Topic: Statin Drugs
What is Cumulative Knowledge, and Why Should it Interest Me?

**Cumulative Knowledge** is determined by ascribing a numerical value to all the articles indexed on our database. The GreenMedInfo.com algorithm appraises a study's overall evidentiary power and quality by generating a numerical value. This "Cumulative Knowledge" score incorporates variables such as study type, with the following types listed in descending order by their power: Meta-Analysis, Human Study, Human: Case Study, Animal: Transgenic, Animal, In Vitro, Review, and Commentary. The cumulative total will provide you an idea about the depth and quality of information that this topic has accumulated on our site. For instance, if you downloaded a document on "Cancers: All", you might see "Curcumin" with a Cumulative Knowledge of 677 and Resveratrol with a Cumulative Knowledge of 175. This does not mean that Curcumin is better, but just that we have gathered more quality research on the Substance Curcumin.

[Click here to read a more in depth explanation](#)

How are Topics and Articles Sorted in this PDF?

Articles in this document are placed within their respective Topic category. If you download a document on the Disease "Cancers: All" and are interested in all articles pertaining to the Substance "Curcumin" with regard to "Cancers: All", you will find them under the "Curcumin" sub-section underneath the Cumulative Knowledge section. Topics are sorted based on their Cumulative Knowledge in relation to the main topic of the download. In the previous example, it would be in relation to "Cancers: All". Articles are then sorted based on the articles Published Date. Articles are sorted in a descending fashion, which means that the most recent articles are displayed first. Articles may appear more than once in this document. For each Topic that an Article contains, it will be displayed in that sub-section. For example, if an Article contains the Substances "Pterostilbene" and "Resveratrol", the article will be displayed under each Topic.

Related Topics

This Topic includes articles from the following related Topics: Atorvastatin, Cerivastatin, Fluvastatin, Lovastatin, Pravastatin, Rosuvastatin, Simvastatin

Quick Summary: 301 Diseases

<table>
<thead>
<tr>
<th>Name</th>
<th>Cumulative Knowledge</th>
<th>Article Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statin-Induced Pathologies</td>
<td>2263</td>
<td>463</td>
</tr>
<tr>
<td>Myopathies</td>
<td>384</td>
<td>72</td>
</tr>
<tr>
<td>Chemically-Induced Liver Damage</td>
<td>339</td>
<td>53</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>218</td>
<td>23</td>
</tr>
<tr>
<td>Rhabdomyolysis</td>
<td>193</td>
<td>45</td>
</tr>
<tr>
<td>Condition</td>
<td>Page</td>
<td>Column</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>Drug-Induced Nutrient Depletion: Statin Drugs</td>
<td>163</td>
<td>35</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>153</td>
<td>12</td>
</tr>
<tr>
<td>Coenzyme Q10 Deficiency</td>
<td>144</td>
<td>19</td>
</tr>
<tr>
<td>Diabetes Mellitus: Type 2</td>
<td>132</td>
<td>11</td>
</tr>
<tr>
<td>Cancers: All</td>
<td>131</td>
<td>8</td>
</tr>
<tr>
<td>Drug-Induced Toxicity</td>
<td>116</td>
<td>20</td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>112</td>
<td>25</td>
</tr>
<tr>
<td>Cardiovascular Diseases</td>
<td>104</td>
<td>12</td>
</tr>
<tr>
<td>Insulin Resistance</td>
<td>101</td>
<td>9</td>
</tr>
<tr>
<td>Cataract</td>
<td>99</td>
<td>15</td>
</tr>
<tr>
<td>Oxidative Stress</td>
<td>98</td>
<td>14</td>
</tr>
<tr>
<td>Mitochondrial Dysfunction</td>
<td>97</td>
<td>23</td>
</tr>
<tr>
<td>Copper Deficiency</td>
<td>90</td>
<td>6</td>
</tr>
<tr>
<td>Zinc Deficiency</td>
<td>90</td>
<td>6</td>
</tr>
<tr>
<td>Myalgias</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>Mitochondrial Myopathies</td>
<td>85</td>
<td>17</td>
</tr>
<tr>
<td>Cognitive Decline/Dysfunction</td>
<td>81</td>
<td>14</td>
</tr>
<tr>
<td>Creatine Phosphokinase (CK): Elevated</td>
<td>70</td>
<td>10</td>
</tr>
<tr>
<td>GGT</td>
<td>65</td>
<td>8</td>
</tr>
<tr>
<td>Memory Disorders</td>
<td>65</td>
<td>12</td>
</tr>
<tr>
<td>Erectile Dysfunction</td>
<td>64</td>
<td>7</td>
</tr>
<tr>
<td>Coronary Artery Disease</td>
<td>61</td>
<td>7</td>
</tr>
<tr>
<td>Kidney Failure</td>
<td>61</td>
<td>7</td>
</tr>
<tr>
<td>Esophageal Cancer</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>Liver Damage</td>
<td>56</td>
<td>12</td>
</tr>
<tr>
<td>Neuropathies</td>
<td>54</td>
<td>12</td>
</tr>
<tr>
<td>Low Testosterone</td>
<td>53</td>
<td>8</td>
</tr>
<tr>
<td>Muscle Damage: Exercise-Induced</td>
<td>51</td>
<td>6</td>
</tr>
<tr>
<td>Athletic Performance</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>Blood Platelet Disorders</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>Testosterone: Too Low</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>Hepatitis: Cholestatic</td>
<td>47</td>
<td>17</td>
</tr>
<tr>
<td>Elevated: ALT</td>
<td>46</td>
<td>4</td>
</tr>
<tr>
<td>Cholestasis</td>
<td>43</td>
<td>15</td>
</tr>
<tr>
<td>Polyneuropathies</td>
<td>43</td>
<td>5</td>
</tr>
<tr>
<td>Liver Disease</td>
<td>42</td>
<td>6</td>
</tr>
<tr>
<td>Diabetes Mellitus: Type 1</td>
<td>41</td>
<td>3</td>
</tr>
<tr>
<td>Hyperglycemia</td>
<td>41</td>
<td>4</td>
</tr>
<tr>
<td>Intracerebral Hemorrhage</td>
<td>41</td>
<td>5</td>
</tr>
<tr>
<td>Peripheral Neuropathies</td>
<td>41</td>
<td>9</td>
</tr>
<tr>
<td>AST: Elevated</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>Diabetes Insipidus</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>Elevated: Creatinine Kinase</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>Fibromyalgia</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>Hemodialysis</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>Liver Failure: Drug Induced</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>Condition</td>
<td>Page</td>
<td>Line</td>
</tr>
<tr>
<td>------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Myopathy</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>Hepatitis: Autoimmune</td>
<td>37</td>
<td>9</td>
</tr>
<tr>
<td>Autoimmune Diseases</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td>Immune Disorders: Low Immune Function</td>
<td>35</td>
<td>9</td>
</tr>
<tr>
<td>Cardiomyopathy</td>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>Depression: Unipolar</td>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>Heart Failure</td>
<td>31</td>
<td>12</td>
</tr>
<tr>
<td>Muscle Soreness</td>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>Aggression</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Aldosterone levels: Low</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Birth Defects</td>
<td>30</td>
<td>8</td>
</tr>
<tr>
<td>Cardiac Mortality</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Eczema</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Hormonal Perturbations: Dopamine Elevation</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Hormonal Perturbations: Homovanillic acid (HVA) Elevations</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Insomnia</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>Kidney Diseases</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Organ Transplantation: Heart</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Renal Failure: Chronic</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Myositis</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td>Kidney Damage: Drug-Induced</td>
<td>27</td>
<td>5</td>
</tr>
<tr>
<td>Neurotoxicity</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td>Prenatal Chemical Exposures</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>Psychiatric Disorders</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>Sleep Disorders</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>Hypothyroidism</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>Cholesterol: Oxidation</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Endothelial Dysfunction</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>Hypertension</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Dermatomyositis</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>Interstitial Lung Diseases</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Mitochondrial Diseases</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>Muscle Disorders</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>DNA damage</td>
<td>22</td>
<td>6</td>
</tr>
<tr>
<td>Lupus-Like Syndrome</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>Lichenoid Dermatitis</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Amyotrophic Lateral Sclerosis</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Aortic Stenosis</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Blood Sugar Problems</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Bone Fractures</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>DHEA: Low</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Diabetes: Cardiovascular Illness</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Exercise-Induced Tissue Damage</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Gastrointestinal Complaints</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Condition</td>
<td>Value 1</td>
<td>Value 2</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Infants: Low Birth Weight</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Muscle Fatigue</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Myasthenia Gravis</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Polymyositis</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Premature Birth</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Prostate Cancer</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Sepsis</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Sperm Quality: Low</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Stroke</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Testicular Cancer</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Neurodegenerative Diseases</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Lens Diseases</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Lichen Planus</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Lupus Erythematosus: Cutaneous</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Psychological Well-Being</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Systemic Lupus Erythematosus</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Jaundice</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Kidney Failure: Acute</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Multi-Organ Failure</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Brain Damage</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Dementia</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Impotence</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Liver Damage: Drug-Induced</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Memory Loss</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Neuromuscular Diseases</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Nightmare</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Gynecomastia</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Tendon Rupture</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Pregnancy: Environmental Exposures</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Skin Cancer</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Stroke: Attenuation/Recovery</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Violence</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Alzheimer's Disease</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Ammonia: Elevated</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Aneurysmal subarachnoid hemorrhage (SAH)</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Anxiety Disorders</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Bacterial Infections and Mycoses</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Balance Disorders</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Bilirubin: Low</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Bladder Cancer</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Blood Lactate/ Pyruvate Ratio: Elevated</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>C-Reactive Protein</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Calcium Homeostasis: Impairment</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Condition</td>
<td>Page</td>
<td>Index</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Cerebral Hemorrhage</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Chemotherapy-Induced Toxicity</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Cholesterol: High</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Colorectal Cancer</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Cough</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Dietary Fatty Acid Imbalance: Omega3/Omega6 Ratio</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Domestic Violence</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Dry Mouth</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Dysphagia</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Family Violence</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Fatigue</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Hip Fracture</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Hypogonadism</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Infection: Bloodstream</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Inflammation</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Irritability</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Isoprostane 8-epi-PGF2alpha: Elevated</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Libido: Low</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Macular Degeneration</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Malignant Hyperthermia</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>McArdie Disease</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Melanoma</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Memory Disorders: Drug-Induced</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Multiple Myeloma</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Muscle Soreness: Exercise-Induced</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Muscle Stiffness: Exercise-Induced</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Myocardial Ischemia</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td><strong>Myotoxicity</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Neuropsychological Dysfunction: Psychomotor Speed</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Oral Symptoms</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Pancreatic Cancer</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Prostatectomy</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>Rheumatoid Arthritis</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Skeletal Muscle: Changes to MHC I expression</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td><strong>Vasospasm: Intracranial</strong></td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Vitamin D Deficiency</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Vitamin E Deficiency</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Weight Problems: Drug-Induced</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td><strong>A1C</strong></td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td><strong>Bile Duct Injury</strong></td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Diabetes: Glycation/A1C</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td><strong>Eosinophilia</strong></td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td><strong>Eye Diseases</strong></td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Lactic Acidosis</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Lens Damage</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>
Lung Diseases: Interstitial 9 5
Myositis Migrans 9 3
Myositis: Focal 9 3
Skeletal Muscle Changes: Endoplasmic Reticulum Stress 9 3
Abortion: Spontaneous 7 2
Demyelinating Diseases 7 8
Multiple Sclerosis 7 4
Pneumonia: Interstitial 7 3
Alopecia 6 2
Ataxia 6 2
Bipolar Disorder 6 2
Blepharoptosis 6 2
Blood-Brain-Barrier Disorders 6 3
Cheilitis 6 2
Compartment Syndromes 6 2
Cutaneous Eruptions 6 2
Cystitis: Hemorrhagic 6 2
Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) 6 2
Gitelman's syndrome (False Presentation) 6 2
Lipid Peroxidation 6 2
Mood Disorders 6 2
Multiple Mononeuropathy 6 2
Organ Transplantation: Liver 6 2
Paranoia 6 2
Perioperative Care 6 2
Rhabdomyolysis: Fatal 6 2
Senile Paranoid Dementia 6 2
Tendinopathy 6 2
Toxic Epidermal Necrolysis 6 2
Ulcerative Colitis 6 2
Vasculitis 6 2
Aging 5 3
Mineral Deficiencies: Selenium 5 5
Skin Problems: Compromised Barrier Function 5 3
Alcohol Toxicity 4 2
Gastrointestinal Diseases 4 2
Immune Dysregulation: TH1/TH2 imbalance 4 2
Lung Diseases 4 2
Organ Transplantation 4 2
Ovarian Diseases 4 4
Pancreatic Diseases 4 2
Proteoglycan Expression: Down-Regulation of Chondroitin Sulfate 4 2
Proteoglycan Expression: Pathological 4 2
Respiratory Diseases 4 2
Spinal Cord Injuries 4 2
Testicular Diseases

Acute Respiratory Distress Syndrome
Acute generalized exanthematous pustulosis (AGEP)
Alkaline Phosphatase: Elevated
Appetite Disorders: Loss/Lack of
Arthralgia
Bilirubin: Elevated
Bullous Dermatosis
Cholangiolitis
Colitis
Congestive Heart Failure
Dermatitis: Actinic
Gastric Ulcer
Guillain-Barre Syndrome
Headache: Altitude-Induced
Hepatitis: Acute
Hyperkalemia
Hypersensitivity
Hyperthermia
Hypotension
Intraocular Hemorrhage
Kidney Failure: Chronic
Kidney Transplant
Lens Opacities
Low Libido
Lupus Erythematosus: Cutaneous: Subacute
Melas Syndrome
Musculoskeletal Complaints
Neuroleptic Malignant Syndrome
Ovulation Disorders
Pleurisy
Pneumonitis
Pneumonitis: Hypersensitivity Type
Polymyalgia Rheumatica
Presymptomatic Metabolic Myopathy
Seizures
Sleep Apnea
Smell Disorders
Urticarial Vasculitis
Alveolar Capillary Congestion
Cochlear Neuronal Damage
Death: Statin-Induced
Hearing Disorders
Hypoadrenalism
Infant Mortality
Influenza A
<table>
<thead>
<tr>
<th>Name</th>
<th>Cumulative Knowledge</th>
<th>Article Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myotoxicity</td>
<td>396</td>
<td>100</td>
</tr>
<tr>
<td>Neurotoxic</td>
<td>319</td>
<td>83</td>
</tr>
<tr>
<td>Hepatotoxic</td>
<td>297</td>
<td>57</td>
</tr>
<tr>
<td>Endocrine Disruptor</td>
<td>162</td>
<td>23</td>
</tr>
<tr>
<td>Carcinogenic</td>
<td>140</td>
<td>8</td>
</tr>
<tr>
<td>Cardiotoxic</td>
<td>112</td>
<td>26</td>
</tr>
<tr>
<td>Oxidant</td>
<td>104</td>
<td>15</td>
</tr>
<tr>
<td>Endocrine Disruptor: Insulin Resistance</td>
<td>101</td>
<td>9</td>
</tr>
<tr>
<td>Diabetogenic</td>
<td>99</td>
<td>8</td>
</tr>
<tr>
<td>Immunotoxic</td>
<td>52</td>
<td>13</td>
</tr>
<tr>
<td>Cytotoxic</td>
<td>50</td>
<td>14</td>
</tr>
<tr>
<td>Nephrotoxic</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>Teratogenic</td>
<td>33</td>
<td>11</td>
</tr>
<tr>
<td>Genotoxic</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>Inflammatory</td>
<td>19</td>
<td>4</td>
</tr>
<tr>
<td>Endocrine Disruptor: Thyroid</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Immunosuppressive</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Cataractogenic</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Apoptotic</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Endocrine Disruptor: Ovary</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Endocrine Disruptor: Pancreas</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Immunoreactive</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Article Count - 25

Quick Summary: 25 Adverse Pharmacological Actions
### Statin administration in animals results in a myopathy characterized by decreased muscle force and elevated plasma CK level. - GMI Summary


**Article Published Date**: Nov 09, 2011

**Authors**: Mártá Füzi, Zoltán Palicz, János Vincze, Julianna Cseri, Zita Szombathy, Ilona Kovács, Anna Oláh, Péter Szentesi, Pál Kertai, György Paragh, László Csernoch

**Study Type**: Animal Study

**Additional Links**


- **Problem Substances**: Fluvastatin : CK(13) : AC(3), Statin Drugs : CK(3705) : AC(437)

- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

### Statins increase exercise-related muscle injury, which worsens with the age of the individual. - GMI Summary


**Article Published Date**: Oct 27, 2011

**Authors**: Beth A Parker, Amanda L Augeri, Jeffrey A Capizzi, Kevin D Ballard, Christopher Troyanos, Aaron L Baggish, Pierre A D'Hemecourt, Paul D Thompson

**Study Type**: Human Study

**Additional Links**

- **Diseases**: Muscle Damage: Exercise-Induced : CK(61) : AC(6), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

- **Problem Substances**: Statin Drugs : CK(3705) : AC(437)

- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

### Statin drugs have been linked to rhabdomyolysis, myositis and kidney failure. - GMI Summary


**Article Published Date**: Oct 21, 2011

**Authors**: Alberico L Catapano

**Study Type**: Review

**Additional Links**

- **Diseases**: Kidney Damage: Drug-Induced : CK(69) : AC(18), Kidney Failure : CK(228) : AC(42), Myositis : CK(15) : AC(2), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Statin drugs have been shown to cause adverse effects in pregnant rats and their offspring, including fetal death. - GMI Summary


Authors: Ali S Faqi, David Prohaska, Rocio Lopez, Gail McIntyre

Study Type: Animal Study

Additional Links

Diseases: Abortion: Spontaneous: CK(197) : AC(27), Birth Defects: CK(154) : AC(24), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Teratogenic: CK(271) : AC(50)

Shorter-term use of statin drugs is associated with an increased risk of cataract surgery. - GMI Summary


Authors: Donald S Fong, Kwun-Yee T Poon

Study Type: Human Study

Additional Links

Diseases: Cataract: CK(180) : AC(53), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Rhabdomyolysis related to statin and seizures has been reported. - GMI Summary


Authors: Yu-Qing Guan, Yan-Jie Shi, Qun Wang

Study Type: Human: Case Report

Additional Links

Diseases: Rhabdomyolysis: CK(37) : AC(6), Seizures: CK(100) : AC(26), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Simvastatin reduces steroid hormone production in rat ovarian cells. - GMI Summary


Article Published Date: Sep 21, 2011

Authors: Israel Ortega, Amanda B Cress, Donna H Wong, Jesus A Villanueva, Anna Sokalska, Benjamin C Moeller, Scott D Stanley, Antoni J Duleba

Study Type: In Vitro Study

Additional Links

Diseases: Ovarian Diseases: CK(9) : AC(4), Ovarian Failure: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)
Statin drugs may interfere with neurological function in the brain by inhibiting cholesterol biosynthesis and synaptic transmission. - GMI Summary


Authors : Tiffany Mailman, Manoj Hariharan, Barbara Karten

Study Type : Review

Diseases : Drug-Induced Toxicity : CK(503) : AC(76), Neurologic Disorders : CK(42) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Statin drugs exhibit neurotoxicity in an animal neuronal cell line. - GMI Summary


Authors : K Vural, M I Tuğlu

Study Type : Animal Study

Diseases : Brain Damage : CK(65) : AC(28), Neurodegenerative Diseases : CK(1481) : AC(410), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions : Antiproliferative : CK(965) : AC(680)

Problem Substances : Atorvastatin : CK(231) : AC(37), Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Vitamin D deficiency, myositis-myalgia, and reversible statin intolerance is discussed. - GMI Summary


Authors : Charles J Glueck, Shaaista B Budhani, Silpa S Masineni, Cesar Abuchaibe, Naseer Khan, Ping Wang, Naila Goldenberg

Study Type : Human Study


Problem Substances : Statin Drugs : CK(3705) : AC(437)

Liver failure and damage are rare but severe unintended consequences of statin drug use. - GMI Summary


Authors : Einar Björnsson, Elin I Jacobsen, Evangelos Kalaitzakis

Study Type : Human Study

Additional Links
Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Liver Damage: CK(496) : AC(172), Liver Disease: CK(95) : AC(29), Liver Failure: Drug Induced: CK(13) : AC(2), Statin-Induced Pathologies: CK(1470) : AC(206)
Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

**Statin drug use is associated with a Lupus-Like syndrome.** - GMI Summary

Article Published Date: Aug 23, 2011
Authors: Hilda J I de Jong, Jan Willem Cohen Tervaert, Siti R F Saldi, Rob J Vandebriel, Patrick C Souverein, Ronald H B Meyboom, Henk van Loveren, Olaf H Klungel
Study Type: Human Study
Additional Links
Diseases: Lupus-Like Syndrome: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206), Systemic Lupus Erythematosus: CK(322) : AC(51)
Problem Substances: Statin Drugs: CK(3705) : AC(437)

**Atorvastatin treatment reduces exercise capacities in rats and exacerbates metabolic perturbations and oxidative stress in skeletal muscle.** - GMI Summary

Article Published Date: Aug 18, 2011
Authors: Jamal Bouitbir, Anne-Laure Charles, Laurence Rasseneur, Stéphane P Dufour, Francois Piquard, Bernard Geny, Joffrey Zoll
Study Type: Animal Study
Additional Links
Diseases: Oxidative Stress: CK(1724) : AC(691), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Oxidant: CK(63) : AC(23)

**Statin-associated myopathy is underestimated and occurs in 5-10% of patients who receive them.** - GMI Summary

Article Published Date: Aug 01, 2011
Authors: Loukianos S Rallidis, Katerina Fountoulaki, Maria Anastasiou-Nana
Study Type: Human Study
Additional Links
Diseases: Myopathies: CK(199) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

**Statin drug use is associated with lower bilirubin levels, a known risk factor for cardiovascular disease.** - GMI Summary

Article Published Date: Jul 23, 2011
**Statin-induced myalgia occurs in ~10% of lipid clinic outpatients.** - GMI Summary


**Article Published Date**: Jul 20, 2011

**Authors**: Gualberto Ruaño, Andreas Windemuth, Alan H B Wu, John P Kane, Mary J Malloy, Clive R Pullinger, Mohan Kocherla, Kali Bogaard, Bruce R Gordon, Theodore R Holford, Ankur Gupta, Richard L Seip, Paul D Thompson

**Study Type**: Human Study

**Additional Links**

**Diseases**: Myalgias : CK(25) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Quercetin is able to ameliorate statin-drug induced skeletal muscle myopathy in an animal model.** - GMI Summary


**Article Published Date**: Jul 20, 2011

**Authors**: Jamal Bouitbir, Anne-Laure Charles, Andoni Echaniz-Laguna, Michel Kindo, Frédéric Daussin, Johan Auwerx, François Piquard, Bernard Geny, Joffrey Zoll

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Drug-Induced Toxicity : CK(503) : AC(76), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin drugs adversely effect memory likely through depletion of coenzyme q10 and interference with mitochondrial function in the brain.** - GMI Summary


**Article Published Date**: Jul 08, 2011

**Authors**: M Fux, J Levine, A Aviv, R H Belmaker

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Cognitive Decline/Dysfunction : CK(350) : AC(71), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Statin drugs increase the risk of diabetes.** - GMI Summary


**Article Published Date**: Jul 01, 2011
**In a pooled analysis of data from 5 statin trials, intensive-dose statin therapy was associated with an increased risk of new-onset diabetes compared with moderate-dose statin therapy.** - GMI Summary

**Statin drugs are known in some cases to induce autoimmune myopathies such as dermatomyositis, polymyositis, and immune-mediated necrotizing myopathies (IMNM).** - GMI Summary

**Risk documentation occured in only 20% of women age 15-45 prescribed a medication known to contribute to birth defects.** - GMI Summary
Postmortem analysis of Alzheimer brains reveals a loss in membrane cholesterol content, indicating that statin drugs may be contribute to neurodegenerative conditions. - GMI Summary

Article Published Date: Apr 01, 2011
Authors: Elisa Biondi
Study Type: Review
Additional Links
Diseases: Neurodevelopmental Disorders: CK(157) : AC(12), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

There is a dose-response relationship in statin-induced rhabdomyolysis. - GMI Summary

Pubmed Data: Can J Cardiol. 2011 Mar-Apr;27(2):146-51. PMID: 21459261
Article Published Date: Mar 01, 2011
Authors: Anne Holbrook, Mitchell Wright, Melani Sung, Christine Ribic, Steven Baker
Study Type: Human Study
Additional Links
Diseases: Kidney Damage: Drug-Induced : CK(69) : AC(18), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Nephrotoxic : CK(133) : AC(33)

Bilateral, simultaneous rupture of the quadriceps tendon associated with simvastatin has been reported. - GMI Summary

Article Published Date: Mar 01, 2011
Authors: Guy Rubin, Elias Haddad, Tsur Ben-Haim, Irit Elmalach, Nimrod Rozen
Study Type: Human: Case Report
Additional Links
Diseases: Statin-Induced Pathologies : CK(1470) : AC(206), Tendon Rupture : CK(6) : AC(2)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Statins up-regulate the expression of HMGCR, the major target of autoantibodies in statin-associated immune-mediated necrotizing myopathy. - GMI Summary

Article Published Date: Mar 01, 2011
Authors: Andrew L Mammen, Tae Chung, Lisa Christopher-Stine, Paul Rosen, Antony Rosen, Kimberly R Doering, Livia A Casciola-Rosen
Study Type: Human Study
Additional Links
Diseases: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Statin-associated myasthenic weakness has been reported. - GMI Summary

Pubmed Data: J Med Assoc Thai. 2011 Feb;94(2):256-8. PMID: 21534375
Drugs targeting cholesterol synthesis are embryo lethal in mice and likely contribute to birth defects in humans. - GMI Summary

Pubmed Data: Drug Metab Rev. 2011 Feb ;43(1):69-90. PMID: 21247357

Statin-induced focal myositis of the upper extremities has been reported. - GMI Summary


Statins have an adverse effect on outcomes in immunosuppressed patients with bloodstream infection. - GMI Summary


Prolonged (more than 4 years) use of statins is associated with a significantly increased risk of colorectal cancer bladder cancer and lung cancer. - GMI Summary

**Subacute-cutaneous lupus erythematosus induced by simvastatin has been reported.** - GMI Summary


**Article Published Date**: Jan 01, 2011

**Authors**: Robin Dominik Rüger, Jan-Christoph Simon, Regina Treudler

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Lupus Erythematosus: Cutaneous: Subacute : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

---

**Atorvastatin-induced acute pancreatitis has been reported.** - GMI Summary


**Article Published Date**: Jan 01, 2011

**Authors**: Prasanna R Deshpande, Kanav Khera, Girish Thunga, Manjunath Hande, Siddalingana T G Gouda, Anantha Naik Nagappa

**Study Type**: Human Study

**Additional Links**

**Diseases**: Chemically-Induced Liver Damage : CK(497) : AC(145), Pancreatitis : CK(131) : AC(25), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Atorvastatin : CK(231) : AC(37)

**Adverse Pharmacological Actions**: Hepatotoxic : CK(95) : AC(34)

---

**Simvastatin interferes with oligodendrocyte function, particularly the prior step in remyelination, indicating it may be harmful in demyelination diseases like MS.** - GMI Summary

**Pubmed Data**: J Neurosci Res. 2010 Nov 15 ;88(15):3361-75. PMID: 20857509

**Article Published Date**: Nov 15, 2010

**Authors**: Inge Smolders, Ilse Smets, Olaf Maier, Martin vandeVen, Paul Steels, Marcel Ameloot

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Demyelinating Diseases : CK(1194) : AC(240), Multiple Sclerosis : CK(664) : AC(130), Neuropathies : CK(322) : AC(62), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Statin drugs are associated with iatrogenic myopathy.** - GMI Summary


**Article Published Date**: Oct 01, 2010

**Authors**: Frank L Mastaglia
Simvastatin has been reported to cause cutaneous eruptions. - GMI Summary


Article Published Date: Sep 01, 2010

Authors: Amy E Adams, Arthur M Bobrove, Anita C Gilliam

Study Type: Human: Case Report

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Mevastatin accelerates loss of synaptic proteins and neurite degeneration in neurons. - GMI Summary


Article Published Date: Sep 01, 2010

Authors: Madhuvanthi Kannan, Joern R Steinert, Ian D Forsythe, Andrew G Smith, Tatyana Chernova

Study Type: In Vitro Study

Additional Links


Problem Substances: Lovastatin: CK(63): AC(12)

Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Statin-induced vasculitis has been reported. - GMI Summary


Article Published Date: Aug 01, 2010

Authors: Deepali Sen, Elliot D Rosenstein, Neil Kramer

Study Type: Human: Case Report

Additional Links


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Immunosuppressive: CK(65): AC(15)

Statin therapy may increase the risk for posttransplantation squamous cell carcinoma. - GMI Summary


Article Published Date: Aug 01, 2010

Authors: Luca Mascitelli, Francesca Pezzetta, Mark R Goldstein

Study Type: Commentary
Simvastatin inhibits brain cholesterol biosynthesis without positively altering molecular indices of Alzheimer disease pathology. - GMI Summary

Pubmed Data: Alzheimer Dis Assoc Disord. 2010 Jul-Sep;24(3):220-6. PMID: 20473136

Article Published Date: Jul 01, 2010

Authors: Alberto Serrano-Pozo, Gloria L Vega, Dieter Lütjohann, Joseph J Locascio, Marsha K Tennis, Amy Deng, Alireza Atri, Bradley T Hyman, Michael C Irizarry, John H Growdon

Study Type: Human Study

Additional Links

Diseases: Statin-Induced Pathologies

Problem Substances: Statin Drugs

Pharmacological Actions: Anticholesteremic Agents

Adverse Pharmacological Actions: Neurotoxic

Rosuvastatin-induced thrombocytopenia has been reported. - GMI Summary


Article Published Date: Jul 01, 2010

Authors: Ioannis Vrettos, Sotiris Papageorgiou, Christina Economopoulou, Vasiliki Pappa, Panagiotis Tsirigotis, Nikolaos Tountas, Theofanis Economopoulos, John Dervenoulas

Study Type: Human: Case Report

Additional Links

Diseases: Statin-Induced Pathologies

Problem Substances: Rosuvastatin, Statin Drugs

Statin therapy alters the expression of genes that regulate calcium homeostasis and membrane repair in skeletal muscle. - GMI Summary


Article Published Date: Jul 01, 2010

Authors: Annette Draeger, Verónica Sanchez-Freire, Katia Monastyrskaya, Hans Hoppeler, Matthias Mueller, Fabio Breil, Markus G Mohaupt, Eduard B Babychuk

Study Type: In Vitro Study

Additional Links

Diseases: Skeletal Muscle: Drug-Induced Changes

Problem Substances: Statin Drugs

Severe statin-induced rhabdomyolysis mimicking Guillain-Barré syndrome in four patients with diabetes mellitus treated with fusidic acid has been reported. - GMI Summary


Article Published Date: Jun 01, 2010

Authors: T A Collidge, S Razvi, C Nolan, M Whittle, C Stirling, A J C Russell, A C Mann, C J Deighan

Study Type: Human: Case Report

Additional Links
Diseases: Diabetes Mellitus: Type 2 : CK(1516) : AC(314), Guillain-Barre Syndrome : CK(61) : AC(13), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anti-Bacterial Agents : CK(718) : AC(269)
Problem Substances: Antibiotics : CK(140) : AC(15), Fusidic acid : CK(6) : AC(2), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

### Atorvastatin induced multiple organ failure has been reported. - GMI Summary

**Pubmed Data**: J La State Med Soc. 2010 May-Jun;162(3):159-60. PMID: 20666169
**Article Published Date**: May 01, 2010
**Authors**: Ramprasad Kandavar, Gary E Sander
**Study Type**: Human: Case Report

### Statin-mediated myopathy is likely mediated by reductions in protein prenylation and especially N-linked glycosylation. - GMI Summary

**Article Published Date**: Apr 15, 2010
**Authors**: Peter James Mullen, Barbara Lüscher, Hubert Scharnagl, Stephan Krähenbühl, Karin Brecht
**Study Type**: In Vitro Study

### Statin therapy contributes to low testosterone and hypogonadism in men with erectile dysfunction - GMI Summary

**Pubmed Data**: J Sex Med. 2010 Apr;7(4 Pt 1):1547-56. Epub 2010 Feb 5. PMID: 20141585
**Article Published Date**: Apr 01, 2010
**Authors**: Giovanni Corona, Valentina Boddi, Giancarlo Balercia, Giulia Rastrelli, Giulia De Vita, Alessandra Sforza, Gianni Forti, Edoardo Mannucci, Mario Maggi
**Study Type**: Human Study

### Atorvastatin causes insulin resistance and increases ambient glycemia in hypercholesterolemic patients - GMI Summary

**Article Published Date**: Mar 23, 2010
**Authors**: Kwang Kon Koh, Michael J Quon, Seung Hwan Han, Yonghee Lee, Soo Jin Kim, Eak Kyun Shin
**Statin toxicity is pleiotropic in nature.** - GMI Summary


Article Published Date: Mar 01, 2010

Authors: Sylvie Callegari, Ross A McKinnon, Stuart Andrews, Miguel A de Barros Lopes

Study Type: In Vitro Study

Diseases: Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38), Apoptotic: CK(1446) : AC(1045)

Additional Keywords: Saccharomyces Cerevisiae: CK(1) : AC(1)

Problem Substances: Atorvastatin: CK(231) : AC(37)

---

**Statins have been associated with immune-mediated necrotizing myopathy.** - GMI Summary


Article Published Date: Feb 01, 2010

Authors: Phyllis Grable-Esposito, Hans D Katzberg, Steven A Greenberg, Jayashri Srinivasan, Jonathan Katz, Anthony A Amato

Study Type: Human Study

Diseases: Autoimmune Diseases: CK(4016) : AC(752), Myopathy: CK(50) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

---

**Statin-induced myopathy is associated with skeletal muscle cell MHC I expression changes.** - GMI Summary


Article Published Date: Feb 01, 2010

Authors: Pratibha Singh, Danielle Kohr, Manfred Kaps, Franz Blaes

Study Type: In Vitro Study

Diseases: Myopathies: CK(199) : AC(18), Skeletal Muscle: Changes to MHC I expression: CK(4) : AC(2), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

---

**Coenzyme Q10 deficiency may be one mechanism for statin-induced myopathies.** - GMI Summary


Article Published Date: Jan 01, 2010

Authors: Richard Deichmann, Carl Lavie, Samuel Andrews
Intended consequences of statin drug use are increased risk of esophageal cancer, kidney failure, cataract, liver dysfunction and myopathies. - GMI Summary


An explanation of the mechanism of statin-induced contractile dysfunction in rat cultured skeletal myofibers. - GMI Summary


Statin drugs, particularly simivastatin, increase the risk for significant creatine kinase elevation. - GMI Summary


Statin drugs may reduce T cell responses associated with inhibiting influenza A virus. - GMI Summary

A case of atorvastatin-induced prolonged cholestasis with bile duct damage has been reported. - GMI Summary

Muscle problems due to statins have been underestimated and may be as prevalent as 10%. - GMI Summary

Statin therapy decreases myocardial (heart) function. - GMI Summary

Statin drugs may cause myopathy by lowering vitamin E levels. - GMI Summary
**Review: Drug-induced liver injury associated with statins.** - GMI Summary


**Article Published Date**: Nov 01, 2009

**Authors**: Mark W Russo, Martin Scobey, Herbert L Bonkovsky

**Study Type**: Review

**Additional Links**

**Diseases**: Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Statin-Induced Pathologies: CK(1470) : AC(206), Vitamin E Deficiency : CK(25) : AC(4)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Additional Keywords**: Statin-Vitamin E Deficiency : CK(10) : AC(1)

**Adverse Pharmacological Actions**: Hepatotoxic : CK(95) : AC(34)

---

**Neuroleptic malignant syndrome as a possible statin drug reaction has been reported.** - GMI Summary


**Article Published Date**: Nov 01, 2009

**Authors**: Joyce M Cooper, Alison L Jones

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18), Neuroleptic Malignant Syndrome : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anti-Bacterial Agents : CK(718) : AC(269), Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin drugs induce a variety of potential adverse "peliotropic" effects.** - GMI Summary


**Article Published Date**: Sep 01, 2009

**Authors**: Jerzy Beltowski, Grazyna Wójcicka, Anna Jamroz-Wiśniewska

**Study Type**: Review

**Additional Links**

**Diseases**: Chemically-Induced Liver Damage : CK(497) : AC(145), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Mineral Deficiencies: Selenium : CK(15) : AC(6), Molecular Pathologies: Dolichol Depletion : CK(2) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)

**Additional Keywords**: Drug-Nutrient Depletion : CK(64) : AC(10), Statin-Selenium Deficiency : CK(4) : AC(4)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

---

**Patients with statin-induced myopathy show high MHC class I expression due to the**
immunomodulatory activity of the drugs. - GMI Summary

Pubmed Data: Ann N Y Acad Sci. 2009 Sep;1173:746-51. PMID: 19758224
Article Published Date: Sep 01, 2009
Authors: Pratibha Singh, Danielle Kohr, Manfred Kaps, Franz Blaes
Study Type: Commentary
Additional Links
Diseases: Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Statin Drugs: CK(3705): AC(437)

Statin use may exacerbate muscle performance declines and falls risk associated with aging without a concomitant decrease in muscle mass. - GMI Summary

Article Published Date: Sep 01, 2009
Authors: D Scott, L Blizzard, J Fell, G Jones
Study Type: Human Study
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Statin Drugs: CK(3705): AC(437)

Rosuvastatin treatment is associated with an increase in insulin resistance in hyperlipidaemic patients with impaired fasting glucose. - GMI Summary

Article Published Date: Sep 01, 2009
Authors: M S Kostapanos, H J Milionis, A-D Agouridis, C V Rizos, M S Elisaf
Study Type: Human Study
Additional Links
Problem Substances: Rosuvastatin: CK(28): AC(6)

Hypothyroidism misdiagnosed as statin intolerance has been reported. - GMI Summary

Article Published Date: Jul 07, 2009
Authors: Eric V Krieger, Robert H Knopp
Study Type: Human: Case Report
Additional Links
Diseases: Hypothyroidism: CK(391): AC(75), Statin-Induced Pathologies: CK(1470): AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Additional Keywords: Misdiagnosed Conditions: CK(3): AC(1)
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor: Thyroid: CK(40): AC(12)
Observational studies suggest that myalgia can occur in up to 10% of persons prescribed statins. - GMI Summary

Pubmed Data: Ann Intern Med. 2009 Jun 16 ;150(12):858-68. PMID: 19528564

Authors: Tisha R Joy, Robert A Hegele

Study Type: Review

Additional Links

Diseases: Myalgias: CK(25) : AC(3), Myopathies: CK(199) : AC(18), Rhabdomyolysis: CK(37) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Statin-induced liver injury may result from the suppression of selenoprotein expression. - GMI Summary


Authors: Andrea Kromer, Bernd Moosmann

Study Type: In Vitro Study

Additional Links

Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Mineral Deficiencies: Selenium: CK(15) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Additional Keywords: Statin-Selenium Deficiency: CK(4) : AC(4)

Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

Simvastatin-induced dermatomyositis has been reported. - GMI Summary

Pubmed Data: Hautarzt. 2009 Jun ;60(6):489-93. PMID: 18853127

Authors: A Rasch, M Schimmer, C A Sander

Study Type: Human: Case Report

Additional Links

Diseases: Dermatomyositis: CK(14) : AC(4), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Simvastatin: CK(657) : AC(114)

Statin drugs inhibit central nervous system remyelination. - GMI Summary

Pubmed Data: Am J Pathol. 2009 Apr 6. PMID: 19349355

Authors: Veronique E Miron, Simone P Zehntner, Tanja Kuhlmann, Samuel K Ludwin, Trevor Owens, Timothy E Kennedy, Barry J Bedell, Jack P Antel

Study Type: Animal Study

Additional Links

Diseases: Demyelinating Diseases: CK(1194) : AC(240), Statin-Induced Pathologies: CK(1470) : AC(206)

Additional Keywords: Multiple Sclerosis Contraindications: CK(0) : AC(1)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)
Statin therapy is associated with lower total testosterone in men with type 2 diabetes. - GMI

Summary


Article Published Date: Apr 01, 2009

Authors: Roger D Stanworth, Dheeraj Kapoor, Kevin S Channer, T Hugh Jones

Study Type: Human Study

Additional Links

Diseases: Statin-Induced Pathologies: CK(1470) : AC(206), Testosterone: Too Low : CK(277) : AC(65)

Additional Keywords: Sex Hormone-Binding Globulin : CK(80) : AC(9)

Problem Substances: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)

Statin-associated focal myositis has been reported. - GMI Summary


Article Published Date: Mar 20, 2009

Authors: Patrick Asbach, Ingo Paetsch, Philipp Stawowy, Bernhard Sander, Eckart Fleck

Study Type: Human: Case Report

Additional Links

Diseases: Musculoskeletal Complaints : CK(10) : AC(2), Myositis: Focal : CK(6) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Atorvastatin-induced hemorrhagic cystitis has been reported. - GMI Summary


Article Published Date: Mar 01, 2009

Authors: Humberto J Martinez-Suarez, Rou Wang, Gary J Faerber

Study Type: Human: Case Report

Additional Links

Diseases: Cystitis: Hemorrhagic : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Simvastatin treatment induces morphology alterations and cell death in mouse cochlear neuronal cells. - GMI Summary

Pubmed Data: Acta Otolaryngol. 2009 Feb;129(2):166-74. PMID: 18607908

Article Published Date: Feb 01, 2009

Authors: Do-Sim Park, Hong-Seob So, Jeong-Han Lee, Hyun-Young Park, Young-Jin Lee, Ji-Hyun Cho, Kui-Hyun Yoon, Channy Park, Kijung Yun, Raekil Park

Study Type: In Vitro Study

Additional Links

Diseases: Cochlear Neuronal Damage : CK(1) : AC(1), DNA damage : CK(607) : AC(274), Hearing Disorders : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Statin-induced muscle toxicity may be associated with altered oxidation of fatty acids. - GMI
Atorvastatin-induced drug reaction with eosinophilia and systemic symptoms (DRESS) has been reported. - GMI Summary

Statin drugs impair mitochondrial function and decrease ubiquinone (coenzyme Q10) levels. - GMI Summary

Hepatitis, rhabdomyolysis and multi-organ failure resulting from statin use has been reported. - GMI Summary

Statins decrease chondroitin sulfate proteoglycan expression following central nervous system injury. - GMI Summary
**Simvastatin may inhibit adrenal function and/or responsiveness.** - GMI Summary


**Article Published Date**: Oct 01, 2008

**Authors**: Taeko Matsuda, Yumiko Toyohira, Susumu Ueno, Masato Tsutsui, Nobuyuki Yanagihara

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Hypoadrenalism: CK(38) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

**Simvastatin-ezetimibe-induced hepatic failure necessitating liver transplantation has been reported.** - GMI Summary

**Pubmed Data**: Pharmacotherapy. 2008 Sep ;28(9):1188-93. PMID: 18752389

**Article Published Date**: Sep 01, 2008

**Authors**: Sony Tuteja, Nikolaos T Pyrsopoulos, William R Wolowich, Kamran Khanmoradi, David M Levi, Gennaro Selvaggi, Geoffrey Weisbaum, Andreas G Tzakis, Eugene R Schiff

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Liver Damage: Drug-Induced: CK(36) : AC(6), Organ Transplantation: Liver: CK(78) : AC(17), Statin-Induced Pathologies: CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)

**Problem Substances**: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Hepatotoxic: CK(95) : AC(34)

**Atorvastatin exhibits immunotoxic and genotoxic properties.** - GMI Summary


**Article Published Date**: Aug 15, 2008

**Authors**: Goran Gajski, Vera Garaj-Vrhovac, Visnja Orescanin

**Study Type**: Human In Vitro

**Additional Links**

**Diseases**: DNA damage: CK(607) : AC(274), Immune Disorders: Low Immune Function: CK(377) : AC(109), Oxidative Stress: CK(1724) : AC(691), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Genotoxic: CK(70) : AC(37), Immunotoxic: CK(129) : AC(21)

**Review: Clinical characterization and molecular mechanisms of statin myopathy.** - GMI Summary

Pravastatin-induced colitis has been reported. - GMI Summary


Atorvastatin has been reported to have caused severe acute hepatitis with symptomatic cholestasis for more than 3 months and bile duct injury. - GMI Summary


Reversible acute hepatitis induced by rosvastatin has been reported. - GMI Summary


Severe obstructive sleep apnea after cerivastatin therapy has been reported. - GMI Summary

**Study Type**: Human: Case Report

**Diseases**: *Sleep Apnea*: CK(57); AC(9), *Statin-Induced Pathologies*: CK(1470); AC(206)

**Problem Substances**: *Cerivastatin*: CK(2); AC(1)

---

**Rhabdomyolysis with atorvastatin and fusidic acid has been reported.** - GMI Summary


**Article Published Date**: Jun 01, 2008

**Authors**: C O'Mahony, V L Campbell, M S Al-Khayatt, D J Brull

**Diseases**: *Drug-Induced Toxicity*: CK(503); AC(76), *Rhabdomyolysis*: CK(37); AC(6), *Statin-Induced Pathologies*: CK(1470); AC(206)

**Pharmacological Actions**: *Anti-Bacterial Agents*: CK(718); AC(269)

**Problem Substances**: *Atorvastatin*: CK(231); AC(37), *Fusidic acid*: CK(6); AC(2), *Statin Drugs*: CK(3705); AC(437)

---

**Spontaneous compartment syndrome in association with simvastatin-induced myositis has been reported.** - GMI Summary


**Article Published Date**: May 01, 2008

**Authors**: J L Walker, G H Smith, M S Gaston, C M Robinson

**Diseases**: *Compartment Syndromes*: CK(3); AC(1), *Myositis*: CK(15); AC(2), *Statin-Induced Pathologies*: CK(1470); AC(206)

**Problem Substances**: *Simvastatin*: CK(657); AC(114), *Statin Drugs*: CK(3705); AC(437)

---

**Possible gynecomastia induced by rosuvastatin has been reported.** - GMI Summary

**Pubmed Data**: Pharmacotherapy. 2008 Apr ;28(4):549-51. PMID: 18363539

**Article Published Date**: Apr 01, 2008

**Authors**: Alessandro Oteri, Maria Antonietta Catania, Rita Travaglini, Alessandra Russo, Safi E Giustini, Achille P Caputi, Giovanni Polimeni

**Diseases**: *Gynecomastia*: CK(29); AC(7), *Statin-Induced Pathologies*: CK(1470); AC(206)

**Problem Substances**: *Rosuvastatin*: CK(28); AC(6), *Statin Drugs*: CK(3705); AC(437)

**Adverse Pharmacological Actions**: *Endocrine Disruptor*: CK(283); AC(56)

---

**Paranoia is one of the symptoms associated with statin therapy.** - GMI Summary


**Article Published Date**: Mar 01, 2008

**Authors**: Jessica T Peters, Candice L Garwood, Marybeth Lepczyk

**Diseases**: *Paranoia*: CK(3); AC(1), *Senile Paranoïd Dementia*: CK(3); AC(1), *Statin-Induced Pathologies*: CK(1470); AC(206)

**Problem Substances**: *Atorvastatin*: CK(231); AC(37), *Statin Drugs*: CK(3705); AC(437)
Statin drugs have been linked to adverse side effects in the oral cavity. - GMI Summary

Article Published Date : Feb 01, 2008
Authors : Montserrat Pascual Cruz, Eduardo Chimenos Küstner, José António García Vicente, Xavier Mezquiriz Ferrero, Eulalia Borrell Thio, José López López
Study Type : Human Study
Additional Links
Problem Substances : Statin Drugs : CK(3705) : AC(437)

Atorvastatin exhibits immunotoxic and genotoxic properties - Article 2. - GMI Summary

Article Published Date : Jan 01, 2008
Authors : Goran Gajski, Vera Garaj-Vrhovac
Study Type : Human In Vitro
Additional Links
Diseases : DNA damage : CK(607) : AC(274), Immune Disorders: Low Immune Function : CK(377) : AC(109), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Genotoxic : CK(70) : AC(37), Immunotoxic : CK(129) : AC(21)

Use of statins and angiotensin converting enzyme inhibitors (ACE-Is) increase the risk of age-related macular degeneration. - GMI Summary

Article Published Date : Jan 01, 2008
Authors : Mahyar Etminan, James M Brophy, David Maberley
Study Type : Human Study
Additional Links
Diseases : Macular Degeneration : CK(108) : AC(22), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Angiotensin-Converting Enzyme (ACE) Inhibitor : CK(50) : AC(5), Statin Drugs : CK(3705) : AC(437)

Statin drugs may contribute to a wide range of disorders via interference with mitochondrial function. - GMI Summary

Article Published Date : Jan 01, 2008
Authors : Beatrice A Golomb, Marcella A Evans
Study Type : Review
Additional Links
Diseases : Mitochondrial Dysfunction : CK(95) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)
Simvastatin-induced rhabdomyolysis and acute renal injury has been reported. - GMI Summary

Article Published Date: Jan 01, 2008
Authors: Abdelkarim Waness, Sami Bahlas, Saad Al Shohaib
Study Type: Human: Case Report
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114)
Adverse Pharmacological Actions: Nephrotoxic: CK(133): AC(33)

The statin drug lovastatin induces concentration-dependent cell death in cardiomyocytes. - GMI Summary

Article Published Date: Jan 01, 2008
Authors: Simon W Rabkin, Michael Y Tsang
Study Type: In Vitro Study
Additional Links
Diseases: Heart Failure: CK(452): AC(85), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Lovastatin: CK(63): AC(12), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Cardiotoxic: CK(467): AC(53), Cytotoxic: CK(45): AC(28)

The adverse effects associated with statin drug use has been linked to mitochondrial dysfunction. - GMI Summary

Article Published Date: Jan 01, 2008
Authors: Beatrice A Golomb, Marcella A Evans
Study Type: Review
Additional Links
Diseases: Mitochondrial Dysfunction: CK(95): AC(35), Myopathies: CK(199): AC(18), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

McArdle disease with rhabdomyolysis induced by rosuvastatin has been reported. - GMI Summary

Pubmed Data: Arq Neuropsiquiatr. 2007 Sep;65(3B):834-7. PMID: 17952291
Article Published Date: Sep 01, 2007
Authors: Paulo José Lorenzoni, Carlos Eduardo Silvado, Rosana Herminia Scola, Mario Luvizotto, Lineu César Werneck
Study Type: Human Study
Additional Links
Problem Substances: Statin Drugs: CK(3705): AC(437)

A potential link between HMG-CoA reductase inhibitor (statin) use and interstitial lung disease
**The use of statins for LDL suppression is associated with increased risk for cancer.** - GMI Summary


**Article Published Date**: Jul 31, 2007

**Authors**: Alawi A Alsheikh-Ali, Prasad V Maddukuri, Hui Han, Richard H Karas

**Study Type**: Meta Analysis

**Additional Links**

**Diseases**: Cancers: All : CK(6410) : AC(2509), Chemically-Induced Liver Damage : CK(497) : AC(145), High Cholesterol : CK(865) : AC(192), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Lovastatin : CK(63) : AC(12), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Carcinogenic : CK(416) : AC(81)

---

**Simvastatin induced rhabdomyolysis and hypothyroidism has been reported.** - GMI Summary


**Article Published Date**: Jul 31, 2007

**Authors**: Thomas J Kiernan, Martin Rochford, John H McDermott

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Hypothyroidism : CK(391) : AC(75), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Endocrine Disruptor: Thyroid : CK(40) : AC(12)

---

**Decreased skeletal muscle mitochondrial DNA in patients treated with high-dose simvastatin has been observed.** - GMI Summary


**Article Published Date**: May 01, 2007

**Authors**: B A Schick, R Laaksonen, J J Frohlich, H Päivä, T Lehtimäki, K H Humphries, H C F Côté

**Study Type**: Human Study

**Additional Links**

**Diseases**: Mitochondrial Dysfunction : CK(95) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

---

**Statin use may be contraindicated in hypothyroidism.** - GMI Summary
Rosuvastatin's hepatotoxic potential may due to its exceptionally high rate of uptake in the liver. - GMI Summary

Pravastatin therapy was associated with an increasing risk of cancer as age increases. - GMI Summary

Statin therapy may result in progressive myopathy with up-regulation of MHC-I associated with an endoplasmic reticulum stress response. - GMI Summary
Simvastatin disrupts IGF-1 signaling by decreasing its activity. - GMI Summary


Authors: Takeharu Ogura, Yoshiyuki Tanaka, Tetsushi Nakata, Tomoko Namikawa, Hirofumi Kataoka, Yoshikazu Ohtsubo

Study Type: In Vitro Study

Additional Links


Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)

Simvastatin exhibits neurotoxicity in the animal model. - GMI Summary


Authors: Veronique E Miron, Sathyanath Rajasekharan, Andrew A Jarjour, Scott S Zamvil, Timothy E Kennedy, Jack P Antel

Study Type: Animal Study

Additional Links

Diseases: Multiple Sclerosis: CK(664): AC(130), Statin-Induced Pathologies: CK(1470): AC(206)

Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Statin-induced inhibition of protein synthesis is an underlying mechanism for statin-induced cardiomyocyte cell death. - GMI Summary


Authors: Simon W Rabkin, Parth Lodha, Jennifer Y Kong

Study Type: In Vitro Study

Additional Links

Diseases: Heart Failure: CK(452): AC(85), Statin-Induced Pathologies: CK(1470): AC(206)

Pharmacological Actions: Apoptotic: CK(1446): AC(1045)

Problem Substances: Lovastatin: CK(63): AC(12), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Cardiotoxic: CK(467): AC(53), Cytotoxic: CK(45): AC(28)

Statins have been associated with cell death in primary neuronal culture. - GMI Summary


Authors: Pia März, Uwe Otten, André R Miserez

Study Type: In Vitro Study

Additional Links

Diseases: Neurotoxicity: CK(8): AC(4), Statin-Induced Pathologies: CK(1470): AC(206)


Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)
Psychiatric adverse reactions associated with cholesterol-lowering drugs have been reported.

- GMI Summary


Authors: Michael Tatley, Ruth Savage

Study Type: Human Study

Additional Links

Diseases: Aggression: CK(37) : AC(5), Depression: Unipolar: CK(442) : AC(69), Memory Disorders: Drug-Induced: CK(47) : AC(9), Psychiatric Disorders: CK(47) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Fenofibrates: CK(83) : AC(11), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Simvastatin decreases coenzyme q10 levels in the left ventricle of the heart and skeletal muscle.

- GMI Summary

Pubmed Data: Physiol Res. 2007;56 Suppl 2:S49-54. Epub 2007 Sep 5. PMID: 17824807

Authors: J Kucharská, A Gvozdjáková, F Simko

Study Type: Animal Study

Additional Links

Diseases: Cardiovascular Diseases: CK(3885) : AC(623), Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Hypertension: CK(1341) : AC(257), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Cardiotoxic: CK(467) : AC(53), Myotoxicity: CK(259) : AC(11)

Asymptomatic statin-induced rhabdomyolysis after long-term therapy with the hydrophilic drug pravastatin has been reported.

- GMI Summary


Authors: Christoph Schindler, Marcus Thorns, Klaus Matschke, Sems Malte Tugtekin, Wilhelm Kirch

Study Type: Human: Case Report

Additional Links

Diseases: Rhabdomyolysis: CK(37) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Lupus erythematosus and other autoimmune diseases related to statin therapy have been reported.

- GMI Summary


Authors: B Noël

Study Type: Human Study

Additional Links

It is thought that as many as 25% of statin users who exercise may experience muscle fatigue, weakness, aches, and cramping due to statin therapy and potentially dismissed by the patient and physician. - GMI Summary


Authors: Amie J Dirks, Kimberly M Jones

Study Type: Review

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)


Pravastatin, as a potential cause for acute pancreatitis, has been reported. - GMI Summary


Authors: Constantine Tsigrelis, C S Pitchumoni

Study Type: Human: Case Report

Additional Links


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Pravastatin: CK(197): AC(31)

Simvastatin-induced decline in cognition has been reported. - GMI Summary


Authors: Kalpana P Padala, Prasad R Padala, Jane F Potter

Study Type: Human: Case Report

Additional Links


Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Lipophilic statin drugs are associated with impaired skeletal muscle mitochondria. - GMI Summary


Authors: P Kaufmann, M Török, A Zahno, K M Waldhauser, K Brecht, S Krähenbühl

Study Type: Animal Study

Additional Links

Statin drugs have been linked to neurotoxicity. - GMI Summary

Article Published Date: Oct 01, 2006
Authors: J J de Langen, E P van Puijenbroek
Study Type: Human Study

Eosinophilic pleural effusion caused by simvastatin after 13 years of exposure has been reported. - GMI Summary

Article Published Date: Oct 01, 2006
Authors: Mariam Roncato-Sabéran, Laurent Hustache-Mathieu, Bruno Hoen
Study Type: Human: Case Report

Statin drugs induce ultrastructural damage in skeletal muscle in patients without myalgia. - GMI Summary

Pubmed Data: J Pathol. 2006 Sep;210(1):94-102. PMID: 16799920
Article Published Date: Sep 01, 2006
Authors: A Draeger, K Monastyrskaya, M Mohaupt, H Hoppeler, H Savolainen, C Allemann, E B Babiychuk
Study Type: Human Study

Myopathy is a therapeutic limitation of statin drug therapy. - GMI Summary

Article Published Date: Sep 01, 2006
Authors: Atul Tiwari, Vinay Bansal, Anita Chugh, Kasim Mookhtiar
Study Type: Review
Statins may unmask a latent pathology involving an impairment of calcium homeostasis such as malignant hyperthermia (MH). - GMI Summary

Article Published Date: Aug 15, 2006
Authors: S Guis, D Figarella-Branger, J P Mattei, F Nicoli, Y Le Fur, G Kozak-Ribbens, J F Pellissier, P J Cozzone, N Amabile, D Bendahan
Study Type: Human Study
Additional Links
Diseases: Calcium Homeostasis: Impairment: CK(10) : AC(1), Malignant Hyperthermia : CK(10) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Short-term memory loss associated with rosvastatin has been reported. - GMI Summary

Article Published Date: Aug 01, 2006
Authors: Laura Galatti, Giovanni Polimeni, Francesco Salvo, Marcello Romani, Aurelio Sessa, Edoardo Spina
Study Type: Human: Case Report
Additional Links
Diseases: Memory Disorders : CK(171) : AC(55), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Rosuvastatin : CK(28) : AC(6), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Gynecomastia may be associated with atorvastatin therapy. - GMI Summary

Article Published Date: Aug 01, 2006
Authors: Kimberly B Hammons, Rebecca F Edwards, William Y Rice
Study Type: Human: Case Report
Additional Links
Diseases: Gynecomastia : CK(29) : AC(7), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Statin treatment may contribute to presymptomatic neuromuscular disorders. - GMI Summary

Article Published Date: Jul 24, 2006
Authors: Georgios Tsivgoulis, Konstantinos Spengos, Nikolaos Karandreas, Marios Panas, Athina Kladi, Panagiota Manta
Study Type: Human: Case Report
Additional Links
Diseases: Myopathies : CK(199) : AC(18), Neuromuscular Diseases : CK(11) : AC(2), Presymptomatic Metabolic Myopathy : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Statin drugs may cause high elevations of creatine phosphokinase (CK) in patients with unnoticed hypothyroidism. - GMI Summary
**Exposure to atorvastatin is associated with lactone and acid metabolites that are increased several-fold in patients with atorvastatin-induced myopathy.** - GMI Summary

**The incidence of statin-induced rhabdomyolysis is higher in practice than in controlled trials in which high-risk subjects are excluded.** - GMI Summary

**Proteinuria is a known adverse effect of statin use.** - GMI Summary

**Unilateral blepharoptosis is an unrecognized side effect of statin treatment.** - GMI Summary
<table>
<thead>
<tr>
<th>Study Type</th>
<th>Human: Case Report</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diseases</strong></td>
<td>Blepharoptosis: CK(3) \cdot AC(1), Myositis: Focal: CK(6) \cdot AC(2), Statin-Induced Pathologies: CK(1470) \cdot AC(206)</td>
</tr>
<tr>
<td><strong>Pharmacological Actions</strong></td>
<td>Anticholesteremic Agents: CK(298) \cdot AC(38)</td>
</tr>
<tr>
<td><strong>Problem Substances</strong></td>
<td>Atorvastatin: CK(231) \cdot AC(37), Statin Drugs: CK(3705) \cdot AC(437)</td>
</tr>
</tbody>
</table>

**Atorvastatin may cause nightmares.** - GMI Summary

<table>
<thead>
<tr>
<th>Pubmed Data</th>
<th>BMJ. 2006 Apr 22 ;332(7547):950. PMID: 16627511</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article Published Date</td>
<td>Apr 22, 2006</td>
</tr>
<tr>
<td>Authors</td>
<td>Peter J H Smak Gregoor</td>
</tr>
<tr>
<td><strong>Diseases</strong></td>
<td>Nightmare: CK(10) \cdot AC(1), Statin-Induced Pathologies: CK(1470) \cdot AC(206)</td>
</tr>
<tr>
<td><strong>Pharmacological Actions</strong></td>
<td>Anticholesteremic Agents: CK(298) \cdot AC(38)</td>
</tr>
<tr>
<td><strong>Problem Substances</strong></td>
<td>Atorvastatin: CK(231) \cdot AC(37)</td>
</tr>
</tbody>
</table>

**Statin-associated myasthenia gravis has been reported.** - GMI Summary

<table>
<thead>
<tr>
<th>Pubmed Data</th>
<th>Medicine (Baltimore). 2006 Mar ;85(2):82-5. PMID: 16609346</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article Published Date</td>
<td>Mar 01, 2006</td>
</tr>
<tr>
<td>Authors</td>
<td>Valerie Purvin, Aki Kawasaki, Kyle H Smith, Anat Kesler</td>
</tr>
<tr>
<td><strong>Diseases</strong></td>
<td>Myasthenia Gravis: CK(70) \cdot AC(11), Statin-Induced Pathologies: CK(1470) \cdot AC(206)</td>
</tr>
<tr>
<td><strong>Pharmacological Actions</strong></td>
<td>Anticholesteremic Agents: CK(298) \cdot AC(38)</td>
</tr>
<tr>
<td><strong>Problem Substances</strong></td>
<td>Pravastatin: CK(197) \cdot AC(31), Simvastatin: CK(657) \cdot AC(114), Statin Drugs: CK(3705) \cdot AC(437)</td>
</tr>
</tbody>
</table>

**Pravastatin-induced lichenoid drug eruption has been reported.** - GMI Summary

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Article Published Date</td>
<td>Feb 01, 2006</td>
</tr>
<tr>
<td>Authors</td>
<td>Vernon Sc Pua, Richard A Scolyer, Ross Stc Barnetson</td>
</tr>
<tr>
<td><strong>Diseases</strong></td>
<td>Lichenoid Dermatitis: CK(9) \cdot AC(3), Statin-Induced Pathologies: CK(1470) \cdot AC(206)</td>
</tr>
<tr>
<td><strong>Pharmacological Actions</strong></td>
<td>Anticholesteremic Agents: CK(298) \cdot AC(38)</td>
</tr>
<tr>
<td><strong>Problem Substances</strong></td>
<td>Pravastatin: CK(197) \cdot AC(31), Statin Drugs: CK(3705) \cdot AC(437)</td>
</tr>
</tbody>
</table>

**Statin treatment contributes to erectile dysfunction.** - GMI Summary

<table>
<thead>
<tr>
<th>Pubmed Data</th>
<th>Int J Clin Pract. 2006 Feb ;60(2):141-5. PMID: 16451283</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article Published Date</td>
<td>Feb 01, 2006</td>
</tr>
<tr>
<td>Authors</td>
<td>H Solomon, Y P Samarasinghe, M D Feher, J Man, H Rivas-Toro, P J Lumb, A S Wierzbicki, G Jackson</td>
</tr>
<tr>
<td><strong>Diseases</strong></td>
<td>Erectile Dysfunction: CK(403) \cdot AC(35), Statin-Induced Pathologies: CK(1470) \cdot AC(206)</td>
</tr>
<tr>
<td><strong>Pharmacological Actions</strong></td>
<td>Anticholesteremic Agents: CK(298) \cdot AC(38)</td>
</tr>
<tr>
<td><strong>Problem Substances</strong></td>
<td>Statin Drugs: CK(3705) \cdot AC(437)</td>
</tr>
</tbody>
</table>

**Recurrent acute pancreatitis during pravastatin-therapy has been reported.** - GMI Summary

|--------------------------------|---------------------------------------------------------------|
Interstitial lung disease has been reported as a side effect of statins. - GMI Summary

Statins may cause clinically important muscle symptoms without inducing a marked creatine kinase elevation. - GMI Summary

Acute cholestatic hepatitis associated with atorvastatin use has been reported. - GMI Summary

Pancreatitis, while rare, is a possible side effect of taking statin drugs. - GMI Summary
Statin drugs have been linked to myopathy, including rhabdomyolysis. - GMI Summary

**Pubmed Data**: Arch Intern Med. 2005 Dec 12-26;165(22):2671-6. PMID: 16344427

**Article Published Date**: Dec 12, 2005

**Authors**: Karen E Hansen, Julie P Hildebrand, Edwin E Ferguson, James H Stein

**Study Type**: Human Study

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

Muscular symptoms were reported by 832 patients (10.5%), with a median time of onset of 1 month following initiation of statin therapy. - GMI Summary

**Pubmed Data**: Cardiovasc Drugs Ther. 2005 Dec ;19(6):403-14. PMID: 16453090

**Article Published Date**: Dec 01, 2005

**Authors**: Eric Bruckert, Gilles Hayem, Sylvie Dejager, Caroline Yau, Bernard Bégaud

**Study Type**: Human Study

**Additional Links**

**Diseases**: Muscle Disorders : CK(10) : AC(1), Myalgias : CK(25) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

Exercise exacerbates cerivastatin-induced skeletal muscle toxicity. - GMI Summary

**Pubmed Data**: Toxicol Sci. 2005 Dec ;88(2):551-61. Epub 2005 Sep 1. PMID: 16141437

**Article Published Date**: Dec 01, 2005

**Authors**: Jennifer L Seachrist, Cho-Ming Loi, Mark G Evans, Kay A Criswell, Charles E Rothwell

**Study Type**: Human Study

**Additional Links**


**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

Some 10% to 20% of heart transplant patients appear to suffer adverse side effects of initial statin therapy. - GMI Summary

**Pubmed Data**: Transplant Proc. 2005 Nov ;37(9):4071-3. PMID: 16386629

**Article Published Date**: Nov 01, 2005


**Study Type**: Human Study

**Additional Links**


**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)
Statin-related myopathy is associated with low muscle levels of coenzyme Q10. - GMI Summary


**Article Published Date**: Nov 01, 2005

**Authors**: Costanza Lamperti, Ali B Naini, Valeria Lucchini, Alessandro Prelle, Nereo Bresolin, Maurizio Moggio, Monica Sciaccio, Petra Kaufmann, Salvatore DiMauro

**Study Type**: Human Study

**Additional Links**

**Diseases**: [Mitochondrial Myopathies](#) : CK(33) : AC(5), [Myopathy](#) : CK(50) : AC(6), [Statin-Induced Pathologies](#) : CK(1470) : AC(206)

**Problem Substances**: [Statin Drugs](#) : CK(3705) : AC(437)

Statin toxicity may mimic viral hepatitis. - GMI Summary


**Article Published Date**: Nov 01, 2005

**Authors**: F Cokça, S Ozkan, G Nergisoglu, O Memikoglu, A Azap

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: [Hepatitis: Acute](#) : CK(5) : AC(1), [Rhabdomyolysis](#) : CK(37) : AC(6), [Statin-Induced Pathologies](#) : CK(1470) : AC(206)

**Pharmacological Actions**: [Anticholesteremic Agents](#) : CK(298) : AC(38)

**Problem Substances**: [Simvastatin](#) : CK(657) : AC(114)

**Adverse Pharmacological Actions**: [Myotoxicity](#) : CK(259) : AC(11), [Nephrotoxic](#) : CK(133) : AC(33)

Statin-associated myopathy with normal creatine kinase levels has been reported. - GMI Summary

**Pubmed Data**: APMIS. 2005 Sep ;113(9):635-7. PMID: 16218940

**Article Published Date**: Sep 01, 2005

**Authors**: Marius Trøseid, Olaf A Henriksen, Sigurd Lindal

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: [Myopathies](#) : CK(199) : AC(18), [Statin-Induced Pathologies](#) : CK(1470) : AC(206)

**Problem Substances**: [Simvastatin](#) : CK(657) : AC(114)

Drug-induced acute autoimmune hepatitis during combination therapy with atorvastatin and ezetimibe has been reported. - GMI Summary

**Pubmed Data**: Ann Clin Biochem. 2005 Sep ;42(Pt 5):402-4. PMID: 16168199

**Article Published Date**: Sep 01, 2005

**Authors**: Charles van Heyningen

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: [Drug-Induced Toxicity](#) : CK(503) : AC(76), [Hepatitis](#) : CK(35) : AC(18), [Statin-Induced Pathologies](#) : CK(1470) : AC(206)

**Pharmacological Actions**: [Anticholesteremic Agents](#) : CK(298) : AC(38)
Rhabdomyolysis from simvastatin triggered by infection and muscle exertion has been reported. - GMI Summary


Article Published Date: Aug 01, 2005

Authors: Josef Finsterer, Georg Zuntner

Study Type: Human: Case Report

Additional Links

Diseases: Rhabdomyolysis: CK(37) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Hypotension and eosinophilia with atorvastatin has been reported. - GMI Summary


Article Published Date: Aug 01, 2005

Authors: J P Hampson, D Smith, R Cowell, A Baker

Study Type: Human: Case Report

Additional Links

Diseases: Eosinophilia: CK(13) : AC(2), Hypotension: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Atorvastatin: CK(231) : AC(37)

Statin neuropathy misdiagnosed as diabetic autoimmune polyneuropathy has been reported. - GMI Summary


Article Published Date: Aug 01, 2005

Authors: Tom Brooks Vaughan, David S H Bell

Study Type: Human: Case Report

Additional Links

Diseases: Neuropathies: CK(322) : AC(62), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Drug induced pancreatitis might be a class effect of statin drugs. - GMI Summary


Article Published Date: Jul 01, 2005

Authors: Sonal Singh

Study Type: Review

Additional Links

Diseases: Pancreatitis: CK(131) : AC(25), Statin-Induced Pathologies: CK(1470) : AC(206)
**Gestational exposure to lovastatin followed by cardiac malformation misclassified as holoprosencephaly has been reported.** - GMI Summary


**Article Published Date**: Jun 30, 2005

**Authors**: Robin J Edison, Maximilian Muenke

**Study Type**: Human: Case Report

**Diseases**: Birth Defects: CK(154) : AC(24), Pregnancy: Environmental Exposures: CK(20) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Teratogenic : CK(271) : AC(50)

---

**Forty-five of 358 statin-treated patients demonstrated a 15% increase in LDL cholesterol levels, leading to suspicion of statin escape phenomenon.** - GMI Summary


**Article Published Date**: Jun 01, 2005

**Authors**: D Yeshurun, G Slobodin, D Keren, N Elias

**Study Type**: Human Study

**Diseases**: Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

---

**Atorvastatin-induced severe gastric ulceration has been reported.** - GMI Summary

**Pubmed Data**: World J Gastroenterol. 2005 May 28;11(20):3159-60. PMID: 15918210

**Article Published Date**: May 28, 2005

**Authors**: Ihab I El-Hajj, Fadi H Mourad, Nina S Shabb, Kassem A Barada

**Study Type**: Human: Case Report

**Diseases**: Gastric Ulcer : CK(247) : AC(93), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Atorvastatin : CK(231) : AC(37)

**Adverse Pharmacological Actions**: Ulcerogenic : CK(34) : AC(8)

---

**The adverse effects of statins may be amplified in the elderly, and include cancer, neurodegenerative conditions, heart failure and accelerated aging.** - GMI Summary


**Article Published Date**: May 01, 2005

**Authors**: Beatrice Alexandra Golomb

**Study Type**: Commentary

**Diseases**: Cancers: All : CK(6410) : AC(2509), Elderly: Age Specific Diseases : CK(348) : AC(33), Heart Failure : CK(452) : AC(85), Neurodegenerative Diseases : CK(1481) : AC(410), Statin-Induced Pathologies : CK(1470) : AC(206)
Review: molecular pathogenesis of statin myopathy. - GMI Summary


Article Published Date: May 01, 2005

Authors: Steven K Baker

Study Type: Review

Additional Links

Diseases: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Gitelman's syndrome presenting as intolerance to statin therapy has been reported. - GMI Summary


Article Published Date: May 01, 2005

Authors: Danielle B Freedman, David Housley

Study Type: Human: Case Report

Additional Links

Diseases: Gitelman's syndrome (False Presentation) : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

Rosuvastatin-associated hepatitis with autoimmune features has been reported. - GMI Summary

Pubmed Data: Eur J Gastroenterol Hepatol. 2005 May ;17(5):589-90. PMID: 15827453

Article Published Date: May 01, 2005

Authors: L M M Wolters, H R Van Buuren

Study Type: Human: Case Report

Additional Links

Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Hepatitis: Autoimmune : CK(16) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances: Rosuvastatin : CK(28) : AC(6)

Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Statins alter mitochondrial function which may be associated with myotoxicity in skeletal muscle. - GMI Summary

Pubmed Data: Biochem Biophys Res Commun. 2005 Apr 15 ;329(3):1067-75. PMID: 15752763

Article Published Date: Apr 15, 2005

Authors: Pascal Sirvent, Jacques Mercier, Guy Vassort, Alain Lacampagne

Study Type: In Vitro Study

Additional Links

Diseases: Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Simvastatin : CK(657) : AC(114)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)
**Statin drugs decrease de novo cholesterol synthesis and increase apoptosis in rat and human periovulatory granulosa cells.** - GMI Summary


**Article Published Date**: Mar 01, 2005

**Authors**: Emilia Rung, P Anders Fräberg, Ruijin Shao, D G Joakim Larsson, Eva Ch Nielsen, Per-Arne Svensson, Björn Carlsson, Lena M S Carlsson, Håkan Billig

**Study Type**: In Vitro Study

---

**Some patients on simvastatin could be vulnerable to depression, violence, or suicide during the initial treatment period.** - GMI Summary

**Pubmed Data**: Psychiatry Res. 2005 Feb 28;133(2-3):197-203. PMID: [15740995](https://pubmed.ncbi.nlm.nih.gov/15740995/)

**Article Published Date**: Feb 28, 2005

**Authors**: Jan Vevera, Zdeněk Fisar, Tomás Kvasnicka, Hanus Zdenek, Lucie Stárková, Richard Ceska, Hana Papezová

**Study Type**: Review

---

**Atorvastatin reduces serum coenzyme Q10 levels (reduced and oxidized forms) in patients with high cholesterol.** - GMI Summary


**Article Published Date**: Jan 01, 2005

**Authors**: Hiroshi Mabuchi, Toshinori Higashikata, Masaaki Kawashiri, Shoji Katsuda, Mihoko Mizuno, Atsushi Nohara, Akihiro Inazu, Junji Koizumi, Junji Kobayashi

**Study Type**: Human Study

---

**Acute pancreatitis associated with combined lisinopril and atorvastatin therapy has been reported.** - GMI Summary


**Article Published Date**: Jan 01, 2005

**Authors**: Mehmet Kanbay, Haldun Sekuk, Ugur Yilmaz, Gürden Gur, Sedat Boyacioglu

**Study Type**: Human: Case Report

---
Statin drug use results in decrements in cognitive functioning. - GMI Summary

Article Published Date: Dec 01, 2004
Authors: Matthew F Muldoon, Christopher M Ryan, Susan M Sereika, Janine D Flory, Stephen B Manuck
Study Type: Human Study
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Lipid lowering drugs increase the risk of peripheral neuropathy. - GMI Summary

Pubmed Data: J Epidemiol Community Health. 2004 Dec;58(12):1047-51. PMID: 15547071
Article Published Date: Dec 01, 2004
Authors: Giovanni Corrao, Antonella Zambon, Lorenza Bertù, Edoardo Botteri, Olivia Leoni, Paolo Contiero
Study Type: Human Study
Additional Links
Diseases: Peripheral Neuropathies: CK(111): AC(24), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Cholesterol Lowering Drugs: CK(1038): AC(90), Fenofibrates: CK(83): AC(11), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Atorvastatin worsens left ventricular diastolic function, which is improved through coenzyme q10 supplementation. - GMI Summary

Pubmed Data: Am J Cardiol. 2004 Nov 15;94(10):1306-10. PMID: 15541254
Article Published Date: Nov 15, 2004
Authors: Marc A Silver, Peter H Langsjoen, Szabolcs Szabo, Harish Patil, Allan Zelinger
Study Type: Human Study
Additional Links
Substances: Coenzyme Q10: CK(503): AC(103)
Diseases: Coenzyme Q10 Deficiency: CK(42): AC(5), Heart Failure: CK(452): AC(85), Hypertension: CK(1341): AC(257), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Cardiotoxic: CK(467): AC(53)

Statin induced pancreatitis has been reported. - GMI Summary

Article Published Date: Nov 01, 2004
Authors: Sonal Singh, Amit Nautiyal, James G Dolan
Study Type: Human: Case Report
Additional Links
Statin drugs induce cell death in rat myotubes. - GMI Summary

Article Published Date: Nov 01, 2004
Authors: Timothy E Johnson, Xiaohua Zhang, Kimberly B Bleicher, Gary Dysart, Amy F Loughlin, William H Schaefer, Diane R Umbehauer
Study Type: In Vitro Study
Additional Links
Diseases: Myopathies: CK(199): AC(18), Statin-Induced Pathologies: CK(1470): AC(206)
Pharmacological Actions: Apoptotic: CK(1446): AC(1045)
Problem Substances: Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Statins and fenofibrates may exert their wide range of adverse side effects through interfering with selenoprotein expression. - GMI Summary

Article Published Date: Oct 01, 2004
Authors: Bernd Moosmann, Christian Behl
Study Type: Review
Additional Links
Additional Keywords: Drug-Nutrient Depletion: CK(64): AC(10), Statin-Selenium Deficiency: CK(4): AC(4)
Problem Substances: Fenofibrates: CK(83): AC(11), Statin Drugs: CK(3705): AC(437)

Statin drugs disrupt IGF-I signaling. - GMI Summary

Article Published Date: Sep 10, 2004
Authors: Kirk W Siddals, Emma Marshman, Melissa Westwood, J Martin Gibson
Study Type: In Vitro Study
Additional Links
Problem Substances: Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)

Statin precipitated lactic acidosis has been reported. - GMI Summary

Pubmed Data: J Clin Pathol. 2004 Sep;57(9):989-90. PMID: 15333664
Article Published Date: Sep 01, 2004
Authors: R Neale, T M Reynolds, W Saweirs
Study Type: Human: Case Report
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Atorvastatin: CK(231): AC(37)
Statin-associated peripheral neuropathy has been recorded in the biomedical literature. - GMI Summary

Pubmed Data: Pharmacotherapy. 2004 Sep;24(9):1194-203. PMID: 15460180

Authors: Pang H Chong, Alexandra Boskovich, Natasa Stevkovic, Russell E Bartt

Study Type: Human Study

Grapefruit consumption may interfere with statin pharmokinetics. - GMI Summary


Authors: Jari J Lilja, Mikko Neuvonen, Pertti J Neuvonen

Study Type: Human Study

Statin drugs (HMG-CoA reductase inhibitors) induce programmed cell death in human liver cells. - GMI Summary


Authors: Toshio Kubota, Koji Fujisaki, Yoshinori Itoh, Takahisa Yano, Toshiaki Sendo, Ryozo Oishi

Study Type: In Vitro Study

Simvastatin-induced mononeuropathy has been reported. - GMI Summary


Authors: Rosana H Scola, Ana P Trentin, Francisco M B Germiniani, Elcio J Piovesan, Lineu C Werneck

Study Type: Human: Case Report

Atorvastatin decreases the coenzyme Q10 level in the blood of patients at risk for cardiovascular disease and stroke. - GMI Summary

Central nervous system and limb anomalies have been reported in first-trimester statin exposure. - GMI Summary


Among top sports performers only about 20% tolerate statin treatment without side-effects. - GMI Summary


Severe irritability associated with statin cholesterol-lowering drugs has been reported. - GMI Summary

Pubmed Data: QJM. 2004 Apr ;97(4):229-35. PMID: 15028853

Ocular hemorrhage has been reported in 90 cases as an adverse effect of statin drugs. - GMI
Summary

Article Published Date: Apr 01, 2004
Authors: F W Fraunfelder
Study Type: Human: Case Report
Additional Links
Diseases: Intraocular Hemorrhage: CK(20): AC(2), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Statin Drugs: CK(3705): AC(437)

**Statin drugs deplete dolichol, which may contribute to statin toxicity and neurodegenerative diseases. - GMI Summary**

Pubmed Data: J Alzheimers Dis. 2004 Apr;6(2):129-35. PMID: 15096696
Article Published Date: Apr 01, 2004
Authors: E Bergamini, R Bizzari, G Cavallini, B Cerbai, E Chiellini, A Donati, Z Gori, A Manfrini, I Parentini, F Signori, I Tamburini
Study Type: Review
Additional Links
Pharmacological Actions: Antioxidants: CK(3231): AC(1251)
Problem Substances: Statin Drugs: CK(3705): AC(437)

**Polymyositis induced or associated with lipid-lowering drugs has been reported. - GMI Summary**

Article Published Date: Apr 01, 2004
Authors: A-L Fauchais, I Iba Ba, P Maurage, X Kyndt, D Bataille, E Hachulla, D Parent, V Queyrel, M Lambert, U Michon Pasturel, P-Y Hatron, P Vahille, B Devulder
Study Type: Human: Case Report
Additional Links
Diseases: Polymyositis: CK(7): AC(3), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Cholesterol Lowering Drugs: CK(1038): AC(90), Statin Drugs: CK(3705): AC(437)

**Statin drugs may induce selenium deficiency which may explain many of its enigmatic side effects. - GMI Summary**

Article Published Date: Mar 13, 2004
Authors: Bernd Moosmann, Christian Behl
Study Type: Review
Additional Links
Additional Keywords: Statin-Selenium Deficiency: CK(4): AC(4)
Problem Substances: Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)
Statin-associated rhabdomyolysis triggered by grapefruit consumption has been reported. - GMI Summary

Article Published Date : Feb 24, 2004
Authors : Jens P Dreier, Matthias Endres
Study Type : Human: Case Report
Additional Links
Substances : Grapefruit : CK(91) : AC(30)
Diseases : Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38), Enzyme Inhibitors : CK(340) : AC(201)
Problem Substances : Simvastatin : CK(657) : AC(114)

Cholesterol lowering medications also alter measurable hormonal concentrations. - GMI Summary

Article Published Date : Feb 01, 2004
Authors : T Ormiston, O M Wolkowitz, V I Reus, R Johnson, F Manfredi
Study Type : Human Study
Additional Links
Problem Substances : Atorvastatin : CK(231) : AC(37), Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

Rhabdomyolysis induced by a single dose of a statin has been reported. - GMI Summary

Pubmed Data : Heart. 2004 Jan ;90(1):e3. PMID: 14676266
Article Published Date : Jan 01, 2004
Authors : S Jamil, P Iqbal
Study Type : Human: Case Report
Additional Links
Diseases : Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Lupus-like syndrome associated with statin therapy has been reported. - GMI Summary

Pubmed Data : Dermatology. 2004 ;208(3):276-7. PMID: 15118389
Article Published Date : Jan 01, 2004
Authors : Bernard Noël, Renato G Panizzon
Study Type : Human: Case Report
Additional Links
Diseases : Lupus-Like Syndrome : CK(10) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Immunotoxic : CK(129) : AC(21)

Lichenoid drug eruption with fluvastatin and lovastatin has been reported. - GMI Summary

**Alcohol and atorvastatin interact to adversely affect intestinal villi structure.** - GMI Summary


**The statin drug atorvastatin induces adverse ultrastructural changes in muscle cells apparent through electron microscopy.** - GMI Summary


**Statins appear to cause muscle damage and impair oxidative metabolism.** - GMI Summary


**Lovastatin-induced cardiac toxicity involves both oncotic and apoptotic cell death.** - GMI Summary

**Atorvastatin-induced polyneuropathy has been reported.** - GMI Summary


Article Published Date: Nov 04, 2003

Authors: Chad Silverberg

Study Type: Human: Case Report


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Atorvastatin: CK(231): AC(37)

Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Review: muscle symptoms associated with lipid-lowering drugs. - GMI Summary

Pubmed Data: Cardiovasc Drugs Ther. 2003 Sep-Nov;17(5-6):459-65. PMID: 15107601

Article Published Date: Sep 01, 2003

Authors: Sylvia Franc, Sylvie Dejager, Eric Bruckert, Marina Chauvenet, Philippe Giralt, Gerard Turpin

Study Type: Human Study


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

**Acute generalized exanthematous pustulosis (AGEP) induced by simvastatin has been reported.** - GMI Summary


Article Published Date: Sep 01, 2003

Authors: T Oskay, L Kutluay

Study Type: Human: Case Report


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Simvastatin: CK(657): AC(114)

**Autoimmune hepatitis associated with atorvastatin use has been reported.** - GMI Summary


Article Published Date: Aug 01, 2003

Authors: Nicoletta Pelli, Maurizio Setti, Paola Ceppa, Carlo Toncini, Francesco Indiveri
Acute pancreatitis due to pravastatin therapy has been reported. - GMI Summary

Pubmed Data: JOP. 2003 May ;4(3):129-32. PMID: 12743419

Article Published Date: May 01, 2003

Authors: George K Anagnostopoulos, Stavros Tsiakos, George Margantinis, Panagiotis Kostopoulos, Dimitrios Arvanitidis

Study Type: Human: Case Report

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

Statin therapy has been associated with small fibre neuropathy. - GMI Summary

Pubmed Data: J Neurol Sci. 2003 Apr 15 ;208(1-2):105-8. PMID: 12639733

Article Published Date: Apr 15, 2003

Authors: Y L Lo, T H Leoh, L M Loh, C E Tan

Study Type: Human: Case Report

Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Statin-associated myopathy is a significant problem with a prevalence rate between 1-5%. - GMI Summary

Pubmed Data: JAMA. 2003 Apr 2 ;289(13):1681-90. PMID: 12672737

Article Published Date: Apr 02, 2003

Authors: Paul D Thompson, Priscilla Clarkson, Richard H Karas

Study Type: Review

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Simvastatin may adversely affect mood and testosterone in men. - GMI Summary


Article Published Date: Feb 01, 2003

Authors: Markku T Hyypä, Erkki Kronholm, Arja Virtanen, Aila Leino, Antti Jula

Study Type: Human Study

Additional Links
Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Hepatitis: Autoimmune : CK(16) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)

---

**Simvastatin-induced lichen planus pemphigoides has been observed.** - GMI Summary

**Pubmed Data:** Ann Dermatol Venereol. 2003 Feb;130(2 Pt 1):187-90. PMID: [12671581](#)

**Article Published Date:** Feb 01, 2003

**Authors:** P-E Stoebner, C Michot, C Ligeron, L Durand, J Meynadier, L Meunier

**Study Type:** Human: Case Report

**Additional Links**


Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

---

**Statin use is associated with with neuropathy.** - GMI Summary

**Pubmed Data:** Ann Pharmacother. 2003 Feb;37(2):274-8. PMID: [12549960](#)

**Article Published Date:** Feb 01, 2003

**Authors:** James M Backes, Patricia A Howard

**Study Type:** Human Study

**Additional Links**


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

---

**Statins lower plasma and lymphocyte ubiquinol/ubiquinone (coQ10) levels.** - GMI Summary

**Pubmed Data:** Biofactors. 2003;18(1-4):113-24. PMID: [14695926](#)

**Article Published Date:** Jan 01, 2003

**Authors:** Siro Passi, Andrea Stancato, Enrico Aleo, Anna Dmitrieva, Gian Paolo Littarru

**Study Type:** Human Study

**Additional Links**

Diseases: Coenzyme Q10 Deficiency: CK(42): AC(5), Statin-Induced Pathologies: CK(1470): AC(206)


---

**The depletion of coq10 by statin drugs may be contributing to increasing rates of congestive heart failure.** - GMI Summary

**Pubmed Data:** Biofactors. 2003;18(1-4):101-11. PMID: [14695925](#)

**Article Published Date:** Jan 01, 2003

**Authors:** Peter H Langsjoen, Alena M Langsjoen

**Study Type:** Review

**Additional Links**

Diseases: Drug-Induced Nutrient Depletion: Statin Drugs: CK(115): AC(17), Heart Failure: CK(452): AC(85), Statin-Induced Pathologies: CK(1470): AC(206)

Additional Keywords: Drug-Nutrient Depletion: CK(64): AC(10), Statin-Coq10 Depletion: CK(36): AC(7)

Problem Substances: Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Cardiotoxic : CK(467) : AC(53)

**Chronic actinic dermatitis secondary to simvastatin has been reported.** - GMI Summary


Article Published Date: Dec 01, 2002

Authors: S A Holme, A D Pearse, A V Anstey

Study Type: Human: Case Report

Additional Links

Diseases: Dermatitis: Actinic : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Simvastatin : CK(657) : AC(114)

**Statin-induced myositis migrans has been reported.** - GMI Summary


Article Published Date: Nov 30, 2002

Authors: Helmut Sinzinger

Study Type: Human: Case Report

Additional Links

Diseases: Myositis : CK(15) : AC(2), Myositis Migrans : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances: Atorvastatin : CK(231) : AC(37), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114)

**Acute pancreatitis induced by fluvastatin therapy has been reported.** - GMI Summary


Article Published Date: Nov 01, 2002

Authors: Curt Tysk, Adel Y Al-Eryani, Amin A Shawabkeh

Study Type: Human: Case Report

Additional Links

Diseases: Pancreatitis : CK(131) : AC(25), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Fluvastatin : CK(13) : AC(3), Statin Drugs : CK(3705) : AC(437)

**Lipid-lowering drugs may contribute to erectile dysfunction.** - GMI Summary


Article Published Date: Oct 01, 2002

Authors: Marco H Blanker, Arianne P Verhagen

Study Type: Review

Additional Links

Diseases: Erectile Dysfunction : CK(403) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Cholesterol Lowering Drugs : CK(1038) : AC(90), Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)

**Cholesterol-lowering drugs may increase the risk of perioperative mortality.** - GMI Summary

Pubmed Data: Cardiovasc Drugs Ther. 2002 Sep ;16(5):471-5. PMID: 12652117

Article Published Date: Sep 01, 2002
Multiorgan failure induced by atorvastatin has been reported. - GMI Summary


Alopecia associated with atorvastatin has been reported. - GMI Summary

Pubmed Data: Am J Med. 2002 Aug 1 ;113(2):171. PMID: 12133763

Acute cholestatic hepatitis induced by cerivastatin has been reported. - GMI Summary

Pubmed Data: Med Clin (Barc). 2002 May 18 ;118(18):717. PMID: 12042141

Long-term exposure to statin drugs may substantially increase the risk of polyneuropathy. - GMI Summary

Pubmed Data: Neurology. 2002 May 14 ;58(9):1333-7. PMID: 12011277
Ulcerative colitis after statin treatment has been reported. - GMI Summary

Pubmed Data: Postgrad Med J. 2002 May;78(919):286-7. PMID: 12151572

Article Published Date: May 01, 2002

Authors: W E Rea, D C S Durrant, D A R Boldy

Study Type: Human: Case Report

Additional Links

Diseases: Statin-Induced Pathologies: CK(1470) : AC(206), Ulcerative Colitis: CK(370) : AC(42)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Inflammatory: CK(109) : AC(26)

Statin-induced fibrotic nonspecific interstitial pneumonia has been reported. - GMI Summary

Pubmed Data: Eur Respir J. 2002 Mar;19(3):577-80. PMID: 11936540

Article Published Date: Mar 01, 2002

Authors: S Lantuejoul, E Brambilla, C Brambilla, G Devouassoux

Study Type: Human: Case Report

Additional Links

Diseases: Pneumonia: Interstitial: CK(4) : AC(2), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Pancreatitis associated with simvastatin plus fenofibrate. - GMI Summary


Article Published Date: Feb 01, 2002

Authors: Kevin B McDonald, Bryan G Garber, Marc M Perreault

Study Type: Human: Case Report

Additional Links

Diseases: Pancreatitis: CK(131) : AC(25), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Fenofibrates: CK(83) : AC(11), Simvastatin: CK(657) : AC(114)

Lipid-lowering drugs contribute to erectile dysfunction. - GMI Summary


Article Published Date: Feb 01, 2002

Authors: Kash Rizvi, John P Hampson, John N Harvey

Study Type: Meta Analysis

Additional Links

Diseases: Erectile Dysfunction: CK(403) : AC(35), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Cholesterol Lowering Drugs: CK(1038) : AC(90), Fenofibrates: CK(83) : AC(11), Statin Drugs: CK(3705) : AC(437)
Concomitant use of erythromycin and simvastatin may increase the cataract risk. - GMI

Summary

Pubmed Data: Arch Intern Med. 2001 Sep 10 ;161(16):2021-6. PMID: 11525705
Authors: R G Schlienger, W E Haefeli, H Jick, C R Meier

Muscular side effects associated with statin drug use are related to oxidative stress. - GMI

Summary

Authors: H Sinzinger, G Lupattelli, F Chehne, A Oguogho, C D Furberg

Linear IgA bullous dermatosis induced by atorvastatin has been observed. - GMI Summary

Authors: C König, A Eickert, K Scharfetter-Kochanek, T Krieg, N Hunzelmann

Users of lipid-lowering drugs are at increased risk of peripheral neuropathy. - GMI Summary

Authors: D Gaist, L A García Rodríguez, C Huerta, J Hallas, S H Sindrup

Lovastatin induces neuronal cell death through interacting with signal transduction pathways that cell control growth and survival. - GMI Summary
Increased lipid peroxidation in a patient with CK-elevation and muscle pain during statin therapy has been reported. - GMI Summary

Influenza vaccine has been reported to be a possible trigger of rhabdomyolysis induced acute renal failure in those taking statin drugs. - GMI Summary

Lovastatin may adversely affect neuropsychological tests of attention and psychomotor speed. - GMI Summary

Acute pancreatitis associated with atorvastatine therapy has been reported. - GMI Summary
Simvastatin exhibits neurotoxic properties. - GMI Summary

Pubmed Data: Brain Res. 2000 Mar 17;859(1):169-72. PMID: 10720627
Article Published Date: Mar 17, 2000
Authors: T Kumano, T Mutoh, H Nakagawa, M Kuriyama
Study Type: In Vitro Study
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114)
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Fatal rhabdomyolysis associated with simvastatin in a renal transplant patient has been reported. - GMI Summary

Article Published Date: Mar 01, 2000
Authors: W J Weise, C J Possidente
Study Type: Human: Case Report
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Rhabdomyolysis and acute renal failure due to statin-fibrate combinations has been reported. - GMI Summary

Pubmed Data: Cardiology. 2000;94(2):127-8. PMID: 11173785
Article Published Date: Jan 01, 2000
Authors: J B Oldemeyer, R J Lund, M Koch, A J Meares, R Dunlay
Study Type: Human: Case Report
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Simvastatin-induced lupus-like syndrome has been reported. - GMI Summary

Article Published Date: Jan 01, 2000
Authors: A Ahmad, M T Fletcher, T M Roy
Atorvastatin-induced cholestatic hepatitis in a young woman with systemic lupus erythematosus has been reported. - GMI Summary

**Article Published Date**: Aug 09, 1999
**Authors**: J Jiménez-Alonso, J M Osorio, F Gutiérrez-Cabello, A López de la Osa, L León, J D Mediavilla García

**Lovastatin induces neuronal cell death.** - GMI Summary

**Article Published Date**: Jun 01, 1999
**Authors**: M Michikawa, K Yanagisawa

**Acute cholestatic hepatitis associated with pravastatin has been reported.** - GMI Summary

**Pubmed Data**: Am J Gastroenterol. 1999 May ;94(5):1388-90. PMID: 10235223
**Article Published Date**: May 01, 1999
**Authors**: M Hartleb, G Rymarczyk, K Januszewski

**Type 2 diabetic patients patients treated with statin drugs have decreased coq10 levels and may be associated with subclinical diabetic cardiomyopathy reversible by CoQ10 supplementation.** - GMI Summary

**Pubmed Data**: Arzneimittelforschung. 1999 Apr;49(4):324-9. PMID: 10337451
Polymyalgia, hypersensitivity pneumonitis and other reactions have been reported in patients taking statin drugs. - GMI Summary

Long-term statin treatment may be associated with chronic peripheral neuropathy. - GMI Summary

Pravastatin accelerates aging effect on diaphragm mitochondrial respiratory function in rats. - GMI Summary
An adverse grapefruit juice-simvastatin interaction has been identified. - GMI Summary

Article Published Date: Nov 01, 1998
Authors: J J Lilja, K T Kivistö, P J Neuvonen
Study Type: Human Study
Additional Links
Substances: Grapefruit : CK(91) : AC(30)
Diseases: Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Systemic autoimmune reactions have been reported to be caused by statin drugs. - GMI Summary

Article Published Date: Nov 01, 1998
Authors: L Rudski, M A Rabinovitch, D Danoff
Study Type: Human: Case Report
Additional Links
Diseases: Autoimmune Diseases : CK(4016) : AC(752), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Immunotoxic : CK(129) : AC(21)

Atorvastatin-induced severe thrombocytopenia. - GMI Summary

Article Published Date: Oct 17, 1998
Authors: M L González-Ponte, M González-Ruiz, E Duvós, M A Gutiérrez-Iñiguez, J I Olalla, E Conde
Study Type: Human: Case Report
Additional Links
Diseases: Statin-Induced Pathologies : CK(1470) : AC(206), Thrombocytopenia : CK(602) : AC(23)
Pharmacological Actions: Anticholesteroleremic Agents : CK(298) : AC(38)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Cheilitis due to treatment with simvastatin has been reported. - GMI Summary

Article Published Date: Oct 01, 1998
Authors: D R Mehregan, D A Mehregan, S Pakideh
Study Type: Human: Case Report
Additional Links
Diseases: Cheilitis : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Hepatitis associated with treatment with lovastatin has been reported. - GMI Summary

Article Published Date: Mar 01, 1998
Authors: M Bruguera, P Joya, J Rodés
Study Type: Human: Case Report
**Statin drugs induce cell death in mouse kidney cells.** - GMI Summary


*Article Published Date*: Oct 01, 1997

*Authors*: O Iimura, F Vrtovsnik, F Terzi, G Friedlander

*Study Type*: In Vitro Study

**Additional Links**

*Diseases*: Kidney Damage : CK(103) : AC(36), Statin-Induced Pathologies : CK(1470) : AC(206)

*Problem Substances*: Statin Drugs : CK(3705) : AC(437)


**Lovastatin increases exercise-induced skeletal muscle injury in human subjects.** - GMI Summary

*Pubmed Data*: Metabolism. 1997 Oct ;46(10):1206-10. PMID: 9322808

*Article Published Date*: Oct 01, 1997

*Authors*: P D Thompson, J M Zmuda, L J Domalik, R J Zimet, J Staggers, J R Guyton

*Study Type*: Human Study

**Additional Links**


*Problem Substances*: Lovastatin : CK(63) : AC(12)

*Adverse Pharmacological Actions*: Myotoxicity : CK(259) : AC(11)

**Statin drugs are associated with adverse mental effects.** - GMI Summary

*Pubmed Data*: Tidsskr Nor Lægeforen. 1997 Sep 20 ;117(22):3210-3. PMID: 9411859

*Article Published Date*: Sep 20, 1997

*Authors*: I Buajordet, S Madsen, H Olsen

*Study Type*: Human Study

**Additional Links**

*Diseases*: Aggression : CK(37) : AC(5), Anxiety Disorders : CK(546) : AC(79), Depression: Unipolar : CK(442) : AC(69), Impotence : CK(3) : AC(1), Sleep Disorders : CK(103) : AC(10), Statin-Induced Pathologies : CK(1470) : AC(206)

*Pharmacological Actions*: Anticholesteremic Agents : CK(298) : AC(38)

*Problem Substances*: Statin Drugs : CK(3705) : AC(437)

*Adverse Pharmacological Actions*: Neurotoxic : CK(879) : AC(87)

**The myotoxicity of statin drugs may be due to the inhibition of the geranylgeranylation of low-molecular-weight proteins in the muscle cells.** - GMI Summary


*Article Published Date*: Jul 01, 1997
Lovastatin monotherapy has been reported to have been a cause of rhabdomyolysis, acute renal failure and hepatopathy. - GMI Summary

Pubmed Data: Jpn Heart J. 1997 Jul ;38(4):541-5. PMID: 9350151

Article Published Date: Jul 01, 1997

Authors: P H Chu, W J Chen, C W Chiang, Y S Lee

Study Type: Human: Case Report

The combination of beta 1-selective receptor antagonists and lipid-lowering drugs has an adverse affect on fat metabolism, blood ammonia levels and measures of fatigue during moderate intensity exercise - GMI Summary


Article Published Date: Mar 01, 1997

Authors: C J Eagles, M J Kendall

There is a dose-related decrease of serum coenzyme Q10 during treatment with statin drugs. - GMI Summary

Pubmed Data: Mol Aspects Med. 1997 ;18 Suppl:S137-44. PMID: 9266515

Article Published Date: Jan 01, 1997

Authors: S A Mortensen, A Leth, E Agner, M Rohde

Study Type: Human Study
Simvastatin exhibits neurotoxicity in a neuronal cell model. - GMI Summary

Article Published Date: Dec 06, 1996
Authors: I Sato-Suzuki, S Murota
Study Type: In Vitro Study
Additional Links
Diseases: Brain Damage: CK(65), AC(28), Neurotoxicity: CK(8), AC(4), Statin-Induced Pathologies: CK(1470), AC(206)
Pharmacological Actions: Antiproliferative: CK(965), AC(680), Enzyme Inhibitors: CK(340), AC(201)
Problem Substances: Simvastatin: CK(657), AC(114)
Adverse Pharmacological Actions: Neurotoxic: CK(879), AC(87)

A possible increased risk of rhabdomyolysis during concomitant use of simvastatin and gemfibrozil has been reported. - GMI Summary

Article Published Date: Dec 01, 1996
Authors: E P van Puijenbroek, P W Du Buf-Vereijken, P F Spooren, J J van Doormaal
Study Type: Human: Case Report
Additional Links
Diseases: Rhabdomyolysis: CK(37), AC(6), Statin-Induced Pathologies: CK(1470), AC(206)
Additional Keywords: Drug Synergy: CK(270), AC(116)
Problem Substances: Fenofibrates: CK(83), AC(11), Gemfibrozil: CK(3), AC(1), Simvastatin: CK(657), AC(114)
Adverse Pharmacological Actions: Myotoxicity: CK(259), AC(11)

Statin therapy can be associated with high blood lactate/ pyruvate ratio suggestive of mitochondrial dysfunction. - GMI Summary

Article Published Date: Sep 01, 1996
Authors: G De Pinieux, P Chariot, M Ammi-Saïd, F Louam, J L Lejonc, A Astier, B Jacotot, R Gherardi
Study Type: Human Study
Additional Links
Diseases: Blood Lactate/Pyruvate Ratio: Elevated: CK(10), AC(1), Coenzyme Q10 Deficiency: CK(42), AC(5), Mitochondrial Dysfunction: CK(95), AC(35), Statin-Induced Pathologies: CK(1470), AC(206)
Pharmacological Actions: Enzyme Inhibitors: CK(340), AC(201)
Problem Substances: Statin Drugs: CK(3705), AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259), AC(11)

Statin drugs exhibit myotoxic, neurotoxic, hepatotoxic and testicule damaging properties in the anima model. - GMI Summary

Article Published Date: Jul 01, 1996
Authors: K M Walsh, M A Albassam, D E Clarke
Study Type: Animal Study
Additional Links
Diseases: Brain Damage: CK(65), AC(28), Liver Damage: Drug-Induced: CK(36), AC(6), Statin-Induced Pathologies: CK(1470), AC(206), Testicular Diseases: CK(37), AC(14)
Pharmacological Actions: Anticholesteremic Agents: CK(298), AC(38), Enzyme Inhibitors: CK(340), AC(201)
**Simvastatin has been reported to cause liver lesions.** - GMI Summary


**Article Published Date**: Apr 13, 1996

**Authors**: J J Koornstra, J P Ottervanger, M C Fehmers, B H Stricker

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Chemically-Induced Liver Damage : CK(497) : AC(145), Jaundice : CK(2) : AC(1), Liver Damage : CK(496) : AC(172), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesterolmic Agents : CK(298) : AC(38)

**Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Simvastatin lowers testosterone secretion in male patients.** - GMI Summary

**Pubmed Data**: Horm Metab Res. 1996 Apr ;28(4):193-8. PMID: 8740196

**Article Published Date**: Apr 01, 1996

**Authors**: C Azzarito, L Boiardi, W Vergoni, M Zini, I Portioli

**Study Type**: Human Study

**Additional Links**

**Diseases**: Low Testosterone : CK(287) : AC(66), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesterolmic Agents : CK(298) : AC(38)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Endocrine Disruptor : CK(283) : AC(56)

---

**Men treated with cholesterol-lowering drugs complain more frequently of erectile dysfunction.** - GMI Summary

**Pubmed Data**: J Clin Pharm Ther. 1996 Apr ;21(2):89-94. PMID: 8809645

**Article Published Date**: Apr 01, 1996

**Authors**: E Bruckert, P Giral, H M Heshmati, G Turpin

**Study Type**: Human Study

**Additional Links**

**Diseases**: Erectile Dysfunction : CK(403) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Cholesterol Lowering Drugs : CK(1038) : AC(90), Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Endocrine Disruptor : CK(283) : AC(56)

---

**Terminal renal failure in lovastatin therapy with pre-existing chronic renal insufficiency has been reported.** - GMI Summary


**Article Published Date**: Jan 01, 1996

**Authors**: G Biesenbach, O Janko, U Stuby, J Zazgornik

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Kidney Damage: Drug-Induced : CK(69) : AC(18), Kidney Failure: Chronic : CK(134) : AC(17), Rhabdomyolysis
**Lovastatin exhibits neurotoxic properties. - GMI Summary**

Article Published Date: Oct 01, 1995
Authors: Y V Bobryshev, O V Pavlov, Y V Balabanov, K Ashwell
Study Type: In Vitro Study

**Simvastatin worsens the myocardial mitochondrial respiration during ischemia probably due to depletion of coenzyme Q10. - GMI Summary**

Article Published Date: Sep 01, 1995
Authors: K Satoh, A Yamato, T Nakai, K Hoshi, K Ichihara
Study Type: Animal Study

**Pravastatin-associated myopathy has been reported. - GMI Summary**

Article Published Date: May 01, 1995
Authors: T Scalvini, D Marocolo, B Cerudelli, I Sleiman, G P Balestrieri, G Giustina
Study Type: Human: Case Report

**Statin drugs exhibit myotoxicity. - GMI Summary**

Article Published Date: Mar 01, 1995
Authors: B A Masters, M J Palmoski, O P Flint, R E Gregg, D Wang-Iverson, S K Durham
Study Type: In Vitro Study
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

**Lovastatin-induced acute cholestatic hepatitis has been reported.** - GMI Summary

**Pubmed Data**: Dtsch Med Wochenschr. 1995 Feb 24;120(8):252-6. PMID: 7867482
**Article Published Date**: Feb 24, 1995
**Authors**: H Huchzermeyer, R Münzenmaier
**Study Type**: Human: Case Report
**Diseases**: Hepatitis: Cholestatic: CK(15): AC(5), Statin-Induced Pathologies: CK(1470): AC(206)
**Problem Substances**: Lovastatin: CK(63): AC(12)
**Adverse Pharmacological Actions**: Hepatotoxic: CK(95): AC(34)

**Cholesterol-lowering drugs may contribute to skin disorders.** - GMI Summary

**Pubmed Data**: Hautarzt. 1995 Feb;46(2):76-80. PMID: 7706076
**Article Published Date**: Feb 01, 1995
**Authors**: E Proksch
**Study Type**: Human Study

**Recurrent hyperthermia due to lovastatin has been reported.** - GMI Summary

**Article Published Date**: Oct 01, 1994
**Authors**: W R von Pohle
**Study Type**: Human: Case Report
**Diseases**: Hyperthermia: CK(3): AC(1), Statin-Induced Pathologies: CK(1470): AC(206)
**Problem Substances**: Lovastatin: CK(63): AC(12)

**Acute hepatitis induced by lovastatin has been reported.** - GMI Summary

**Pubmed Data**: Dig Dis Sci. 1994 Sep;39(9):2032-3. PMID: 8082513
**Article Published Date**: Sep 01, 1994
**Authors**: S Grimbert, D Pessayre, C Degott, J P Benhamou
**Study Type**: Human: Case Report
**Problem Substances**: Lovastatin: CK(63): AC(12)
Adverse Pharmacological Actions: **Hepatotoxic**: CK(95) : AC(34)

**Lovastatin causes depletion of coenzyme Q10 levels in the cardiac muscle and mitochondria of animals.** - GMI Summary

Pubmed Data: Biochim Biophys Acta. 1994 Jul 6 ;1200(2):100-8. PMID: 8031828

Article Published Date: Jul 06, 1994

Authors: B A Diebold, N V Bhagavan, R J Guillory

Study Type: Animal Study

Additional Links

Diseases: **Coenzyme Q10 Deficiency**: CK(42) : AC(5), **Drug-Induced Nutrient Depletion**: Statin Drugs : CK(115) : AC(17), **Heart Failure**: CK(452) : AC(85), **Statin-Induced Pathologies**: CK(1470) : AC(206)

Problem Substances: **Lovastatin**: CK(63) : AC(12)

**Lovastatin may adversely affect myelin formation and the remyelination process.** - GMI Summary


Article Published Date: Apr 01, 1994

Authors: L Sepp-Lorenzino, P S Coleman, J N Larocca

Study Type: In Vitro Study

Additional Links

Diseases: **Demyelinating Diseases**: CK(1194) : AC(240), **Statin-Induced Pathologies**: CK(1470) : AC(206)

Additional Keywords: **Remyelination**: CK(11) : AC(7)

Problem Substances: **Lovastatin**: CK(63) : AC(12), **Statin Drugs**: CK(3705) : AC(437)

Adverse Pharmacological Actions: **Neurotoxic**: CK(879) : AC(87)

**Some statin drugs are may cause neurological problems due to their ability to cross the blood-brain barrier.** - GMI Summary


Article Published Date: Feb 01, 1994

Authors: A Saheki, T Terasaki, I Tamai, A Tsuji

Study Type: Animal Study

Additional Links

Diseases: **Blood-Brain-Barrier Disorders**: CK(24) : AC(13), **Statin-Induced Pathologies**: CK(1470) : AC(206)

Problem Substances: **Lovastatin**: CK(63) : AC(12), **Simvastatin**: CK(657) : AC(114), **Statin Drugs**: CK(3705) : AC(437)

Adverse Pharmacological Actions: **Neurotoxic**: CK(879) : AC(87)

**A simvastatin-induced lichenoid drug eruption has been reported.** - GMI Summary


Article Published Date: Jan 01, 1994

Authors: D Roger, F Rolle, F Labrousse, A Brosset, J M Bonnetblanc

Study Type: Human: Case Report

Additional Links

Diseases: **Lichenoid Dermatitis**: CK(9) : AC(3), **Statin-Induced Pathologies**: CK(1470) : AC(206)

Pharmacological Actions: **Anticholesteremic Agents**: CK(298) : AC(38)

Problem Substances: **Simvastatin**: CK(657) : AC(114)
Lovastatin has the potential of causing muscle damage. - GMI Summary

**Pubmed Data:** J Neuropathol Exp Neurol. 1993 Sep ;52(5):542-9. PMID: 8360706

**Article Published Date:** Sep 01, 1993

**Authors:** A J Waclawik, S Lindal, A G Engel

**Study Type:** Animal Study

**Diseases:** Myopathies: CK(199) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances:** Lovastatin: CK(63) : AC(12)

**Adverse Pharmacological Actions:** Myotoxicity: CK(259) : AC(11)

Cholesterol-lowering medications reduce DHEA-secretory responses and sperm motility. - GMI Summary

**Pubmed Data:** Metabolism. 1993 Sep ;42(9):1146-52. PMID: 8412767

**Article Published Date:** Sep 01, 1993

**Authors:** A S Dobs, P S Sarma, D Schteingart

**Study Type:** Human Study

**Diseases:** DHEA: Low: CK(28) : AC(7), Sperm Quality: Low: CK(134) : AC(26), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances:** Cholesterol Lowering Drugs: CK(1038) : AC(90), Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Endocrine Disruptor: CK(283) : AC(56)

Psychiatric disorders with use of simvastatin have been reported. - GMI Summary

**Pubmed Data:** Ned Tijdschr Geneeskd. 1993 Jun 26 ;137(26):1312-5. PMID: 8345888

**Article Published Date:** Jun 26, 1993

**Authors:** N Duits, F M Bos

**Study Type:** Human: Case Report

**Diseases:** Mood Disorders: CK(75) : AC(12), Psychiatric Disorders: CK(47) : AC(6), Psychological Well-Being: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

**Pharmacological Actions:** Anticholesteremic Agents: CK(298) : AC(38)

**Problem Substances:** Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Neurotoxic: CK(879) : AC(87)

Lovastatin-induced cholestasis has been reported. - GMI Summary

**Pubmed Data:** CMAJ. 1993 Feb 1 ;148(3):374. PMID: 8439902

**Article Published Date:** Feb 01, 1993

**Authors:** E M Yoshida, A Levin

**Study Type:** Human: Case Report

**Diseases:** Cholestasis: CK(95) : AC(21), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances:** Lovastatin: CK(63) : AC(12)

**Adverse Pharmacological Actions:** Hepatotoxic: CK(95) : AC(34)

A case of simvastatin-induced acute rhabdomyolysis with heart failure after initiation of
treatment with fusidic acid has been reported. - GMI Summary

Article Published Date : Apr 01, 1992
Authors : C Dromer, C Vedrenne, T Billey, M Pages, B Fournié, A Fournié
Study Type : Human: Case Report
Additional Links
Diseases : Congestive Heart Failure : CK(147) : AC(29), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions : Cardiotoxic : CK(467) : AC(53), Myotoxicity : CK(259) : AC(11)

Severe liver toxicity requiring discontinuation occurs in 5% of simvastatin-treated patients and 4.5% of pravastatin-treated patients. - GMI Summary

Article Published Date : Jan 01, 1992
Authors : M Ballarè, M Campanini, G Airoldi, G Zaccala, M C Bertoncelli, G Cornaglia, M Porzio, A Monteverde
Study Type : Human Study
Additional Links
Diseases : Chemically-Induced Liver Damage : CK(497) : AC(145), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Hepatotoxic : CK(95) : AC(34)

Simvastatin side effects are far higher than reported in clinical trials. - GMI Summary

Article Published Date : Nov 27, 1991
Authors : R S Scott, C J Lintott, M J Wilson
Study Type : Human Study
Additional Links
Diseases : Gastrointestinal Complaints : CK(10) : AC(1), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Statin drugs may interfere with the immune cell function. - GMI Summary

Article Published Date : Nov 01, 1991
Authors : L L Ng, J E Davies
Study Type : In Vitro Study
Additional Links
Diseases : Immune Disorders: Low Immune Function : CK(377) : AC(109), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Statin drug induced myopathy is amplified in the rats administered cyclcosporine A. - GMI Summary
Cholestatic jaundice during lovastatin medication has been reported. - GMI Summary

Simvastatin has been reported to cause cholestatic hepatitis. - GMI Summary

Simvastatin suppresses human testicular testosterone synthesis. - GMI Summary

An experimental statin drug was demonstrated to cause a wide range of adverse effects in the animal model. - GMI Summary
Two cases of simvastatin-induced acute pancreatitis have been reported. - GMI Summary

A case of hepatitis caused by simvastatin has been reported. - GMI Summary

A case of simvastatin-induced acute pancreatitis has been reported. - GMI Summary

Rhabdomyolysis secondary to lovastatin therapy has been reported. - GMI Summary
Lovastatin decreases coenzyme Q levels associated with compromised cardiac function in humans. - GMI Summary

Pubmed Data: Proc Natl Acad Sci U S A. 1990 Nov;87(22):8931-4. PMID: 2247468
Article Published Date: Nov 01, 1990
Authors: K Folkers, P Langsjoen, R Willis, P Richardson, L J Xia, C Q Ye, H Tamagawa
Study Type: Human Study
Diseases: Coronary Artery Disease: CK(942) : AC(133), Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), High Cholesterol: CK(865) : AC(192), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Cardiotoxic: CK(467) : AC(53)

Lovastatin decreases coenzyme Q10 levels in rats. - GMI Summary

Article Published Date: Nov 01, 1990
Authors: R A Willis, K Folkers, J L Tucker, C Q Ye, L J Xia, H Tamagawa
Study Type: Animal Study
Diseases: Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Statin-Induced Pathologies: CK(1470) : AC(206)
Additional Keywords: Statin-Coq10 Depletion: CK(36) : AC(7)
Problem Substances: Lovastatin: CK(63) : AC(12)

Statin treatment results in significantly reduced serum levels of aldosterone. - GMI Summary

Article Published Date: Sep 01, 1990
Authors: H Ide, S Fujiya, Y Aanuma, Y Agishi
Study Type: Human Study
Diseases: Aldosterone levels: Low: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)
Problem Substances: Lovastatin: CK(63) : AC(12), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor: CK(283) : AC(56)

Lovastatin inhibits testosterone production in testicular cells. - GMI Summary

Article Published Date: Sep 01, 1990
Authors: P G Andreis, L Cavallini, G Mazzocchi, G G Nussdorfer
Study Type: In Vitro Study
Diseases: Low Testosterone: CK(287) : AC(66), Statin-Induced Pathologies: CK(1470) : AC(206)
Lovastatin-induced acute rhabdomyolysis has been reported. - GMI Summary


Article Published Date: Apr 01, 1990

Authors: A D Kogan, S Orenstein

Study Type: Human: Case Report

Additional Links

Diseases: Rhabdomyolysis: CK(37) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Lovastatin: CK(63) : AC(12)

Pravastatin may contribute to the pathology of eye diseases by inhibit cholesterol synthesis in the lens. - GMI Summary

Pubmed Data: J Lipid Res. 1989 Sep ;30(9):1411-20. PMID: 2513368

Article Published Date: Sep 01, 1989

Authors: S T Mosley, S S Kalinowski, B L Schafer, R D Tanaka

Study Type: In Vitro Study

Additional Links

Diseases: Eye Diseases: CK(568) : AC(129), Lens Damage: CK(3) : AC(1), Lens Diseases: CK(6) : AC(4), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Pravastatin: CK(197) : AC(31)

Cholesterol-lowering drugs may contribute to skin disorders. - GMI Summary


Article Published Date: Nov 01, 1987

Authors: M L Williams, K R Feingold, G Grubauer, P M Elias

Study Type: Review

Additional Links

Diseases: Ichthyosis: CK(1) : AC(1), Skin Problems: Compromised Barrier Function: CK(3) : AC(2), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Cholesterol Lowering Drugs: CK(1038) : AC(90), Statin Drugs: CK(3705) : AC(437)

Statins have been associated with arrest of DNA synthesis and proliferation in glial cells. - GMI Summary

Pubmed Data: J Neurochem. 1986 Apr ;46(4):1283-91. PMID: 3633306

Article Published Date: Apr 01, 1986

Authors: T J Langan, J J Volpe

Study Type: In Vitro Study

Additional Links

Diseases: Neurotoxicity: CK(8) : AC(4), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neuroxic : CK(879) : AC(87)
**Statin administration in animals results in a myopathy characterized by decreased muscle force and elevated plasma CK level.** - GMI Summary


**Article Published Date**: Nov 09, 2011

**Authors**: Mártá Füzi, Zoltán Palicz, János Vincze, Julianna Cseri, Zita Szombathy, Ilona Kovács, Anna Oláh, Péter Szentesi, Pál Kertai, György Paragh, László Csernoch

**Study Type**: Animal Study

**Additional Links**
- **Problem Substances**: Fluvastatin : CK(13) : AC(3), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statins increase exercise-related muscle injury, which worsens with the age of the individual.** - GMI Summary


**Article Published Date**: Oct 27, 2011

**Authors**: Beth A Parker, Amanda L Augeri, Jeffrey A Capizzi, Kevin D Ballard, Christopher Troyanos, Aaron L Baggish, Pierre A D'Hemecourt, Paul D Thompson

**Study Type**: Human Study

**Additional Links**
- **Diseases**: Muscle Damage: Exercise-Induced : CK(61) : AC(6), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin-associated myopathy is underestimated and occurs in 5-10% of patients who receive them.** - GMI Summary


**Article Published Date**: Aug 01, 2011

**Authors**: Loukianos S Rallidis, Katerina Fountoulaki, Maria Anastasiou-Nana

**Study Type**: Human Study

**Additional Links**
- **Diseases**: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**The incidence of statin-related myopathy may be as high as 10.5%.** - GMI Summary


**Article Published Date**: Mar 18, 2011

**Authors**: Thomas F Whayne
**Statins up-regulate the expression of HMGCR, the major target of autoantibodies in statin-associated immune-mediated necrotizing myopathy.** - GMI Summary


Article Published Date: Mar 01, 2011

Authors: Andrew L Mammen, Tae Chung, Lisa Christopher-Stine, Paul Rosen, Antony Rosen, Kimberly R Doering, Livia A Casciola-Rosen

**Statin-induced myopathy occurs in between 10-15% of users.** - GMI Summary


Article Published Date: Feb 23, 2011

Authors: Thura T Abd, Terry A Jacobson

**Statin-mediated myopathy is likely mediated by reductions in protein prenylation and especially N-linked glycosylation.** - GMI Summary


Article Published Date: Apr 15, 2010

Authors: Peter James Mullen, Barbara Lüscher, Hubert Scharnagl, Stephan Krähenbühl, Karin Brecht

**Low dose simvastatin induces compositional, structural and dynamic changes in rat.** - GMI Summary


Article Published Date: Feb 01, 2010

Authors: Nihal Simsek Ozek, Yildirim Sara, Rustu Onur, Feride Severcan
Statin-induced myopathy is associated with skeletal muscle cell MHC I expression changes. - GMI Summary

Article Published Date : Feb 01, 2010
Authors : Pratibha Singh, Danielle Kohr, Manfred Kaps, Franz Blaes
Study Type : In Vitro Study
Additional Links
Diseases : Myopathies : CK(199) : AC(18), Skeletal Muscle: Changes to MHC I expression : CK(4) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Coenzyme Q10 deficiency may be one mechanism for statin-induced myopathies. - GMI Summary

Article Published Date : Jan 01, 2010
Authors : Richard Deichmann, Carl Lavie, Samuel Andrews
Study Type : Review
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Unintended consequences of statin drug use are increased risk of esophageal cancer, kidney failure, cataract, liver dysfunction and myopathies. - GMI Summary

Article Published Date : Jan 01, 2010
Authors : Julia Hippisley-Cox, Carol Coupland
Study Type : Human Study
Additional Links
Diseases : Cardiovascular Diseases : CK(3885) : AC(623), Cataract : CK(180) : AC(53), Chemically-Induced Liver Damage : CK(497) : AC(145), Esophageal Cancer : CK(201) : AC(53), Kidney Failure : CK(228) : AC(42), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

An explanation of the mechanism of statin-induced contractile dysfunction in rat cultured skeletal myofibers. - GMI Summary

Article Published Date : Jan 01, 2010
Authors : Syoko Tanaka, Kazuho Sakamoto, Masaya Yamamoto, Anna Mizuno, Tomoyuki Ono, Satoshi Waguri, Junko Kimura
**Statin drugs, particularly simivastatin, increase the risk for significant creatine kinase elevation.** - GMI Summary


*Article Published Date* : Jan 01, 2010

*Authors* : Ryan S Stolcpart, Kari L Olson, Thomas Delate, Jon Rasmussen, Thomas F Rehring, John A Merenich

*Study Type* : Human Study

**Muscle problems due to statins have been underestimated and may be as prevalent as 10%.** - GMI Summary


*Article Published Date* : Jan 01, 2010

*Authors* : Stan P Janssen, Yvo M Smulders, Victor E Gerdes, Frank L J Vissren

*Study Type* : Review

**Neuroleptic malignant syndrome as a possible statin drug reaction has been reported.** - GMI Summary


*Article Published Date* : Nov 01, 2009

*Authors* : Joyce M Cooper, Alison L Jones

*Study Type* : Human: Case Report

**Observational studies suggest that myalgia can occur in up to 10% of persons prescribed statins.** - GMI Summary

Statin-induced muscle toxicity may be associated with altered oxidation of fatty acids. - GMI Summary


Statin-induced Ca(2+) release from ryanodine-sensitive stores and mitochondria an may contribute to myotoxicity. - GMI Summary


Review: Clinical characterization and molecular mechanisms of statin myopathy. - GMI Summary


The adverse effects associated with statin drug use has been linked to mitochondrial dysfunction. - GMI Summary

PubMed Data: Jan 01, 2008
**Muscle complaints occur in 10% or more of patients started on high-dose statins. - GMI**

**Summary**


**Article Published Date**: Aug 01, 2007

**Authors**: Charles R Harper, Terry A Jacobson

**Study Type**: Meta Analysis

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin use may be contraindicated in hypothyroidism. - GMI**

**Summary**

**Pubmed Data**: Can Fam Physician. 2007 Mar ;53(3):428-31. PMID: [17872677](https://doi.org/10.14473/cfp.53.3.2007.428)

**Article Published Date**: Mar 01, 2007

**Authors**: Simona L Bar, Daniel T Holmes, Jiri Frohlich

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Hyperlipidemia : CK(864) : AC(105), Hypothyroidism : CK(391) : AC(75), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin therapy may result in progressive myopathy with up-regulation of MHC-I associated with an endoplasmic reticulum stress response. - GMI**

**Summary**

**Pubmed Data**: Neuromuscul Disord. 2007 Feb ;17(2):194-200. Epub 2007 Jan 22. PMID: [17241784](https://doi.org/10.1016/j.nmd.2006.11.001)

**Article Published Date**: Feb 01, 2007

**Authors**: Merrilee Needham, Victoria Fabian, Wally Knezevic, Peter Panegyres, Paul Zilko, Frank L Mastaglia

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18), Skeletal Muscle: Changes to MHC I expression : CK(4) : AC(2), Skeletal Muscle Changes: Endoplasmic Reticulum Stress : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anti-Inflammatory Agents : CK(1025) : AC(400)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**It is thought that as many as 25% of statin users who exercise may experience muscle fatigue, weakness, aches, and cramping due to statin therapy and potentially dismissed by the patient and physician. - GMI**

---

88
### Statin drugs induce ultrastructural damage in skeletal muscle in patients without myalgia.

**Abstract**

Statin drugs induce ultrastructural damage in skeletal muscle in patients without myalgia.

**Keywords**

Muscle Damage: Exercise-Induced, Myalgias:CK(61), Myopathies:CK(199), Statin-Induced Pathologies:CK(1470)

**Authors**

Amie J Dirks, Kimberly M Jones

**Study Type**

Review

**Diseases**

Muscle Damage: Exercise-Induced (CK(61)), Myalgias (CK(25)), Myopathies (CK(199)), Statin-Induced Pathologies (CK(1470))

**Pharmacological Actions**

Anticholesteremic Agents (CK(298)), Apoptotic (CK(1446))

**Problem Substances**

Statin Drugs (CK(3705)), Myotoxicity (CK(259))

**Adverse Pharmacological Actions**

Myotoxicity (AC(11))

---

### Myopathy is a therapeutic limitation of statin drug therapy.

**Abstract**

Myopathy is a therapeutic limitation of statin drug therapy.

**Keywords**

Myopathies:CK(199), Statin-Induced Pathologies:CK(1470)

**Authors**

A Draeger, K Monastyrskaya, M Mohaupt, H Hoppeler, H Savolainen, C Allemann, E B Babiychuk

**Study Type**

Human Study

**Diseases**

Myopathies (CK(199)), Statin-Induced Pathologies (CK(1470))

**Problem Substances**

Atorvastatin (CK(231)), Pravastatin (CK(197)), Simvastatin (CK(657)), Statin Drugs (CK(3705))

**Adverse Pharmacological Actions**

Myotoxicity (CK(259))

---

### Statin treatment may contribute to presymptomatic neuromuscular disorders.

**Abstract**

Statin treatment may contribute to presymptomatic neuromuscular disorders.

**Keywords**

Myopathies:CK(199), Statin-Induced Pathologies:CK(1470), Neuromuscular Diseases:CK(11), Presymptomatic Metabolic Myopathy:CK(3), Statin-Induced Pathologies:CK(1470)

**Authors**

Georgios Tsivgoulis, Konstantinos Spengos, Nikolaos Karandreas, Marios Panas, Athina Kladi, Panagiota Manta

**Study Type**

Human: Case Report

**Diseases**

Myopathies (CK(199)), Neuromuscular Diseases (CK(11)), Statin-Induced Pathologies (CK(1470))

**Problem Substances**

Statin Drugs (CK(3705)), Myotoxicity (CK(259))

---

### Exposure to atorvastatin is associated with lactone and acid metabolites that are increased several-fold in patients with atorvastatin-induced myopathy.

**Abstract**

Exposure to atorvastatin is associated with lactone and acid metabolites that are increased several-fold in patients with atorvastatin-induced myopathy.

**Keywords**

Statin Drugs:CK(3705), Myotoxicity:CK(259), Myopathy:CK(259), Akathisia:CK(259), Atorvastatin:CK(231), Pravastatin:CK(197), Simvastatin:CK(657), Myopathies:CK(199), Statin-Induced Pathologies:CK(1470)

**Authors**

Atul Tiwari, Vinay Bansal, Anita Chugh, Kasim Mookhtiar

**Study Type**

Review

**Diseases**

Myopathies (CK(199)), Statin-Induced Pathologies (CK(1470))

**Problem Substances**

Statin Drugs (CK(3705)), Myotoxicity (CK(259))

**Adverse Pharmacological Actions**

Myotoxicity (AC(11))
Statin drugs have been linked to myopathy, including rhabdomyolysis. - GMI Summary

Statin-associated myopathy with normal creatine kinase levels has been reported. - GMI Summary

Statin-induced myopathic weakness causing disability is an underappreciated side effect. - GMI Summary

Statin drugs lead to changes in statin sterol metabolism and aggressive statin treatment may adversely effect mitochondrial volume. - GMI Summary
**Authors**: Hannu Päivä, Karin M Thelen, Rudy Van Coster, Joël Smet, Boel De Paepe, Kari M Mattila, Juha Laakso, Terho Lehtimäki, Klaus von Bergmann, Dieter Lütjohann, Reijo Laaksonen

**Study Type**: Human Study

**Additional Links**

**Diseases**: Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5), Myopathies : CK(199) : AC(18)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Review: molecular pathogenesis of statin myopathy.** - GMI Summary

**Pubmed Data**: Muscle Nerve. 2005 May ;31(5):572-80. PMID: 15712281

**Article Published Date**: May 01, 2005

**Authors**: Steven K Baker

**Study Type**: Review

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin drugs induce cell death in rat myotubes.** - GMI Summary


**Article Published Date**: Nov 01, 2004

**Authors**: Timothy E Johnson, Xiaohua Zhang, Kimberly B Bleicher, Gary Dysart, Amy F Loughlin, William H Schaefer, Diane R Umbenhauer

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Apoptotic : CK(1446) : AC(1045)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statins appear to cause muscle damage and impair oxidative metabolism.** - GMI Summary


**Article Published Date**: Jan 01, 2004

**Authors**: S Gambelli, M T Dotti, A Malandrini, M Mondelli, M L Stromillo, C Gaudiano, A Federico

**Study Type**: Human Study

**Additional Links**

**Diseases**: Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin-associated myopathy is a significant problem with a prevalence rate between 1-5%.** - GMI Summary

**Pubmed Data**: JAMA. 2003 Apr 2 ;289(13):1681-90. PMID: 12672737

**Article Published Date**: Apr 02, 2003
The myotoxicity of statin drugs may be due to the inhibition of the geranylgeranylation of low-molecular-weight proteins in the muscle cells. - GMI Summary

Pravastatin-associated myopathy has been reported. - GMI Summary

Statin drugs exhibit myotoxicity. - GMI Summary

Lovastatin has the potential of causing muscle damage. - GMI Summary
Statin drugs reduce coq10 levels which may result in mitochondrial dysfunction and cellular damage. - GMI Summary

Article Published Date : Mar 01, 1993
Authors : G Ghirlanda, A Oradei, A Manto, S Lippa, L Uccioli, S Caputo, A V Greco, G P Littarru
Study Type : Human Study
Additional Links
Diseases : Drug-Induced Toxicity : CK(503) : AC(76), High Cholesterol : CK(865) : AC(192), Myopathies : CK(199) : AC(18)
Adverse Keywords : Drug-Nutrient Depletion : CK(64) : AC(10), Statin-Coq10 Depletion : CK(36) : AC(7)
Problem Substances : Lovastatin : CK(63) : AC(12), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Cytotoxic : CK(45) : AC(28)

Simvastatin side effects are far higher than reported in clinical trials. - GMI Summary

Article Published Date : Nov 27, 1991
Authors : R S Scott, C J Lintott, M J Wilson
Study Type : Human Study
Additional Links
Diseases : Gastrointestinal Complaints : CK(10) : AC(1), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Statin drug induced myopathy is amplified in the rats administered cyclosporine A. - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 1991 Jun;257(3):1225-35. PMID: 1904494
Article Published Date : Jun 01, 1991
Authors : P F Smith, R S Eydeloth, S J Grossman, R J Stubbs, M S Schwartz, J I Germershausen, K P Vyas, P H Kari, J S MacDonald
Study Type : Animal Study
Additional Links
Diseases : Cholestasis : CK(95) : AC(21), Drug-Induced Toxicity : CK(503) : AC(76), Myopathies : CK(199) : AC(18), Organ Transplantation : CK(39) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Cyclosporins : CK(2) : AC(1), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Topic: Chemically-Induced Liver Damage

Liver failure and damage are rare but severe unintended consequences of statin drug use. - GMI Summary
Atorvastatin-induced acute pancreatitis has been reported. - GMI Summary

Unintended consequences of statin drug use are increased risk of esophageal cancer, kidney failure, cataract, liver dysfunction and myopathies. - GMI Summary

Review: Drug-induced liver injury associated with statins. - GMI Summary
Statin drugs induce a variety of potential adverse "peliotropic" effects. - GMI Summary


Article Published Date: Sep 01, 2009

Authors: Jerzy Beltowski, Grazyna Wójcicka, Anna Jamroz-Wiśniewska

Study Type: Review

Additional Links


Additional Keywords: Drug-Nutrient Depletion : CK(64) : AC(10), Statin-Selenium Deficiency : CK(4) : AC(4)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Cholestatic jaundice induced by atorvastatin has been observed. - GMI Summary


Article Published Date: Jul 01, 2009

Authors: Saar Minha, Galina Golzman, Ilan Adar, Micha Rapoport

Study Type: Human: Case Report

Additional Links

Diseases: Autoimmune Diseases : CK(4016) : AC(752), Chemically-Induced Liver Damage : CK(497) : AC(145), Hepatitis: Cholestatic : CK(15) : AC(5), Jaundice : CK(2) : AC(1)

Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Statin-induced liver injury may result from the suppression of selenoprotein expression. - GMI Summary


Article Published Date: Jun 01, 2009

Authors: Andrea Kromer, Bernd Moosmann

Study Type: In Vitro Study

Additional Links

Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Mineral Deficiencies: Selenium: CK(15) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

Additional Keywords: Statin-Selenium Deficiency : CK(4) : AC(4)

Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Atorvastatin has been reported to have caused severe acute hepatitis with symptomatic cholestasis for more than 3 months and bile duct injury. - GMI Summary


Article Published Date: Jul 01, 2008

Authors: J F Rahier, J Rahier, I Leclercq, A P Geubel

Study Type: Human: Case Report

Additional Links

Diseases: Bile Duct Injury : CK(6) : AC(2), Chemically-Induced Liver Damage : CK(497) : AC(145), Cholestasis : CK(95) : AC(21), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)
Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Reversible acute hepatitis induced by rosuvastatin has been reported. - GMI Summary

Article Published Date: Jul 01, 2008
Authors: Alessandro Oteri, Maria Antonietta Catania, Alessandra Russo, Francesco Salvo, Luciano Giacci, Achille Patrizio Caputi, Giovanni Polimeni
Study Type: Human: Case Report
Additional Links
Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Rosuvastatin : CK(28) : AC(6)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

The use of statins for LDL suppression is associated with increased risk for cancer. - GMI Summary

Article Published Date: Jul 31, 2007
Authors: Alawi A Alsheikh-Ali, Prasad V Maddukuri, Hui Han, Richard H Karas
Study Type: Meta Analysis
Additional Links
Diseases: Cancers: All : CK(6410) : AC(2509), Chemically-Induced Liver Damage : CK(497) : AC(145), High Cholesterol : CK(865) : AC(192), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Lovastatin : CK(63) : AC(12), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Carcinogenic : CK(416) : AC(81)

Rosuvastatin’s hepatotoxic potential may due to its exceptionally high rate of uptake in the liver. - GMI Summary

Article Published Date: Feb 28, 2007
Authors: Giuseppe Famularo, Luca Miele, Giovanni Minisola, Antonio Grieco
Study Type: Review
Additional Links
Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Rosuvastatin : CK(28) : AC(6)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Acute cholestatic hepatitis associated with atorvastatin use has been reported. - GMI Summary

Article Published Date: Jan 01, 2006
Authors: M L de Castro, J A Hermo, A Baz, C de Luaces, R Pérez, J Clofent
Study Type: Human: Case Report
Additional Links
Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Cholestasis : CK(95) : AC(21), Hepatitis: Cholestatic :
Fluvastatin has been linked to adverse hepatic reactions. - GMI Summary

Pubmed Data: Drug Saf. 2006;29(12):1163-72. PMID: 17147462
Article Published Date: Jan 01, 2006
Authors: Anita Conforti, Lara Magro, Ugo Moretti, Stefania Scotto, Domenico Motola, Francesco Salvo, Barbara Ros, Roberto Leone
Study Type: Human Study
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34)

Rosuvastatin-associated hepatitis with autoimmune features has been reported. - GMI Summary

Pubmed Data: Eur J Gastroenterol Hepatol. 2005 May;17(5):589-90. PMID: 15827453
Article Published Date: May 01, 2005
Authors: L M M Wolters, H R Van Buuren
Study Type: Human: Case Report
Problem Substances: Rosuvastatin: CK(13): AC(3)
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34)

Statin drugs (HMG-CoA reductase inhibitors) induce programmed cell death in human liver cells. - GMI Summary

Article Published Date: Jun 15, 2004
Authors: Toshio Kubota, Koji Fujisaki, Yoshinori Itoh, Takahisa Yano, Toshiaki Sendo, Ryozo Oishi
Study Type: In Vitro Study
Diseases: Chemically-Induced Liver Damage: CK(497): AC(145), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Statin Drugs: CK(3705): AC(437)

Autoimmune hepatitis associated with atorvastatin use has been reported. - GMI Summary

Article Published Date: Aug 01, 2003
Authors: Nicoletta Pelli, Maurizio Setti, Paola Ceppa, Carlo Toncini, Francesco Indiveri
Study Type: Human Study
Acute cholestatic hepatitis induced by cerivastatin has been reported. - GMI Summary

Pubmed Data: Med Clin (Barc). 2002 May 18 ;118(18):717. PMID: 12042141
Article Published Date: May 18, 2002
Authors: Miquel Torres, Javier Sobrino, Carmen Asensio, Dolors López
Study Type: Human: Case Report

Additional Links
Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Cholestasis: CK(95) : AC(21), Hepatitis: Cholestatic: CK(15) : AC(5), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Cerivastatin: CK(2) : AC(1), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

Atorvastatin-induced cholestatic hepatitis in a young woman with systemic lupus erythematosus has been reported. - GMI Summary

Article Published Date: Aug 09, 1999
Authors: J Jiménez-Alonso, J M Osorio, F Gutiérrez-Cabello, A López de la Osa, L León, J D Mediavilla García
Study Type: Human: Case Report

Additional Links
Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: Cholestatic: CK(15) : AC(5), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

Acute cholestatic hepatitis associated with pravastatin has been reported. - GMI Summary

Pubmed Data: Am J Gastroenterol. 1999 May ;94(5):1388-90. PMID: 10235223
Article Published Date: May 01, 1999
Authors: M Hartleb, G Rymarczyk, K Januszewski
Study Type: Human: Case Report

Additional Links
Problem Substances: Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

Hepatitis associated with treatment with lovastatin has been reported. - GMI Summary

Article Published Date: Mar 01, 1998
Authors: M Bruguera, P Joya, J Rodés
Study Type: Human: Case Report

Additional Links
Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: CK(35) : AC(18), Statin-Induced Pathologies
Lovastatin monotherapy has been reported to have been a cause of rhabdomyolysis, acute renal failure and hepatopathy. - GMI Summary

Pubmed Data: Jpn Heart J. 1997 Jul;38(4):541-5. PMID: 9350151
Article Published Date: Jul 01, 1997
Authors: P H Chu, W J Chen, C W Chiang, Y S Lee
Study Type: Human: Case Report
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Lovastatin: CK(63): AC(12)
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34)

Simvastatin has been reported to cause liver lesions. - GMI Summary

Article Published Date: Apr 13, 1996
Authors: J J Koornstra, J P Ottervanger, M C Fehmers, B H Stricker
Study Type: Human: Case Report
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Acute hepatitis induced by lovastatin has been reported. - GMI Summary

Article Published Date: Sep 01, 1994
Authors: S Grimbert, D Pessayre, C Degott, J P Benhamou
Study Type: Human: Case Report
Additional Links
Problem Substances: Lovastatin: CK(63): AC(12)
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34)

Severe liver toxicity requiring discontinuation occurs in 5% of simvastatin-treated patients and 4.5% of pravastatin-treated patients. - GMI Summary

Article Published Date: Jan 01, 1992
Authors: M Ballarè, M Campanini, G Airoldi, G Zaccara, M C Bertoncelli, G Cornaglia, M Porzio, A Monteverde
Study Type: Human Study
Simvastatin has been reported to cause cholestatic hepatitis. - GMI Summary

Pubmed Data: Recent Prog Med. 1991 Apr;82(4):233-5. PMID: 1857844
Article Published Date: Apr 01, 1991
Authors: M Ballaré, M Campanini, E Catania, G Bordin, G Zaccala, A Monteverde
Study Type: Human: Case Report

A case of hepatitis caused by simvastatin has been reported. - GMI Summary

Article Published Date: Jan 01, 1991
Authors: P Feydy, W V Bogomoletz
Study Type: Human: Case Report

Statin therapy contributes to low testosterone and hypogonadism in men with erectile dysfunction - GMI Summary

Article Published Date: Apr 01, 2010
Authors: Giovanni Corona, Valentina Boddi, Giancarlo Balercia, Giulia Rastrelli, Giulia De Vita, Alessandra Sforza, Gianni Forti, Edoardo Mannucci, Mario Maggi
Study Type: Human Study

Atorvastatin causes insulin resistance and increases ambient glycemia in hypercholesterolemic patients - GMI Summary

Topic: High Cholesterol
Atorvastatin increases myocardial indices of oxidative stress in a porcine model of hypercholesterolemia and chronic ischemia. - GMI Summary

The use of statins for LDL suppression is associated with increased risk for cancer. - GMI Summary

Statin drugs have been demonstrated to increase the rate of breast cancer, hemorrhagic stroke and mortality from noncardiovascular causes including cancer and infections. - GMI Summary

Atorvastatin reduces serum coenzyme Q10 levels (reduced and oxidized forms) in patients
with high cholesterol. - GMI Summary

Article Published Date : Jan 01, 2005
Authors : Hiroshi Mabuchi, Toshinori Higashikata, Masaaki Kawashiri, Shoji Katsuda, Mihoko Mizuno, Atushi Nohara, Akihiro Inazu, Junji Koizumi, Junji Kobayashi
Study Type : Human Study
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), High Cholesterol : CK(865) : AC(192), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Statins and fenofibrates may exert their wide range of adverse side effects through interfering with selenoprotein expression. - GMI Summary

Article Published Date : Oct 01, 2004
Authors : Bernd Moosmann, Christian Behl
Study Type : Review
Additional Links
Diseases : Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), High Cholesterol : CK(865) : AC(192), Mineral Deficiencies: Selenium : CK(15) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Additional Keywords : Drug-Nutrient Depletion : CK(64) : AC(10), Statin-Selenium Deficiency : CK(4) : AC(4)
Problem Substances : Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)

Statin drugs may induce selenium deficiency which may explain many of its enigmatic side effects. - GMI Summary

Article Published Date : Mar 13, 2004
Authors : Bernd Moosmann, Christian Behl
Study Type : Review
Additional Links
Diseases : Coronary Artery Disease : CK(942) : AC(133), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), High Cholesterol : CK(865) : AC(192), Mineral Deficiencies: Selenium : CK(15) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Additional Keywords : Statin-Selenium Deficiency : CK(4) : AC(4)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Lovastatin enhances the susceptibility of LDL cholesterol to oxidation. - GMI Summary

Article Published Date : Jun 30, 1997
Authors : A Palomäki, K Malminiemi, T Metsä-Ketelä
Study Type : Human Study
Additional Links
Diseases : Cholesterol: Oxidation : CK(329) : AC(96), Coronary Artery Disease : CK(942) : AC(133), High Cholesterol : CK(865) : AC(192)
Problem Substances : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Cardiotoxic : CK(467) : AC(53), Oxidant : CK(63) : AC(23)
Statin drugs reduce coq10 levels which may result in mitochondrial dysfunction and cellular damage. - GMI Summary

Article Published Date : Mar 01, 1993
Authors : G Ghirlanda, A Oradei, A Manto, S Lippa, L Uccioli, S Caputo, A V Greco, G P Littarru
Study Type : Human Study
Additional Links
Diseases : Drug-Induced Toxicity : CK(503) : AC(76), High Cholesterol : CK(865) : AC(192), Myopathies : CK(199) : AC(18)
Additional Keywords : Drug-Nutrient Depletion : CK(64) : AC(10), Statin-Coq10 Depletion : CK(36) : AC(7)
Problem Substances : Lovastatin : CK(63) : AC(12), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Cytotoxic : CK(45) : AC(28)

Lovastatin decreases coenzyme Q levels associated with compromised cardiac function in humans. - GMI Summary

Pubmed Data : Proc Natl Acad Sci U S A. 1990 Nov;87(22):8931-4. PMID: 2247468
Article Published Date : Nov 01, 1990
Authors : K Folkers, P Langsjoen, R Willis, P Richardson, L J Xia, C Q Ye, H Tamagawa
Study Type : Human Study
Additional Links
Diseases : Coronary Artery Disease : CK(942) : AC(133), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), High Cholesterol : CK(865) : AC(192), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Cardiotoxic : CK(467) : AC(53)

Topic: Rhabdomyolysis

Statin drugs have been linked to rhabdomyolysis, myositis and kidney failure. - GMI Summary

Article Published Date : Oct 21, 2011
Authors : Alberico L Catapano
Study Type : Review
Additional Links
Diseases : Kidney Damage: Drug-Induced : CK(69) : AC(18), Kidney Failure : CK(228) : AC(42), Myositis : CK(15) : AC(2), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11), Nephrotoxic : CK(133) : AC(33)

Rhabdomyolysis related to statin and seizures has been reported. - GMI Summary

Article Published Date : Oct 01, 2011
Authors : Yu-Qing Guan, Yan-Jie Shi, Qun Wang
Study Type : Human: Case Report
Additional Links
Diseases: Rhabdomyolysis: CK(37): AC(6), Seizures: CK(100): AC(26), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Statin Drugs: CK(3705): AC(437)

There is a dose-response relationship in statin-induced rhabdomyolysis. - GMI Summary

Pubmed Data: Can J Cardiol. 2011 Mar-Apr;27(2):146-51. PMID: 21459261
Article Published Date: Mar 01, 2011
Authors: Anne Holbrook, Mitchell Wright, Melani Sung, Christine Ribic, Steven Baker
Study Type: Human Study
Additional Links
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Nephrotoxic: CK(133): AC(33)

Severe rhabdomyolysis due to rosuvastatin in a liver transplant subject with HIV has been reported. - GMI Summary

Article Published Date: Mar 01, 2011
Authors: Ana Moreno, Jesús Fortún, Javier Graus, Miguel A Rodríguez-Gandía, Carmen Quereda, María J Pérrez-Elías, Javier Nuño, Philip Wikman, Santiago Moreno, Rafael Bárzeca
Study Type: Human: Case Report
Additional Links
Diseases: Rhabdomyolysis: CK(37): AC(6)
Problem Substances: Rosuvastatin: CK(28): AC(6)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Severe statin-induced rhabdomyolysis mimicking Guillain-Barré syndrome in four patients with diabetes mellitus treated with fusidic acid has been reported. - GMI Summary

Article Published Date: Jun 01, 2010
Authors: T A Collidge, S Razvi, C Nolan, M Whittle, C Stirling, A J C Russell, A C Mann, C J Deighan
Study Type: Human: Case Report
Additional Links
Pharmacological Actions: Anti-Bacterial Agents: CK(718): AC(269)
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Concomitant administration of simvastatin and danazol has been associated with fatal rhabdomyolysis. - GMI Summary

Article Published Date: May 01, 2010
Authors: Ivan Stankovic, Alja Vlahovic-Stipac, Biljana Putnikovic, Zorica Cvetkovic, Aleksandar N Neskovic
Study Type: Human: Case Report
The risk of rhabdomyolysis (severe muscle toxicity) from statin drugs increases with increase in systemic exposure. - GMI Summary

Article Published Date: Dec 14, 2009
Authors: Karin Hedenmalm, Gunnar Alvan, Patrik Ohagen, Marja-Liisa Dahl
Study Type: Human Study
Additional Links
Diseases: Rhabdomyolysis : CK(37) : AC(6)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Simvastatin 80 mg daily is associated with a higher incidence of myotoxicity compared with maximum approved doses of other statins. - GMI Summary

Article Published Date: Dec 01, 2009
Authors: James M Backes, Patricia A Howard, Janelle F Ruisinger, Patrick M Moriarty
Study Type: Human Study
Additional Links
Diseases: Myotoxicity : CK(10) : AC(1), Rhabdomyolysis : CK(37) : AC(6)
Problem Substances: Simvastatin : CK(657) : AC(114)

Observational studies suggest that myalgia can occur in up to 10% of persons prescribed statins. - GMI Summary

Pubmed Data: Ann Intern Med. 2009 Jun 16 ;150(12):858-68. PMID: 19528564
Article Published Date: Jun 16, 2009
Authors: Tisha R Joy, Robert A Hegele
Study Type: Review
Additional Links
Diseases: Myalgias : CK(25) : AC(3), Myopathies : CK(199) : AC(18), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Hepatitis, rhabdomyolysis and multi-organ failure resulting from statin use has been reported. - GMI Summary

Article Published Date: Jan 01, 2009
Authors: Muthuram Rajaram
Study Type: Human: Case Report
Additional Links
Diseases: Hepatitis : CK(35) : AC(18), Multi-Organ Failure : CK(3) : AC(1), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Rhabdomyolysis with atorvastatin and fusidic acid has been reported. - GMI Summary

Article Published Date: Jun 01, 2008
Authors: C O'Mahony, V L Campbell, M S Al-Khayatt, D J Brull
Study Type: Human: Case Report
Additional Links
Diseases: Drug-Induced Toxicity: CK(503): AC(76), Rhabdomyolysis: CK(37): AC(6), Statin-Induced Pathologies: CK(1470): AC(206)
Pharmacological Actions: Anti-Bacterial Agents: CK(718): AC(269)

Simvastatin-induced rhabdomyolysis and acute renal injury has been reported. - GMI Summary

Article Published Date: Jan 01, 2008
Authors: Abdelkarim Waness, Sami Bahlas, Saad Al Shohaib
Study Type: Human: Case Report
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114)
Adverse Pharmacological Actions: Nephrotoxic: CK(133): AC(33)

McArdle disease with rhabdomyolysis induced by rosuvastatin has been reported. - GMI Summary

Pubmed Data: Arq Neuropsiquiatr. 2007 Sep;65(3B):834-7. PMID: 17952291
Article Published Date: Sep 01, 2007
Authors: Paulo José Lorenzoni, Carlos Eduardo Silvado, Rosana Herminia Scola, Mario Luvizotto, Lineu César Werneck
Study Type: Human Study
Additional Links
Problem Substances: Statin Drugs: CK(3705): AC(437)

Simvastatin induced rhabdomyolysis and hypothyroidism has been reported. - GMI Summary

Article Published Date: Jul 31, 2007
Authors: Thomas J Kiernan, Martin Rochford, John H McDermott
Study Type: Human: Case Report
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor: Thyroid: CK(40): AC(12)

Review: Risk factors for statin-associated rhabdomyolysis. - GMI Summary
**Asymptomatic statin-induced rhabdomyolysis after long-term therapy with the hydrophilic drug pravastatin has been reported.** - GMI Summary

**Pubmed Data**: Pharmacoepidemiol Drug Saf. 2007 Mar ;16(3):352-8. PMID: 16892458

**Article Published Date**: Mar 01, 2007

**Authors**: Stephanie Schech, David Graham, Judy Staffa, Susan E Andrade, Lois La Grenade, Margaret Burgess, David Blough, Andy Stergachis, K Arnold Chan, Richard Platt, Deborah Shatin

**Study Type**: Human Study

**Additional Links**

**Diseases**: Rhabdomyolysis : CK(37) : AC(6)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

---

**The incidence of statin-induced rhabdomyolysis is higher in practice than in controlled trials in which high-risk subjects are excluded.** - GMI Summary

**Pubmed Data**: Clin Ther. 2007 Jan ;29(1):172-6. PMID: 17379057

**Article Published Date**: Jan 01, 2007

**Authors**: Christoph Schindler, Marcus Thorns, Klaus Matschke, Sems Malte Tugtekin, Wilhelm Kirch

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin drugs have been linked to myopathy, including rhabdomyolysis.** - GMI Summary

**Pubmed Data**: Am J Med. 2006 May ;119(5):400-9. PMID: 16651050

**Article Published Date**: May 01, 2006

**Authors**: Kenneth A Antons, Craig D Williams, Steven K Baker, Paul S Phillips

**Study Type**: Review

**Additional Links**

**Diseases**: Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Some 10% to 20% of heart transplant patients appear to suffer adverse side effects of initial statin therapy.** - GMI Summary

**Pubmed Data**: Transplant Proc. 2005 Nov ;37(9):4071-3. PMID: 16386629

**Article Published Date**: Nov 01, 2005
Statin toxicity may mimic viral hepatitis. - GMI Summary

Article Published Date: Nov 01, 2005
Authors: F Cokça, S Ozkan, G Nergisoglu, O Memikoglu, A Azap
Study Type: Human: Case Report
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Simvastatin: CK(657): AC(114)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11), Nephrotoxic: CK(133): AC(33)

Rhabdomyolysis from simvastatin triggered by infection and muscle exertion has been reported. - GMI Summary

Article Published Date: Aug 01, 2005
Authors: Josef Finsterer, Georg Zuntner
Study Type: Human: Case Report
Additional Links
Diseases: Rhabdomyolysis: CK(37): AC(6), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Statin-associated rhabdomyolysis triggered by grapefruit consumption has been reported. - GMI Summary

Article Published Date: Feb 24, 2004
Authors: Jens P Dreier, Matthias Endres
Study Type: Human: Case Report
Additional Links
Substances: Grapefruit: CK(91): AC(30)
Diseases: Rhabdomyolysis: CK(37): AC(6), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Simvastatin: CK(657): AC(114)

Rhabdomyolysis induced by a single dose of a statin has been reported. - GMI Summary

Pubmed Data: Heart. 2004 Jan;90(1):e3. PMID: 14676266
Article Published Date: Jan 01, 2004
Cholesterol-lowering drugs may increase the risk of perioperative mortality. - GMI Summary

Pubmed Data: Cardiovasc Drugs Ther. 2002 Sep;16(5):471-5. PMID: 12652117
Article Published Date: Sep 01, 2002
Authors: Mathias Wilhelmi, Michael Winterhalter, Stefan Fischer, Thorsten Walles, Janusz Zuk, Martin Strüber, Axel Haverich
Study Type: Human: Case Report
Additional Links
Diseases: Perioperative Care: CK(3) : AC(1), Rhabdomyolysis: CK(37) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)
Anti Therapeutic Actions: Surgical Procedures: CK(85) : AC(7)
Problem Substances: Cholesterol Lowering Drugs: CK(1038) : AC(90), Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)

The total rhabdomyolysis rate for cerivastatin was 16 - 80 times more frequent than with other statins without providing additional efficacy. - GMI Summary

Article Published Date: Sep 01, 2002
Authors: Michael H Davidson
Study Type: Review
Additional Links
Diseases: Rhabdomyolysis: CK(37) : AC(6)
Problem Substances: Cerivastatin: CK(2) : AC(1), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Rhabdomyolysis is a rare but clinically important adverse event of statin monotherapy or combination therapy. - GMI Summary

Article Published Date: Sep 01, 2001
Authors: M A Omar, J P Wilson, T S Cox
Study Type: Review
Additional Links
Diseases: Rhabdomyolysis: CK(37) : AC(6)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Influenza vaccine has been reported to be a possible trigger of rhabdomyolysis induced acute renal failure in those taking statin drugs. - GMI Summary

Article Published Date: May 01, 2000
**Rhabdomyolysis and acute renal failure due to statin-fibrate combinations has been reported.** - GMI Summary

**Pubmed Data**: Cardiology. 2000 ;94(2):127-8. PMID: 11173785

**Article Published Date**: Jan 01, 2000

**Authors**: J B Oldemeyer, R J Lund, M Koch, A J Meares, R Dunlay

**Study Type**: Human: Case Report

**Additional Links**


**Problem Substances**: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

---

**Lovastatin monotherapy has been reported to have been a cause of rhabdomyolysis, acute renal failure and hepatopathy.** - GMI Summary

**Pubmed Data**: Jpn Heart J. 1997 Jul ;38(4):541-5. PMID: 9350151

**Article Published Date**: Jul 01, 1997

**Authors**: P H Chu, W J Chen, C W Chiang, Y S Lee

**Study Type**: Human: Case Report

**Additional Links**


**Pharmacological Actions**: Anticholesteremic Agents: CK(298): AC(38)

**Problem Substances**: Lovastatin: CK(63): AC(12)

**Adverse Pharmacological Actions**: Nephrotoxic: CK(133): AC(33)

---

**A possible increased risk of rhabdomyolysis during concomitant use of simvastatin and gemfibrozil has been reported.** - GMI Summary


**Article Published Date**: Dec 01, 1996

**Authors**: E P van Puijenbroek, P W Du Buf-Vereijken, P F Spooren, J J van Doormaal

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Rhabdomyolysis: CK(37): AC(6), Statin-Induced Pathologies: CK(1470): AC(206)

**Additional Keywords**: Drug Synergy: CK(270): AC(116)


**Adverse Pharmacological Actions**: Myotoxicity: CK(259): AC(11)

---

**Terminal renal failure in lovastatin therapy with pre-existing chronic renal insufficiency has been reported.** - GMI Summary
A case of simvastatin-induced acute rhabdomyolysis with heart failure after initiation of treatment with fusidic acid has been reported. - GMI Summary

Rhabdomyolysis secondary to lovastatin therapy has been reported. - GMI Summary

Lovastatin-induced acute rhabdomyolysis has been reported. - GMI Summary

Topic: Drug-Induced Nutrient Depletion: Statin Drugs

Simvastatin-induced inhibition of mitochondrial respiration is likely associated myotoxicity. -
GMI Summary


**Article Published Date**: Aug 04, 2011

**Authors**: Peter J Mullen, Anja Zahno, Peter Lindinger, Swarna Maseneni, Andrea Felser, Stephan Krähenbühl, Karin Brecht

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

**Statin drugs adversely effect memory likely through depletion of coenzyme q10 and interference with mitochondrial function in the brain.** - GMI Summary


**Article Published Date**: Jul 08, 2011

**Authors**: M Fux, J Levine, A Aviv, R H Belmaker

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Cognitive Decline/Dysfunction : CK(350) : AC(71), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

**A case of atorvastatin-induced pancreatitis has been reported.** - GMI Summary

**Pubmed Data**: Indian J Pharmacol. 2010 Oct ;42(5):324-5. PMID: 21206629

**Article Published Date**: Oct 01, 2010

**Authors**: Samir Prajapati, Samidh Shah, Chetna Desai, Mira Desai, R K Dikshit

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Pancreatitis : CK(131) : AC(25)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Coenzyme Q10 deficiency may be one mechanism for statin-induced myopathies.** - GMI Summary

**Pubmed Data**: Ochsner J. 2010 ;10(1):16-21. PMID: 21603349

**Article Published Date**: Jan 01, 2010

**Authors**: Richard Deichmann, Carl Lavie, Samuel Andrews

**Study Type**: Review

**Additional Links**

**Diseases**: Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

**Statin drugs may cause myopathy by lowering vitamin E levels.** - GMI Summary
Statin drugs induce a variety of potential adverse "peliotropic" effects. - GMI Summary

Statin-induced liver injury may result from the suppression of selenoprotein expression. - GMI Summary

Statin drugs interfere with neurological healing by inhibiting myelin formation. - GMI Summary
Simvastatin decreases coenzyme q10 levels in the left ventricle of the heart and skeletal muscle. - GMI Summary

Pubmed Data: Physiol Res. 2007;56 Suppl 2:S49-54. Epub 2007 Sep 5. PMID: 17824807
Article Published Date: Jan 01, 2007
Authors: J Kucharská, A Gvozdjáková, F Simko
Study Type: Animal Study

Fluvastatin has been linked to adverse hepatic reactions. - GMI Summary

Pubmed Data: Drug Saf. 2006 ;29(12):1163-72. PMID: 17147462
Article Published Date: Jan 01, 2006
Authors: Anita Conforti, Lara Magro, Ugo Moretti, Stefania Scotto, Domenico Motola, Francesco Salvo, Barbara Ros, Roberto Leone
Study Type: Human Study

Statins may adversely alter the response of muscle to exercise stress. - GMI Summary

Article Published Date: Dec 01, 2005
Authors: Maria L Urso, Priscilla M Clarkson, Dustin Hittel, Eric P Hoffman, Paul D Thompson
Study Type: Human Study

Statins and fenofibrates may exert their wide range of adverse side effects through interfering with selenoprotein expression. - GMI Summary

Article Published Date: Oct 01, 2004
Authors: Bernd Moosmann, Christian Behl
Study Type: Review
Statin precipitated lactic acidosis has been reported. - GMI Summary

Pubmed Data : J Clin Pathol. 2004 Sep;57(9):989-90. PMID: 15333664
Article Published Date : Sep 01, 2004
Authors : R Neale, T M Reynolds, W Saweirs
Study Type : Human: Case Report
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Lactic Acidosis : CK(6) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Atorvastatin : CK(231) : AC(37)

Statin drugs may induce selenium deficiency which may explain many of its enigmatic side effects. - GMI Summary

Article Published Date : Mar 13, 2004
Authors : Bernd Moosmann, Christian Behl
Study Type : Review
Additional Links
Diseases : Coronary Artery Disease : CK(942) : AC(133), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), High Cholesterol : CK(865) : AC(192), Mineral Deficiencies: Selenium : CK(15) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Additional Keywords : Statin-Selenium Deficiency : CK(4) : AC(4)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Atrial fibrillation induced by simvastatin treatment in a 61-year-old man has been reported. - GMI Summary

Article Published Date : Jul 01, 2003
Authors : Takemi Akahane, Katsufumi Mizushige, Hatsumi Nishio, Hiroshi Fukui, Shigeki Kuriyama
Study Type : Human: Case Report
Additional Links
Diseases : Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Cardiotoxic : CK(467) : AC(53)

The depletion of coq10 by statin drugs may be contributing to increasing rates of congestive heart failure. - GMI Summary

Article Published Date : Jan 01, 2003
Authors : Peter H Langsjoen, Alena M Langsjoen
Study Type : Review
Additional Links
Type 2 diabetic patients treated with statin drugs have decreased coq10 levels and may be associated with subclinical diabetic cardiomyopathy reversible by CoQ10 supplementation.

Pravastatin accelerates aging effect on diaphragm mitochondrial respiratory function in rats.

There is a dose-related decrease of serum coenzyme Q10 during treatment with statin drugs.

Simvastatin worsens the myocardial mitochondrial respiration during ischemia probably due to depletion of coenzyme Q10.
Lovastatin causes depletion of coenzyme Q10 levels in the cardiac muscle and mitochondria of animals. - GMI Summary

Pubmed Data: Biochim Biophys Acta. 1994 Jul 6 ;1200(2):100-8. PMID: 8031828

Lovastatin decreases coenzyme Q levels associated with compromised cardiac function in humans. - GMI Summary

Pubmed Data: Proc Natl Acad Sci U S A. 1990 Nov;87(22):8931-4. PMID: 2247468

Lovastatin decreases coenzyme Q10 levels in rats. - GMI Summary


Topic: Hyperlipidemia
Rosuvastatin treatment is associated with an increase in insulin resistance in hyperlipidaemic patients with impaired fasting glucose. - GMI Summary

Article Published Date: Sep 01, 2009
Authors: M S Kostapanos, H J Milionis, A-D Agouridis, C V Rizos, M S Elisaf
Study Type: Human Study
Additional Links
Diseases: Hyperlipidemia: CK(864) : AC(105), Insulin Resistance: CK(741) : AC(194), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Rosuvastatin: CK(28) : AC(6)
Adverse Pharmacological Actions: Diabetogenic: CK(89) : AC(9), Endocrine Disruptor: Insulin Resistance: CK(50) : AC(18)

Statin use is associated with an increased incidence of interstitial lung disease. - GMI Summary

Article Published Date: Oct 01, 2008
Authors: Antonio B Fernández, Richard H Karas, Alawi A Alsheikh-Ali, Paul D Thompson
Study Type: Meta Analysis
Additional Links
Diseases: Hyperlipidemia: CK(864) : AC(105), Interstitial Lung Diseases: CK(56) : AC(11)
Problem Substances: Statin Drugs: CK(3705) : AC(437)

Statin use may be contraindicated in hypothyroidism. - GMI Summary

Article Published Date: Mar 01, 2007
Authors: Simona L Bar, Daniel T Holmes, Jiri Frohlich
Study Type: Human: Case Report
Additional Links
Diseases: Hyperlipidemia: CK(864) : AC(105), Hypothyroidism: CK(391) : AC(75), Myopathies: CK(199) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Statin therapy is associated with decreased serum levels of zinc and copper. - GMI Summary

Article Published Date: Jan 01, 2005
Authors: Majid Ghayour-Mobarhan, David J Lamb, Andrew Taylor, Nandita Vaidya, Callum Livingstone, Timothy Wang, Gordon A A Ferns
Study Type: Human Study
Additional Links
Diseases: Copper Deficiency: CK(44) : AC(5), Hyperlipidemia: CK(864) : AC(105), Zinc Deficiency: CK(53) : AC(5)
Problem Substances: Atorvastatin: CK(231) : AC(37), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Statin therapy is associated with decreased serum levels of zinc and copper. - GMI Summary
Cholesterol-lowering drugs may contribute to skin disorders. - GMI Summary

Pubmed Data : Hautarzt. 1995 Feb ;46(2):76-80. PMID: 7706076
Article Published Date : Feb 01, 1995
Authors : E Proksch
Study Type : Human Study
Additional Links
Diseases : Eczema : CK(773) : AC(85), Hyperlipidemia : CK(864) : AC(105), Psoriasis : CK(211) : AC(39), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Cholesterol Lowering Drugs : CK(1038) : AC(90), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Topic: Coenzyme Q10 Deficiency

Coenzyme Q10 deficiency may be one mechanism for statin-induced myopathies. - GMI Summary

Article Published Date : Jan 01, 2010
Authors : Richard Deichmann, Carl Lavie, Samuel Andrews
Study Type : Review
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Atorvastatin reduces serum coenzyme Q10 levels (reduced and oxidized forms) in patients with high cholesterol. - GMI Summary

Article Published Date : Jan 01, 2005
Authors : Hiroshi Mabuchi, Toshinori Higashikata, Masaaki Kawashiri, Shoji Katsuda, Mihoko Mizuno, Atsushi Nohara, Akihiro Inazu, Junji Koizumi, Junji Kobayashi
Study Type : Human Study
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), High Cholesterol : CK(865) : AC(192), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Atorvastatin worsens left ventricular diastolic function, which is improved through coenzyme q10 supplementation. - GMI Summary

Pubmed Data: Am J Cardiol. 2004 Nov 15;94(10):1306-10. PMID: 15541254
Article Published Date: Nov 15, 2004
Authors: Marc A Silver, Peter H Langsjoen, Szabolcs Szabo, Harish Patil, Allan Zelinger
Study Type: Human Study

Statin precipitated lactic acidosis has been reported. - GMI Summary

Pubmed Data: J Clin Pathol. 2004 Sep;57(9):989-90. PMID: 15333664
Article Published Date: Sep 01, 2004
Authors: R Neale, T M Reynolds, W Saweirs
Study Type: Human: Case Report

Atorvastatin decreases the coenzyme Q10 level in the blood of patients at risk for cardiovascular disease and stroke. - GMI Summary

Article Published Date: Jun 01, 2004
Authors: Tatjana Rundek, Ali Naini, Ralph Sacco, Kristen Coates, Salvatore DiMauro
Study Type: Human Study

Statins lower plasma and lymphocyte ubiquinol/ubiquinone (coQ10) levels. - GMI Summary

Article Published Date: Jan 01, 2003
Authors: Siro Passi, Andrea Stancato, Enrico Aleo, Anna Dmitrieva, Gian Paolo Littarru
Study Type: Human Study
Simvastatin-induced lactic acidosis has been reported. - GMI Summary

Article Published Date : Oct 01, 2002
Authors : Anil K Goli, Sujatha A Goli, Ryland P Byrd, Thomas M Roy
Study Type : Human: Case Report
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), Lactic Acidosis : CK(6) : AC(2), Mitochondrial Dysfunction : CK(95) : AC(35)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

There is a dose-related decrease of serum coenzyme Q10 during treatment with statin drugs. - GMI Summary

Pubmed Data : Mol Aspects Med. 1997 ;18 Suppl:S137-44. PMID: 9266515
Article Published Date : Jan 01, 1997
Authors : S A Mortensen, A Leth, E Agner, M Rohde
Study Type : Human Study
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Antioxidants : CK(3231) : AC(1251)
Problem Substances : Lovastatin : CK(63) : AC(12), Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

Statin therapy can be associated with high blood lactate/ pyruvate ratio suggestive of mitochondrial dysfunction. - GMI Summary

Article Published Date : Sep 01, 1996
Authors : G De Pinieux, P Chariot, M Ammi-Saïd, F Louam, J L Lejonc, A Astier, B Jacotot, R Gherardi
Study Type : Human Study
Additional Links
Diseases : Blood Lactate/ Pyruvate Ratio: Elevated : CK(10) : AC(1), Coenzyme Q10 Deficiency : CK(42) : AC(5), Mitochondrial Dysfunction : CK(95) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Enzyme Inhibitors : CK(340) : AC(201)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Simvastatin worsens the myocardial mitochondrial respiration during ischemia probably due to depletion of coenzyme Q10. - GMI Summary

Article Published Date : Sep 01, 1995
Authors : K Satoh, A Yamato, T Nakai, K Hoshi, K Ichihara
Study Type : Animal Study
Additional Links
Diseases : Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Mitochondrial Dysfunction : CK(95) : AC(35), Myocardial Ischemia : CK(83) : AC(36), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Enzyme Inhibitors : CK(340) : AC(201)
Lovastatin causes depletion of coenzyme Q10 levels in the cardiac muscle and mitochondria of animals. - GMI Summary

Pubmed Data: Biochim Biophys Acta. 1994 Jul 6 ;1200(2):100-8. PMID: 8031828
Article Published Date: Jul 06, 1994
Authors: B A Diebold, N V Bhagavan, R J Guillory
Study Type: Animal Study
Additional Links
Diseases: Coenzyme Q10 Deficiency: CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Heart Failure: CK(452) : AC(85), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Lovastatin: CK(63) : AC(12)
Adverse Pharmacological Actions: Cardiotoxic: CK(467) : AC(53), Myotoxicity: CK(259) : AC(11)

Statin drugs increase the risk of diabetes and cause abnormal liver enzyme elevations. - GMI Summary

Article Published Date: Sep 14, 2011
Authors: M Alberton, P Wu, E Druyts, M Briel, E J Mills
Study Type: Meta Analysis
Additional Links
Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

In a pooled analysis of data from 5 statin trials, intensive-dose statin therapy was associated with an increased risk of new-onset diabetes compared with moderate-dose statin therapy. - GMI Summary

Pubmed Data: JAMA. 2011 Jun 22;305(24):2556-64. PMID: 21693744
Article Published Date: Jun 22, 2011
Authors: David Preiss, Sreenivasa Rao Kondapally Seshasai, Paul Welsh, Sabina A Murphy, Jennifer E Ho, David D Waters, David A DeMicco, Philip Barter, Christopher P Cannon, Marc S Sabatine, Eugene Braunwald, John J P Kastelein, James A de Lemos, Michael A Blazing, Terje R Pedersen, Matti J Tikkanen, Naveed Sattar, Kausik K Ray
Study Type: Meta Analysis
Additional Links
Diseases: Diabetes Mellitus: Type 2 : CK(1516) : AC(314), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Diabetogenic: CK(89) : AC(9)

There are 17 randomized trials on statin treatment showing an increased incidence of diabetes. - GMI Summary
Severe statin-induced rhabdomyolysis mimicking Guillain-Barré syndrome in four patients with diabetes mellitus treated with fusidic acid has been reported. - GMI Summary

Statins increase the risk of developing type 2 diabetes. - GMI Summary

Simvastatin contributes to insulin resistance in non-diabetic patients. - GMI Summary
Atorvastatin treatment is not effective in reducing inflammation (C-reactive protein) or outcome in patients with type 2 diabetes on hemodialysis. - GMI Summary


Acute onset and worsening of diabetes concurrent with administration of statins has been reported. - GMI Summary


Ezetimibe and simvastatin use is associated with increased cancer incidence and death. - GMI Summary


Statin drugs are associated with increased risk of cancers of the thyroid, esophagus, urinary tract and possibly increased lung cancer in women. - GMI Summary

The use of statins for LDL suppression is associated with increased risk for cancer. - GMI

Summary


Article Published Date: Jul 31, 2007

Authors: Alawi A Alsheikh-Ali, Prasad V Maddukuri, Hui Han, Richard H Karas

Study Type: Meta Analysis

Additional Links

Diseases: Cancers: All: CK(6410) : AC(2509), Chemically-Induced Liver Damage: CK(497) : AC(145), High Cholesterol: CK(865) : AC(192), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Lovastatin: CK(63) : AC(12), Pravastatin: CK(197) : AC(31), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Carcinogenic: CK(416) : AC(81)

Pravastatin therapy was associated with an increasing risk of cancer as age increases. - GMI

Summary

Pubmed Data: CMAJ. 2007 Feb 27 ;176(5):649-54. PMID: 17325332

Article Published Date: Feb 27, 2007

Authors: Stefanos Bonovas, Nikolaos M Sitaras

Study Type: Meta Analysis

Additional Links

Diseases: Cancers: All: CK(6410) : AC(2509), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Pravastatin: CK(197) : AC(31)

Adverse Pharmacological Actions: Carcinogenic: CK(416) : AC(81)

The adverse effects of statins may be amplified in the elderly, and include cancer, neurodegenerative conditions, heart failure and accelerated aging. - GMI

Summary


Article Published Date: May 01, 2005

Authors: Beatrice Alexandra Golomb

Study Type: Commentary

Additional Links

Diseases: Cancers: All: CK(6410) : AC(2509), Elderly: Age Specific Diseases: CK(348) : AC(33), Heart Failure: CK(452) : AC(85), Neurodegenerative Diseases: CK(1481) : AC(410), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Topic: Drug-Induced Toxicity

Statin drugs may interfere with neurological function in the brain by inhibiting cholesterol biosynthesis and synaptic transmission. - GMI

Summary

Quercetin is able to ameliorate statin-drug induced skeletal muscle myopathy in an animal model. - GMI Summary


Statin drugs increase the risk of diabetes. - GMI Summary


Risk documentation occurred in only 20% of women age 15-45 prescribed a medication known to contribute to birth defects. - GMI Summary

Pubmed Data : J Am Board Fam Med. 2011 May-Jun;24(3):262-71. PMID: 21551398

Concomitant administration of simvastatin and danazol has been associated with fatal
**Rhabdomyolysis.** - GMI Summary


**Article Published Date**: May 01, 2010

**Authors**: Ivan Stankovic, Alja Vlahovic-Stipac, Biljana Putnikovic, Zorica Cvetkovic, Aleksandar N Neskovic

**Study Type**: Human: Case Report

**Additional Links**
- **Diseases**: Drug-Induced Toxicity: CK(503) : AC(76), Rhabdomyolysis: CK(37) : AC(6), Rhabdomyolysis: Fatal: CK(3) : AC(1)
- **Problem Substances**: Danazol : CK(4) : AC(2), Simvastatin : CK(657) : AC(114)

---

**Low dose simvastatin induces compositional, structural and dynamic changes in rat.** - GMI Summary


**Article Published Date**: Feb 01, 2010

**Authors**: Nihal Simsek Ozek, Yildirim Sara, Rustu Onur, Feride Severcan

**Study Type**: Animal Study

**Additional Links**
- **Diseases**: Drug-Induced Toxicity: CK(503) : AC(76), Myopathies: CK(199) : AC(18)
- **Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin-induced muscle toxicity may be associated with altered oxidation of fatty acids.** - GMI Summary


**Article Published Date**: Feb 01, 2009

**Authors**: Paul S Phillips, Theodore P Ciaraldi, Dong-Lim Kim, M Anthony Verity, Tanya Wolfson, Robert R Henry,

**Study Type**: Human Study

**Additional Links**
- **Diseases**: Drug-Induced Toxicity: CK(503) : AC(76), Myopathies: CK(199) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)
- **Problem Substances**: Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Rhabdomyolysis with atorvastatin and fusidic acid has been reported.** - GMI Summary


**Article Published Date**: Jun 01, 2008

**Authors**: C O'Mahony, V L Campbell, M S Al-Khayatt, D J Brull

**Study Type**: Human: Case Report

**Additional Links**
- **Diseases**: Drug-Induced Toxicity: CK(503) : AC(76), Rhabdomyolysis: CK(37) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)
- **Pharmacological Actions**: Anti-Bacterial Agents: CK(718) : AC(269)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37), Fusidic acid : CK(6) : AC(2), Statin Drugs : CK(3705) : AC(437)

---

**Drug-induced acute autoimmune hepatitis during combination therapy with atorvastatin and ezetimibe has been reported.** - GMI Summary
Statin drugs reduce coq10 levels which may result in mitochondrial dysfunction and cellular damage. - GMI Summary

Statin drug induced myopathy is amplified in the rats administered cyclosporine A. - GMI Summary

Topic: Pancreatitis

Atorvastatin-induced acute pancreatitis has been reported. - GMI Summary
**A case of atorvastatin-induced pancreatitis has been reported.** - GMI Summary


Authors: Samir Prajapati, Samidh Shah, Chetna Desai, Mira Desai, R K Dikshit

Study Type: Human: Case Report


Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

---

**Pravastatin, as a potential cause for acute pancreatitis, has been reported.** - GMI Summary


Authors: Constantine Tsigrelis, C S Pitchumoni

Study Type: Human: Case Report

Diseases: Pancreatitis: CK(131) : AC(25), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Pravastatin: CK(197) : AC(31)

---

**Simvastatin-associated pancreatitis has been observed.** - GMI Summary


Authors: Jeremy L Johnson, Ilana B Loomis

Study Type: Human: Case Report

Diseases: Pancreatitis: CK(131) : AC(25)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

---

**Recurrent acute pancreatitis during pravastatin-therapy has been reported.** - GMI Summary


Authors: C Becker, C Hvalic, G Delmore, S Krähenbühl, R Schlienger

Study Type: Human: Case Report

Diseases: Pancreatitis: CK(131) : AC(25), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)

---

**Pancreatitis, while rare, is a possible side effect of taking statin drugs.** - GMI Summary

Pubmed Data: Drug Saf. 2006 ;29(12):1123-32. PMID: 17147459

Article Published Date: Jan 01, 2006
Drug induced pancreatitis might be a class effect of statin drugs. - GMI Summary


Acute pancreatitis associated with combined lisinopril and atorvastatin therapy has been reported. - GMI Summary


Statin induced pancreatitis has been reported. - GMI Summary


Acute pancreatitis due to pravastatin therapy has been reported. - GMI Summary

Pubmed Data: JOP. 2003 May;4(3):129-32. PMID: 12743419
Acute pancreatitis induced by fluvastatin therapy has been reported. - GMI Summary


Article Published Date : Nov 01, 2002

Authors : Curt Tysk, Adel Y Al-Eryani, Amin A Shawabkeh

Study Type : Human: Case Report

Additional Links

Diseases : Pancreatitis : CK(131) : AC(25), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances : Fluvastatin : CK(13) : AC(3), Statin Drugs : CK(3705) : AC(437)

Pancreatitis associated with simvastatin plus fenofibrate. - GMI Summary


Article Published Date : Feb 01, 2002

Authors : Kevin B McDonald, Bryan G Garber, Marc M Perreault

Study Type : Human: Case Report

Additional Links

Diseases : Pancreatitis : CK(131) : AC(25), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances : Fenofibrates : CK(83) : AC(11), Simvastatin : CK(657) : AC(114)

Acute pancreatitis associated with atorvastatine therapy has been reported. - GMI Summary


Article Published Date : Apr 01, 2000

Authors : G Belaïche, G Ley, J L Slama

Study Type : Human: Case Report

Additional Links

Diseases : Pancreatitis : CK(131) : AC(25), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Atorvastatin : CK(231) : AC(37)

Two cases of simvastatin-induced acute pancreatitis have been reported. - GMI Summary


Article Published Date : Jan 01, 1991

Authors : M Ramdani, A M Schmitt, J Liautard, O Duhamel, P Legroux, J Gislon, E A Pariente, D Agay, D Faure

Study Type : Human: Case Report

Additional Links

Diseases : Pancreatitis : CK(131) : AC(25), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Simvastatin : CK(657) : AC(114)

A case of simvastatin-induced acute pancreatitis has been reported. - GMI Summary


Article Published Date : Jan 01, 1991

Authors : M Couderc, P Blanc, J M Rouillon, P Bauret, D Larrey, H Michel

Study Type : Human: Case Report
Statin drug use is associated with lower bilirubin levels, a known risk factor for cardiovascular disease. - GMI Summary


Article Published Date: Jul 23, 2011

Authors: Kwok Leung Ong, Ben J Wu, Bernard M Y Cheung, Philip J Barter, Kerry-Anne Rye

Study Type: Human Study

Statins increase the risk of developing type 2 diabetes. - GMI Summary


Article Published Date: Feb 27, 2010


Study Type: Human Study

Unintended consequences of statin drug use are increased risk of esophageal cancer, kidney failure, cataract, liver dysfunction and myopathies. - GMI Summary


Article Published Date: Jan 01, 2010

Authors: Julia Hippisley-Cox, Carol Coupland

Study Type: Human Study

Statin therapy decreases myocardial (heart) function. - GMI Summary
**Simvastatin decreases coenzyme q10 levels in the left ventricle of the heart and skeletal muscle.** - GMI Summary

- **Pubmed Data**: Clin Cardiol. 2009 Dec;32(12):684-9. PMID: 20027659
- **Article Published Date**: Dec 01, 2009
- **Authors**: Jack Rubinstein, Feras Aloka, George S Abela
- **Study Type**: Human Study
- **Additional Links**
  - **Diseases**: Cardiovascular Diseases: CK(3885) : AC(623), Statin-Induced Pathologies : CK(1470) : AC(206)
  - **Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Atorvastatin decreases the coenzyme Q10 level in the blood of patients at risk for cardiovascular disease and stroke.** - GMI Summary

- **Pubmed Data**: Physiol Res. 2007;56 Suppl 2:S49-54. Epub 2007 Sep 5. PMID: 17824807
- **Article Published Date**: Jan 01, 2007
- **Authors**: J Kucharská, A Gvozdjáková, F Simko
- **Study Type**: Animal Study
- **Additional Links**
  - **Diseases**: Cardiovascular Diseases : CK(3885) : AC(623), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Hypertension : CK(1341) : AC(257), Statin-Induced Pathologies : CK(1470) : AC(206)
  - **Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
  - **Adverse Pharmacological Actions**: Cardiotoxic : CK(467) : AC(53), Myotoxicity : CK(259) : AC(11)

**Topic: Insulin Resistance**

**Statin drugs contribute to insulin resistance in human subjects.** - GMI Summary

- **Article Published Date**: Nov 01, 2011
- **Authors**: E Moutzouri, E Liberopoulos, D P Mikhailidis, M S Kostapanos, A A Kei, H Milionis, M Elisaf
- **Study Type**: Human Study
- **Additional Links**
  - **Diseases**: Insulin Resistance : CK(741) : AC(194)
  - **Problem Substances**: Ezetimibe (trade name Zetia) : CK(20) : AC(1), Rosuvastatin : CK(28) : AC(6), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
  - **Adverse Pharmacological Actions**: Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)

**Statin therapy may cause insulin resistance which may negate their purported beneficial effects on cardiac remodelling in heart failure.** - GMI Summary
Atorvastatin causes insulin resistance and increases ambient glycemia in hypercholesterolemic patients - GMI Summary

Article Published Date : Mar 23, 2010
Authors : Kwang Kon Koh, Michael J Quon, Seung Hwan Han, Yonghee Lee, Soo Jin Kim, Eak Kyun Shin
Study Type : Human Study
Additional Links
Diseases : High Cholesterol : CK(865) : AC(192), Hyperglycemia : CK(145) : AC(47), Insulin Resistance : CK(741) : AC(194), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Atorvastatin : CK(231) : AC(37), Insulin : CK(17) : AC(5), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)

Simvastatin contributes to insulin resistance in non-diabetic patients. - GMI Summary

Article Published Date : Jan 01, 2010
Authors : William L Baker, Ripple Talati, C Michael White, Craig I Coleman
Study Type : Meta Analysis
Additional Links
Diseases : Insulin Resistance : CK(741) : AC(194)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions : Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)

Rosuvastatin treatment is associated with an increase in insulin resistance in hyperlipidaemic patients with impaired fasting glucose. - GMI Summary

Article Published Date : Jan 01, 2010
Authors : William L Baker, Ripple Talati, C Michael White, Craig I Coleman
Study Type : Meta Analysis
Additional Links
Diseases : Diabetes Mellitus: Type 2 : CK(1516) : AC(314), Hyperglycemia : CK(145) : AC(47), Insulin Resistance : CK(741) : AC(194)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions : Diabetogenic : CK(89) : AC(9), Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)
Topic: Cataract

Shorter-term use of statin drugs is associated with an increased risk of cataract surgery. - GMI Summary

Article Published Date: Oct 06, 2011
Authors: Donald S Fong, Kwun-Yee T Poon
Study Type: Human Study
Additional Links
Diseases: Cataract : CK(180) : AC(53), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Unintended consequences of statin drug use are increased risk of esophageal cancer, kidney failure, cataract, liver dysfunction and myopathies. - GMI Summary

Article Published Date: Jan 01, 2010
Authors: Julia Hippisley-Cox, Carol Coupland
Study Type: Human Study
Additional Links
Diseases: Cardiovascular Diseases : CK(3885) : AC(623), Cataract : CK(180) : AC(53), Chemically-Induced Liver Damage : CK(497) : AC(145), Esophageal Cancer : CK(201) : AC(53), Kidney Failure : CK(228) : AC(42), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

Atorvastatin contributes to cataract formation in the white rat. - GMI Summary

Article Published Date: Jan 01, 2002
Authors: Paweł Zakrzewski, Jolanta Milewska, Krystyna Czerny
Study Type: Animal Study
Additional Links
Diseases: Cataract : CK(180) : AC(53), Lens Diseases : CK(6) : AC(4)
**Concomitant use of erythromycin and simvastatin may increase the cataract risk.** - GMI Summary

Pubmed Data: Arch Intern Med. 2001 Sep 10 ;161(16):2021-6. PMID: 11525705

Authors: R G Schlienger, W E Haefeli, H Jick, C R Meier

**Summary**

Concomitant use of erythromycin and simvastatin may increase the cataract risk.

---

**An experimental statin drug was demonstrated to cause a wide range of adverse effects in the animal model.** - GMI Summary

Pubmed Data: Fundam Appl Toxicol. 1991 Feb ;16(2):320-9. PMID: 2055362

Authors: R J Gerson, H L Allen, G R Lankas, J S MacDonald, A W Alberts, D L Bokelman

**Summary**

An experimental statin drug was demonstrated to cause a wide range of adverse effects in the animal model.

---

**Statin drugs may contribute to lens opacities.** - GMI Summary


Authors: R J Gerson, J S MacDonald, A W Alberts, J Chen, J B Yudkovitz, M D Greenspan, L F Rubin, D L Bokelman

**Summary**

Statin drugs may contribute to lens opacities.

---

**Topic: Oxidative Stress**

**Atorvastatin treatment reduces exercise capacities in rats and exacerbates metabolic perturbations and oxidative stress in skeletal muscle.** - GMI Summary


Authors: Jamal Bouitbir, Anne-Laure Charles, Laurence Rasseneur, Stéphane P Dufour, Francois Piquard, Bernard Geny, Joffrey Zoll
Statin drugs may cause ALS-like neurodegeneration in susceptible individuals. - GMI Summary


Atorvastatin exhibits immunotoxic and genotoxic properties. - GMI Summary


Atorvastatin increases myocardial indices of oxidative stress in a porcine model of hypercholesterolemia and chronic ischemia. - GMI Summary


Statin therapy appears to be associated with increased oxidation injury. - GMI Summary

Muscular side effects associated with statin drug use are related to oxidative stress. - GMI Summary


Article Published Date: Aug 01, 2001

Authors: H Sinzinger, G Lupattelli, F Chehne, A Oguogho, C D Furbeg

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11), Oxidant: CK(63): AC(23)

Simvastatin-induced inhibition of mitochondrial respiration is likely associated myotoxicity. - GMI Summary


Article Published Date: Aug 04, 2011

Authors: Peter J Mullen, Anja Zahno, Peter Lindinger, Swarna Maseneni, Andrea Felser, Stephan Krähenbühl, Karin Brecht

Study Type: In Vitro Study

Additional Links


Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Statin drugs may contribute to a wide range of disorders via interference with mitochondrial function. - GMI Summary


Article Published Date: Jan 01, 2008

Authors: Beatrice A Golomb, Marcella A Evans

Study Type: Review

Additional Links

Diseases: Mitochondrial Dysfunction: CK(95): AC(35), Statin-Induced Pathologies: CK(1470): AC(206)

Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

The adverse effects associated with statin drug use has been linked to mitochondrial dysfunction. - GMI Summary

Article Published Date: Jan 01, 2008
Decreased skeletal muscle mitochondrial DNA in patients treated with high-dose simvastatin has been observed. - GMI Summary

Article Published Date : May 01, 2007
Authors : B A Schick, R Laaksonen, J J Frohlich, H Päivä, T Lehtimäki, K H Humphries, H C F Côté
Study Type : Human Study
Additional Links
Diseases : Mitochondrial Dysfunction : CK(95) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Statin drugss can act directly on mitochondria either in vivo or in vitro inducing permeability transition, which is a process involved in cell death. - GMI Summary

Article Published Date : Feb 15, 2006
Authors : Jesus A Velho, Heitor Okanobo, Giovanna R Degasperi, Márcio Y Matsumoto, Luciane C Alberici, Ricardo G Cosso, Helena C F Oliveira, Anibal E Vercesi
Study Type : Review
Additional Links
Diseases : Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5)
Problem Substances : Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Cytotoxic : CK(45) : AC(28)

Statin drugs lead to changes in statin sterol metabolism and aggressive statin treatment may adversely effect mitochondrial volume. - GMI Summary

Article Published Date : Jul 01, 2005
Authors : Hannu Päivä, Karin M Thelen, Rudy Van Coster, Joél Smet, Boel De Paepe, Kari M Mattila, Juha Laakso, Terho Lehtimäki, Klaus von Bergmann, Dieter Lütjohann, Reijo Laaksonen
Study Type : Human Study
Additional Links
Diseases : Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5), Myopathies : CK(199) : AC(18)
Problem Substances : Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Statins alter mitochondrial function which may be associated with myotoxicity in skeletal muscle. - GMI Summary

Pubmed Data : Biochem Biophys Res Commun. 2005 Apr 15 ;329(3):1067-75. PMID: 15752763
Statins appear to cause muscle damage and impair oxidative metabolism. - GMI Summary


Simvastatin-induced lactic acidosis has been reported. - GMI Summary


Pravastatin accelerates aging effect on diaphragm mitochondrial respiratory function in rats. - GMI Summary


Statin therapy can be associated with high blood lactate/pyruvate ratio suggestive of mitochondrial dysfunction. - GMI Summary

Simvastatin worsens the myocardial mitochondrial respiration during ischemia probably due to depletion of coenzyme Q10. - GMI Summary


Statin drugs may enhance respiratory impairment of liver mitochondria under pathophysiological conditions, such as ischemia. - GMI Summary


Topic: Copper Deficiency

Statin therapy is associated with decreased serum levels of zinc and copper. - GMI Summary

Statin therapy is associated with decreased serum levels of zinc and copper. - GMI Summary


**Article Published Date**: Jan 01, 2005

**Authors**: Majid Ghayour-Mobarhan, David J Lamb, Andrew Taylor, Nandita Vaidya, Callum Livingstone, Timothy Wang, Gordon A A Ferns

**Study Type**: Meta Analysis

**Additional Links**
- **Diseases**: Copper Deficiency : CK(44) : AC(5), Hyperlipidemia : CK(864) : AC(105), Zinc Deficiency : CK(53) : AC(5)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Topic**: Zinc Deficiency

---

Statin administration in animals results in a myopathy characterized by decreased muscle force and elevated plasma CK level. - GMI Summary


**Article Published Date**: Nov 09, 2011

**Authors**: Márta Füzi, Zoltán Palicz, János Vincze, Julianna Cseri, Zita Szombathy, Ilona Kovács, Anna Oláh, Péter Szentesi, Pál Kertai, György Paragh, László Csernoch

**Study Type**: Animal Study
Vitamin D deficiency, myositis-myalgia, and reversible statin intolerance is discussed. - GMI Summary

Article Published Date : Sep 01, 2011
Authors : Charles J Glueck, Shaaista B Budhani, Silpa S Masineni, Cesar Abuchaibe, Naseer Khan, Ping Wang, Naila Goldenberg
Study Type : Human Study

Statin-induced myalgia occurs in 10% of lipid clinic outpatients. - GMI Summary

Article Published Date : Jul 20, 2011
Authors : Gualberto Ruaño, Andreas Windemuth, Alan H B Wu, John P Kane, Mary J Malloy, Clive R Pullinger, Mohan Kocherla, Kali Bogaard, Bruce R Gordon, Theodore R Holford, Ankur Gupta, Richard L Seip, Paul D Thompson
Study Type : Human Study

Muscle problems due to statins have been underestimated and may be as prevalent as 10%. - GMI Summary

Article Published Date : Jan 01, 2010
Authors : Stan P Janssen, Yvo M Smulders, Victor E Gerdes, Frank L J Vissren
Study Type : Review

Observational studies suggest that myalgia can occur in up to 10% of persons prescribed statins. - GMI Summary

Pubmed Data : Ann Intern Med. 2009 Jun 16 ;150(12):858-68. PMID: 19528564
Article Published Date : Jun 16, 2009
Authors : Tisha R Joy, Robert A Hegele
It is thought that as many as 25% of statin users who exercise may experience muscle fatigue, weakness, aches, and cramping due to statin therapy and potentially dismissed by the patient and physician. - GMI Summary

Muscular symptoms were reported by 832 patients (10.5%), with a median time of onset of 1 month following initiation of statin therapy. - GMI Summary

Some 10% to 20% of heart transplant patients appear to suffer adverse side effects of initial statin therapy. - GMI Summary

Review: muscle symptoms associated with lipid-lowering drugs. - GMI Summary
Muscular side effects associated with statin drug use are related to oxidative stress. - GMI Summary


Simvastatin-induced inhibition of mitochondrial respiration is likely associated myotoxicity. - GMI Summary

Statin drugs impair mitochondrial function and decrease ubiquinone (coenzyme Q10) levels. - GMI Summary

Topic: Mitochondrial Myopathies
Lipophilic statin drugs are associated with impaired skeletal muscle mitochondria. - GMI

Summary


Article Published Date: Oct 01, 2006

Authors: P Kaufmann, M Török, A Zahno, K M Waldhauser, K Brecht, S Krähenbühl

Study Type: Animal Study

Additional Links

Diseases: Mitochondrial Myopathies: CK(33) : AC(5), Statin-Induced Pathologies: CK(1470) : AC(206)


Statin drugss can act directly on mitochondria either in vivo or in vitro inducing permeability transition, which is a process involved in cell death. - GMI Summary


Article Published Date: Feb 15, 2006

Authors: Jesus A Velho, Heitor Okanobo, Giovanna R Degasperi, Márcio Y Matsumoto, Luciane C Alberici, Ricardo G Cosso, Helena C F Oliveira, Anibal E Vercesi

Study Type: Review

Additional Links

Diseases: Mitochondrial Dysfunction: CK(95) : AC(35), Mitochondrial Myopathies: CK(33) : AC(5)

Problem Substances: Lovastatin: CK(63) : AC(12), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Cytotoxic: CK(45) : AC(28)

Statin-related myopathy is associated wtih low muscle levels of coenzyme Q10. - GMI Summary


Article Published Date: Nov 01, 2005

Authors: Costanza Lamperti, Ali B Naini, Valeria Lucchini, Alessandro Prelle, Nereo Bresolin, Maurizio Moggio, Monica Sciacco, Petra Kaufmann, Salvatore DiMauro

Study Type: Human Study

Additional Links

Diseases: Mitochondrial Myopathies: CK(33) : AC(5), Myopathy: CK(50) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Statin drugs lead to changes in statin sterol metabolism and aggressive statin treatment may adversely effect mitochondrial volume. - GMI Summary


Article Published Date: Jul 01, 2005

Authors: Hannu Päivä, Karin M Thelen, Rudy Van Coster, Joël Smet, Boel De Paepe, Kari M Mattila, Juha Laakso, Terho Lehtimäki, Klaus von Bergmann, Dieter Lütjohann, Reijo Laaksonen

Study Type: Human Study

Additional Links

Diseases: Mitochondrial Dysfunction: CK(95) : AC(35), Mitochondrial Myopathies: CK(33) : AC(5), Myopathies: CK(199) : AC(18)

Problem Substances: Atorvastatin: CK(231) : AC(37), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)
**Statins alter mitochondrial function which may be associated with myotoxicity in skeletal muscle.** - GMI Summary

**Pubmed Data**: Biochem Biophys Res Commun. 2005 Apr 15 ;329(3):1067-75. PMID: 15752763

**Article Published Date**: Apr 15, 2005

**Authors**: Pascal Sirvent, Jacques Mercier, Guy Vassort, Alain Lacampagne

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statins appear to cause muscle damage and impair oxidative metabolism.** - GMI Summary


**Article Published Date**: Jan 01, 2004

**Authors**: S Gambelli, M T Dotti, A Malandrini, M Mondelli, M L Stromillo, C Gaudiano, A Federico

**Study Type**: Human Study

**Additional Links**

**Diseases**: Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Topic: Cognitive Decline/Dysfunction**

**Statin drugs adversely effect memory likely through depletion of coenzyme q10 and interference with mitochondrial function in the brain.** - GMI Summary


**Article Published Date**: Jul 08, 2011

**Authors**: M Fux, J Levine, A Aviv, R H Belmaker

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Cognitive Decline/Dysfunction : CK(350) : AC(71), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Mevastatin accelerates loss of synaptic proteins and neurite degeneration in neurons.** - GMI Summary


**Article Published Date**: Sep 01, 2010

**Authors**: Madhuvanthi Kannan, Joern R Steinert, Ian D Forsythe, Andrew G Smith, Tatyana Chernova

**Study Type**: In Vitro Study

**Additional Links**

Statin-associated adverse cognitive effects have been reported with 90% resolving after drug discontinuation. - GMI Summary

Pubmed Data : Pharmacotherapy. 2009 Jul ;29(7):800-11. PMID: 19558254
Article Published Date : Jul 01, 2009
Authors : Marcella A Evans, Beatrice A Golomb
Study Type : Human Study
Additional Links
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Simvastatin-induced decline in cognition has been reported. - GMI Summary

Article Published Date : Oct 01, 2006
Authors : Kalpana P Padala, Prasad R Padala, Jane F Potter
Study Type : Human: Case Report
Additional Links
Diseases : Cognitive Decline/Dysfunction : CK(350) : AC(71), Memory Disorders : CK(171) : AC(55), Memory Loss : CK(89) : AC(30), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Statin drug use results in decrements in cognitive functioning. - GMI Summary

Article Published Date : Dec 01, 2004
Authors : Matthew F Muldoon, Christopher M Ryan, Susan M Sereika, Janine D Flory, Stephen B Manuck
Study Type : Human Study
Additional Links
Diseases : Cognitive Decline/Dysfunction : CK(350) : AC(71), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Cognitive impairment associated with statin drug use has been reported. - GMI Summary

Pubmed Data : Pharmacotherapy. 2003 Dec ;23(12):1663-7. PMID: 14695047
Article Published Date : Dec 01, 2003
Authors : Deborah S King, Amanda J Wilburn, Marion R Wofford, T Kristopher Harrell, Brent J Lindley, Daniel W Jones
Study Type : Review
Additional Links
Diseases : Cognitive Decline/Dysfunction : CK(350) : AC(71), Dementia : CK(148) : AC(29), Memory Disorders : CK(171) : AC(55)
Problem Substances : Atorvastatin : CK(231) : AC(37), Cholesterol Lowering Drugs : CK(1038) : AC(90), Simvastatin :
Statin drugs show no cognitive or anti-amyloid benefits and may be associated with cognitive impairment. - GMI Summary

Pubmed Data: Pharmacotherapy. 2003 Jul ;23(7):871-80. PMID: 12885101
Article Published Date: Jul 01, 2003
Authors: Leslie R Wagstaff, Melinda W Mitton, Beth McLendon Arvik, P Murali Doraiswamy
Study Type: Human Study
Additional Links
Diseases: Cognitive Decline/Dysfunction: CK(350) : AC(71), Memory Disorders: CK(171) : AC(55)
Problem Substances: Lovastatin: CK(63) : AC(12), Pravastatin: CK(197) : AC(31), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Topic: Creatine Phosphokinase (CK): Elevated

Statin administration in animals results in a myopathy characterized by decreased muscle force and elevated plasma CK level. - GMI Summary

Article Published Date: Nov 09, 2011
Authors: Márti Füzi, Zoltán Palicz, János Vincze, Julianna Cseri, Zita Szombathy, Ilona Kovács, Anna Oláh, Péter Szentesi, Pál Kertai, György Paragh, László Csernoch
Study Type: Animal Study
Additional Links
Problem Substances: Fluvastatin: CK(13) : AC(3), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Statin drugs, particularly simivastatin, increase the risk for significant creatine kinase elevation. - GMI Summary

Article Published Date: Jan 01, 2010
Authors: Ryan S Stolcpart, Karl L Olson, Thomas Delate, Jon Rasmussen, Thomas F Rehring, John A Merenich
Study Type: Human Study
Additional Links
Diseases: Creatine Phosphokinase (CK): Elevated: CK(43) : AC(5), Myopathies: CK(199) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Statin drugs may cause high elevations of creatine phosphokinase (CK) in patients with unnoticed hypothyroidism. - GMI Summary

Exercise exacerbates cerivastatin-induced skeletal muscle toxicity. - GMI Summary

Muscular side effects associated with statin drug use are related to oxidative stress. - GMI Summary

Increased lipid peroxidation in a patient with CK-elevation and muscle pain during statin therapy has been reported. - GMI Summary

Lovastatin increases exercise-induced skeletal muscle injury in human subjects. - GMI Summary
**Statin drugs increase the risk of diabetes and cause abnormal liver enzyme elevations.** - GMI Summary

**Exercise exacerbates cerivastatin-induced skeletal muscle toxicity.** - GMI Summary

**Acute cholestatic hepatitis associated with pravastatin has been reported.** - GMI Summary
Acute hepatitis induced by lovastatin has been reported. - GMI Summary

Article Published Date : Sep 01, 1994
Authors : S Grimbert, D Pessayre, C Degott, J P Benhamou
Study Type : Human: Case Report
Additional Links
Problem Substances : Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions : Hepatotoxic : CK(95) : AC(34)

Simvastatin has been reported to cause cholestatic hepatitis. - GMI Summary

Pubmed Data : Recenti Prog Med. 1991 Apr ;82(4):233-5. PMID: 1857844
Article Published Date : Apr 01, 1991
Authors : M Ballaré, M Campanini, E Catania, G Bordin, G Zaccala, A Monteverde
Study Type : Human: Case Report
Additional Links
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Hepatotoxic : CK(95) : AC(34)

Topic: Memory Disorders

Statin-associated adverse cognitive effects have been reported with 90% resolving after drug discontinuation. - GMI Summary

Pubmed Data : Pharmacotherapy. 2009 Jul ;29(7):800-11. PMID: 19558254
Article Published Date : Jul 01, 2009
Authors : Marcella A Evans, Beatrice A Golomb
Study Type : Human Study
Additional Links
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Simvastatin-induced decline in cognition has been reported. - GMI Summary

Article Published Date : Oct 01, 2006
Authors : Kalpana P Padala, Prasad R Padala, Jane F Potter
Study Type : Human: Case Report
Additional Links
Diseases : Cognitive Decline/Dysfunction : CK(350) : AC(71), Memory Disorders : CK(171) : AC(55), Memory Loss : CK(89)
Short-term memory loss associated with rosuvastatin has been reported. - GMI Summary

Article Published Date: Aug 01, 2006
Authors: Laura Galatti, Giovanni Polimeni, Francesco Salvo, Marcello Romani, Aurelio Sessa, Edoardo Spina
Study Type: Human: Case Report
Additional Links
Diseases: Memory Disorders: CK(171): AC(55), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Rosuvastatin: CK(28): AC(6), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Cognitive impairment associated with statin drug use has been reported. - GMI Summary

Pubmed Data: Pharmacotherapy. 2003 Dec;23(12):1663-7. PMID: 14695047
Article Published Date: Dec 01, 2003
Authors: Deborah S King, Amanda J Wilburn, Marion R Wofford, T Kristopher Harrell, Brent J Lindley, Daniel W Jones
Study Type: Review
Additional Links
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Statin drugs show no cognitive or anti-amyloid benefits and may be associated with cognitive impairment. - GMI Summary

Pubmed Data: Pharmacotherapy. 2003 Jul;23(7):871-80. PMID: 12885101
Article Published Date: Jul 01, 2003
Authors: Leslie R Wagstaff, Melinda W Mitton, Beth McLendon Anvik, P Murali Doraiswamy
Study Type: Human Study
Additional Links
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Statin-induced memory loss has been reported. - GMI Summary

Article Published Date: Jun 01, 2001
Authors: A Orsi, O Sherman, Z Woldeselassie
Study Type: Human: Case Report
Additional Links
Diseases: Memory Disorders: CK(171): AC(55)
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Statin Drugs: CK(3705): AC(437)
Statin therapy contributes to low testosterone and hypogonadism in men with erectile dysfunction - GMI Summary

Article Published Date: Apr 01, 2010
Authors: Giovanni Corona, Valentina Boddi, Giancarlo Balercia, Giulia Rastrelli, Giulia De Vita, Alessandra Sforza, Gianni Forti, Edoardo Mannucci, Mario Maggi
Study Type: Human Study
Additional Links
Diseases: Erectile Dysfunction : CK(403) : AC(35), High Cholesterol : CK(865) : AC(192), Hypogonadism : CK(26) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206), Testosterone: Too Low : CK(277) : AC(65)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)

Statin use has been associated with erectile dysfunction. - GMI Summary

Article Published Date: Jan 01, 2009
Authors: Catherine Do, Eric Huyghe, Maryse Lapeyre-Mestre, Jean Louis Montastruc, Haleh Bagheri
Study Type: Human Study
Additional Links
Diseases: Erectile Dysfunction : CK(403) : AC(35)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Statin treatment contributes to erectile dysfunction. - GMI Summary

Pubmed Data: Int J Clin Pract. 2006 Feb ;60(2):141-5. PMID: 16451283
Article Published Date: Feb 01, 2006
Authors: H Solomon, Y P Samarasinghe, M D Feher, J Man, H Rivas-Toro, P J Lumb, A S Wierzbicki, G Jackson
Study Type: Human Study
Additional Links
Diseases: Erectile Dysfunction : CK(403) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Lipid-lowering drugs may contribute to erectile dysfunction. - GMI Summary

Article Published Date: Oct 01, 2002
Authors: Marco H Blanker, Arianne P Verhagen
Study Type: Review
Additional Links
Diseases: Erectile Dysfunction : CK(403) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Cholesterol Lowering Drugs : CK(1038) : AC(90), Fenofibrates : CK(83) : AC(11), Statin Drugs : 154
Lipid-lowering drugs contribute to erectile dysfunction. - GMI Summary

Article Published Date: Feb 01, 2002
Authors: Kash Rizvi, John P Hampson, John N Harvey
Study Type: Meta Analysis
Additional Links
Diseases: Erectile Dysfunction : CK(403) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Cholesterol Lowering Drugs : CK(1038) : AC(90), Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)

Men treated with cholesterol-lowering drugs complain more frequently of erectile dysfunction. - GMI Summary

Pubmed Data: J Clin Pharm Ther. 1996 Apr ;21(2):89-94. PMID: 8809645
Article Published Date: Apr 01, 1996
Authors: E Bruckert, P Giral, H M Heshmati, G Turpin
Study Type: Human Study
Additional Links
Diseases: Erectile Dysfunction : CK(403) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Cholesterol Lowering Drugs : CK(1038) : AC(90), Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)

Statin-induced impotence has been reported. - GMI Summary

Article Published Date: Feb 01, 1996
Authors: A Halkin, I S Lossos, D Mevorach
Study Type: Human: Case Report
Additional Links
Diseases: Erectile Dysfunction : CK(403) : AC(35), Impotence : CK(3) : AC(1), Low Libido : CK(56) : AC(19)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38), Enzyme Inhibitors : CK(340) : AC(201)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Topic: Coronary Artery Disease

Mitochondrial dysfunction caused by statin contributes to endothelial dysfunction in patients with coronary artery disease. - GMI Summary

Article Published Date: Jun 01, 2010
Authors: Yuk-Ling Dai, Ting-Hin Luk, Chung-Wah Siu, Kai-Hang Yiu, Hiu-Ting Chan, Stephen W L Lee, Sheung-Wai Li, Sidney Tam, Bonnie Fong, Chu-Pak Lau, Hung-Fat Tse
Study Type: Human Study
Additional Links
Diseases: Coronary Artery Disease : CK(942) : AC(133), Endothelial Dysfunction : CK(654) : AC(167), Mitochondrial
Statin drugs may induce selenium deficiency which may explain many of its enigmatic side effects. - GMI Summary

**Pubmed Data**: Lancet. 2004 Mar 13;363(9412):892-4. PMID: 15031036

**Article Published Date**: Mar 13, 2004

**Authors**: Bernd Moosmann, Christian Behl

**Study Type**: Review

**Diseases**: Coronary Artery Disease : CK(942) : AC(133), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), High Cholesterol : CK(865) : AC(192), Mineral Deficiencies: Selenium : CK(15) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Additional Keywords**: Statin-Selenium Deficiency : CK(4) : AC(4)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

Lovastatin enhances the susceptibility of LDL cholesterol to oxidation. - GMI Summary


**Article Published Date**: Jun 30, 1997

**Authors**: A Palomäki, K Malminiemi, T Metsä-Ketelä

**Study Type**: Human Study

**Diseases**: Cholesterol: Oxidation : CK(329) : AC(96), Coronary Artery Disease : CK(942) : AC(133), High Cholesterol : CK(865) : AC(192)

**Problem Substances**: Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Cardiotoxic : CK(467) : AC(53), Oxidant : CK(63) : AC(23)

Lovastatin decreases coenzyme Q levels associated with compromised cardiac function in humans. - GMI Summary

**Pubmed Data**: Proc Natl Acad Sci U S A. 1990 Nov;87(22):8931-4. PMID: 2247468

**Article Published Date**: Nov 01, 1990

**Authors**: K Folkers, P Langsjoen, R Willis, P Richardson, L J Xia, C Q Ye, H Tamagawa

**Study Type**: Human Study

**Diseases**: Coronary Artery Disease : CK(942) : AC(133), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), High Cholesterol : CK(865) : AC(192), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Cardiotoxic : CK(467) : AC(53)

**Topic**: Kidney Failure

Statin drugs have been linked to rhabdomyolysis, myositis and kidney failure. - GMI Summary


**Article Published Date**: Oct 21, 2011
Unintended consequences of statin drug use are increased risk of esophageal cancer, kidney failure, cataract, liver dysfunction and myopathies. - GMI Summary


Unintended consequences of statin drug use are increased risk of esophageal cancer, kidney failure, cataract, liver dysfunction and myopathies. - GMI Summary


Liver failure and damage are rare but severe unintended consequences of statin drug use. - GMI Summary

**Review: Drug-induced liver injury associated with statins.** - GMI Summary


**Article Published Date**: Nov 01, 2009

**Authors**: Mark W Russo, Martin Scobey, Herbert L Bonkovsky

**Study Type**: Review

**Additional Links**

**Diseases**:
- Chemically-Induced Liver Damage: CK(497) : AC(145)
- Liver Damage: CK(496) : AC(172)
- Liver Disease: CK(95) : AC(29)
- Liver Failure: Drug Induced: CK(13) : AC(2)
- Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**:
- Atorvastatin: CK(231) : AC(37)
- Fluvastatin: CK(13) : AC(3)
- Simvastatin: CK(657) : AC(114)
- Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**:
- Hepatotoxic: CK(95) : AC(34)

---

**Simvastatin has been reported to cause liver lesions.** - GMI Summary


**Article Published Date**: Apr 13, 1996

**Authors**: J J Koornstra, J P Ottervanger, M C Fehmers, B H Stricker

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**:
- Chemically-Induced Liver Damage: CK(497) : AC(145)
- Jaundice: CK(2) : AC(1)
- Liver Damage: CK(496) : AC(172)
- Liver Disease: CK(95) : AC(29)
- Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**:
- Simvastatin: CK(657) : AC(114)
- Statin Drugs: CK(3705) : AC(437)

**Pharmacological Actions**:
- Anticholesteremic Agents: CK(298) : AC(38)

---

**Statin drugs may enhance respiratory impairment of liver mitochondria under pathophysiological conditions, such as ischemia.** - GMI Summary


**Article Published Date**: Aug 03, 1994

**Authors**: K Satoh, T Nakai, K Ichihara

**Study Type**: Animal Study

**Additional Links**

**Diseases**:
- Liver Damage: CK(496) : AC(172)
- Mitochondrial Dysfunction: CK(95) : AC(35)

**Problem Substances**:
- Lovastatin: CK(63) : AC(12)
- Pravastatin: CK(197) : AC(31)
- Simvastatin: CK(657) : AC(114)
- Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**:
- Hepatotoxic: CK(95) : AC(34)

---

**Topic: Neuropathies**

**Simvastatin interferes with oligodendrocyte function, particularly the prior step in remyelination, indicating it may be harmful in demyelination diseases like MS.** - GMI Summary

**Pubmed Data**: J Neurosci Res. 2010 Nov 15 ;88(15):3361-75. PMID: [20857509](PMID:20857509)
Simvastatin delays nerve regeneration. - GMI Summary


Statin drugs have been linked to neurotoxicity. - GMI Summary

Statin neuropathy misdiagnosed as diabetic autoimmune polyneuropathy has been reported. - GMI Summary

Simvastatin-induced mononeuropathy has been reported. - GMI Summary
Atorvastatin-induced polyneuropathy has been reported. - GMI Summary

Statin therapy has been associated with small fibre neuropathy. - GMI Summary

Statin use is associated with neuropathy. - GMI Summary

Users of lipid-lowering drugs are at increased risk of peripheral neuropathy. - GMI Summary
**Long-term statin treatment may be associated with chronic peripheral neuropathy.** - GMI Summary


**Article Published Date**: Jan 01, 1999

**Authors**: U Jeppesen, D Gaist, T Smith, S H Sindrup

**Study Type**: Human: Case Report

**Diseases**:
- Neuropathies: CK(322) : AC(62)
- Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**:
- Statin Drugs: CK(3705) : AC(437)

**Pharmacological Actions**:
- Neurotoxic: CK(879) : AC(87)

**Topic**: Low Testosterone

**Decreased libido is a probable adverse drug reaction of statin drugs, possibly related to low levels of testosterone caused by cholesterol depletion.** - GMI Summary


**Article Published Date**: Sep 01, 2004

**Authors**: L de Graaf, A H P M Brouwers, W L Diemont

**Study Type**: Human Study

**Diseases**:
- Libido: Low: CK(56) : AC(19)
- Low Testosterone: CK(287) : AC(66)

**Problem Substances**:
- Statin Drugs: CK(3705) : AC(437)

**Simvastatin may adversely affect mood and testosterone in men.** - GMI Summary

**Pubmed Data**: Psychoneuroendocrinology. 2003 Feb ;28(2):181-94. PMID: 12510011

**Article Published Date**: Feb 01, 2003

**Authors**: Markku T Hyyppä, Erkki Kronholm, Arja Virtanen, Aila Leino, Antti Jula

**Study Type**: Human Study

**Diseases**:
- Depression: Unipolar: CK(442) : AC(69)
- Low Testosterone: CK(287) : AC(66)
- Statin-Induced Pathologies: CK(1470) : AC(206)

**Pharmacological Actions**:
- Anticholesteremic Agents: CK(298) : AC(38)

**Problem Substances**:
- Simvastatin: CK(657) : AC(114)

**Adverse Pharmacological Actions**:
- Endocrine Disruptor: CK(283) : AC(56)

**High-dose simvastatin reduces testosterone levels in men.** - GMI Summary

**Pubmed Data**: Metabolism. 2000 Sep ;49(9):1234-8. PMID: 11016911

**Article Published Date**: Sep 01, 2000
Simvastatin lowers testosterone secretion in male patients. - GMI Summary


Simvastatin suppresses human testicular testosterone synthesis. - GMI Summary


Lovastatin inhibits testosterone production in testicular cells. - GMI Summary


Topic: Muscle Damage: Exercise-Induced

Statins increase exercise-related muscle injury, which worsens with the age of the individual. - GMI Summary

It is thought that as many as 25% of statin users who exercise may experience muscle fatigue, weakness, aches, and cramping due to statin therapy and potentially dismissed by the patient and physician. - GMI Summary

Statins may adversely alter the response of muscle to exercise stress. - GMI Summary

Exercise exacerbates cerivastatin-induced skeletal muscle toxicity. - GMI Summary
Lovastatin increases exercise-induced skeletal muscle injury in human subjects. - GMI Summary

Pubmed Data: Metabolism. 1997 Oct;46(10):1206-10. PMID: 9322808

Article Published Date: Oct 01, 1997

Authors: P D Thompson, J M Zmuda, L J Domalik, R J Zimet, J Staggers, J R Guyton

Study Type: Human Study

Additional Links


Problem Substances: Lovastatin: CK(63): AC(12)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

---

Statins may adversely alter the response of muscle to exercise stress. - GMI Summary


Article Published Date: Dec 01, 2005

Authors: Maria L Urso, Priscilla M Clarkson, Dustin Hittel, Eric P Hoffman, Paul D Thompson

Study Type: Human Study

Additional Links


Pharmacological Actions: Proteasome Inhibitors: CK(29): AC(23)

Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)

---

Exercise exacerbates cerivastatin-induced skeletal muscle toxicity. - GMI Summary


Article Published Date: Dec 01, 2005

Authors: Jennifer L Seachrist, Cho-Ming Loi, Mark G Evans, Kay A Criswell, Charles E Rothwell

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

---

Among top sports performers only about 20% tolerate statin treatment without side-effects. - GMI Summary


Article Published Date: Apr 01, 2004

Authors: H Sinzinger, J O'Grady

Study Type: Human Study

Additional Links

Diseases: Athletic Performance: CK(300): AC(56), Statin-Induced Pathologies: CK(1470): AC(206)
Lovastatin increases exercise-induced skeletal muscle injury in human subjects. - GMI

Summary

Pubmed Data: Metabolism. 1997 Oct ;46(10):1206-10. PMID: 9322808
Article Published Date: Oct 01, 1997
Authors: P D Thompson, J M Zmuda, L J Domalik, R J Zimet, J Staggers, J R Guyton
Study Type: Human Study
Additional Links
Problem Substances: Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Statin drugs alter platelet function. - GMI Summary

Article Published Date: Dec 01, 2002
Authors: L Puccetti, A L Pasqui, M Pastorelli, G Bova, M Cercignani, A Palazzuoli, P Angori, A Auteri, F Bruni
Study Type: Human Study
Additional Links
Diseases: Blood Platelet Disorders : CK(5) : AC(1)
Pharmacological Actions: Nitric Oxide Inhibitor : CK(88) : AC(52)

Statin use is associated with lower testosterone levels. - GMI Summary

Pubmed Data: Urology. 2010 Nov;76(5):1048-51. PMID: 20605197
Article Published Date: Nov 01, 2010
Authors: Bulent Akduman, Daniel J Tandberg, Colin I O'Donnell, Alexa Hughes, Mark A Moyad, E David Crawford
Study Type: Human Study
Additional Links
Diseases: Testosterone: Too Low : CK(277) : AC(65)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)

Statin therapy contributes to low testosterone and hypogonadism in men with erectile dysfunction - GMI Summary

Statin therapy is associated with lower total testosterone in men with type 2 diabetes. - GMI Summary


A case of atorvastatin-induced prolonged cholestasis with bile duct damage has been reported. - GMI Summary


Review: Drug-induced liver injury associated with statins. - GMI Summary

Cholestatic jaundice induced by atorvastatin has been observed. - GMI Summary

Article Published Date: Jul 01, 2009
Authors: Saar Minha, Galina Golzman, Ilan Adar, Micha Rapoport
Study Type: Human: Case Report
Additional Links
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34)

Acute cholestatic hepatitis associated with atorvastatin use has been reported. - GMI Summary

Article Published Date: Jan 01, 2006
Authors: M L de Castro, J A Hermo, A Baz, C de Luaces, R Pérez, J Clofent
Study Type: Human: Case Report
Additional Links
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34)

Acute cholestatic hepatitis induced by cerivastatin has been reported. - GMI Summary

Pubmed Data: Med Clin (Barc). 2002 May 18 ;118(18):717. PMID: 12042141
Article Published Date: May 18, 2002
Authors: Miquel Torres, Javier Sobrino, Carmen Asensio, Dolors López
Study Type: Human: Case Report
Additional Links
Problem Substances: Cerivastatin: CK(2): AC(1), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34)

Atorvastatin-induced cholestatic hepatitis in a young woman with systemic lupus erythematosus has been reported. - GMI Summary

Article Published Date: Aug 09, 1999
Authors: J Jiménez-Alonso, J M Osorio, F Gutiérrez-Cabello, A López de la Osa, L León, J D Mediavilla García
Study Type: Human: Case Report
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: **Hepatotoxic**: CK(95) : AC(34)

---

**Acute cholestatic hepatitis associated with pravastatin has been reported.** - GMI Summary

**Pubmed Data** : Am J Gastroenterol. 1999 May ;94(5):1388-90. PMID: 10235223

**Article Published Date** : May 01, 1999

**Authors** : M Hartleb, G Rymarczyk, K Januszewski

**Study Type** : Human: Case Report

**Additional Links**


**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Hepatotoxic : CK(95) : AC(34)

---

**Lovastatin-induced acute cholestatic hepatitis has been reported.** - GMI Summary


**Article Published Date** : Feb 24, 1995

**Authors** : H Huchzermeyer, R Münzenmaier

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : Hepatitis: Cholestatic : CK(15) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Lovastatin : CK(63) : AC(12)

**Adverse Pharmacological Actions** : Hepatotoxic : CK(95) : AC(34)

---

**Acute hepatitis induced by lovastatin has been reported.** - GMI Summary

**Pubmed Data** : Dig Dis Sci. 1994 Sep ;39(9):2032-3. PMID: 8082513

**Article Published Date** : Sep 01, 1994

**Authors** : S Grimbert, D Pessayre, C Degott, J P Benhamou

**Study Type** : Human: Case Report

**Additional Links**


**Problem Substances** : Lovastatin : CK(63) : AC(12)

**Adverse Pharmacological Actions** : Hepatotoxic : CK(95) : AC(34)

---

**Simvastatin has been reported to cause cholestatic hepatitis.** - GMI Summary

**Pubmed Data** : Recenti Prog Med. 1991 Apr ;82(4):233-5. PMID: 1857844

**Article Published Date** : Apr 01, 1991

**Authors** : M Ballaré, M Campanini, E Catania, G Bordin, G Zaccala, A Monteverde

**Study Type** : Human: Case Report

**Additional Links**


**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Hepatotoxic : CK(95) : AC(34)
**Topic: Elevated: ALT**

**Statin drugs increase the risk of diabetes and cause abnormal liver enzyme elevations.** - GMI Summary


**Article Published Date:** Sep 14, 2011

**Authors:** M Alberton, P Wu, E Druyts, M Briel, E J Mills

**Study Type:** Meta Analysis

**Additional Links**


**Problem Substances:** Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Hepatotoxic : CK(95) : AC(34)

---

**Simvastatin has been reported to cause cholestatic hepatitis.** - GMI Summary

**Pubmed Data:** Recenti Prog Med. 1991 Apr ;82(4):233-5. PMID: 1857844

**Article Published Date:** Apr 01, 1991

**Authors:** M Ballaré, M Campanini, E Catania, G Bordin, G Zaccala, A Monteverde

**Study Type:** Human: Case Report

**Additional Links**


**Pharmacological Actions:** Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances:** Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Hepatotoxic : CK(95) : AC(34)

---

**Topic: Cholestasis**

**A case of atorvastatin-induced prolonged cholestasis with bile duct damage has been reported.** - GMI Summary

**Pubmed Data:** Clin Drug Investig. 2010 ;30(3):205-9. PMID: 20155993

**Article Published Date:** Jan 01, 2010

**Authors:** Manuela Merli, Maria Consiglia Bragazzi, Federica Giubilo, Francesco Callea, Adolfo F Attili, Domenico Alvaro

**Study Type:** Human: Case Report

**Additional Links**


**Pharmacological Actions:** Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances:** Atorvastatin : CK(231) : AC(37)

---

**Atorvastatin has been reported to have caused severe acute hepatitis with symptomatic cholestasis for more than 3 months and bile duct injury.** - GMI Summary

**Pubmed Data:** Acta Gastroenterol Belg. 2008 Jul-Sep;71(3):318-20. PMID: 19198578
Acute cholestatic hepatitis associated with atorvastatin use has been reported. - GMI Summary


Acute cholestatic hepatitis induced by cerivastatin has been reported. - GMI Summary

Pubmed Data : Med Clin (Barc). 2002 May 18 ;118(18):717. PMID: 12042141

Acute cholestatic hepatitis associated with pravastatin has been reported. - GMI Summary

Pubmed Data : Am J Gastroenterol. 1999 May ;94(5):1388-90. PMID: 10235233

Lovastatin-induced cholestasis has been reported. - GMI Summary

Pubmed Data : CMAJ. 1993 Feb 1 ;148(3):374. PMID: 8439902
Statin drug induced myopathy is amplified in the rats administered cyclosporine A. - GMI Summary

Pubmed Data: J Pharmacol Exp Ther. 1991 Jun;257(3):1225-35. PMID: 1904494

Article Published Date: Jun 01, 1991

Authors: P F Smith, R S Eydeloth, S J Grossman, R J Stubbs, M S Schwartz, J I Germershausen, K P Vyas, P H Kari, J S MacDonald

Study Type: Animal Study

Diseases: Cholestasis : CK(95) : AC(21), Drug-Induced Toxicity : CK(503) : AC(76), Myopathies : CK(199) : AC(18), Organ Transplantation : CK(39) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Cyclosporins : CK(2) : AC(1), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Cholestatic jaundice during lovastatin medication has been reported. - GMI Summary


Article Published Date: May 10, 1991

Authors: U Spreckelsen, R Kirchhoff, H Haacke

Study Type: Human: Case Report

Diseases: Cholestasis : CK(95) : AC(21), Jaundice : CK(2) : AC(1), Liver Damage: Drug-Induced : CK(36) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Simvastatin has been reported to cause cholestatic hepatitis. - GMI Summary

Pubmed Data: Recenti Prog Med. 1991 Apr ;82(4):233-5. PMID: 1857844

Article Published Date: Apr 01, 1991

Authors: M Ballaré, M Campanini, E Catania, G Bordin, G Zaccala, A Monteverde

Study Type: Human: Case Report


Pharmacological Actions: Anticholesterolemic Agents : CK(298) : AC(38)

Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Topic: Polyneuropathies

Atorvastatin-induced polyneuropathy has been reported. - GMI Summary

**Long-term exposure to statin drugs may substantially increase the risk of polyneuropathy.**

**GMI Summary**

- **Pubmed Data**: Neurology. 2002 May 14 ;58(9):1333-7. PMID: 12011277

**Liver failure and damage are rare but severe unintended consequences of statin drug use.**

**GMI Summary**


**Review: Drug-induced liver injury associated with statins.**

**GMI Summary**

**Adverse Pharmacological Actions**: Hepatotoxic : CK(95) : AC(34)

**Topic**: Diabetes Mellitus: Type 1

**Statin drugs increase the risk of diabetes** - GMI Summary


*Article Published Date*: Jul 01, 2011

*Authors*: Uchechukwu K Sampson, Macrae F Linton, Sergio Fazio

*Study Type*: Meta Analysis

*Additional Links*

*Diseases*: Diabetes Mellitus: Type 1 : CK(933) : AC(212), Drug-Induced Toxicity : CK(503) : AC(76), Statin-Induced Pathologies : CK(1470) : AC(206)

*Problem Substances*: Statin Drugs : CK(3705) : AC(437)

*Adverse Pharmacological Actions*: Diabetogenic : CK(89) : AC(9)

**There are 17 randomized trials on statin treatment showing an increased incidence of diabetes** - GMI Summary


*Article Published Date*: Oct 07, 2010

*Authors*: E J Mills, P Wu, G Chong, I Ghement, S Singh, E A Akl, O Eyawo, G Guyatt, O Berwanger, M Briel

*Study Type*: Meta Analysis

*Additional Links*

*Diseases*: Blood Sugar Problems : CK(3241) : AC(659), Diabetes Mellitus: Type 1 : CK(933) : AC(212), Diabetes Mellitus: Type 2 : CK(1516) : AC(314)

*Problem Substances*: Statin Drugs : CK(3705) : AC(437)

*Adverse Pharmacological Actions*: Diabetogenic : CK(89) : AC(9)

**Atorvastatin appears to increase the risk of deteriorating blood sugar control** - GMI Summary


*Article Published Date*: Jun 01, 2006

*Authors*: Jun Sasaki, Mikio Iwashita, Suminori Kono

*Study Type*: Review

*Additional Links*

*Diseases*: Diabetes Mellitus: Type 1 : CK(933) : AC(212), Hyperglycemia : CK(145) : AC(47)

*Problem Substances*: Atorvastatin : CK(231) : AC(37)

*Adverse Pharmacological Actions*: Endocrine Disruptor : CK(283) : AC(56)

**Topic**: Hyperglycemia

**Atorvastatin causes insulin resistance and increases ambient glycemia in hypercholesterolemic patients** - GMI Summary


*Article Published Date*: Mar 23, 2010

*Authors*: Kwang Kon Koh, Michael J Quon, Seung Hwan Han, Yonghee Lee, Soo Jin Kim, Eak Kyun Shin
Simvastatin contributes to insulin resistance in non-diabetic patients. - GMI Summary


Atorvastatin appears to increase the risk of deteriorating blood sugar control. - GMI Summary


Statin after intracerebral hemorrhage may increase the riks of new hemorrhage. - GMI Summary


Statin use following intracerebral hemorrhage may be harmful. - GMI Summary

**Statins may increase intracerebral hemorrhage volume.** - GMI Summary


**Authors**: Geneviève Ricard, Marie-Pierre Garant, Nathalie Carrier, Nancy Leblanc, Jean-Martin Boulanger

**Study Type**: Human Study

**Additional Links**

**Diseases**: Intracerebral Hemorrhage : CK(120) : AC(8)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

---

**In patients with recent stroke or TIA and without known coronary heart disease, 80 mg of atorvastatin per day increase in the incidence of hemorrhagic stroke.** - GMI Summary


**Authors**: Pierre Amarenco, Julien Bogousslavsky, Alfred Callahan, Larry B Goldstein, Michael Hennerici, Amy E Rudolph, Henrik Sillesen, Lisa Simunovic, Michael Szarek, K M A Welch, Justin A Zivin

**Study Type**: Human Study

**Additional Links**

**Diseases**: Intracerebral Hemorrhage : CK(120) : AC(8)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Peripheral Neuropathies**

**Multiple mononeuropathy caused by treatment with pravastatin has been reported.** - GMI Summary


**Authors**: I Abellán-Miralles, R M Sánchez-Pérez, N Pérez-Carmona, C Díaz-Marín, J Mallada-Frechin

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Multiple Mononeuropathy : CK(3) : AC(1), Peripheral Neuropathies : CK(111) : AC(24)

**Problem Substances**: Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

---

**Lipid lowering drugs increase the risk of peripheral neuropathy.** - GMI Summary

**Pubmed Data**: J Epidemiol Community Health. 2004 Dec ;58(12):1047-51. PMID: 15547071

**Authors**: Giovanni Corrao, Antonella Zambon, Lorenza Bertü, Edoardo Botteri, Olivia Leoni, Paolo Contiero

**Study Type**: Human Study

**Additional Links**
Statin-associated peripheral neuropathy has been recorded in the biomedical literature. - GMI Summary

Pubmed Data: Pharmacotherapy. 2004 Sep ;24(9):1194-203. PMID: 15460180
Article Published Date: Sep 01, 2004
Authors: Pang H Chong, Alexandra Boskovich, Natasa Stevkovic, Russell E Bartt
Study Type: Human Study
Additional Links
Diseases: Peripheral Neuropathies:CK(111) : AC(24), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Cholesterol Lowering Drugs : CK(1038) : AC(90), Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Peripheral neuropathy induced by lipid-lowering therapy has been reported. - GMI Summary

Article Published Date: Jul 01, 1998
Authors: P E Ziajka, T Wehmeier
Study Type: Human: Case Report
Additional Links
Diseases: Peripheral Neuropathies : CK(111) : AC(24)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Statin drugs increase the risk of diabetes and cause abnormal liver enzyme elevations. - GMI Summary

Article Published Date: Sep 14, 2011
Authors: M Alberton, P Wu, E Druyts, M Briel, E J Mills
Study Type: Meta Analysis
Additional Links
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Statin drugs increase the risk of diabetes and cause abnormal liver enzyme elevations. - GMI

Topic: Diabetes Insipidus
**Topic: Elevated: Creatinine Kinase**

*Statin drugs increase the risk of diabetes and cause abnormal liver enzyme elevations.* - GMI Summary

**Topic: Fibromyalgia**

*Statins may cause clinically important muscle symptoms without inducing a marked creatine kinase elevation.* - GMI Summary

**Topic: Hemodialysis**

*Although statin drugs decrease LDL cholesterol in end-stage kidney disease, their use does not lower morbidity or mortality.* - GMI Summary
**Atorvastatin treatment is not effective in reducing inflammation (C-reactive protein) or outcome in patients with type 2 diabetes on hemodialysis.** - GMI Summary

**Liver failure and damage are rare but severe unintended consequences of statin drug use.** - GMI Summary

**Statin drugs have been associated with immune-mediated necrotizing myopathy.** - GMI Summary
Statin-associated myopathy may indicate structural muscle damage even when levels of creatine phosphokinase levels are normal. - GMI Summary

Pubmed Data: CMAJ. 2009 Jul 7;181(1-2):E11-8. PMID: 19581603
Article Published Date: Jul 07, 2009
Authors: Markus G Mohaupt, Richard H Karas, Eduard B Babiychuk, Verónica Sanchez-Freire, Katia Monastyrskaya, Lakshmanan Iyer, Hans Hoppeler, Fabio Breil, Annette Draeger
Study Type: Human Study

Statin-related myopathy is associated with low muscle levels of coenzyme Q10. - GMI Summary

Article Published Date: Nov 01, 2005
Authors: Costanza Lamperti, Ali B Naini, Valeria Lucchini, Alessandro Prelle, Nereo Bresolin, Maurizio Moggio, Monica Sciacco, Petra Kaufmann, Salvatore DiMauro
Study Type: Human Study

Statin drugs may induce myopathy without being indicated in abnormal creatine kinase levels. - GMI Summary

Article Published Date: Oct 01, 2002
Authors: Paul S Phillips, Richard H Haas, Sergei Bannykh, Stephanie Hathaway, Nancy L Gray, Bruce J Kimura, Georgirene D Vladutiu, John D F England,
Study Type: Human Study

Topic: Hepatitis: Autoimmune

Review: Drug-induced liver injury associated with statins. - GMI Summary

Article Published Date: Nov 01, 2009
Authors: Mark W Russo, Martin Scobey, Herbert L Bonkovsky
Study Type: Review
Autoimmune hepatitis after treatment with fluvastatin has been reported. - GMI Summary

Pubmed Data: Liver Int. 2007 May;27(4):592. PMID: 17403199
Authors: Agustin Castiella, Javier Fernandez, Eva Zapata
Study Type: Human: Case Report

Autoimmune hepatitis triggered by statins has been reported. - GMI Summary

Pubmed Data: J Clin Gastroenterol. 2006 Sep;40(8):757-61. PMID: 16940892
Authors: Vamsee Alla, Joseph Abraham, Junaid Siddiqui, Dimple Raina, George Y Wu, Naga P Chalasani, Herbert L Bonkovsky

Rosuvastatin-associated hepatitis with autoimmune features has been reported. - GMI Summary

Pubmed Data: Eur J Gastroenterol Hepatol. 2005 May;17(5):589-90. PMID: 15827453
Authors: L M M Wolters, H R Van Buuren

Autoimmune hepatitis associated with atorvastatin use has been reported. - GMI Summary

Authors: Nicoletta Pelli, Maurizio Setti, Paola Ceppa, Carlo Toncini, Francesco Indiveri
Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

**Topic: Autoimmune Diseases**

**Statin-induced vasculitis has been reported.** - GMI Summary


Article Published Date: Aug 01, 2010

Authors: Deepali Sen, Elliot D Rosenstein, Neil Kramer

Study Type: Human: Case Report

Additional Links

Diseases: Autoimmune Diseases: CK(4016) : AC(752), Statin-Induced Pathologies: CK(1470) : AC(206), Vasculitis: CK(34) : AC(10)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Immunosuppressive: CK(65) : AC(15)

**Statins have been associated with immune-mediated necrotizing myopathy.** - GMI Summary


Article Published Date: Feb 01, 2010

Authors: Phyllis Grable-Esposito, Hans D Katzberg, Steven A Greenberg, Jayashri Srinivasan, Jonathan Katz, Anthony A Amato

Study Type: Human Study

Additional Links

Diseases: Autoimmune Diseases: CK(4016) : AC(752), Myopathy: CK(50) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

**Cholestatic jaundice induced by atorvastatin has been observed.** - GMI Summary


Article Published Date: Jul 01, 2009

Authors: Saar Minha, Galina Golzman, Ilan Adar, Micha Rapoport

Study Type: Human: Case Report

Additional Links

Diseases: Autoimmune Diseases: CK(4016) : AC(752), Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: Cholestatic: CK(15) : AC(5), Jaundice: CK(2) : AC(1)

Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

**Lupus erythematosus and other autoimmune diseases related to statin therapy have been reported.** - GMI Summary


Article Published Date: Jan 01, 2007

Authors: B Noël

Study Type: Human Study

Additional Links
Systemic autoimmune reactions have been reported to be caused by statin drugs. - GMI

**Summary**


**Article Published Date**: Nov 01, 1998

**Authors**: L Rudski, M A Rabinovitch, D Danoff

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Autoimmune Diseases : CK(4016) : AC(752), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Immunotoxic : CK(129) : AC(21)

---

**Topic**: Immune Disorders: Low Immune Function

**Statins exhibit complex immunomodulatory properties, including T cell-mediated tumour immune tolerance.** - GMI Summary


**Article Published Date**: Aug 01, 2010

**Authors**: K J Lee, J Y Moon, H K Choi, H O Kim, G Y Hur, K H Jung, S Y Lee, J H Kim, C Shin, J J Shim, K H In, S H Yoo, K H Kang, S Y Lee

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Immune Disorders: Low Immune Function : CK(377) : AC(109), Tumors : CK(186) : AC(105)

**Pharmacological Actions**: Antiproliferative : CK(965) : AC(680), Cell cycle arrest : CK(356) : AC(286), Interleukin-10 downregulation : CK(65) : AC(18)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Immunosuppressive : CK(65) : AC(15)

---

**Simvastatin impairs humoral and cell-mediated immunity in mice.** - GMI Summary


**Article Published Date**: Oct 01, 2008

**Authors**: Cristina Ulivieri, Daniela Fanigliulo, Daniela Benati, Franco Laghi Pasini, Cosima T Baldari

**Study Type**: Human Study

**Additional Links**

**Diseases**: Immune Disorders: Low Immune Function : CK(377) : AC(109)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

---

**Atorvastatin exhibits immunotoxic and genotoxic properties.** - GMI Summary


**Article Published Date**: Aug 15, 2008
Atorvastatin exhibits immunotoxic and genotoxic properties - Article 2. - GMI Summary

Article Published Date: Jan 01, 2008
Authors: Goran Gajski, Vera Garaj-Vrhovac
Study Type: Human In Vitro
Additional Links
Diseases: DNA damage: CK(607) : AC(274), Immune Disorders: Low Immune Function: CK(377) : AC(109), Oxidative Stress: CK(1724) : AC(691), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Genotoxic: CK(70) : AC(37), Immunotoxic: CK(129) : AC(21)

Statin drugs may interfere with the immune cell function. - GMI Summary

Article Published Date: Nov 01, 1991
Authors: L L Ng, J E Davies
Study Type: In Vitro Study
Additional Links
Diseases: Immune Disorders: Low Immune Function: CK(377) : AC(109), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Lovastatin: CK(63) : AC(12), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Topic: Cardiomyopathy

Atorvastatin causes cardiomyopathy when administered in combination with chemotherapy. - GMI Summary

Article Published Date: Jul 01, 2007
Authors: Metin Caner, Bingur Sonmez, Ozlem Kurnaz, Caner Aldemir, Seda Salar, Tuncay Altug, Ayhan Bilir, Meric A Altinoz
Study Type: Human Study
Additional Links
Diseases: Cardiomyopathy: CK(75) : AC(15), Chemotherapy-Induced Toxicity: CK(666) : AC(183)
Additional Keywords: Drug Interaction: CK(36) : AC(5)
Problem Substances: Atorvastatin: CK(231) : AC(37)

Statin drugs (HMG-CoA reductase inhibitors) induce programmed cell death in human heart cells. - GMI Summary

Type 2 diabetic patients patients treated with statin drugs have decreased coq10 levels and may be associated with subclinical diabetic cardiomyopathy reversible by CoQ10 supplementation. - GMI Summary

Psychiatric adverse reactions associated with cholesterol-lowering drugs have been reported. - GMI Summary

Some patients on simvastatin could be vulnerable to depression, violence, or suicide during the initial treatment period. - GMI Summary
**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)
Problem Substances: Simvastatin: CK(657) : AC(114)

---

**Simvastatin may adversely affect mood and testosterone in men.** - GMI Summary

**Pubmed Data**: Psychoneuroendocrinology. 2003 Feb ;28(2):181-94. PMID: 12510011
**Article Published Date**: Feb 01, 2003
**Authors**: Markku T Hyypää, Erkki Kronholm, Arja Virtanen, Aila Leino, Antti Jula
**Study Type**: Human Study
**Additional Links**
**Diseases**: Depression: Unipolar: CK(442) : AC(69), Low Testosterone: CK(287) : AC(66), Statin-Induced Pathologies: CK(1470) : AC(206)
**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)
**Problem Substances**: Simvastatin: CK(657) : AC(114)
**Adverse Pharmacological Actions**: Endocrine Disruptor: CK(283) : AC(56)

---

**Statin drugs are associated with adverse mental effects.** - GMI Summary

**Pubmed Data**: Tidsskr Nor Laegeforen. 1997 Sep 20 ;117(22):3210-3. PMID: 9411859
**Article Published Date**: Sep 20, 1997
**Authors**: I Buajordet, S Madsen, H Olsen
**Study Type**: Human Study
**Additional Links**
**Diseases**: Aggression: CK(37) : AC(5), Anxiety Disorders: CK(546) : AC(79), Depression: Unipolar: CK(442) : AC(69), Impotence: CK(3) : AC(1), Sleep Disorders: CK(103) : AC(10), Statin-Induced Pathologies: CK(1470) : AC(206)
**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)
**Problem Substances**: Statin Drugs: CK(3705) : AC(437)
**Adverse Pharmacological Actions**: Neurotoxic: CK(879) : AC(87)

---

**Topic**: Heart Failure

---

**Statin therapy may cause insulin resistance which may negate their purported beneficial effects on cardiac remodelling in heart failure.** - GMI Summary

**Pubmed Data**: Int J Cardiol. 2011 Feb 3 ;146(3):417. Epub 2010 May 18. PMID: 20483495
**Article Published Date**: Feb 03, 2011
**Authors**: Kenan Yalta
**Study Type**: Review
**Additional Links**
**Diseases**: Heart Failure: CK(452) : AC(85), Insulin Resistance: CK(741) : AC(194)
**Problem Substances**: Statin Drugs: CK(3705) : AC(437)
**Adverse Pharmacological Actions**: Endocrine Disruptor: Insulin Resistance: CK(50) : AC(18)

---

**The statin drug lovastatin induces concentration-dependent cell death in cardiomyocytes.** - GMI Summary

**Pubmed Data**: Pharmacology. 2008 ;82(1):74-82. Epub 2008 May 27. PMID: 18504415
**Article Published Date**: Jan 01, 2008
**Authors**: Simon W Rabkin, Michael Y Tsang
**Statin-induced inhibition of protein synthesis is an underlying mechanism for statin-induced cardiomyocyte cell death.** - GMI Summary


**Authors**: Simon W Rabkin, Parth Lodha, Jennifer Y Kong

**Study Type**: In Vitro Study

**Adverse Pharmacological Actions**: Cardiotoxic: CK(467): AC(53), Cytotoxic: CK(45): AC(28)

---

**The adverse effects of statins may be amplified in the elderly, and include cancer, neurodegenerative conditions, heart failure and accelerated aging.** - GMI Summary


**Authors**: Beatrice Alexandra Golomb

**Study Type**: Commentary

**Adverse Pharmacological Actions**: Cardiotoxic: CK(467): AC(53), Cytotoxic: CK(45): AC(28)

---

**Atorvastatin worsens left ventricular diastolic function, which is improved through coenzyme q10 supplementation.** - GMI Summary

**Pubmed Data**: Am J Cardiol. 2004 Nov 15;94(10):1306-10. PMID: 15541254

**Authors**: Marc A Silver, Peter H Langsjoen, Szabolcs Szabo, Harish Patil, Allan Zelinger

**Study Type**: Human Study

**Adverse Pharmacological Actions**: Cardiotoxic: CK(467): AC(53)

---

**Lovastatin-induced cardiac toxicity involves both oncotic and apoptotic cell death.** - GMI Summary

The depletion of coq10 by statin drugs may be contributing to increasing rates of congestive heart failure. - GMI Summary


Lovastatin causes depletion of coenzyme Q10 levels in the cardiac muscle and mitochondria of animals. - GMI Summary

Pubmed Data : Biochim Biophys Acta. 1994 Jul 6 ;1200(2):100-8. PMID: 8031828

Muscle problems due to statins have been underestimated and may be as prevalent as 10%. - GMI Summary

Some 10% to 20% of heart transplant patients appear to suffer adverse side effects of initial statin therapy. - GMI Summary

Article Published Date: Nov 01, 2005
Study Type: Human Study
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Adverse Pharmacological Actions: Hepatotoxic: CK(95): AC(34), Myotoxicity: CK(259): AC(11)

Topic: Aggression

Psychiatric adverse reactions associated with cholesterol-lowering drugs have been reported. - GMI Summary

Article Published Date: Jan 01, 2007
Authors: Michael Tatley, Ruth Savage
Study Type: Human Study
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Fenofibrates: CK(83): AC(11), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Severe irritability associated with statin cholesterol-lowering drugs has been reported. - GMI Summary

Pubmed Data: QJM. 2004 Apr;97(4):229-35. PMID: 15028853
Article Published Date: Apr 01, 2004
Authors: B A Golomb, T Kane, J E Dimsdale
Study Type: Human Study
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Statin Drugs: CK(3705): AC(437)

Statin drugs are associated with adverse mental effects. - GMI Summary

Pubmed Data: Tidsskr Nor Laegeforen. 1997 Sep 20;117(22):3210-3. PMID: 9411859
Statin treatment results in significantly reduced serum levels of aldosterone. - GMI Summary

Statin drugs have been shown to cause adverse effects in pregnant rats and their offspring, including fetal death. - GMI Summary

Risk documentation occurred in only 20% of women age 15-45 prescribed a medication known to contribute to birth defects. - GMI Summary

Topic: Aldosterone levels: Low

Topic: Birth Defects
**Drugs targeting cholesterol synthesis are embryo lethal in mice and likely contribute to birth defects in humans.** - GMI Summary


**Article Published Date**: Feb 01, 2011

**Authors**: Simon Horvat, Jim McWhir, Damjana Rozman

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Birth Defects: CK(154) : AC(24), Infant Mortality: CK(194) : AC(17), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Teratogenic: CK(271) : AC(50)

---

**Gestational exposure to lovastatin followed by cardiac malformation misclassified as holoprosencephaly has been reported.** - GMI Summary


**Article Published Date**: Jun 30, 2005

**Authors**: Robin J Edison, Maximilian Muenke

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Birth Defects: CK(154) : AC(24), Pregnancy: Environmental Exposures: CK(20) : AC(3), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Teratogenic: CK(271) : AC(50)

---

**Central nervous system and limb anomalies have been reported in first-trimester statin exposure.** - GMI Summary


**Article Published Date**: Apr 08, 2004

**Authors**: Robin J Edison, Maximilian Muenke

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Birth Defects: CK(154) : AC(24), Pregnancy: Environmental Exposures: CK(20) : AC(3), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Teratogenic: CK(271) : AC(50)

---

**Statin drugs cause early embryo lethality in animals.** - GMI Summary
Lovastatin exhibits toxicity in human fetal brain cells. - GMI Summary

Although statin drugs decrease LDL cholesterol in end-stage kidney disease, their use does not lower morbidity or mortality. - GMI Summary

Cholesterol-lowering drugs may contribute to skin disorders. - GMI Summary
**Topic: Hormonal Perturbations: Dopamine Elevation**

**Cholesterol lowering medications also alter measurable hormonal concentrations.** - GMI Summary


**Article Published Date**: Feb 01, 2004

**Authors**: T Ormiston, O M Wolkowitz, V I Reus, R Johnson, F Manfredi

**Study Type**: Human Study

**Additional Links**

**Diseases**: Hormonal Perturbations: Dopamine Elevation: CK(10) : AC(1), Hormonal Perturbations: Homovanillic acid (HVA) Elevations: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Atorvastatin: CK(231) : AC(37), Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)

**Topic: Hormonal Perturbations: Homovanillic acid (HVA) Elevations**

**Cholesterol lowering medications also alter measurable hormonal concentrations.** - GMI Summary


**Article Published Date**: Feb 01, 2004

**Authors**: T Ormiston, O M Wolkowitz, V I Reus, R Johnson, F Manfredi

**Study Type**: Human Study

**Additional Links**

**Diseases**: Hormonal Perturbations: Dopamine Elevation: CK(10) : AC(1), Hormonal Perturbations: Homovanillic acid (HVA) Elevations: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Atorvastatin: CK(231) : AC(37), Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)

**Topic: Insomnia**

**Insomnia is a possible statin-associated psychiatric adverse effect.** - GMI Summary

**Pubmed Data**: Drug Saf. 2008;31(12):1115-23. PMID: 19026028

**Article Published Date**: Jan 01, 2008

**Authors**: Marco Tuccori, Francesco Lapi, Arianna Testi, Daniela Coli, Ugo Moretti, Alfredo Vannacci, Domenico Motola, Francesco Salvo, Alma Lisa Rivolta, Corrado Blandizzi, Alessandro Mugelli, Mario Del Tacca

**Study Type**: Meta Analysis

**Additional Links**

**Diseases**: Insomnia: CK(297) : AC(52)

**Problem Substances**: Statin Drugs: CK(3705) : AC(437)

**Lovastatin has an adverse effect on sleep efficiency and sleep stages.** - GMI Summary
Although statin drugs decrease LDL cholesterol in end-stage kidney disease, their use does not lower morbidity or mortality. - GMI Summary

Some 10% to 20% of heart transplant patients appear to suffer adverse side effects of initial statin therapy. - GMI Summary

Cholesterol-lowering drugs may contribute to skin disorders. - GMI Summary
Although statin drugs decrease LDL cholesterol in end-stage kidney disease, their use does not lower morbidity or mortality. - GMI Summary

Article Published Date : Aug 01, 2010
Authors : Joel C Marrs, Joseph J Saseen
Study Type : Human Study

Statin drugs have been linked to rhabdomyolysis, myositis and kidney failure. - GMI Summary

Article Published Date : Oct 21, 2011
Authors : Alberico L Catapano
Study Type : Review

Vitamin D deficiency, myositis-myalgia, and reversible statin intolerance is discussed. - GMI Summary

Article Published Date : Sep 01, 2011
Authors : Charles J Glueck, Shaaista B Budhani, Silpa S Masineni, Cesar Abuchaibe, Naseer Khan, Ping Wang, Naila Goldenberg
Study Type : Human Study

Statin-induced focal myositis of the upper extremities has been reported. - GMI Summary
**Spontaneous compartment syndrome in association with simvastatin-induced myositis has been reported.** - GMI Summary


Article Published Date: May 01, 2008

Authors: J L Walker, G H Smith, M S Gaston, C M Robinson

Study Type: Human: Case Report

Additional Links


Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

**Statin-induced myositis migrans has been reported.** - GMI Summary


Article Published Date: Nov 30, 2002

Authors: Helmut Sinzinger

Study Type: Human: Case Report

Additional Links


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)


**Kidney Damage: Drug-Induced**

**Statin drugs have been linked to rhabdomyolysis, myositis and kidney failure.** - GMI Summary


Article Published Date: Oct 21, 2011

Authors: Alberico L Catapano

Study Type: Review

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11), Nephrotoxic: CK(133): AC(33)

**There is a dose-response relationship in statin-induced rhabdomyolysis.** - GMI Summary

Pubmed Data: Can J Cardiol. 2011 Mar-Apr;27(2):146-51. PMID: 21459261
Simvastatin-induced rhabdomyolysis and acute renal injury has been reported. - GMI Summary


**Article Published Date**: Jan 01, 2008

**Authors**: Abdelkarim Waness, Sami Bahlas, Saad Al Shohaib

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Kidney Damage: Drug-Induced : CK(69) : AC(18), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Nephrotoxic : CK(133) : AC(33)

Terminal renal failure in lovastatin therapy with pre-existing chronic renal insufficiency has been reported. - GMI Summary


**Article Published Date**: Jan 01, 1996

**Authors**: G Biesenbach, O Janko, U Stuby, J Zazgornik

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Kidney Damage: Drug-Induced : CK(69) : AC(18), Kidney Failure: Chronic : CK(134) : AC(17), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Lovastatin : CK(63) : AC(12)

**Adverse Pharmacological Actions**: Nephrotoxic : CK(133) : AC(33)

**Topic**: Neurotoxicity

Mevastatin accelerates loss of synaptic proteins and neurite degeneration in neurons. - GMI Summary


**Article Published Date**: Sep 01, 2010

**Authors**: Madhuvanthi Kannan, Joern R Steinert, Ian D Forsythe, Andrew G Smith, Tatyana Chernova

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Aging : CK(1249) : AC(356), Cognitive Decline/Dysfunction : CK(350) : AC(71), Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38), Apoptotic : CK(1446) : AC(1045)

**Problem Substances**: Lovastatin : CK(63) : AC(12)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)
**Statins have been associated with cell death in primary neuronal culture.** - GMI Summary


**Article Published Date**: Jan 01, 2007

**Authors**: Pia März, Uwe Otten, André R Miserez

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Statin drugs have been linked to neurotoxicity.** - GMI Summary


**Article Published Date**: Oct 01, 2006

**Authors**: J J de Langen, E P van Puijenbroek

**Study Type**: Human Study

**Additional Links**

**Diseases**: Neuropathies : CK(322) : AC(62), Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Lovastatin induces neuronal cell death through interacting with signal transduction pathways that cell control growth and survival.** - GMI Summary


**Article Published Date**: Feb 01, 2001

**Authors**: N García-Román, A M Alvarez, M J Toro, A Montes, M J Lorenzo

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Lovastatin : CK(63) : AC(12)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Simvastatin exhibits neurotoxic properties.** - GMI Summary


**Article Published Date**: Mar 17, 2000

**Authors**: T Kumano, T Mutoh, H Nakagawa, M Kuriyama

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Brain Damage : CK(65) : AC(28), Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Lovastatin induces neuronal cell death.** - GMI Summary
Simvastatin exhibits neurotoxicity in a neuronal cell model. - GMI Summary

Lovastatin exhibits neurotoxic properties. - GMI Summary

Lovastatin exhibits toxicity in human fetal brain cells. - GMI Summary

Statins have been associated with arrest of DNA synthesis and proliferation in glial cells. - GMI Summary
**Article Published Date**: Apr 01, 1986  
**Authors**: T J Langan, J J Volpe  
**Study Type**: In Vitro Study  
**Additional Links**  
**Diseases**: Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)  
**Problem Substances**: Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)  
**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)  

**Topic**: Prenatal Chemical Exposures

---

**Warfarin and lovastatin exhibit embryotoxic potential.** - GMI Summary

**Article Published Date**: Aug 01, 2010  
**Authors**: Karlfried Groebe, Katrin Hayess, Martina Klemm-Manns, Gerhard Schwall, Wojciech Wozny, Margino Steemans, Annelieke K Peters, Chaturvedala Sastri, Petra Jaeckel, Werner Stegmann, Helmut Zengerling, Rainer Schöpf, Slobodan Poznanovic, Tina C Stummann, Andrea Seiler, Horst Spielmann, André Schrattenholz  
**Study Type**: In Vitro Study  
**Additional Links**  
**Diseases**: Prenatal Chemical Exposures : CK(268) : AC(73)  
**Problem Substances**: Lovastatin : CK(63) : AC(12), Warfarin : CK(236) : AC(27)  
**Adverse Pharmacological Actions**: Embryotoxic : CK(7) : AC(4), Teratogenic : CK(271) : AC(50)  

---

**Prenatal exposure to statin drugs results in reduced gestational age at birth and lower birth weight.** - GMI Summary

**Article Published Date**: Oct 01, 2008  
**Authors**: Nobuko Taguchi, Evelyn T Rubin, Akiko Hosokawa, Jacquelyn Choi, Angela Yating Ying, Myla E Moretti, Gideon Koren, Shinya Ito  
**Study Type**: Human Study  
**Additional Links**  
**Diseases**: Infants: Low Birth Weight : CK(102) : AC(11), Premature Birth : CK(330) : AC(41), Prenatal Chemical Exposures : CK(268) : AC(73)  
**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)  

---

**Lovastatin exhibits toxicity in human fetal brain cells.** - GMI Summary

**Pubmed Data**: Neurotoxicol Teratol. 1995 Jan-Feb;17(1):31-9. PMID: [7708017](https://doi.org/10.1016/0892-0236(95)90070-9)  
**Article Published Date**: Jan 01, 1995  
**Authors**: O V Pavlov, Bobryshev YuV, Balabanov YuV, K Ashwell  
**Study Type**: Human In Vitro  
**Additional Links**  
**Diseases**: Abortion: Spontaneous : CK(197) : AC(27), Birth Defects : CK(154) : AC(24), Neurotoxicity : CK(8) : AC(4), Prenatal Chemical Exposures : CK(268) : AC(73)  
**Pharmacological Actions**: Antiproliferative : CK(965) : AC(680)  
**Problem Substances**: Lovastatin : CK(63) : AC(12)  
**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87), Teratogenic : CK(271) : AC(50)
**Psychiatric Disorders**

**Psychiatric adverse reactions associated with cholesterol-lowering drugs have been reported.**

- GMI Summary


Authors : Michael Tatley, Ruth Savage

Study Type : Human Study

Additional Links

Diseases : Aggression : CK(37) : AC(5), Depression : Unipolar : CK(442) : AC(69), Memory Disorders : Drug-Induced : CK(47) : AC(9), Psychiatric Disorders : CK(47) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

**Severe irritability associated with statin cholesterol-lowering drugs has been reported.** - GMI Summary

Pubmed Data : QJM. 2004 Apr ;97(4):229-35. PMID: 15028853

Authors : B A Golomb, T Kane, J E Dimsdale

Study Type : Human Study

Additional Links


Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Statin Drugs : CK(3705) : AC(437)

**Psychiatric disorders with use of simvastatin have been reported.** - GMI Summary


Authors : N Duits, F M Bos

Study Type : Human: Case Report

Additional Links

Diseases : Mood Disorders : CK(75) : AC(12), Psychiatric Disorders : CK(47) : AC(6), Psychological Well-Being : CK(10) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

**Sleep Disorders**

**Nightmares and sleep disturbances with simvastatin and metoprolol have been reported.** - GMI Summary

**Statin drugs are associated with adverse mental effects.** - GMI Summary

*Pubmed Data* : Tidsskr Nor Laegeforen. 1997 Sep 20 ;117(22):3210-3. PMID: 9411859

**Sleep disturbance and appetite loss after lovastatin.** - GMI Summary

*Pubmed Data* : Lancet. 1994 Apr 16 ;343(8903):973. PMID: 7909021

**Lovastatin has an adverse effect on sleep efficiency and sleep stages.** - GMI Summary


**Topic:** Hypothyroidism

**Hypothyroidism misdiagnosed as statin intolerance has been reported.** - GMI Summary

Simvastatin induced rhabdomyolysis and hypothyroidism has been reported. - GMI Summary


Article Published Date: Jul 31, 2007

Authors: Thomas J Kiernan, Martin Rochford, John H McDermott

Study Type: Human: Case Report

Statin use may be contraindicated in hypothyroidism. - GMI Summary


Article Published Date: Mar 01, 2007

Authors: Simona L Bar, Daniel T Holmes, Jiri Frohlich

Study Type: Human: Case Report

Statin drugs may cause high elevations of creatine phosphokinase (CK) in patients with unnoticed hypothyroidism. - GMI Summary


Article Published Date: Jun 01, 2006

Authors: Kotaro Tokinaga, Toru Oeda, Yoshifumi Suzuki, Yasuhisa Matsushima

Study Type: Human Study

Topic: Cholesterol: Oxidation

The statin drug lovastatin reduces the antioxidant capacity of LDL, indicating it may increase the oxidation of LDL cholesterol. - GMI Summary

**Lovastatin enhances the susceptibility of LDL cholesterol to oxidation.** - GMI Summary


**Article Published Date**: Jun 30, 1997

**Authors**: A Palomäki, K Malminiemi, T Metsä-Ketelä

**Study Type**: Human Study

**Diseases**:
- Cholesterol: Oxidation: CK(329) : AC(96)
- Coronary Artery Disease: CK(942) : AC(133)
- High Cholesterol: CK(865) : AC(192)

**Problem Substances**:
- Lovastatin: CK(63) : AC(12)
- Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**:
- Cardiotoxic: CK(467) : AC(53)
- Oxidant: CK(63) : AC(23)

---

**Mitochondrial dysfunction caused by statin contributes to endothelial dysfunction in patients with coronary artery disease.** - GMI Summary


**Article Published Date**: Jun 01, 2010

**Authors**: Yuk-Ling Dai, Ting-Hin Luk, Chung-Wah Siu, Kai-Hang Yiu, Hiu-Ting Chan, Stephen W L Lee, Sheung-Wai Li, Sidney Tam, Bonnie Fong, Chu-Pak Lau, Hung-Fat Tse

**Study Type**: Human Study

**Diseases**:
- Coronary Artery Disease: CK(942) : AC(133)
- Endothelial Dysfunction: CK(654) : AC(167)
- Mitochondrial Diseases: CK(92) : AC(33)

**Problem Substances**:
- Simvastatin: CK(657) : AC(114)
- Statin Drugs: CK(3705) : AC(437)

---

**Atorvastatin increases myocardial indices of oxidative stress in a porcine model of hypercholesterolemia and chronic ischemia.** - GMI Summary


**Article Published Date**: Jul 01, 2008

**Authors**: Neel R Sodha, Munir Boodhwani, Basel Ramlawi, Richard T Clements, Shigetoshi Mieno, Jun Feng, Shu-Hua Xu, Cesario Bianchi, Frank W Sellke

**Study Type**: Animal Study

**Diseases**:
- Endothelial Dysfunction: CK(654) : AC(167)
- High Cholesterol: CK(865) : AC(192)
- Oxidative Stress: CK(1724) : AC(691)

**Problem Substances**:
- Atorvastatin: CK(231) : AC(37)
- Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**:
- Oxidant: CK(63) : AC(23)

---

**Topic: Hepatitis**
Fluvastatin use may be a cause of autoimmune hepatitis. - GMI Summary

Article Published Date: Mar 01, 2011
Authors: Satoshi Nakayama, Naoya Murashima
Study Type: Human: Case Report
Additional Links
Diseases: Hepatitis : CK(35) : AC(18)
Pharmacological Actions: Anti-Inflammatory Agents : CK(1025) : AC(400), Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Fluvastatin : CK(13) : AC(3)

Hepatitis, rhabdomyolysis and multi-organ failure resulting from statin use has been reported. - GMI Summary

Article Published Date: Jan 01, 2009
Authors: Muthuram Rajaram
Study Type: Human: Case Report
Additional Links
Diseases: Hepatitis : CK(35) : AC(18), Multi-Organ Failure : CK(3) : AC(1), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Drug-induced acute autoimmune hepatitis during combination therapy with atorvastatin and ezetimibe has been reported. - GMI Summary

Pubmed Data: Ann Clin Biochem. 2005 Sep ;42(Pt 5):402-4. PMID: 16168199
Article Published Date: Sep 01, 2005
Authors: Charles van Heyningen
Study Type: Human: Case Report
Additional Links
Diseases: Drug-Induced Toxicity : CK(503) : AC(76), Hepatitis : CK(35) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Additional Keywords: Drug Interaction : CK(36) : AC(5)
Problem Substances: Atorvastatin : CK(231) : AC(37)

Statin drug induced lupus-like syndrome concomitant with a severe autoimmune hepatitis has been reported. - GMI Summary

Article Published Date: Jan 01, 2003
Authors: I W Graziadei, G E Obermoser, N T Sepp, K H Erhart, W Vogel
Study Type: Human: Case Report
Additional Links
Diseases: Hepatitis : CK(35) : AC(18), Systemic Lupus Erythematosus : CK(322) : AC(51)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Atorvastatin : CK(231) : AC(37)
Hepatitis associated with treatment with lovastatin has been reported. - GMI Summary


Article Published Date: Mar 01, 1998

Authors: M Bruguera, P Joya, J Rodés

Study Type: Human: Case Report

Additional Links

Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: CK(35) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

A case of hepatitis caused by simvastatin has been reported. - GMI Summary


Article Published Date: Jan 01, 1991

Authors: P Feydy, W V Bogomoletz

Study Type: Human: Case Report

Additional Links

Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: CK(35) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Lovastatin: CK(63) : AC(12), Simvastatin: CK(657) : AC(114)

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

Topic: Hypertension

Simvastatin decreases coenzyme q10 levels in the left ventricle of the heart and skeletal muscle. - GMI Summary

Pubmed Data: Physiol Res. 2007;56 Suppl 2:S49-54. Epub 2007 Sep 5. PMID: 17824807

Article Published Date: Jan 01, 2007

Authors: J Kucharská, A Gvozdjákova, F Simko

Study Type: Animal Study

Additional Links

Diseases: Cardiovascular Diseases: CK(3885) : AC(623), Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Hypertension: CK(1341) : AC(257), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Cardiotoxic: CK(467) : AC(53), Myotoxicity: CK(259) : AC(11)

Atorvastatin worsens left ventricular diastolic function, which is improved through coenzyme q10 supplementation. - GMI Summary

Pubmed Data: Am J Cardiol. 2004 Nov 15;94(10):1306-10. PMID: 15541254

Article Published Date: Nov 15, 2004

Authors: Marc A Silver, Peter H Langsjoen, Szabolcs Szabo, Harish Patil, Allan Zelinger

Study Type: Human Study

Additional Links
**Topic: Dermatomyositis**

*Statin drugs are known in some cases to induce autoimmune myopathies such as dermatomyositis, polymyositis, and immune-mediated necrotizing myopathies (IMNM).* - GMI Summary

**Simvastatin-induced dermatomyositis has been reported.** - GMI Summary

**Lupus erythematosus and other autoimmune diseases related to statin therapy have been reported.** - GMI Summary

**Fluvastatin-induced dermatomyositis has been reported.** - GMI Summary
A dermatomyositis-like syndrome has been linked to statin drug use. - GMI Summary

Statin use is associated with an increased incidence of interstitial lung disease. - GMI Summary

A potential link between HMG-CoA reductase inhibitor (statin) use and interstitial lung disease has been reported. - GMI Summary
Topic: Mitochondrial Diseases

Mitochondrial dysfunction caused by statin contributes to endothelial dysfunction in patients with coronary artery disease. - GMI Summary


Statins-induced MELAS syndrome has been reported. - GMI Summary


Topic: Muscle Disorders

Muscular symptoms were reported by 832 patients (10.5%), with a median time of onset of 1 month following initiation of statin therapy. - GMI Summary


Pravastatin-associated polymyositis has been reported. - GMI Summary

Pubmed Data: 208

**Article Published Date** : Jan 01, 2004

**Authors** : Akio Takagi, Yasusi Shiio

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : Muscle Disorders : CK(10) : AC(1), Polymyositis : CK(7) : AC(3)

**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Pravastatin : CK(197) : AC(31)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11)

---

**Review: muscle symptoms associated with lipid-lowering drugs.** - GMI Summary

**Pubmed Data** : Cardiovasc Drugs Ther. 2003 Sep-Nov;17(5-6):459-65. PMID: 15107601

**Article Published Date** : Sep 01, 2003

**Authors** : Sylvia Franc, Sylvie Dejager, Eric Bruckert, Marina Chauvenet, Philippe Giral, Gérard Turpin

**Study Type** : Human Study

**Additional Links**


**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11)

---

**Topic: DNA damage**

**Simvastatin treatment induces morphology alterations and cell death in mouse cochlear neuronal cells.** - GMI Summary

**Pubmed Data** : Acta Otolaryngol. 2009 Feb ;129(2):166-74. PMID: 18607908

**Article Published Date** : Feb 01, 2009

**Authors** : Do-Sim Park, Hong-Seob So, Jeong-Han Lee, Hyun-Young Park, Young-Jin Lee, Ji-Hyun Cho, Kui-Hyun Yoon, Channy Park, Kijung Yun, Raekil Park

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : Cochlear Neuronal Damage : CK(1) : AC(1), DNA damage : CK(607) : AC(274), Hearing Disorders : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Neurotoxic : CK(879) : AC(87)

---

**Atorvastatin exhibits immunotoxic and genotoxic properties.** - GMI Summary


**Article Published Date** : Aug 15, 2008

**Authors** : Goran Gajski, Vera Garaj-Vrhovac, Visnja Orescanin

**Study Type** : Human In Vitro

**Additional Links**

**Diseases** : DNA damage : CK(607) : AC(274), Immune Disorders: Low Immune Function : CK(377) : AC(109), Oxidative Stress : CK(1724) : AC(691), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Genotoxic : CK(70) : AC(37), Immunotoxic : CK(129) : AC(21)
Atorvastatin exhibits immunotoxic and genotoxic properties - Article 2. - GMI Summary

Article Published Date: Jan 01, 2008
Authors: Goran Gajski, Vera Garaj-Vrhovac
Study Type: Human In Vitro

Additional Links
Diseases: DNA damage: CK(607) : AC(274), Immune Disorders: Low Immune Function: CK(377) : AC(109), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Genotoxic: CK(70) : AC(37), Immunotoxic: CK(129) : AC(21)

Topic: Lupus-Like Syndrome

Statin drug use is associated with a Lupus-Like syndrome. - GMI Summary

Article Published Date: Aug 23, 2011
Authors: Hilda J I de Jong, Jan Willem Cohen Tervaert, Siti R F Saldi, Rob J Vandebril, Patrick C Souverein, Ronald H B Meyboom, Henk van Loveren, Olaf H Klungel
Study Type: Human Study

Additional Links
Diseases: Lupus-Like Syndrome: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206), Systemic Lupus Erythematosus: CK(322) : AC(51)
Problem Substances: Statin Drugs: CK(3705) : AC(437)

Lupus-like syndrome associated with statin therapy has been reported. - GMI Summary

Pubmed Data: Dermatology. 2004 ;208(3):276-7. PMID: 15118389
Article Published Date: Jan 01, 2004
Authors: Bernard Noël, Renato G Panizzon
Study Type: Human: Case Report

Additional Links
Diseases: Lupus-Like Syndrome: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Immunotoxic: CK(129) : AC(21)

Simvastatin-induced lupus-like syndrome has been reported. - GMI Summary

Article Published Date: Jan 01, 2000
Authors: A Ahmad, M T Fletcher, T M Roy
Study Type: Human: Case Report

Additional Links
Diseases: Arthralgia: CK(20) : AC(2), Lupus-Like Syndrome: CK(10) : AC(1), Pleurisy: CK(27) : AC(9), Statin-Induced Pathologies: CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114)

Fatal lupus-like syndrome and ARDS induced by fluvastatin has been reported. - GMI Summary

Article Published Date : Jul 11, 1998
Authors : M K Sridhar, A Abdulla
Study Type : Human: Case Report
Additional Links
Diseases : Acute Respiratory Distress Syndrome : CK(3) : AC(1), Lupus-Like Syndrome : CK(10) : AC(1)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Fluvastatin : CK(13) : AC(3)

Topic: Lichenoid Dermatitis

Pravastatin-induced lichenoid drug eruption has been reported. - GMI Summary

Article Published Date : Feb 01, 2006
Authors : Vernon Sc Pua, Richard A Scolyer, Ross Stc Barnetson
Study Type : Human: Case Report
Additional Links
Diseases : Lichenoid Dermatitis : CK(9) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

Lichenoid drug eruption with fluvastatin and lovastatin has been reported. - GMI Summary

Article Published Date : Jan 01, 2004
Authors : Bela Sebök, Margit Tóth, Bela Anga, Ferenc Harangi, Imre Schneider
Study Type : Human: Case Report
Additional Links
Diseases : Lichenoid Dermatitis : CK(9) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Fluvastatin : CK(13) : AC(3), Lovastatin : CK(63) : AC(12)

Simvastatin-induced lichen planus pemphigoides has been observed. - GMI Summary

Article Published Date : Feb 01, 2003
Authors : P-E Stoebner, C Michot, C Ligeron, L Durand, J Meynadier, L Meunier
Study Type : Human: Case Report
Additional Links
Diseases : Lichen Planus : CK(30) : AC(4), Lichenoid Dermatitis : CK(9) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

A simvastatin-induced lichenoid drug eruption has been reported. - GMI Summary

Topic: Amyotrophic Lateral Sclerosis

**Statin drugs may cause ALS-like neurodegeneration in susceptible individuals.**  - GMI Summary


**Article Published Date**: Jan 01, 2009

**Authors**: Beatrice A Golomb, Edwin K Kwon, Sabrina Koperski, Marcella A Evans

**Study Type**: Human Study

**Additional Links**


**Problem Substances**: Statin Drugs: CK(3705): AC(437)

**Statin drug use may be linked to neuromuscular diseases and an amyotrophic lateral sclerosis-like syndrome.**  - GMI Summary

**Pubmed Data**: Drug Saf. 2007;30(6):515-25. PMID: 17536877

**Article Published Date**: Jan 01, 2007

**Authors**: I Ralph Edwards, Kristina Star, Anne Kiuru

**Study Type**: Human Study

**Additional Links**

**Diseases**: Amyotrophic Lateral Sclerosis: CK(335): AC(68), Neuromuscular Diseases: CK(11): AC(2)

**Problem Substances**: Statin Drugs: CK(3705): AC(437)

Topic: Aortic Stenosis

**A combination of ezetimibe and simvastatin do not reduce aortic valve stenosis.**  - GMI Summary


**Article Published Date**: Dec 01, 2010

**Authors**: Eva Gerdts, Anne Bjørhovde Rossebø, Terje Rolf Pedersen, Kurt Boman, Philippe Brudi, John Boyd Chambers, Kenneth Egstrup, Christa Gohlke-Bärwolf, Ingar Holme, Y Antero Kesäniemi, William Malbecq, Christoph Nienaber, Simon Ray, Terje Skjærpe, Kristian Wachtell, Ronnie Willenheimer

**Study Type**: Meta Analysis

**Additional Links**

**Diseases**: Aortic Stenosis: CK(41): AC(11)

**Problem Substances**: Ezetimibe (trade name Zetia): CK(20): AC(1), Simvastatin: CK(657): AC(114)

Topic: Blood Sugar Problems
There are 17 randomized trials on statin treatment showing an increased incidence of diabetes.

- GMI Summary


Article Published Date : Oct 07, 2010

Authors : E J Mills, P Wu, G Chong, I Ghement, S Singh, E A Akl, O Eyawo, G Guyatt, O Berwanger, M Briel

Study Type : Meta Analysis

Additional Links

Diseases : Blood Sugar Problems : CK(3241) : AC(659), Diabetes Mellitus: Type 1 : CK(933) : AC(212), Diabetes Mellitus: Type 2 : CK(1516) : AC(314)

Problem Substances : Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Diabetogenic : CK(89) : AC(9)

---

Topic: Bone Fractures

Statin users have poorer leaning balance which may potentially increase fall risk in this group.

- GMI Summary


Article Published Date : Oct 27, 2011

Authors : Wendy Haerer, Kim Delbaere, Harry Bartlett, Stephen R Lord, Jeffrey Rowland

Study Type : Human Study

Additional Links

Diseases : Balance Disorders : CK(20) : AC(3), Bone Fractures : CK(323) : AC(65)

Problem Substances : Statin Drugs : CK(3705) : AC(437)

---

Statin use may exacerbate muscle performance declines and falls risk associated with aging without a concomitant decrease in muscle mass.

- GMI Summary


Article Published Date : Sep 01, 2009

Authors : D Scott, L Blizzard, J Fell, G Jones

Study Type : Human Study

Additional Links

Diseases : Bone Fractures : CK(323) : AC(65), Hip Fracture : CK(111) : AC(19), Muscle Fatigue : CK(6) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Statin Drugs : CK(3705) : AC(437)

---

Topic: DHEA: Low

Cholesterol-lowering medications reduce DHEA-secretory responses and sperm motility.

- GMI Summary

Pubmed Data : Metabolism. 1993 Sep ;42(9):1146-52. PMID: 8412767

Article Published Date : Sep 01, 1993

Authors : A S Dobs, P S Sarma, D Schteingart
**Topic: Diabetes: Cardiovascular Illness**

*Type 2 diabetic patients patients treated with statin drugs have decreased coq10 levels and may be associated with subclinical diabetic cardiomyopathy reversible by CoQ10 supplementation.* - GMI Summary

**Pubmed Data**: Arzneimittelforschung. 1999 Apr;49(4):324-9. PMID: 10337451

**Article Published Date**: Apr 01, 1999

**Authors**: Y Miyake, A Shouzu, M Nishikawa, T Yonemoto, H Shimizu, S Omoto, T Hayakawa, M Inada

**Study Type**: Human Study

**Diseases**: Cardiomyopathy : CK(75) : AC(15), Diabetes: Cardiovascular Illness : CK(503) : AC(103), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)

**Additional Keywords**: Drug-Nutrient Depletion : CK(64) : AC(10), Statin-Coq10 Depletion : CK(36) : AC(7)

**Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Cardiotoxic : CK(467) : AC(53)

---

**Topic: Exercise-Induced Tissue Damage**

*Statins may adversely alter the response of muscle to exercise stress.* - GMI Summary


**Article Published Date**: Dec 01, 2005

**Authors**: Maria L Urso, Priscilla M Clarkson, Dustin Hittel, Eric P Hoffman, Paul D Thompson

**Study Type**: Human Study

**Diseases**: Athletic Performance : CK(300) : AC(56), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Exercise-Induced Tissue Damage : CK(26) : AC(7), Muscle Damage: Exercise-Induced : CK(61) : AC(6)

**Pharmacological Actions**: Proteasome Inhibitors : CK(29) : AC(23)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Gastrointestinal Complaints**

*Simvastatin side effects are far higher than reported in clinical trials.* - GMI Summary

**Pubmed Data**: N Z Med J. 1991 Nov 27 ;104(924):493-5. PMID: 1745460

**Article Published Date**: Nov 27, 1991

**Authors**: R S Scott, C J Lintott, M J Wilson

**Study Type**: Human Study
**Topic: Infants: Low Birth Weight**

*Prenatal exposure to statin drugs results in reduced gestational age at birth and lower birth weight.* - GMI Summary


Article Published Date: Oct 01, 2008

Authors: Nobuko Taguchi, Evelyn T Rubin, Akiko Hosokawa, Jacquelyn Choi, Angela Yating Ying, Myla E Moretti, Gideon Koren, Shinya Ito

Study Type: Human Study

**Topic: Muscle Fatigue**

*Statin use may exacerbate muscle performance declines and falls risk associated with aging without a concomitant decrease in muscle mass.* - GMI Summary


Article Published Date: Sep 01, 2009

Authors: D Scott, L Blizzard, J Fell, G Jones

Study Type: Human Study

**Review: muscle symptoms associated with lipid-lowering drugs.** - GMI Summary

Pubmed Data: Cardiovasc Drugs Ther. 2003 Sep-Nov;17(5-6):459-65. PMID: 15107601

Article Published Date: Sep 01, 2003

Authors: Sylvia Franc, Sylvie Dejager, Eric Bruckert, Marina Chauvenet, Philippe Giral, Gérard Turpin

Study Type: Human Study

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)
Topic: Myasthenia Gravis

**Statin-associated myasthenic weakness has been reported.** - GMI Summary

Pubmed Data: J Med Assoc Thai. 2011 Feb ;94(2):256-8. PMID: 21534375

Article Published Date: Feb 01, 2011

Authors: Nath Pasutharnchat, Kammant Phanthumchinda

Study Type: Human: Case Report

Additional Links

Diseases: Myasthenia Gravis : CK(70) : AC(11), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Statin-associated myastenia gravis has been reported.** - GMI Summary

Pubmed Data: Medicine (Baltimore). 2006 Mar ;85(2):82-5. PMID: 16609346

Article Published Date: Mar 01, 2006

Authors: Valerie Purvin, Aki Kawasaki, Kyle H Smith, Anat Kesler

Study Type: Human: Case Report

Additional Links

Diseases: Myasthenia Gravis : CK(70) : AC(11), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Statin-associated exacerbation of myasthenia gravis has been reported.** - GMI Summary

Pubmed Data: Neurology. 2004 Dec 14 ;63(11):2188. PMID: 15596782

Article Published Date: Dec 14, 2004

Authors: Michael S Cartwright, Douglas R Jeffery, Geoffrey R Nuss, Peter D Donofrio

Study Type: Review

Additional Links

Diseases: Myasthenia Gravis : CK(70) : AC(11)


---

Topic: Pneumonia

**Statins are not associated with a reduced risk of pneumonia.** - GMI Summary


Article Published Date: Nov 15, 2011

Authors: Chun Shing Kwok, Jessica Ka-Yan Yeong, Richard M Turner, Rodrigo Cavallazzi, Sonal Singh, Yoon Kong Loke

Study Type: Meta Analysis

Additional Links

Diseases: Pneumonia : CK(191) : AC(38)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

---

Topic: Polymyositis
Statin drugs are known in some cases to induce autoimmune myopathies such as dermatomyositis, polymyositis, and immune-mediated necrotizing myopathies (IMNM).

**Summary**


*Article Published Date*: Jun 01, 2011

*Authors*: Andrew L Mammen

*Study Type*: Review

**Additional Links**

*Diseases*: Dermatomyositis: CK(14) : AC(4), Polymyositis : CK(7) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)

*Problem Substances*: Statin Drugs : CK(3705) : AC(437)

*Adverse Pharmacological Actions*: Immunotoxic : CK(129) : AC(21)

---

**Lupus erythematosus and other autoimmune diseases related to statin therapy have been reported.** - GMI Summary


*Article Published Date*: Jan 01, 2007

*Authors*: B Noël

*Study Type*: Human Study

**Additional Links**


*Problem Substances*: Statin Drugs : CK(3705) : AC(437)

*Adverse Pharmacological Actions*: Immunotoxic : CK(129) : AC(21)

---

**Polymyositis induced or associated with lipid-lowering drugs has been reported.** - GMI Summary


*Article Published Date*: Apr 01, 2004

*Authors*: A-L Fauchais, J Iba Ba, P Maurage, X Kyndt, D Bataille, E Hachulla, D Parent, V Queyrel, M Lambert, U Michon Pasturel, P-Y Hatron, P Vanhille, B Devulder

*Study Type*: Human: Case Report

**Additional Links**

*Diseases*: Polymyositis : CK(7) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)

*Problem Substances*: Cholesterol Lowering Drugs : CK(1038) : AC(90), Statin Drugs : CK(3705) : AC(437)

---

**Pravastatin-associated polymyositis has been reported.** - GMI Summary


*Article Published Date*: Jan 01, 2004

*Authors*: Akio Takagi, Yasushi Shiio

*Study Type*: Human: Case Report

**Additional Links**

*Diseases*: Muscle Disorders : CK(10) : AC(1), Polymyositis : CK(7) : AC(3)

*Pharmacological Actions*: Anticholesteremic Agents : CK(298) : AC(38)

*Problem Substances*: Pravastatin : CK(197) : AC(31)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Severe polymyositis with simvastatin use has been reported. - GMI Summary

Article Published Date : Nov 16, 2003
Authors : G Riesco-Eizaguirre, F J Arpa-Gutiérrez, M Gutiérrez, E Toribio
Study Type : Human: Case Report
Additional Links
Diseases : Polymyositis : CK(7) : AC(3)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Simvastatin : CK(657) : AC(114)

Topic: Premature Birth

Prenatal exposure to statin drugs results in reduced gestational age at birth and lower birth weight. - GMI Summary

Article Published Date : Oct 01, 2008
Authors : Nobuko Taguchi, Evelyn T Rubin, Akiko Hosokawa, Jacquelyn Choi, Angela Yating Ying, Myla E Moretti, Gideon Koren, Shinya Ito
Study Type : Human Study
Additional Links
Diseases : Infants: Low Birth Weight : CK(102) : AC(11), Premature Birth : CK(330) : AC(41), Prenatal Chemical Exposures : CK(268) : AC(73)
Problem Substances : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Topic: Prostate Cancer

Statins increase the risk of prostate cancer. - GMI Summary

Article Published Date : Dec 01, 2011
Authors : Chih-Ching Chang, Shu-Chen Ho, Hui-Fen Chiu, Chun-Yuh Yang
Study Type : Human Study
Additional Links
Diseases : Prostate Cancer : CK(712) : AC(280)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Carcinogenic : CK(416) : AC(81)

Statin use has an adverse effect on biochemical outcomes following radical prostatectomy. - GMI Summary

Article Published Date : Oct 01, 2011
Authors : Chad R Ritch, Greg Hruby, Ketan K Badani, Mitchell C Benson, James M McKiernan
Study Type : Human Study
**Topic: Sepsis**

*The statin drug atorvastatin is found in very high concentrations in intensive patients with sepsis.* - GMI Summary


Article Published Date: Apr 01, 2009

Authors: Peter S Kruger, Noelle M Freir, Bala Venkatesh, Thomas A Robertson, Michael S Roberts, Mark Jones

Study Type: Human Study

**Topic: Sperm Quality: Low**

*Cholesterol-lowering medications reduce DHEA-secretory responses and sperm motility.* - GMI Summary

Pubmed Data: Metabolism. 1993 Sep;42(9):1146-52. PMID: [8412767](https://pubmed.ncbi.nlm.nih.gov/8412767)

Article Published Date: Sep 01, 1993

Authors: A S Dobs, P S Sarma, D Schteingart

Study Type: Human Study

**Topic: Stroke**

*The statin drug atorvastatin increases the risk of hemorrhagic stroke.* - GMI Summary


Article Published Date: Jun 10, 2008

Authors: L B Goldstein, P Amarenco, M Szarek, A Callahan, M Hennerici, H Sillesen, J A Zivin, K M A Welch,

Study Type: Human Study

**Additional Links**

**Diseases**:
- Prostate Cancer: CK(712) : AC(280)
- Prostatectomy: CK(10) : AC(1)

**Problem Substances**:
- Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**:
- Carcinogenic: CK(416) : AC(81)
**cardiovascular disease and stroke** - GMI Summary

**Pubmed Data**: Arch Neurol. 2004 Jun;61(6):889-92. PMID: 15210526

**Article Published Date**: Jun 01, 2004

**Authors**: Tatjana Rundek, Ali Naini, Ralph Sacco, Kristen Coates, Salvatore DiMauro

**Study Type**: Human Study

**Additional Links**
- **Diseases**: Cardiovascular Diseases : CK(3885) : AC(623), Coenzyme Q10 Deficiency : CK(42) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206), Stroke : CK(452) : AC(44)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37)

---

**Topic: Testicular Cancer**

**Statin-induced testicular pain has been reported** - GMI Summary


**Article Published Date**: Jan 01, 2007

**Authors**: Sunny A Linnebur, William H Hiatt

**Study Type**: Human Study

**Additional Links**
- **Diseases**: Testicular Cancer : CK(21) : AC(6)
- **Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Neurodegenerative Diseases**

**Statin drugs exhibit neurotoxicity in an animal neuronal cell line** - GMI Summary


**Article Published Date**: Sep 01, 2011

**Authors**: K Vural, M I Tuğlu

**Study Type**: Animal Study

**Additional Links**
- **Diseases**: Brain Damage : CK(65) : AC(28), Neurodegenerative Diseases : CK(1481) : AC(410), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Pharmacological Actions**: Antiproliferative : CK(965) : AC(680)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37), Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

**Statin drugs may cause ALS-like neurodegeneration in susceptible individuals** - GMI Summary


**Article Published Date**: Jan 01, 2009

**Authors**: Beatrice A Golomb, Edwin K Kwon, Sabrina Koperski, Marcella A Evans

**Study Type**: Human Study

**Additional Links**
- **Diseases**: Amyotrophic Lateral Sclerosis : CK(335) : AC(68), Neurodegenerative Diseases : CK(1481) : AC(410), Oxidative Stress : CK(1724) : AC(691)
- **Problem Substances**: Statin Drugs : CK(3705) : AC(437)
The adverse effects of statins may be amplified in the elderly, and include cancer, neurodegenerative conditions, heart failure and accelerated aging. - GMI Summary

Article Published Date: May 01, 2005
Authors: Beatrice Alexandra Golomb
Study Type: Commentary

Statin drugs deplete dolichol, which may contribute to statin toxicity and neurodegenerative diseases. - GMI Summary

Pubmed Data: J Alzheimers Dis. 2004 Apr ;6(2):129-35. PMID: 15096696
Article Published Date: Apr 01, 2004
Authors: E Bergamini, R Bizzarri, G Cavallini, B Cerbai, E Chiellini, A Donati, Z Gori, A Manfrini, I Parentini, F Signori, I Tamburini
Study Type: Review

Atorvastatin contributes to cataract formation in the white rat. - GMI Summary

Article Published Date: Jan 01, 2002
Authors: Paweł Zakrzewski, Jolanta Milewska, Krystyna Czerny
Study Type: Animal Study

Long-term treatment of animals with statin drugs result in the inhibition of cholesterol synthesis in the lens. - GMI Summary

Article Published Date: Aug 01, 1991
Authors: S S Kalinowski, R D Tanaka, S T Mosley
Study Type: Animal Study
**Statin Drugs**

**Statin Drugs may contribute to lens opacities.** - GMI Summary


Article Published Date: Jan 01, 1990

Authors: R J Gerson, J S MacDonald, A W Alberts, J Chen, J B Yudkovitz, M D Greenspan, L F Rubin, D L Bokelman

Study Type: Review

Additional Links

Diseases: Cataract: CK(180) : AC(53), Lens Diseases: CK(6) : AC(4), Lens Opacities: CK(1) : AC(1)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Lovastatin: CK(63) : AC(12), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Cataractogenic: CK(3) : AC(2)

---

**Pravastatin may contribute to the pathology of eye diseases by inhibit cholesterol synthesis in the lens.** - GMI Summary

Pubmed Data: J Lipid Res. 1989 Sep;30(9):1411-20. PMID: 2513368

Article Published Date: Sep 01, 1989

Authors: S T Mosley, S S Kalinowski, B L Schafer, R D Tanaka

Study Type: In Vitro Study

Additional Links

Diseases: Eye Diseases: CK(568) : AC(129), Lens Damage: CK(3) : AC(1), Lens Diseases: CK(6) : AC(4), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Pravastatin: CK(197) : AC(31)

---

**Topic: Lichen Planus**

**Lupus erythematosus and other autoimmune diseases related to statin therapy have been reported.** - GMI Summary


Article Published Date: Jan 01, 2007

Authors: B Noël

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Immunotoxic: CK(129) : AC(21)

---

**Simvastatin-induced lichen planus pemphigoides has been observed.** - GMI Summary


Article Published Date: Feb 01, 2003

Authors: P-E Stoebner, C Michot, C Ligeron, L Durand, J Meynadier, L Meunier

Study Type: Human: Case Report
**Topic: Lupus Erythematosus: Cutaneous**

*Statin-induced subacute cutaneous lupus erythematosus has been reported.* - GMI Summary

**Pubmed Data:** Clin Exp Dermatol. 2007 Sep ;32(5):589-91. PMID: 17692061

**Article Published Date:** Sep 01, 2007

**Authors:** R Suchak, K Benson, V Swale

**Study Type:** Human: Case Report

---

**Lupus erythematosus and other autoimmune diseases related to statin therapy have been reported.** - GMI Summary


**Article Published Date:** Jan 01, 2007

**Authors:** B Noël

**Study Type:** Human Study

---

**Topic: Psychological Well-Being**

*Lovastatin may adversely affect neuropsychological tests of attention and psychomotor speed.* - GMI Summary

**Pubmed Data:** Am J Med. 2000 May ;108(7):538-46. PMID: 10806282

**Article Published Date:** May 01, 2000

**Authors:** M F Muldoon, S D Barger, C M Ryan, J D Flory, J P Lehoczky, K A Matthews, S B Manuck

**Study Type:** Human Study

---
Psychiatric disorders with use of simvastatin have been reported. - GMI Summary


Article Published Date: Jun 26, 1993

Authors: N Duits, F M Bos

Study Type: Human: Case Report

Additional Links


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

 Topic: Systemic Lupus Erythematosus

Statin drug use is associated with a Lupus-Like syndrome. - GMI Summary


Article Published Date: Aug 23, 2011

Authors: Hilda J I de Jong, Jan Willem Cohen Tervaert, Siti R F Saldi, Rob J Vandebril, Patrick C Souverein, Ronald H B Meyboom, Henk van Loveren, Olaf H Klungel

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Statin drug induced lupus-like syndrome concomitant with a severe autoimmune hepatitis has been reported. - GMI Summary


Article Published Date: Jan 01, 2003

Authors: I W Graziadei, G E Obermoser, N T Sepp, K H Erhart, W Vogel

Study Type: Human: Case Report

Additional Links


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Atorvastatin: CK(231): AC(37)

Simvastatin-induced lupus erythematosus has been reported. - GMI Summary


Article Published Date: Sep 01, 1998

Authors: R Khosla, A N Butman, D F Hammer

Study Type: Human: Case Report

Additional Links

Diseases: Systemic Lupus Erythematosus: CK(322): AC(51)
**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)
**Problem Substances**: Simvastatin: CK(657) : AC(114)

**Topic: Jaundice**

**Cholestatic jaundice induced by atorvastatin has been observed.** - GMI Summary

**Pubmed Data**: Isr Med Assoc J. 2009 Jul ;11(7):440-1. PMID: 19911499
**Article Published Date**: Jul 01, 2009
**Authors**: Saar Minha, Galina Golzman, Ilan Adar, Micha Rapoport
**Study Type**: Human: Case Report
**Additional Links**
- Diseases: Autoimmune Diseases: CK(4016) : AC(752), Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: Cholestatic: CK(15) : AC(5), Jaundice: CK(2) : AC(1)
- Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)
**Adverse Pharmacological Actions**: Hepatotoxic: CK(95) : AC(34)

**Simvastatin has been reported to cause liver lesions.** - GMI Summary

**Article Published Date**: Apr 13, 1996
**Authors**: J J Koornstra, J P Ottervanger, M C Fehmers, B H Stricker
**Study Type**: Human: Case Report
**Additional Links**
- Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Jaundice: CK(2) : AC(1), Liver Damage: CK(496) : AC(172), Statin-Induced Pathologies: CK(1470) : AC(206)
**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)
**Problem Substances**: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

**Cholestatic jaundice during lovastatin medication has been reported.** - GMI Summary

**Article Published Date**: May 10, 1991
**Authors**: U Spreckelsen, R Kirchhoff, H Haacke
**Study Type**: Human: Case Report
**Additional Links**
- Diseases: Cholestasis: CK(95) : AC(21), Jaundice: CK(2) : AC(1), Liver Damage: Drug-Induced: CK(36) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)
**Problem Substances**: Statin Drugs: CK(3705) : AC(437)
**Adverse Pharmacological Actions**: Hepatotoxic: CK(95) : AC(34)

**Topic: Kidney Failure: Acute**

**Acute renal failure with the combined use of rosuvastatin and fenofibrate has been reported.** - GMI Summary

**Pubmed Data**: Ren Fail. 2010 Jun;32(5):633-5. PMID: 20486848
**Article Published Date**: Jun 01, 2010
Rhabdomyolysis and acute renal failure due to statin-fibrate combinations has been reported. - GMI Summary

Pubmed Data: Cardiology. 2000 ;94(2):127-8. PMID: 11173785
Article Published Date: Jan 01, 2000
Authors: J B Oldemeyer, R J Lund, M Koch, A J Meares, R Dunlay
Study Type: Human: Case Report
Additional Links
Diseases: Kidney Failure: Acute : CK(31) : AC(7), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Lovastatin monotherapy has been reported to have been a cause of rhabdomyolysis, acute renal failure and hepatopathy. - GMI Summary

Pubmed Data: Jpn Heart J. 1997 Jul ;38(4):541-5. PMID: 9350151
Article Published Date: Jul 01, 1997
Authors: P H Chu, W J Chen, C W Chiang, Y S Lee
Study Type: Human: Case Report
Additional Links
Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Kidney Failure: Acute : CK(31) : AC(7), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions: Nephotoxic : CK(133) : AC(33)

Topic: Multi-Organ Failure

Atorvastatin induced multiple organ failure has been reported. - GMI Summary

Pubmed Data: J La State Med Soc. 2010 May-Jun;162(3):159-60. PMID: 20666169
Article Published Date: May 01, 2010
Authors: Ramprasad Kandavar, Gary E Sander
Study Type: Human: Case Report
Additional Links
Diseases: Multi-Organ Failure : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Calcium Channel Blockers : CK(78) : AC(21)
Additional Keywords: Drug Synergy : CK(270) : AC(116)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Hepatitis, rhabdomyolysis and multi-organ failure resulting from statin use has been reported. - GMI Summary
Multiorgan failure induced by atorvastatin has been reported. - GMI Summary

Article Published Date : Sep 01, 2002
Authors : Jayaprakash Sreenarasimhaiah, Peggy Shiels, Mauricio Lisker-Melman
Study Type : Human: Case Report
Additional Links
Diseases : Multi-Organ Failure : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Statin drugs exhibit neurotoxicity in an animal neuronal cell line. - GMI Summary

Article Published Date : Sep 01, 2011
Authors : K Vural, M I Tuğlu
Study Type : Animal Study
Additional Links
Diseases : Brain Damage : CK(65) : AC(28), Neurodegenerative Diseases : CK(1481) : AC(410), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Antiproliferative : CK(965) : AC(680)
Problem Substances : Atorvastatin : CK(231) : AC(37), Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Simvastatin exhibits neurotoxic properties. - GMI Summary

Pubmed Data : Brain Res. 2000 Mar 17 ;859(1):169-72. PMID: 10720627
Article Published Date : Mar 17, 2000
Authors : T Kumano, T Mutoh, H Nakagawa, M Kuriyama
Study Type : In Vitro Study
Additional Links
Diseases : Brain Damage : CK(65) : AC(28), Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Lovastatin induces neuronal cell death. - GMI Summary

Article Published Date : Jun 01, 1999
**Simvastatin exhibits neurotoxicity in a neuronal cell model.** - GMI Summary

**Pubmed Data:** Neurosci Lett. 1996 Dec 6;220(1):21-4. PMID: 8977139

**Article Published Date:** Dec 06, 1996

**Authors:** I Sato-Suzuki, S Murota

**Study Type:** In Vitro Study

**Problem Substances:** Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Neurotoxic : CK(879) : AC(87)

**Statin drugs exhibit myotoxic, neurotoxic, hepatotoxic and testicule damaging properties in the anima model.** - GMI Summary

**Pubmed Data:** Toxicol Pathol. 1996 Jul-Aug;24(4):468-76. PMID: 8864188

**Article Published Date:** Jul 01, 1996

**Authors:** K M Walsh, M A Albassam, D E Clarke

**Study Type:** Animal Study

**Problem Substances:** Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Neurotoxic : CK(879) : AC(87)

**Topic:** Dementia

**Statin-associated adverse cognitive effects have been reported with 90% resolving after drug discontinuation.** - GMI Summary

**Pubmed Data:** Pharmacotherapy. 2009 Jul ;29(7):800-11. PMID: 19558254

**Article Published Date:** Jul 01, 2009

**Authors:** Marcella A Evans, Beatrice A Golomb

**Study Type:** Human Study

**Problem Substances:** Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Neurotoxic : CK(879) : AC(87)
**Cognitive impairment associated with statin drug use has been reported.** - GMI Summary

**Pubmed Data**: Pharmacotherapy. 2003 Dec;23(12):1663-7. PMID: 14695047

**Article Published Date**: Dec 01, 2003

**Authors**: Deborah S King, Amanda J Wilburn, Marion R Wofford, T Kristopher Harrell, Brent J Lindley, Daniel W Jones

**Study Type**: Review

**Additional Links**


**Adverse Pharmacological Actions**: Neurotoxic: CK(879): AC(87)

---

**Statin drugs are associated with adverse mental effects.** - GMI Summary

**Pubmed Data**: Tidsskr Nor Laegeforen. 1997 Sep 20;117(22):3210-3. PMID: 9411859

**Article Published Date**: Sep 20, 1997

**Authors**: I Buajordet, S Madsen, H Olsen

**Study Type**: Human Study

**Additional Links**


**Pharmacological Actions**: Anticholesteremic Agents: CK(298): AC(38)

**Problem Substances**: Statin Drugs: CK(3705): AC(437)

**Adverse Pharmacological Actions**: Neurotoxic: CK(879): AC(87)

---

**Statin-induced impotence has been reported.** - GMI Summary


**Article Published Date**: Feb 01, 1996

**Authors**: A Halkin, I S Lossos, D Mevorach

**Study Type**: Human: Case Report

**Additional Links**


**Pharmacological Actions**: Anticholesteremic Agents: CK(298): AC(38), Enzyme Inhibitors: CK(340): AC(201)

**Problem Substances**: Statin Drugs: CK(3705): AC(437)

---

**Topic: Liver Damage: Drug-Induced**

**Simvastatin-ezetimibe-induced hepatic failure necessitating liver transplantation has been reported.** - GMI Summary

**Pubmed Data**: Pharmacotherapy. 2008 Sep;28(9):1188-93. PMID: 18752389

**Article Published Date**: Sep 01, 2008

**Authors**: Sony Tuteja, Nikolaos T Pyrsopoulos, William R Wolowich, Kamran Khanmoradi, David M Levi, Gennaro Selvaggi, Geoffrey Weisbaum, Andreas G Tzakis, Eugene R Schiff
Statin drugs exhibit myotoxic, neurotoxic, hepatotoxic and testicule damaging properties in the anima model. - GMI Summary

Article Published Date: Jul 01, 1996
Authors: K M Walsh, M A Albassam, D E Clarke
Study Type: Animal Study
Additional Links
Diseases: Brain Damage: CK(65) : AC(28), Liver Damage: Drug-Induced : CK(36) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206), Testicular Diseases : CK(7) : AC(14)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38), Enzyme Inhibitors : CK(340) : AC(201)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34), Myotoxicity : CK(259) : AC(11), Neurotoxic : CK(879) : AC(87)

Cholestatic jaundice during lovastatin medication has been reported. - GMI Summary

Article Published Date: May 10, 1991
Authors: U Spreckelsen, R Kirchhoff, H Haacke
Study Type: Human: Case Report
Additional Links
Diseases: Cholestasis : CK(95) : AC(21), Jaundice : CK(2) : AC(1), Liver Damage: Drug-Induced : CK(36) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Topic: Memory Loss

Statin-associated adverse cognitive effects have been reported with 90% resolving after drug discontinuation. - GMI Summary

Pubmed Data: Pharmacotherapy. 2009 Jul ;29(7):800-11. PMID: 19558254
Article Published Date: Jul 01, 2009
Authors: Marcella A Evans, Beatrice A Golomb
Study Type: Human Study
Additional Links
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)
Simvastatin-induced decline in cognition has been reported. - GMI Summary


Article Published Date: Oct 01, 2006

Authors: Kalpana P Padala, Prasad R Padala, Jane F Potter

Study Type: Human: Case Report

Additional Links

Diseases: Cognitive Decline/Dysfunction: CK(350) : AC(71), Memory Disorders: CK(171) : AC(55), Memory Loss: CK(89) : AC(30), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Topic: Neuromuscular Diseases

Statin drug use may be linked to neuromuscular diseases and an amyotrophic lateral sclerosis-like syndrome. - GMI Summary


Article Published Date: Jan 01, 2007

Authors: I Ralph Edwards, Kristina Star, Anne Kiuru

Study Type: Human Study

Additional Links

Diseases: Amyotrophic Lateral Sclerosis: CK(335) : AC(68), Neuromuscular Diseases: CK(11) : AC(2)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Statin treatment may contribute to presymptomatic neuromuscular disorders. - GMI Summary


Article Published Date: Jul 24, 2006

Authors: Georgios Tsivgoulis, Konstantinos Spengos, Nikolaos Karandreas, Marios Panas, Athina Kladi, Panagiota Manta

Study Type: Human: Case Report

Additional Links

Diseases: Myopathies: CK(199) : AC(18), Neuromuscular Diseases: CK(11) : AC(2), Presymptomatic Metabolic Myopathy: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Topic: Nightmare

Atorvastatin may cause nightmares. - GMI Summary

Pubmed Data: BMJ. 2006 Apr 22 ;332(7547):950. PMID: 16627511

Article Published Date: Apr 22, 2006

Authors: Peter J H Smak Gregoor

Study Type: Human Study

Additional Links

Diseases: Nightmare: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)
Nightmares and sleep disturbances with simvastatin and metoprolol have been reported. - GMI Summary

Article Published Date: Oct 01, 2001
Authors: G Boriani, M Biffi, E Strocchi, A Branzi
Study Type: Human: Case Report

Additional Links
Diseases: Nightmare: CK(10): AC(1), Sleep Disorders: CK(103): AC(10)
Pharmacological Actions: Antihypertensive Agents: CK(158): AC(35)
Problem Substances: Metoprolol: CK(81): AC(8), Simvastatin: CK(657): AC(114)

Possible gynecomastia induced by rosuvastatin has been reported. - GMI Summary

Article Published Date: Apr 01, 2008
Authors: Alessandro Oteri, Maria Antonietta Catania, Rita Travaglini, Alessandra Russo, Safi E Giustini, Achille P Caputi, Giovanni Polimeni
Study Type: Human: Case Report

Additional Links
Diseases: Gynecomastia: CK(29): AC(7), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Rosuvastatin: CK(28): AC(6), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)

Gynecomastia may be associated with atorvastatin therapy. - GMI Summary

Article Published Date: Aug 01, 2006
Authors: Kimberly B Hammons, Rebecca F Edwards, William Y Rice
Study Type: Human: Case Report

Additional Links
Diseases: Gynecomastia: CK(29): AC(7), Statin-Induced Pathologies: CK(1470): AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)

Topic: Tendon Rupture

Bilateral, simultaneous rupture of the quadriceps tendon associated with simvastatin has been reported. - GMI Summary

Article Published Date: Mar 01, 2011
Authors: Guy Rubin, Elias Haddad, Tsur Ben-Haim, Irit Elmalach, Nimrod Rozen
Study Type: Human: Case Report
Statins may increase the risk of tendon rupture by altering MMP activity. - GMI Summary


Authors: Raja C Pullatt, Mamatha Reddy Gadarla, Richard H Karas, Alawi A Alsheikh-Ali, Paul D Thompson

Additional Links
Diseases: Tendon Rupture: CK(6) : AC(2)

Topic: Thrombocytopenia

Rosuvastatin-induced thrombocytopenia has been reported. - GMI Summary


Authors: Ioannis Vrettos, Sotiris Papageorgiou, Christina Economopoulou, Vasiliki Pappa, Panagiotis Tsirigotis, Nikolaos Tountas, Theofanis Economopoulos, John Dervenoulas

Additional Links
Diseases: Statin-Induced Pathologies: CK(1470) : AC(206), Thrombocytopenia: CK(602) : AC(23)

Atorvastatin-induced severe thrombocytopenia. - GMI Summary


Authors: M L González-Ponte, M González-Ruiz, E Duvós, M A Gutiérrez-Iñiguez, J I Olalla, E Conde

Additional Links
Diseases: Statin-Induced Pathologies: CK(1470) : AC(206), Thrombocytopenia: CK(602) : AC(23)

Topic: Pregnancy: Environmental Exposures

Gestational exposure to lovastatin followed by cardiac malformation misclassified as holoprosencephaly has been reported. - GMI Summary


Authors: Robin J Edison, Maximilian Muenke
Central nervous system and limb anomalies have been reported in first-trimester statin exposure. - GMI Summary

Article Published Date: Apr 08, 2004
Authors: Robin J Edison, Maximilian Muenke

Statin therapy may increase the risk for posttransplantation squamous cell carcinoma. - GMI Summary

Article Published Date: Aug 01, 2010
Authors: Luca Mascitelli, Francesca Pezzetta, Mark R Goldstein

Statin drug use is associated with increased incidence of melanoma and non-melanoma skin cancer. - GMI Summary

Article Published Date: Apr 01, 1991
Authors: A G Smals, J J Weusten, T J Benraad, P W Kloppenborg

Simvastatin suppresses human testicular testosterone synthesis. - GMI Summary

Article Published Date: Apr 01, 1991
Authors: A G Smals, J J Weusten, T J Benraad, P W Kloppenborg

Study Type: Human: Case Report
Additional Links
Problem Substances: Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Teratogenic : CK(271) : AC(50)

Study Type: In Vitro Study
Additional Links
Diseases: Low Testosterone : CK(287) : AC(66), Pregnancy: Environmental Exposures : CK(20) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56), Teratogenic : CK(271) : AC(50)
**cancers. - GMI Summary**


*Article Published Date* : Oct 01, 2008

*Authors* : Jaana Kuoppala, Anne Lamminpää, Eero Pukkala

*Study Type* : Human Study

**Additional Links**

*Diseases* : Melanoma : CK(156) : AC(83), Skin Cancer : CK(397) : AC(169)

*Problem Substances* : Statin Drugs : CK(3705) : AC(437)

---

**Topic: Stroke: Attenuation/Recovery**

**Early statin use appears to be associated with and increased risk of poststroke infection. - GMI Summary**


*Article Published Date* : Jul 20, 2011

*Authors* : Kyra Becker, Pat Tanzi, Angela Kalil, Dean Shibata, Kevin Cain

*Study Type* : Human Study

**Additional Links**

*Diseases* : Bacterial Infections and Mycoses : CK(96) : AC(50), Stroke: Attenuation/Recovery : CK(93) : AC(20)

*Problem Substances* : Statin Drugs : CK(3705) : AC(437)

---

**Statin after intracerebral hemorrhage may increase the riks of new hemorrhage. - GMI Summary**


*Article Published Date* : Jun 15, 2011

*Authors* : Anders G Olsson

*Study Type* : Commentary

**Additional Links**

*Diseases* : Intracerebral Hemorrhage : CK(120) : AC(8), Stroke: Attenuation/Recovery : CK(93) : AC(20), Stroke: Hemorrhagic : CK(10) : AC(1)

*Pharmacological Actions* : Anticholesteremic Agents : CK(298) : AC(38)

*Problem Substances* : Statin Drugs : CK(3705) : AC(437)

*Adverse Pharmacological Actions* : Hemorrhagic : CK(3) : AC(1)

---

**Topic: Violence**

**Some patients on simvastatin could be vulnerable to depression, violence, or suicide during the initial treatment period. - GMI Summary**

*Pubmed Data* : Psychiatry Res. 2005 Feb 28 ;133(2-3):197-203. PMID: 15740995

*Article Published Date* : Feb 28, 2005

*Authors* : Jan Vevera, Zdenĕk Fisar, Tomáš Kvasnicka, Hanus Zdenek, Lucie Stárková, Richard Ceska, Hana Papezová

*Study Type* : Review

**Additional Links**

*Diseases* : Depression: Unipolar : CK(442) : AC(69), Statin-Induced Pathologies : CK(1470) : AC(206), Suicidal Behavior : CK(31) : AC(4), Violence : CK(31) : AC(3)
Severe irritability associated with statin cholesterol-lowering drugs has been reported. - GMI Summary

Pubmed Data: QJM. 2004 Apr ;97(4):229-35. PMID: 15028853
Article Published Date: Apr 01, 2004
Authors: B A Golomb, T Kane, J E Dimsdale
Study Type: Human Study
Additional Links
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Simvastatin : CK(657) : AC(114)

Statin-associated adverse cognitive effects have been reported with 90% resolving after drug discontinuation. - GMI Summary

Pubmed Data: Pharmacotherapy. 2009 Jul ;29(7):800-11. PMID: 19558254
Article Published Date: Jul 01, 2009
Authors: Marcella A Evans, Beatrice A Golomb
Study Type: Human Study
Additional Links
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

The combination of beta 1-selective receptor antagonists and lipid-lowering drugs has an adverse affect on fat metabolism, blood ammonia levels and measures of fatigue during moderate intensity exercise - GMI Summary

Article Published Date: Mar 01, 1997
Authors: C J Eagles, M J Kendall
Study Type: Human Study
Additional Links
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Additional Keywords: Drug Interaction : CK(36) : AC(5)
Problem Substances: Atenolol : CK(30) : AC(3), Statin Drugs : CK(3705) : AC(437)
**Topic: Aneurysmal subarachnoid hemorrhage (SAH)**

*Selective serotonin reuptake inhibitors and statin use increases the risk for vasospasm after subarachnoid hemorrhage.* - GMI Summary


**Article Published Date**: Mar 22, 2005

**Authors**: A B Singhal, M A Topcuoglu, D J Dorer, C S Ogilvy, B S Carter, W J Koroshetz

**Study Type**: Human Study

**Additional Links**

- Diseases: Aneurysmal subarachnoid hemorrhage (SAH) : CK(10) : AC(1), Cerebral Hemorrhage : CK(5) : AC(2), Vasospasm Intraparenchymal : CK(5) : AC(1)
- Problem Substances: Selective Serotonin Reuptake Inhibitors (SSRIs) : CK(59) : AC(8), Statin Drugs : CK(3705) : AC(437)

**Topic: Anxiety Disorders**

*Statin drugs are associated with adverse mental effects.* - GMI Summary

**Pubmed Data**: Tidsskr Nor Laegeforen. 1997 Sep 20;117(22):3210-3. PMID: 9411859

**Article Published Date**: Sep 20, 1997

**Authors**: I Buajordet, S Madsen, H Olsen

**Study Type**: Human Study

**Additional Links**

- Diseases: Aggression : CK(37) : AC(5), Anxiety Disorders : CK(546) : AC(79), Depression: Unipolar : CK(442) : AC(69), Impotence : CK(3) : AC(1), Sleep Disorders : CK(103) : AC(10), Statin-Induced Pathologies : CK(1470) : AC(206)
- Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
- Problem Substances: Statin Drugs : CK(3705) : AC(437)
- Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

**Topic: Bacterial Infections and Mycoses**

*Early statin use appears to be associated with and increased risk of poststroke infection.* - GMI Summary


**Article Published Date**: Jul 20, 2011

**Authors**: Kyra Becker, Pat Tanzi, Angela Kalil, Dean Shibata, Kevin Cain

**Study Type**: Human Study

**Additional Links**

- Diseases: Bacterial Infections and Mycoses : CK(96) : AC(50), Stroke: Attenuation/Recovery : CK(93) : AC(20)
- Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Topic: Balance Disorders**

*Statin users have poorer leaning balance which may potentially increase fall risk in this group.*
Statin drug use is associated with lower bilirubin levels, a known risk factor for cardiovascular disease.

Statin therapy can be associated with high blood lactate/pyruvate ratio suggestive of mitochondrial dysfunction.

Prolonged (more than 4 years) use of statins is associated with a significantly increased risk of colorectal cancer, bladder cancer and lung cancer.
**Topic: Breast Cancer**

**Statin drug use is associated with increased risk of breast cancer in postmenopausal women without hormone therapy.** - GMI Summary

Pubmed Data: Anticancer Res. 2009 Dec;29(12):5143-8. PMID: 20044629

Article Published Date: Dec 01, 2009

Authors: Mark Eaton, Jonathan Eklof, James R Beal, Abe E Sahmoun

Study Type: Human Study

Additional Links

Diseases: Breast Cancer : CK(1504) : AC(551)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Statin use is associated with an increased risk of breast cancer among statin users of 5 years or more.** - GMI Summary


Article Published Date: Mar 01, 2007

Authors: Denise M Boudreau, Onchee Yu, Diana L Miglioretti, Diana S M Buist, Susan R Heckbert, Janet R Daling

Study Type: Human Study

Additional Links

Diseases: Breast Cancer : CK(1504) : AC(551)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Topic: C-Reactive Protein**

**Atorvastatin treatment is not effective in reducing inflammation (C-reactive protein) or outcome in patients with type 2 diabetes on hemodialysis.** - GMI Summary


Article Published Date: Dec 01, 2008

Authors: Vera Krane, Karl Winkler, Christiane Drechsler, Jürgen Lilienthal, Winfried März, Christoph Wanner

Study Type: Human Study

Additional Links

Diseases: C-Reactive Protein : CK(425) : AC(72), Diabetes Mellitus: Type 2 : CK(1516) : AC(314), Hemodialysis : CK(293) : AC(41), Inflammation : CK(835) : AC(334)

Problem Substances: Atorvastatin : CK(231) : AC(37)

**Topic: Calcium Homeostasis: Impairment**
Statins may unmask a latent pathology involving an impairment of calcium homeostasis such as malignant hyperthermia (MH).


Authors: S Guis, D Figarella-Branger, J P Mattei, F Nicoli, Y Le Fur, G Kozak-Ribbens, J F Pellissier, P J Cozzone, N Amabile, D Bendahan

Study Type: Human Study

Diseases: Calcium Homeostasis: Impairment, Malignant Hyperthermia

Problem Substances: Statin Drugs

Selecte serotonin reuptake inhibitors and statin use increases the risk for vasospasm after subarachnoid hemorrhage.


Authors: A B Singhal, M A Topcuoglu, D J Dorer, C S Ogilvy, B S Carter, W J Koroshetz

Study Type: Human Study

Diseases: Aneurysmal subarachnoid hemorrhage (SAH), Cerebral Hemorrhage, Vasospasm: Intracranial

Problem Substances: Selective Serotonin Reuptake Inhibitors (SSRIs), Statin Drugs

Atorvastatin causes cardiomyopathy when administered in combination with chemotherapy.


Authors: Metin Caner, Bingur Sonmez, Ozlem Kurnaz, Caner Aldemir, Seda Salar, Tuncay Altug, Ayhan Bilir, Meric A Altinoz

Study Type: Human Study

Diseases: Cardiomyopathy, Chemotherapy-Induced Toxicity

Problem Substances: Atorvastatin

Statins increase the risk of developing type 2 diabetes.

**Topic: Colorectal Cancer**

**Prolonged (more than 4 years) use of statins is associated with a significantly increased risk of colorectal cancer bladder cancer and lung cancer.** - GMI Summary

*Article Published Date* : Jan 01, 2011
*Authors* : Yana Vinogradova, Carol Coupland, Julia Hippisley-Cox
*Study Type* : Human Study
*Additional Links* : Bladder Cancer : CK(129) : AC(58), Colorectal Cancer : CK(685) : AC(294), Lung Cancer : CK(409) : AC(181), Statin-Induced Pathologies : CK(1470) : AC(206)
*Problem Substances* : Statin Drugs : CK(3705) : AC(437)

---

**Topic: Cough**

**Statin drugs have been linked to adverse side effects in the oral cavity.** - GMI Summary

*Article Published Date* : Feb 01, 2008
*Authors* : Montserrat Pascual Cruz, Eduardo Chimenos Küstner, José António García Vicente, Xavier Mezquiriz Ferrero, Eulalia Borrell Thio, José López López
*Study Type* : Human Study
*Problem Substances* : Statin Drugs : CK(3705) : AC(437)

---

**Topic: Dietary Fatty Acid Imbalance: Omega3/Omega6 Ratio**

**Statin treatment alters serum n-3 and n-6 fatty acids in patients.** - GMI Summary

**Topic: Domestic Violence**

Severe irritability associated with statin cholesterol-lowering drugs has been reported. - GMI Summary

Pubmed Data: QJM. 2004 Apr;97(4):229-35. PMID: 15028853

**Topic: Dry Mouth**

Statin drugs have been linked to adverse side effects in the oral cavity. - GMI Summary


**Topic: Dysphagia**

Dysphagia has been reported to be a side effect of statin drug therapy. - GMI Summary

Pubmed Data: Ugeskr Laeger. 2010 Feb 15;172(7):544-545. PMID: 20156405
**Topic: Family Violence**

Severe irritability associated with statin cholesterol-lowering drugs has been reported. - GMI Summary

Pubmed Data: QJM. 2004 Apr ;97(4):229-35. PMID: 15028853

Article Published Date: Apr 01, 2004

Authors: B A Golomb, T Kane, J E Dimsdale

Study Type: Human Study

Additional Links


Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Topic: Fatigue**

The combination of beta 1-selective receptor antagonists and lipid-lowering drugs has an adverse affect on fat metabolism, blood ammonia levels and measures of fatigue during moderate intensity exercise - GMI Summary


Article Published Date: Mar 01, 1997

Authors: C J Eagles, M J Kendall

Study Type: Human Study

Additional Links


Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)

Additional Keywords: Drug Interaction : CK(36) : AC(5)

Problem Substances: Atenolol : CK(30) : AC(3), Statin Drugs : CK(3705) : AC(437)

**Topic: Hip Fracture**

Statin use may exacerbate muscle performance declines and falls risk associated with aging without a concomitant decrease in muscle mass. - GMI Summary


Article Published Date: Sep 01, 2009

Authors: D Scott, L Blizzard, J Fell, G Jones

Study Type: Human Study

Additional Links
**Topic: Hypogonadism**

**Statin therapy contributes to low testosterone and hypogonadism in men with erectile dysfunction** - GMI Summary


Article Published Date: Apr 01, 2010

Authors: Giovanni Corona, Valentina Boddi, Giancarlo Balercia, Giulia Rastrelli, Giulia De Vita, Alessandra Sforza, Gianni Forti, Edoardo Mannucci, Mario Maggi

Study Type: Human Study

Additional Links

Diseases: Erectile Dysfunction : CK(403) : AC(35), High Cholesterol : CK(865) : AC(192), Hypogonadism : CK(26) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Topic: Infection: Bloodstream**

**Statins have an adverse effect on outcomes in immunosuppressed patients with bloodstream infection**. - GMI Summary


Article Published Date: Jan 01, 2011

Authors: D Viasus, C Gudiol, N Fernández-Sabé, I Cabello, C Garcia-Vidal, M Cisnal, R Duarte, M Antonio, J Carratalà

Study Type: Human Study

Additional Links

Diseases: Infection: Bloodstream : CK(10) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Topic: Inflammation**

**Atorvastatin treatment is not effective in reducing inflammation (C-reactive protein) or outcome in patients with type 2 diabetes on hemodialysis**. - GMI Summary


Article Published Date: Dec 01, 2008

Authors: Vera Krane, Karl Winkler, Christiane Drechsler, Jürgen Lilienthal, Winfried März, Christoph Wanner,

Study Type: Human Study

Additional Links

Diseases: C-Reactive Protein : CK(425) : AC(72), Diabetes Mellitus: Type 2 : CK(1516) : AC(314), Hemodialysis : CK(293) : AC(41), Inflammation : CK(835) : AC(334)

Problem Substances: Atorvastatin : CK(231) : AC(37)
**Topic: Irritability**

*Severe irritability associated with statin cholesterol-lowering drugs has been reported.* - GMI

**Summary**

Pubmed Data: QJM. 2004 Apr;97(4):229-35. PMID: 15028853

Article Published Date: Apr 01, 2004

Authors: B A Golomb, T Kane, J E Dimsdale

Study Type: Human Study

Additional Links


Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

---

**Topic: Isoprostane 8-epi-PGF2alpha: Elevated**

*Muscular side effects associated with statin drug use are related to oxidative stress.* - GMI

**Summary**


Article Published Date: Aug 01, 2001

Authors: H Sinzinger, G Lupattelli, F Chehne, A Oguogho, C D Furberg

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11), Oxidant: CK(63) : AC(23)

---

**Topic: Libido: Low**

*Decreased libido is a probable adverse drug reaction of statin drugs, possibly related to low levels of testosterone caused by cholesterol depletion.* - GMI Summary


Article Published Date: Sep 01, 2004

Authors: L de Graaf, A H P M Brouwers, W L Diemont

Study Type: Human Study

Additional Links

Diseases: Libido: Low: CK(56) : AC(19), Low Testosterone: CK(287) : AC(66)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

---

**Topic: Lung Cancer**
Prolonged (more than 4 years) use of statins is associated with a significantly increased risk of colorectal cancer, bladder cancer, and lung cancer. - GMI Summary


Article Published Date: Jan 01, 2011
Authors: Yana Vinogradova, Carol Coupland, Julia Hippisley-Cox
Study Type: Human Study
Additional Links
Diseases: Bladder Cancer: CK(129) : AC(58), Colorectal Cancer: CK(685) : AC(294), Lung Cancer: CK(409) : AC(181), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)

Topic: Macular Degeneration

Use of statins and angiotensin converting enzyme inhibitors (ACE-Is) increase the risk of age-related macular degeneration. - GMI Summary


Article Published Date: Jan 01, 2008
Authors: Mahyar Etminan, James M Brophy, David Maberley
Study Type: Human Study
Additional Links
Diseases: Macular Degeneration: CK(108) : AC(22), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Angiotensin-Converting Enzyme (ACE) Inhibitor: CK(50) : AC(5), Statin Drugs: CK(3705) : AC(437)

Topic: Malignant Hyperthermia

Statins may unmask a latent pathology involving an impairment of calcium homeostasis such as malignant hyperthermia (MH). - GMI Summary


Article Published Date: Aug 15, 2006
Authors: S Guis, D Figarella-Branger, J P Mattei, F Nicoli, Y Le Fur, G Kozak-Ribbens, J F Pellissier, P J Cozzone, N Amabile, D Bendahan
Study Type: Human Study
Additional Links
Diseases: Calcium Homeostasis: Impairment: CK(10) : AC(1), Malignant Hyperthermia: CK(10) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)

Topic: McArdle Disease

McArdle disease with rhabdomyolysis induced by rosuvastatin has been reported. - GMI Summary

Pubmed Data: Arq Neuropsiquiatr. 2007 Sep ;65(3B):834-7. PMID: 17952291
Statin drug use is associated with increased incidence of melanoma and non-melanoma skin cancers. - GMI Summary


Psychiatric adverse reactions associated with cholesterol-lowering drugs have been reported. - GMI Summary

High dose simvastatin may be harmful for patients with multiple myeloma. - GMI Summary
Lovastatin increases exercise-induced skeletal muscle injury in human subjects. - GMI

Summary

Pubmed Data: Metabolism. 1997 Oct ;46(10):1206-10. PMID: 9322808

Article Published Date: Oct 01, 1997

Authors: P D Thompson, J M Zmuda, L J Domalik, R J Zimet, J Staggers, J R Guyton

Study Type: Human Study


Problem Substances: Lovastatin: CK(63) : AC(12)

Adverse Pharmacological Actions: Myotoxicity: CK(259) : AC(11)

Lovastatin increases exercise-induced skeletal muscle injury in human subjects.

Lipophilic statin drugs worsen myocardial ischemia in dogs. - GMI Summary


Article Published Date: Feb 01, 2000

Authors: K Satoh, K Ichihara

Study Type: Animal Study

Diseases: Myocardial Ischemia: CK(83) : AC(36)

Additional Keywords: Lipophilic Stains: CK(2) : AC(1)

Simvastatin worsens the myocardial mitochondrial respiration during ischemia probably due to depletion of coenzyme Q10. - GMI Summary

Article Published Date: Sep 01, 1995
Authors: K Satoh, A Yamato, T Nakai, K Hoshi, K Ichihara
Study Type: Animal Study

Simvastatin 80 mg daily is associated with a higher incidence of myotoxicity compared with maximum approved doses of other statins. - GMI Summary

Article Published Date: Dec 01, 2009
Authors: James M Backes, Patricia A Howard, Janelle F Ruisinger, Patrick M Moriarty

Lovastatin may adversely affect neuropsychological tests of attention and psychomotor speed. - GMI Summary

Article Published Date: May 01, 2000
Authors: M F Muldoon, S D Barger, C M Ryan, J D Flory, J P Lehoczky, K A Matthews, S B Manuck

Topic: Oral Symptoms
Statin drugs have been linked to adverse side effects in the oral cavity. - GMI Summary


Article Published Date: Feb 01, 2008

Authors: Montserrat Pascual Cruz, Eduardo Chimenos Küstner, José António Garcia Vicente, Xavier Mezquiriz Ferrero, Eulalia Borrell Thio, José López López

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

---

Topic: Pancreatic Cancer

Statin use may increase the risk of pancreatic cancer: - GMI Summary


Article Published Date: Jul 01, 2011

Authors: Hui-Fen Chiu, Chih-Ching Chang, Shu-Chen Ho, Trong-Neng Wu, Chun-Yuh Yang

Study Type: Human Study

Additional Links

Diseases: Pancreatic Cancer: CK(428): AC(156)

Problem Substances: Statin Drugs: CK(3705): AC(437)

---

Topic: Prostatectomy

Statin use has an adverse effect on biochemical outcomes following radical prostatectomy. - GMI Summary


Article Published Date: Oct 01, 2011

Authors: Chad R Ritch, Greg Hruby, Ketan K Badani, Mitchell C Benson, James M McKiernan

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Carcinogenic: CK(416): AC(81)

---

Topic: Rheumatoid Arthritis

Statin drug use is associated with a significantly increased risk of rheumatoid arthritis. - GMI Summary


Article Published Date: Oct 06, 2011
**Authors**: H J I de Jong, O H Klungel, L van Dijk, R J Vandebriel, H G M Leufkens, Jw van der Laan, J W Cohen Tervaert, H van Loveren

**Study Type**: Human Study

**Diseases**: Rheumatoid Arthritis : CK(273) : AC(59)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Inflammatory : CK(109) : AC(26)

---

**Topic**: Skeletal Muscle: Changes to MHC I expression

**Statin-induced myopathy is associated with skeletal muscle cell MHC I expression changes.**

- **GMI Summary**

  **Pubmed Data**: Muscle Nerve. 2010 Feb ;41(2):179-84. PMID: 19813190

  **Article Published Date**: Feb 01, 2010

  **Authors**: Pratibha Singh, Danielle Kohr, Manfred Kaps, Franz Blaes

  **Study Type**: In Vitro Study

  **Diseases**: Myopathies : CK(199) : AC(18), Skeletal Muscle: Changes to MHC I expression : CK(4) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)

  **Problem Substances**: Statin Drugs : CK(3705) : AC(437)

  **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin therapy may result in progressive myopathy with up-regulation of MHC-I associated with an endoplasmic reticulum stress response.**

- **GMI Summary**

  **Pubmed Data**: Neuromuscul Disord. 2007 Feb ;17(2):194-200. Epub 2007 Jan 22. PMID: 17241784

  **Article Published Date**: Feb 01, 2007

  **Authors**: Merrilee Needham, Victoria Fabian, Wally Knezevic, Peter Panegyres, Paul Zilko, Frank L Mastaglia

  **Study Type**: Human: Case Report

  **Diseases**: Myopathies : CK(199) : AC(18), Skeletal Muscle: Changes to MHC I expression : CK(4) : AC(2), Skeletal Muscle Changes: Endoplasmic Reticulum Stress : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

  **Pharmacological Actions**: Anti-Inflammatory Agents : CK(1025) : AC(400)

  **Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

  **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Topic**: Vasospasm: Intracranial

**Selective serotonin reuptake inhibitors and statin use increases the risk for vasospasm after subarachnoid hemorrhage.**

- **GMI Summary**


  **Article Published Date**: Mar 22, 2005

  **Authors**: A B Singhal, M A Topcuoglu, D J Dorer, C S Ogilvy, B S Carter, W J Koroshetz

  **Study Type**: Human Study

  **Additional Links**
**Topic: Vitamin D Deficiency**

*Vitamin D deficiency, myositis-myalgia, and reversible statin intolerance is discussed.* - GMI Summary


**Article Published Date** : Sep 01, 2011

**Authors** : Charles J Glueck, Shaaista B Budhani, Silpa S Masineni, Cesar Abuchaibe, Naseer Khan, Ping Wang, Nalia Goldenberg

**Study Type** : Human Study

**Additional Links**

**Diseases** : Myalgias : CK(25) : AC(3), Myositis : CK(15) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206), Vitamin D Deficiency : CK(253) : AC(27)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

---

**Topic: Vitamin E Deficiency**

*Statin drugs may cause myopathy by lowering vitamin E levels.* - GMI Summary

**Pubmed Data** : Med Hypotheses. 2009 Nov 5. Epub 2009 Nov 5. PMID: 19896775

**Article Published Date** : Nov 05, 2009

**Authors** : Francesco Galli, Luigi Iuliano

**Study Type** : Review

**Additional Links**

**Diseases** : Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206), Vitamin E Deficiency : CK(25) : AC(4)

**Additional Keywords** : Statin-Vitamin E Deficiency : CK(10) : AC(1)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

---

**Topic: Weight Problems: Drug-Induced**

*The combination of beta 1-selective receptor antagonists and lipid-lowering drugs has an adverse affect on fat metabolism, blood ammonia levels and measures of fatigue during moderate intensity exercise.* - GMI Summary


**Article Published Date** : Mar 01, 1997

**Authors** : C J Eagles, M J Kendall

**Study Type** : Human Study

**Additional Links**

**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)

**Additional Keywords**: Drug Interaction: CK(36) : AC(5)

**Problem Substances**: Atenolol: CK(30) : AC(3), Statin Drugs: CK(3705) : AC(437)

---

**Topic: A1C**

*Acute onset and worsening of diabetes concurrent with administration of statins has been reported.* - GMI Summary

**Pubmed Data**: Endocr J. 2005 Jun ;52(3):369-72. PMID: 16006732

**Article Published Date**: Jun 01, 2005

**Authors**: Chie Ohmura, Hirotaka Watada, Takahisa Hirose, Yasushi Tanaka, Ryuzo Kawamori

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: A1C: CK(160) : AC(4), Diabetes: Glycation/A1C: CK(135) : AC(30), Diabetes Mellitus: Type 2 : CK(1516) : AC(314)

**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)

**Problem Substances**: Atorvastatin: CK(231) : AC(37), Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Diabetogenic : CK(89) : AC(9)

---

**Topic: Bile Duct Injury**

*A case of atorvastatin-induced prolonged cholestasis with bile duct damage has been reported.* - GMI Summary


**Article Published Date**: Jan 01, 2010

**Authors**: Manuela Merli, Maria Consiglia Bragazzi, Federica Giubilo, Francesco Callea, Adolfo F Attili, Domenico Alvaro

**Study Type**: Human: Case Report

**Additional Links**


**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)

**Problem Substances**: Atorvastatin: CK(231) : AC(37)

---

*Atorvastatin has been reported to have caused severe acute hepatitis with symptomatic cholestasis for more than 3 months and bile duct injury.* - GMI Summary

**Pubmed Data**: Acta Gastroenterol Belg. 2008 Jul-Sep;71(3):318-20. PMID: 19198578

**Article Published Date**: Jul 01, 2008

**Authors**: J F Rahier, J Rahier, I Leclercq, A P Geubel

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Bile Duct Injury : CK(6) : AC(2), Chemically-Induced Liver Damage : CK(497) : AC(145), Cholestatic : CK(95) : AC(21), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents: CK(298) : AC(38)

**Problem Substances**: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Hepatotoxic : CK(95) : AC(34)
**Topic: Diabetes: Glycation/A1C**

*Acute onset and worsening of diabetes concurrent with administration of statins has been reported.* - GMI Summary

**Pubmed Data**: Endocr J. 2005 Jun ;52(3):369-72. PMID: 16006732

**Article Published Date**: Jun 01, 2005

**Authors**: Chie Ohmura, Hirotaka Watada, Takahisa Hirose, Yasushi Tanaka, Ryuzo Kawamori

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: A1C : CK(160) : AC(4), Diabetes: Glycation/A1C : CK(135) : AC(30), Diabetes Mellitus: Type 2 : CK(1516) : AC(314)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Diabetogenic : CK(89) : AC(9)

---

**Topic: Eosinophilia**

*Eosinophilic pleural effusion caused by simvastatin after 13 years of exposure has been reported.* - GMI Summary


**Article Published Date**: Oct 01, 2006

**Authors**: Mariam Roncato-Sabéran, Laurent Hustache-Mathieu, Bruno Hoen

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Eosinophilia : CK(13) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Hypotension and eosinophilia with atorvastatin has been reported.** - GMI Summary


**Article Published Date**: Aug 01, 2005

**Authors**: J P Hampson, D Smith, R Cowell, A Baker

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Eosinophilia : CK(13) : AC(2), Hypotension : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Atorvastatin : CK(231) : AC(37)

---

**Topic: Eye Diseases**

*Long-term treatmetn of animals with statin drugs result in the inhibition of cholesterol synthesis in the lens.* - GMI Summary

**Pravastatin may contribute to the pathology of eye diseases by inhibit cholesterol synthesis in the lens.** - GMI Summary

Pubmed Data: J Lipid Res. 1989 Sep ;30(9):1411-20. PMID: 2513368

Authors: S T Mosley, S S Kalinowski, B L Schafer, R D Tanaka

**Statin precipitated lactic acidosis has been reported.** - GMI Summary

Pubmed Data: J Clin Pathol. 2004 Sep ;57(9):989-90. PMID: 15333664

Authors: R Neale, T M Reynolds, W Saweirs

**Simvastatin-induced lactic acidosis has been reported.** - GMI Summary


Authors: Anil K Goli, Sujatha A Goli, Ryland P Byrd, Thomas M Roy

**Topic: Lactic Acidosis**

**Topic: Lens Damage**
Long-term treatment of animals with statin drugs result in the inhibition of cholesterol synthesis in the lens. - GMI Summary

Article Published Date : Aug 01, 1991
Authors : S S Kalinowski, R D Tanaka, S T Mosley
Study Type : Animal Study
Additional Links
Diseases : Eye Diseases : CK(568) : AC(129), Lens Damage : CK(3) : AC(1), Lens Diseases : CK(6) : AC(4)
Problem Substances : Lovastatin : CK(63) : AC(12), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Pravastatin may contribute to the pathology of eye diseases by inhibit cholesterol synthesis in the lens. - GMI Summary

Pubmed Data : J Lipid Res. 1989 Sep ;30(9):1411-20. PMID: 2513368
Article Published Date : Sep 01, 1989
Authors : S T Mosley, S S Kalinowski, B L Schafer, R D Tanaka
Study Type : In Vitro Study
Additional Links
Diseases : Eye Diseases : CK(568) : AC(129), Lens Damage : CK(3) : AC(1), Lens Diseases : CK(6) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Pravastatin : CK(197) : AC(31)

Topic: Lung Diseases: Interstitial

Statins may contribute to interstitial lung disease. - GMI Summary

Article Published Date : Jan 15, 2007
Authors : Tim Walker, Joe McCaffery, Chris Steinfort
Study Type : Review
Additional Links
Problem Substances : Statin Drugs : CK(3705) : AC(437)

Interstitial lung disease has been reported as a side effect of statins. - GMI Summary

Pubmed Data : Therapie. 2006 Jan-Feb;61(1):57-67. PMID: 16792155
Article Published Date : Jan 01, 2006
Authors : Gwenaëlle Veyrac, Laurent Cellerin, Pascale Jolliet
Study Type : Review
Additional Links
Diseases : Lung Diseases: Interstitial : CK(5) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Interstitial lung disease with pleural effusion caused by simvastatin has been reported. - GMI Summary
**Topic: Myositis Migrans**

**Statin-induced myositis migrans has been reported. - GMI Summary**


**Topic: Myositis: Focal**

**Statin-associated focal myositis has been reported. - GMI Summary**


**Unilateral blepharoptosis is an unrecognized side effect of statin treatment. - GMI Summary**


**Topic: Skeletal Muscle Changes: Endoplasmic Reticulum Stress**
Statin therapy may result in progressive myopathy with up-regulation of MHC-I associated with an endoplasmic reticulum stress response. - GMI Summary

Article Published Date: Feb 01, 2007
Authors: Merrilee Needham, Victoria Fabian, Wally Knezevic, Peter Panegyres, Paul Zilko, Frank L Mastaglia
Study Type: Human: Case Report

Additional Links
Pharmacological Actions: Anti-Inflammatory Agents : CK(1025) : AC(400)
Problem Substances: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Topic: Abortion: Spontaneous

Statin drugs have been shown to cause adverse effects in pregnant rats and their offspring, including fetal death. - GMI Summary

Article Published Date: Oct 17, 2011
Authors: Ali S Faqi, David Prohaska, Rocio Lopez, Gail McIntyre
Study Type: Animal Study

Additional Links
Diseases: Abortion: Spontaneous : CK(197) : AC(27), Birth Defects : CK(154) : AC(24), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Teratogenic : CK(271) : AC(50)

Lovastatin exhibits toxicity in human fetal brain cells. - GMI Summary

Article Published Date: Jan 01, 1995
Authors: O V Pavlov, Bobryshev YuV, Balabanov YuV, K Ashwell
Study Type: Human In Vitro

Additional Links
Pharmacological Actions: Antiproliferative : CK(965) : AC(680)
Problem Substances: Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87), Teratogenic : CK(271) : AC(50)

Topic: Demyelinating Diseases

Simvastatin interferes with oligodendrocyte function, particularly the prior step in remyelination, indicating it may be harmful in demyelination diseases like MS. - GMI Summary
Statin drugs inhibit central nervous system remyelination. - GMI Summary

Pubmed Data: Am J Pathol. 2009 Apr 6. PMID: 19349355

Authors: Véronique E Miron, Simone P Zehntner, Tanja Kuhlmann, Samuel K Ludwin, Trevor Owens, Timothy E Kennedy, Barry J Bedell, Jack P Antel

Study Type: Animal Study

Diseases: Demyelinating Diseases: CK(1194): AC(240), Statin-Induced Pathologies: CK(1470): AC(206)

Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Neurotoxic: CK(879): AC(87)

Lovastatin induces the formation of abnormal myelin-like membrane sheets in primary oligodendrocytes. - GMI Summary


Authors: Olaf Maier, Jenny De Jonge, Anita Nomden, Dick Hoekstra, Wia Baron

Study Type: In Vitro Study

Diseases: Demyelinating Diseases: CK(1194): AC(240)

Problem Substances: Lovastatin: CK(63): AC(12)

The inhibition of cholesterol synthesis with simvastatin is detrimental to neuronal tissue. - GMI Summary


Authors: Zhongmin Xiang, Steven A Reeves

Study Type: In Vitro Study

Diseases: Demyelinating Diseases: CK(1194): AC(240)

Problem Substances: Simvastatin: CK(657): AC(114)
Statin drugs interfere with neurological healing by inhibiting myelin formation. - GMI Summary


Article Published Date : Dec 10, 2008

Authors : Steve Klopfleisch, Doron Merkler, Matthias Schmitz, Sabine Klöppner, Mariann Schedensack, Gunnar Jeserich, Hans H Althaus, Wolfgang Brück

Study Type : Animal Study

Additional Links

Diseases : Demyelinating Diseases : CK(1194) : AC(240), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Multiple Sclerosis : CK(664) : AC(130)

Additional Keywords : Remyelination : CK(11) : AC(7)

Problem Substances : Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Lovastatin may adversely affect myelin formation and the remyelination process. - GMI Summary


Article Published Date : Apr 01, 1994

Authors : L Sepp-Lorenzino, P S Coleman, J N Larocca

Study Type : In Vitro Study

Additional Links

Diseases : Demyelinating Diseases : CK(1194) : AC(240), Statin-Induced Pathologies : CK(1470) : AC(206)

Additional Keywords : Remyelination : CK(11) : AC(7)

Problem Substances : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Topic: Multiple Sclerosis

Simvastatin interferes with oligodendrocyte function, particularly the prior step in remyelination, indicating it may be harmful in demyelination diseases like MS. - GMI Summary

Pubmed Data : J Neurosci Res. 2010 Nov 15 ;88(15):3361-75. PMID: 20857509

Article Published Date : Nov 15, 2010

Authors :

Inge Smolders, Ilse Smets, Olaf Maier, Martin vandeVen, Paul Steels, Marcel Ameloot

Study Type : In Vitro Study

Additional Links

Diseases : Demyelinating Diseases : CK(1194) : AC(240), Multiple Sclerosis : CK(664) : AC(130), Neuropathies : CK(322) : AC(62), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances : Simvastatin : CK(657) : AC(114)

Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Statin drugs interfere with neurological healing by inhibiting myelin formation. - GMI Summary


Article Published Date : Dec 10, 2008

Authors : Steve Klopfleisch, Doron Merkler, Matthias Schmitz, Sabine Klöppner, Mariann Schedensack, Gunnar Jeserich,
Simvastatin exhibits neurotoxicity in the animal model. - GMI Summary

Article Published Date: Jan 15, 2007
Authors: Veronique E Miron, Sathyanath Rajasekharan, Andrew A Jarjour, Scott S Zamvil, Timothy E Kennedy, Jack P Antel
Study Type: Animal Study
Additional Links
Diseases: Multiple Sclerosis : CK(664) : AC(130), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Topic: Pneumonia: Interstitial

Statins may contribute to interstitial lung disease. - GMI Summary

Article Published Date: Jan 15, 2007
Authors: Tim Walker, Joe McCaffery, Chris Steinfort
Study Type: Review
Additional Links
Problem Substances: Statin Drugs : CK(3705) : AC(437)

Statin-induced fibrotic nonspecific interstitial pneumonia has been reported. - GMI Summary

Pubmed Data: Eur Respir J. 2002 Mar ;19(3):577-80. PMID: 11936540
Article Published Date: Mar 01, 2002
Authors: S Lantuejoul, E Brambilla, C Brambilla, G Devouassoux
Study Type: Human: Case Report
Additional Links
Diseases: Pneumonia: Interstitial : CK(4) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Topic: Alopecia

Alopecia associated with atorvastatin has been reported. - GMI Summary

Pubmed Data: Am J Med. 2002 Aug 1 ;113(2):171. PMID: 12133763
Article Published Date: Aug 01, 2002
**Topic: Ataxia**

*Statins have been reported to cause ataxia in bipolar disorder.* - GMI Summary


**Article Published Date**: Mar 01, 2010

**Authors**: Jon E Berner

**Study Type**: Human: Case Report

**Diseases**: Ataxia: CK(3): AC(1), Bipolar Disorder: CK(94): AC(16)

**Problem Substances**: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

**Bipolar Disorder**

*Statins have been reported to cause ataxia in bipolar disorder.* - GMI Summary


**Article Published Date**: Mar 01, 2010

**Authors**: Jon E Berner

**Study Type**: Human: Case Report

**Diseases**: Ataxia: CK(3): AC(1), Bipolar Disorder: CK(94): AC(16)

**Problem Substances**: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

**Blepharoptosis**

*Unilateral blepharoptosis is an unrecognized side effect of statin treatment.* - GMI Summary


**Article Published Date**: May 01, 2006

**Authors**: Fatih Sinan Ertas, Nilgün Markal Ertaş, Sadi Gulec, Yusuf Atmaca, Sumru Tanju, Cumhur Sener, Cetin Erol

**Study Type**: Human: Case Report


**Pharmacological Actions**: Anticholesteremic Agents: CK(298): AC(38)

**Problem Substances**: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)

**Blood-Brain-Barrier Disorders**

*Some statin drugs are may cause neurological problems due to their ability to cross the blood-
**brain barrier.** - GMI Summary


Article Published Date: Feb 01, 1994

Authors: A Saheki, T Terasaki, I Tamai, A Tsuji

Study Type: Animal Study

Additional Links

Diseases: Blood-Brain-Barrier Disorders: CK(24) : AC(13), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Lovastatin: CK(63) : AC(12), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

---

**Chelitis**

Chelitis due to treatment with simvastatin has been reported. - GMI Summary


Article Published Date: Oct 01, 1998

Authors: D R Mehregan, D A Mehregan, S Pakideh

Study Type: Human: Case Report

Additional Links

Diseases: Chelitis: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

---

**Compartment Syndromes**

Spontaneous compartment syndrome in association with simvastatin-induced myositis has been reported. - GMI Summary


Article Published Date: May 01, 2008

Authors: J L Walker, G H Smith, M S Gaston, C M Robinson

Study Type: Human: Case Report

Additional Links

Diseases: Compartment Syndromes: CK(3) : AC(1), Myositis: CK(15) : AC(2), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

---

**Cutaneous Eruptions**

Simvastatin has been reported to cause cutaneous eruptions. - GMI Summary


Article Published Date: Sep 01, 2010

Authors: Amy E Adams, Arthur M Bobrove, Anita C Gilliam

Study Type: Human: Case Report

Additional Links

Diseases: Cutaneous Eruptions: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)
**Problem Substances**: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

__Topic: Cystitis: Hemorrhagic__

**Atorvastatin-induced hemorrhagic cystitis has been reported.** - GMI Summary


Article Published Date: Mar 01, 2009

Authors: Humberto J Martinez-Suarez, Rou Wang, Gary J Faerber

Study Type: Human: Case Report

Additional Links

Diseases: Cystitis: Hemorrhagic: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

__Topic: Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)__

**Atorvastatin-induced drug reaction with eosinophilia and systemic symptoms (DRESS) has been reported.** - GMI Summary


Article Published Date: Jan 01, 2009

Authors: L Gressier, C Pruvost-Balland, L Dubertret, M Viguier

Study Type: Human: Case Report

Additional Links

Diseases: Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS): CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

__Topic: Gitelman’s syndrome (False Presentation)__

**Gitelman’s syndrome presenting as intolerance to statin therapy has been reported.** - GMI Summary


Article Published Date: May 01, 2005

Authors: Danielle B Freedman, David Housley

Study Type: Human: Case Report

Additional Links

Diseases: Gitelman’s syndrome (False Presentation): CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)

__Topic: Lipid Peroxidation__

**Increased lipid peroxidation in a patient with CK-elevation and muscle pain during statin therapy has been reported.** - GMI Summary
**Topic: Mood Disorders**

**Psychiatric disorders with use of simvastatin have been reported.** - GMI Summary


**Article Published Date** : Jun 26, 1993

**Authors** : N Duits, F M Bos

**Study Type** : Human: Case Report

**Diseases** : Mood Disorders : CK(75) : AC(12), Psychiatric Disorders : CK(47) : AC(6), Psychological Well-Being : CK(10) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Neurotoxic : CK(879) : AC(87)

**Topic: Multiple Mononeuropathy**

**Multiple mononeuropathy caused by treatment with pravastatin has been reported.** - GMI Summary


**Article Published Date** : Dec 01, 2006

**Authors** : I Abellán-Miralles, R M Sánchez-Pérez, N Pérez-Carmona, C Díaz-Marín, J Mallada-Frechín

**Study Type** : Human: Case Report

**Diseases** : Multiple Mononeuropathy : CK(3) : AC(1), Peripheral Neuropathies : CK(111) : AC(24)

**Problem Substances** : Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

**Topic: Organ Transplantation: Liver**

**Simvastatin-ezetimibe-induced hepatic failure necessitating liver transplantation has been reported.** - GMI Summary

**Pubmed Data** : Pharmacotherapy. 2008 Sep ;28(9):1188-93. PMID: 18752389

**Article Published Date** : Sep 01, 2008

**Authors** : Sony Tuteja, Nikolaos T Pyrsopoulos, William R Wolowich, Kamran Khanmoradi, David M Levi, Gennaro Selvaggi, Geoffrey Weisbaum, Andreas G Tzakis, Eugene R Schiff
**Topic: Paranoia**

**Paranoia is one of the symptoms associated with statin therapy.** - GMI Summary


*Article Published Date* : Mar 01, 2008

*Authors* : Jessica T Peters, Candice L Garwood, Marybeth Lepczyk

*Study Type* : Human: Case Report

**Additional Links**

*Diseases* : Paranoia : CK(3) : AC(1), Senile Paranoid Dementia : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

*Problem Substances* : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Perioperative Care**

**Cholesterol-lowering drugs may increase the risk of periooperative mortality.** - GMI Summary

*Pubmed Data* : Cardiovasc Drugs Ther. 2002 Sep ;16(5):471-5. PMID: 12652117

*Article Published Date* : Sep 01, 2002

*Authors* : Mathias Wilhelmi, Michael Winterhalter, Stefan Fischer, Thorsten Walles, Janusz Zuk, Martin Strüber, Axel Haverich

*Study Type* : Human: Case Report

**Additional Links**

*Diseases* : Perioperative Care : CK(3) : AC(1), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

*Anti Therapeutic Actions* : Surgical Procedures : CK(85) : AC(7)

*Problem Substances* : Cholesterol Lowering Drugs : CK(1038) : AC(90), Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Rhabdomyolysis: Fatal**

**Concomitant administration of simvastatin and danazol has been associated with fatal rhabdomyolysis.** - GMI Summary


*Article Published Date* : May 01, 2010

*Authors* : Ivan Stankovic, Alja Vlahovic-Stipac, Biljana Putnikovic, Zorica Cvetkovic, Aleksandar N Neskovic

*Study Type* : Human: Case Report

**Additional Links**

*Diseases* : Drug-Induced Toxicity : CK(503) : AC(76), Rhabdomyolysis : CK(37) : AC(6), Rhabdomyolysis: Fatal : CK(3) : AC(6)
**Fatal rhabdomyolysis associated with simvastatin in a renal transplant patient has been reported.** - GMI Summary

**Article Published Date**: Mar 01, 2000
**Authors**: W J Weise, C J Possidente
**Study Type**: Human: Case Report
**Additional Links**
- **Diseases**: Kidney Transplant : CK(37) : AC(7), Rhabdomyolysis: Fatal : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Simvastatin : CK(657) : AC(114)
- **Additional Links**
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Topic: Senile Paranoid Dementia**

**Paranoia is one of the symptoms associated with statin therapy.** - GMI Summary

**Article Published Date**: Mar 01, 2008
**Authors**: Jessica T Peters, Candice L Garwood, Marybeth Lepczyk
**Study Type**: Human: Case Report
**Additional Links**
- **Diseases**: Paranoia : CK(3) : AC(1), Senile Paranoid Dementia : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Tendinopathy**

**Statins may increase the risk of tendon rupture by altering MMP activity.** - GMI Summary

**Pubmed Data**: Am J Cardiol. 2007 Jul 1;100(1):152-3. Epub 2007 May 21. PMID: 17599460
**Article Published Date**: Jul 01, 2007
**Authors**: Raja C Pullatt, Mamatha Reddy Gadarla, Richard H Karas, Alawi A Alsheikh-Ali, Paul D Thompson
**Study Type**: Human: Case Report
**Additional Links**
- **Diseases**: Tendinopathy : CK(30) : AC(3), Tendon Rupture : CK(6) : AC(2)
- **Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)
- **Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Toxic Epidermal Necrolysis**

**Toxic epidermal necrolysis from atorvastatin has been reported.** - GMI Summary

**Pubmed Data**: JAMA. 1998 May 27;279(20):1613-4. PMID: 9613909
**Topic: Ulcerative Colitis**

**Ulcerative colitis after statin treatment has been reported.** - GMI Summary

Pubmed Data: Postgrad Med J. 2002 May ;78(919):286-7. PMID: 12151572

Article Published Date: May 01, 2002

Authors: W E Rea, D C S Durrant, D A R Boldy

Study Type: Human: Case Report

Diseases: Statin-Induced Pathologies: CK(1470) : AC(206), Ulcerative Colitis: CK(370) : AC(42)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

**Topic: Vasculitis**

**Statin-induced vasculitis has been reported.** - GMI Summary


Article Published Date: Aug 01, 2010

Authors: Deepali Sen, Elliot D Rosenstein, Neil Kramer

Study Type: Human: Case Report

Diseases: Autoimmune Diseases: CK(4016) : AC(752), Statin-Induced Pathologies: CK(1470) : AC(206), Vasculitis: CK(34) : AC(10)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Immunosuppressive: CK(65) : AC(15)

**Topic: Aging**

**Mevastatin accelerates loss of synaptic proteins and neurite degeneration in neurons.** - GMI Summary


Article Published Date: Sep 01, 2010

Authors: Madhuvanthi Kannan, Joern R Steinert, Ian D Forsythe, Andrew G Smith, Tatyana Chernova
Pravastatin accelerates aging effect on diaphragm mitochondrial respiratory function in rats. - GMI Summary

Article Published Date: Dec 01, 1998
Authors: S Sugiyama

Statin drugs induce a variety of potential adverse "peliotropic" effects. - GMI Summary

Article Published Date: Sep 01, 2009
Authors: Jerzy Bełtowski, Grazyna Wójcicka, Anna Jamroz-Wiśniewska

Statin-induced liver injury may result from the suppression of selenoprotein expression. - GMI Summary

Article Published Date: Jun 01, 2009
Authors: Andrea Kromer, Bernd Moosmann
Statins and fenofibrates may exert their wide range of adverse side effects through interfering with selenoprotein expression. - GMI Summary

Article Published Date: Oct 01, 2004
Authors: Bernd Moosmann, Christian Behl
Study Type: Review

Statin drugs may induce selenium deficiency which may explain many of its enigmatic side effects. - GMI Summary

Article Published Date: Mar 13, 2004
Authors: Bernd Moosmann, Christian Behl
Study Type: Review

Topic: Skin Problems: Compromised Barrier Function

Statin drugs, when applied topically, adversely affect skin barrier function. - GMI Summary

Article Published Date: Nov 01, 1990
Authors: K R Feingold, M Q Man, G K Menon, S S Cho, B E Brown, P M Elias
Study Type: Animal Study

Cholesterol-lowering drugs may contribute to skin disorders. - GMI Summary

Article Published Date: Nov 01, 1987
Authors: M L Williams, K R Feingold, G Grubauer, P M Elias
Study Type: Review
**Topic: Alcohol Toxicity**

*Alcohol and atorvastatin interact to adversely affect intestinal villi structure.* - GMI Summary


**Article Published Date** : Jan 01, 2004

**Authors** : Ewa Kifer-Wysocka, Jadwiga Romanowska-Sarlej, Włodzimierz Matysiak, Marta Lis-Sochocka, Barbara Jedrych, Krystyna Czerny

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Alcohol Toxicity : CK(205) : AC(81), Gastrointestinal Diseases : CK(34) : AC(13), Statin-Induced Pathologies : CK(1470) : AC(206)

**Additional Keywords** : Toxic Substance Synergy : CK(3) : AC(2)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Topic: Gastrointestinal Diseases**

*Alcohol and atorvastatin interact to adversely affect intestinal villi structure.* - GMI Summary


**Article Published Date** : Jan 01, 2004

**Authors** : Ewa Kifer-Wysocka, Jadwiga Romanowska-Sarlej, Włodzimierz Matysiak, Marta Lis-Sochocka, Barbara Jedrych, Krystyna Czerny

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Alcohol Toxicity : CK(205) : AC(81), Gastrointestinal Diseases : CK(34) : AC(13), Statin-Induced Pathologies : CK(1470) : AC(206)

**Additional Keywords** : Toxic Substance Synergy : CK(3) : AC(2)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Topic: Immune Dysregulation: TH1/TH2 imbalance**

*Lovastatin alters the immunological balance towards a Th2 dominant state.* - GMI Summary


**Article Published Date** : Nov 29, 2002

**Authors** : Romesh Stanislaus, Anne G Gilg, Avtar K Singh, Inderjit Singh

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Immune Dysregulation: TH1/TH2 imbalance : CK(129) : AC(33)

**Pharmacological Actions** : Interleukin-10 downregulation : CK(65) : AC(18), Interleukin-6 Downregulation : CK(395) : AC(132)

**Problem Substances** : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Immunoreactive : CK(50) : AC(5)
**Topic: Lung Diseases**

**Statin drugs alter the composition of surfactant in the adult lung.** - GMI Summary


Article Published Date : Jan 01, 1997

Authors : K G Davidson, S M Acton, H A Barr, T E Nicholas

Study Type : Animal Study

**Additional Links**

- Diseases : Lung Diseases : CK(15) : AC(4)
- Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
- Problem Substances : Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114)

**Topic: Organ Transplantation**

**Statin drug induced myopathy is amplified in the rats administered cyclosporine A.** - GMI Summary

Pubmed Data : J Pharmacol Exp Ther. 1991 Jun;257(3):1225-35. PMID: 1904494

Article Published Date : Jun 01, 1991

Authors : P F Smith, R S Eydelloth, S J Grossman, R J Stubbs, M S Schwartz, J I Germershausen, K P Vyas, P H Karl, J S MacDonald

Study Type : Animal Study

**Additional Links**

- Diseases : Cholestasis : CK(95) : AC(21), Drug-Induced Toxicity : CK(503) : AC(76), Myopathies : CK(199) : AC(18), Organ Transplantation : CK(39) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)
- Problem Substances : Cyclosporins : CK(2) : AC(1), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Topic: Ovarian Diseases**

**Simvastatin reduces steroid hormone production in rat ovarian cells.** - GMI Summary


Article Published Date : Sep 21, 2011

Authors : Israel Ortega, Amanda B Cress, Donna H Wong, Jesus A Villanueva, Anna Sokalska, Benjamin C Moeller, Scott D Stanley, Antoni J Duleba

Study Type : In Vitro Study

**Additional Links**

- Diseases : Ovarian Diseases : CK(9) : AC(4), Ovarian Failure : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
- Problem Substances : Simvastatin : CK(657) : AC(114)
- Adverse Pharmacological Actions : Endocrine Disruptor: Ovary : CK(2) : AC(2)

**Statin drugs decrease de novo cholesterol synthesis and increase apoptosis in rat and human periovulatory granulosa cells.** - GMI Summary


Article Published Date : Mar 01, 2005
**Topic: Pancreatic Diseases**

**High doses of atorvastatin modifies the secretory process in the exocrine portion of the pancreas.** - GMI Summary

**Pubmed Data:** Ann Univ Mariae Curie Sklodowska Med. 2004 ;59(2):52-6. PMID: 16146048

**Article Published Date:** Jan 01, 2004

**Authors:** Krystyna Czerny, Jadwiga Romanowska, Ewa Kifer-Wysocka, Włodzimierz Matysiak, Teresa Masłyk

**Study Type:** Animal Study

**Additional Links**

**Diseases:** Pancreatic Diseases : CK(9) : AC(3)

**Problem Substances:** Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Endocrine Disruptor: Pancreas : CK(2) : AC(1)

---

**Topic: Proteoglycan Expression: Down-Regulation of Chondroitin Sulfate**

**Statins decrease chondroitin sulfate proteoglycan expression following central nervous system injury.** - GMI Summary

**Pubmed Data:** Exp Neurol. 2008 Nov ;214(1):78-86. Epub 2008 Aug 5. PMID: 18722369

**Article Published Date:** Nov 01, 2008

**Authors:** Eric Holmberg, Shu-xin Zhang, Patrick D Sarmiere, Bridget R Kluge, Jason T White, Suzanne Doolen

**Study Type:** Animal Study

**Additional Links**

**Diseases:** Proteoglycan Expression: Down-Regulation of Chondroitin Sulfate : CK(2) : AC(1), Proteoglycan Expression: Pathological : CK(2) : AC(1), Spinal Cord Injuries : CK(71) : AC(26), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances:** Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Proteoglycan Expression: Pathological**

**Statins decrease chondroitin sulfate proteoglycan expression following central nervous system injury.** - GMI Summary

**Pubmed Data:** Exp Neurol. 2008 Nov ;214(1):78-86. Epub 2008 Aug 5. PMID: 18722369

**Article Published Date:** Nov 01, 2008

**Authors:** Eric Holmberg, Shu-xin Zhang, Patrick D Sarmiere, Bridget R Kluge, Jason T White, Suzanne Doolen

**Study Type:** Animal Study

**Additional Links**
Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

### Topic: Respiratory Diseases

**Pravastatin accelerates aging effect on diaphragm mitochondrial respiratory function in rats.**

GMI Summary

**Pubmed Data:** Biochem Mol Biol Int. 1998 Dec ;46(5):923-31. PMID: [9861446](https://doi.org/10.1016/S0006-2952(98)80213-2)

**Article Published Date:** Dec 01, 1998

**Authors:** S Sugiyama

**Study Type:** Animal Study

**Additional Links**


**Problem Substances:** Pravastatin: CK(197): AC(31), Statin Drugs: CK(3705): AC(437)

### Topic: Spinal Cord Injuries

**Statins decrease chondroitin sulfate proteoglycan expression following central nervous system injury.**

GMI Summary

**Pubmed Data:** Exp Neurol. 2008 Nov ;214(1):78-86. Epub 2008 Aug 5. PMID: [18722369](https://doi.org/10.1016/j.expneurol.2008.06.001)

**Article Published Date:** Nov 01, 2008

**Authors:** Eric Holmberg, Shu-xin Zhang, Patrick D Sarmiere, Bridget R Kluge, Jason T White, Suzanne Doolen

**Study Type:** Animal Study

**Additional Links**


**Problem Substances:** Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

### Topic: Testicular Diseases

**Statin drugs exhibit myotoxic, neurotoxic, hepatotoxic and testicule damaging properties in the anima model.**

GMI Summary

**Pubmed Data:** Toxicol Pathol. 1996 Jul-Aug;24(4):468-76. PMID: [8864188](https://doi.org/10.1080/01936911.1996.11738320)

**Article Published Date:** Jul 01, 1996

**Authors:** K M Walsh, M A Albassam, D E Clarke

**Study Type:** Animal Study

**Additional Links**

**Diseases:** Brain Damage: CK(65): AC(28), Liver Damage: Drug-Induced: CK(36): AC(6), Statin-Induced Pathologies: CK(1470): AC(206), Testicular Diseases: CK(37): AC(14)

**Pharmacological Actions:** Anticholesteremic Agents: CK(298): AC(38), Enzyme Inhibitors: CK(340): AC(201)

**Problem Substances:** Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)

**Adverse Pharmacological Actions:** Hepatotoxic: CK(95): AC(34), Myotoxicity: CK(259): AC(11), Neurotoxic: CK(879):
**Topic: Acute Respiratory Distress Syndrome**

**Fatal lupus-like syndrome and ARDS induced by fluvastatin has been reported.** - GMI Summary


Article Published Date : Jul 11, 1998

Authors : M K Sridhar, A Abdulla

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : Acute Respiratory Distress Syndrome : CK(3) : AC(1), Lupus-Like Syndrome : CK(10) : AC(1)

**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Fluvastatin : CK(13) : AC(3)

**Topic: Acute generalized exanthematous pustulosis (AGEP)**

**Acute generalized exanthematous pustulosis (AGEP) induced by simvastatin has been reported.** - GMI Summary


Article Published Date : Sep 01, 2003

Authors : T Oskay, L Kutluay

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : Acute generalized exanthematous pustulosis (AGEP) : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Simvastatin : CK(657) : AC(114)

**Topic: Alkaline Phosphatase: Elevated**

**A case of atorvastatin-induced prolonged cholestasis with bile duct damage has been reported.** - GMI Summary


Article Published Date : Jan 01, 2010

Authors : Manuela Merli, Maria Consiglia Bragazzi, Federica Giubilo, Francesco Callea, Adolfo F Attili, Domenico Alvaro

**Study Type** : Human: Case Report

**Additional Links**


**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Atorvastatin : CK(231) : AC(37)

**Topic: Appetite Disorders: Loss/Lack of**
**Sleep disturbance and appetite loss after lovastatin.** - GMI Summary

**Pubmed Data**: Lancet. 1994 Apr 16 ;343(8903):973. PMID: 7909021
**Article Published Date**: Apr 16, 1994
**Authors**: H Sinzinger, F Mayr, P Schmid, S Granegger, J O'Grady, B A Peskar
**Study Type**: Human: Case Report
**Additional Links**
- **Diseases**: Appetite Disorders: Loss/Lack of: CK(4) : AC(2), Sleep Disorders : CK(103) : AC(10)
- **Problem Substances**: Lovastatin : CK(63) : AC(12)

**Topic: Arthralgia**

**Simvastatin-induced lupus-like syndrome has been reported.** - GMI Summary

**Pubmed Data**: Tenn Med. 2000 Jan ;93(1):21-2. PMID: 10628262
**Article Published Date**: Jan 01, 2000
**Authors**: A Ahmad, M T Fletcher, T M Roy
**Study Type**: Human: Case Report
**Additional Links**
- **Diseases**: Arthralgia : CK(20) : AC(2), Lupus-Like Syndrome : CK(10) : AC(1), Pleurisy : CK(27) : AC(9), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)
- **Problem Substances**: Simvastatin : CK(657) : AC(114)

**Topic: Bilirubin: Elevated**

**A case of atorvastatin-induced prolonged cholestasis with bile duct damage has been reported.** - GMI Summary

**Article Published Date**: Jan 01, 2010
**Authors**: Manuela Merli, Maria Consiglia Bragazzi, Federica Giubilo, Francesco Callea, Adolfo F Attili, Domenico Alvaro
**Study Type**: Human: Case Report
**Additional Links**
- **Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37)

**Topic: Bullous Dermatosis**

**Linear IgA bullous dermatosis induced by atorvastatin has been observed.** - GMI Summary

**Article Published Date**: Apr 01, 2001
**Topic: Cholangiolitis**

*A case of atorvastatin-induced prolonged cholestasis with bile duct damage has been reported.* - GMI Summary


**Article Published Date**: Jan 01, 2010

**Authors**: Manuela Merli, Maria Consiglia Bragazzi, Federica Giubilo, Francesco Callea, Adolfo F Attili, Domenico Alvaro

**Study Type**: Human: Case Report

**Additional Links**


**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Atorvastatin : CK(231) : AC(37)

**Topic: Colitis**

*Pravastatin-induced colitis has been reported.* - GMI Summary


**Article Published Date**: Aug 01, 2008

**Authors**: Ashis Mukhopadhya, Hugh Gilmour, John Plevris

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Colitis : CK(142) : AC(54), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Inflammatory : CK(109) : AC(26)

**Topic: Congestive Heart Failure**

*A case of simvastatin-induced acute rhabdomyolysis with heart failure after initiation of treatment with fusidic acid has been reported.* - GMI Summary

**Pubmed Data**: Rev Rhum Mal Osteoartic. 1992 Apr;59(4):281-3. PMID: 1496277

**Article Published Date**: Apr 01, 1992

**Authors**: C Dromer, C Vedrenne, T Billey, M Pages, B Fournié, A Fournié

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Congestive Heart Failure : CK(147) : AC(29), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
**Pharmacological Actions**

*Anticholesteremic Agents*: CK(298) : AC(38)

**Problem Substances**

*Simvastatin*: CK(657) : AC(114)

**Adverse Pharmacological Actions**

*Cardiotoxic*: CK(467) : AC(53), *Myotoxic*: CK(259) : AC(11)

---

**Topic: Dermatitis: Actinic**

*Chronic actinic dermatitis secondary to simvastatin has been reported.* - GMI Summary

**Pubmed Data**: Photodermatol Photoimmunol Photomed. 2002 Dec ;18(6):313-4. PMID: 12535029

**Article Published Date**: Dec 01, 2002

**Authors**: S A Holme, A D Pearse, A V Anstey

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: *Dermatitis: Actinic*: CK(3) : AC(1), *Statin-Induced Pathologies*: CK(1470) : AC(206)

**Problem Substances**: *Simvastatin*: CK(657) : AC(114)

---

**Topic: Gastric Ulcer**

*Atorvastatin-induced severe gastric ulceration has been reported.* - GMI Summary

**Pubmed Data**: World J Gastroenterol. 2005 May 28 ;11(20):3159-60. PMID: 15918210

**Article Published Date**: May 28, 2005

**Authors**: Ihab I El-Hajj, Fadi H Mourad, Nina S Shabb, Kassem A Barada

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: *Gastric Ulcer*: CK(247) : AC(93), *Statin-Induced Pathologies*: CK(1470) : AC(206)

**Pharmacological Actions**: *Anticholesteremic Agents*: CK(298) : AC(38)

**Problem Substances**: *Atorvastatin*: CK(231) : AC(37)

**Adverse Pharmacological Actions**: *Ulcerogenic*: CK(34) : AC(8)

---

**Topic: Guillain-Barre Syndrome**

*Severe statin-induced rhabdomyolysis mimicking Guillain-Barré syndrome in four patients with diabetes mellitus treated with fusidic acid has been reported.* - GMI Summary

**Pubmed Data**: Diabet Med. 2010 Jun ;27(6):696-700. PMID: 20546290

**Article Published Date**: Jun 01, 2010

**Authors**: T A Collidge, S Razvi, C Nolan, M Whittle, C Stirling, A J C Russell, A C Mann, C J Deighan

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: *Diabetes Mellitus: Type 2*: CK(1516) : AC(314), *Guillain-Barre Syndrome*: CK(61) : AC(13), *Rhabdomyolysis*: CK(37) : AC(6), *Statin-Induced Pathologies*: CK(1470) : AC(206)

**Pharmacological Actions**: *Anti-Bacterial Agents*: CK(718) : AC(269)

**Problem Substances**: *Antibiotics*: CK(140) : AC(15), *Fusidic acid*: CK(6) : AC(2), *Statin Drugs*: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: *Neurotoxic*: CK(879) : AC(87)
**Topic: Headache: Altitude-Induced**

*Pravastatin may contribute to altitude-induced migraine headaches.* - GMI Summary

**Pubmed Data**: Aviat Space Environ Med. 1998 Jun ;69(6):603-6. PMID: 9641408

**Article Published Date**: Jun 01, 1998

**Authors**: C S Ramsey, Q C Snyder

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Headache: Altitude-Induced : CK(3) : AC(1)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Pravastatin : CK(197) : AC(31)

---

**Topic: Hepatitis: Acute**

*Statin toxicity may mimic viral hepatitis.* - GMI Summary


**Article Published Date**: Nov 01, 2005

**Authors**: F Cokça, S Ozkan, G Nergisoglu, O Memikoglu, A Azap

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Hepatitis: Acute : CK(5) : AC(1), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11), Nephrotoxic : CK(133) : AC(33)

---

**Topic: Hyperkalemia**

*Hyperkalemia during treatment with a statin drug has been reported.* - GMI Summary


**Article Published Date**: May 04, 1989

**Authors**: S Edelman, J L Witztum

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Hyperkalemia : CK(6) : AC(2)

**Problem Substances**: Lovastatin : CK(63) : AC(12)

---

**Topic: Hypersensitivity**

*Polymyalgia, hypersensitivity pneumonitis and other reactions have been reported in patients taking statin drugs.* - GMI Summary


**Article Published Date**: Mar 01, 1999
Topic: **Hyperthermia**

**Recurrent hyperthermia due to lovastatin has been reported.** - GMI Summary


Article Published Date: Oct 01, 1994

Authors: W R von Pohle

Study Type: Human: Case Report

Additional Links

Diseases: Hyperthermia: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Lovastatin: CK(63) : AC(12)

---

Topic: **Hypotension**

**Hypotension and eosinophilia with atorvastatin has been reported.** - GMI Summary


Article Published Date: Aug 01, 2005

Authors: J P Hampson, D Smith, R Cowell, A Baker

Study Type: Human: Case Report

Additional Links

Diseases: Eosinophilia: CK(13) : AC(2), Hypotension: CK(3) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Atorvastatin: CK(231) : AC(37)

---

Topic: **Intraocular Hemorrhage**

**Ocular hemorrhage has been reported in 90 cases as an adverse effect of statin drugs.** - GMI Summary


Article Published Date: Apr 01, 2004

Authors: F W Fraunfelder

Study Type: Human: Case Report

Additional Links
## Topic: Kidney Failure: Chronic

**Terminal renal failure in lovastatin therapy with pre-existing chronic renal insufficiency has been reported.** - GMI Summary

### Pubmed Data

### Article Published Date
- Jan 01, 1996

### Authors
- G Biesenbach, O Janko, U Stuby, J Zazgornik

### Study Type
- Human: Case Report

### Additional Links
- **Diseases**: Kidney Damage: Drug-Induced : CK(69) : AC(18), Kidney Failure: Chronic : CK(134) : AC(17), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)
- **Problem Substances**: Lovastatin : CK(63) : AC(12)
- **Adverse Pharmacological Actions**: Nephrotoxic : CK(133) : AC(33)

## Topic: Kidney Transplant

**Fatal rhabdomyolysis associated with simvastatin in a renal transplant patient has been reported.** - GMI Summary

### Pubmed Data

### Article Published Date
- Mar 01, 2000

### Authors
- W J Weise, C J Possidente

### Study Type
- Human: Case Report

### Additional Links
- **Diseases**: Kidney Transplant : CK(37) : AC(7), Rhabdomyolysis: Fatal : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Simvastatin : CK(657) : AC(114)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

## Topic: Lens Opacities

**Statin drugs may contribute to lens opacities.** - GMI Summary

### Pubmed Data

### Article Published Date
- Jan 01, 1990

### Authors
- R J Gerson, J S MacDonald, A W Alberts, J Chen, J B Yudkovitz, M D Greenspan, L F Rubin, D L Bokelman

### Study Type
- Review

### Additional Links
- **Diseases**: Cataract : CK(180) : AC(53), Lens Diseases : CK(6) : AC(4), Lens Opacities : CK(1) : AC(1)
- **Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)
- **Problem Substances**: Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Cataractogenic : CK(3) : AC(2)
**Topic: Low Libido**

**Statin-induced impotence has been reported.** - GMI Summary


Article Published Date: Feb 01, 1996

Authors: A Halkin, I S Lossos, D Mevorach

Study Type: Human: Case Report

Additional Links

Diseases: Erectile Dysfunction : CK(403) : AC(35), Impotence : CK(3) : AC(1), Low Libido : CK(56) : AC(19)

Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38), Enzyme Inhibitors : CK(340) : AC(201)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Topic: Lupus Erythematosus: Cutaneous: Subacute**

**Subacute-cutaneous lupus erythematosus induced by simvastatin has been reported.** - GMI Summary


Article Published Date: Jan 01, 2011

Authors: Robin Dominik Rüger, Jan-Christoph Simon, Regina Treudler

Study Type: Human: Case Report

Additional Links

Diseases: Lupus Erythematosus: Cutaneous: Subacute : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances: Simvastatin : CK(657) : AC(114)

**Topic: Melas Syndrome**

**Statins-induced MELAS syndrome has been reported.** - GMI Summary


Article Published Date: Jan 01, 2007

Authors: Joseph E Thomas, Nora Lee, Paul D Thompson

Study Type: Human: Case Report

Additional Links

Diseases: Melas Syndrome : CK(20) : AC(2), Mitochondrial Diseases : CK(92) : AC(33)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

**Topic: Musculoskeletal Complaints**

**Statin-associated focal myositis has been reported.** - GMI Summary


Article Published Date: Mar 20, 2009
**Topic: Neuroleptic Malignant Syndrome**

*Neuroleptic malignant syndrome as a possible statin drug reaction has been reported.* - GMI Summary


**Summary**

Authors: Joyce M Cooper, Alison L Jones

Study Type: Human: Case Report

Diseases: Musculoskeletal Complaints: CK(10) : AC(2), Myositis: Focal : CK(6) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

**Topic: Ovulation Disorders**

*Statin drugs decrease de novo cholesterol synthesis and increase apoptosis in rat and human periovulatory granulosa cells.* - GMI Summary


**Summary**

Authors: Emilia Rung, P Anders Friberg, Ruijin Shao, D G Joakim Larsson, Eva Ch Nielsen, Per-Arne Svensson, Björn Carlsson, Lena M S Carlsson, Håkan Billig

Study Type: In Vitro Study

Diseases: Ovarian Diseases : CK(9) : AC(4), Ovulation Disorders : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Apoptotic : CK(5) : AC(5), Endocrine Disruptor: Ovary : CK(2) : AC(2)

**Topic: Pleurisy**

*Simvastatin-induced lupus-like syndrome has been reported.* - GMI Summary


**Summary**

Authors: A Ahmad, M T Fletcher, T M Roy

Study Type: Human: Case Report
Topic: **Pneumonitis**

*Polymyalgia, hypersensitivity pneumonitis and other reactions have been reported in patients taking statin drugs.* - GMI Summary

**Pubmed Data**: Chest. 1999 Mar;115(3):886-9. PMID: [10084510](https://doi.org/10.1016/S0018-9954(99)70089-7)

**Article Published Date**: Mar 01, 1999

**Authors**: M I Liebhaber, R S Wright, H J Gelberg, Z Dyer, J L Kupperman

**Study Type**: Human: Case Report

**Additional Links**


**Problem Substances**: Statin Drugs: CK(3705): AC(437)

**Adverse Pharmacological Actions**: Myotoxicity: CK(259): AC(11)

---

Topic: **Pneumonitis: Hypersensitivity Type**

*Polymyalgia, hypersensitivity pneumonitis and other reactions have been reported in patients taking statin drugs.* - GMI Summary

**Pubmed Data**: Chest. 1999 Mar;115(3):886-9. PMID: [10084510](https://doi.org/10.1016/S0018-9954(99)70089-7)

**Article Published Date**: Mar 01, 1999

**Authors**: M I Liebhaber, R S Wright, H J Gelberg, Z Dyer, J L Kupperman

**Study Type**: Human: Case Report

**Additional Links**


**Problem Substances**: Statin Drugs: CK(3705): AC(437)

**Adverse Pharmacological Actions**: Myotoxicity: CK(259): AC(11)

---

Topic: **Polymyalgia Rheumatica**

*Polymyalgia, hypersensitivity pneumonitis and other reactions have been reported in patients taking statin drugs.* - GMI Summary

**Pubmed Data**: Chest. 1999 Mar;115(3):886-9. PMID: [10084510](https://doi.org/10.1016/S0018-9954(99)70089-7)

**Article Published Date**: Mar 01, 1999
Authors: M I Liebhaber, R S Wright, H J Gelberg, Z Dyer, J L Kupperman

Study Type: Human: Case Report

Additional Links

Diseases: Hypersensitivity: CK(54) : AC(13), Pneumonitis : CK(230) : AC(3), Pneumonitis: Hypersensitivity Type : CK(3) : AC(1), Polymyalgia Rheumatica : CK(43) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

---

Topic: Presymptomatic Metabolic Myopathy

Statin treatment may contribute to presymptomatic neuromuscular disorders. - GMI Summary


Article Published Date: Jul 24, 2006

Authors: Georgios Tsivgoulis, Konstantinos Spengos, Nikolaos Karandreas, Marios Panas, Athina Kladi, Panagiota Manta

Study Type: Human: Case Report

Additional Links

Diseases: Myopathies : CK(199) : AC(18), Neuromuscular Diseases : CK(11) : AC(2), Presymptomatic Metabolic Myopathy : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

---

Topic: Seizures

Rhabdomyolysis related to statin and seizures has been reported. - GMI Summary


Article Published Date: Oct 01, 2011

Authors: Yu-Qing Guan, Yan-Jie Shi, Qun Wang

Study Type: Human: Case Report

Additional Links

Diseases: Rhabdomyolysis : CK(37) : AC(6), Seizures : CK(100) : AC(26), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

---

Topic: Sleep Apnea

Severe obstructive sleep apnea after cerivastatin therapy has been reported. - GMI Summary


Article Published Date: Jun 15, 2008

Authors: Matthew R Ebben, Nitin K Sethi, Arthur J Spielman

Study Type: Human: Case Report

Additional Links

Diseases: Sleep Apnea : CK(57) : AC(9), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Cerivastatin : CK(2) : AC(1)
**Topic: Smell Disorders**

*Lovastatin-induced smell disorders have been reported.* - GMI Summary


**Article Published Date**: Sep 01, 1992

**Authors**: R Weber, C Raschka, T Bonzel

**Study Type**: Human: Case Report

**Additional Links**

- **Diseases**: Smell Disorders : CK(15) : AC(3)
- **Problem Substances**: Lovastatin : CK(63) : AC(12)

---

**Topic: Urticarial Vasculitis**

*Urticarial vasculitis from simvastatin has been reported.* - GMI Summary


**Article Published Date**: Aug 01, 2010

**Authors**: Veronica Bellini, Danilo Assalve, Paolo Lisi

**Study Type**: Human: Case Report

**Additional Links**

- **Diseases**: Urticarial Vasculitis : CK(3) : AC(1)
- **Problem Substances**: Simvastatin : CK(657) : AC(114)

---

**Topic: Alveolar Capillary Congestion**

*A statin drug exhibits toxicity in the animal model.* - GMI Summary

**Pubmed Data**: Hum Exp Toxicol. 1994 May ;13(5):357-68. PMID: [8043318](https://www.ncbi.nlm.nih.gov/pubmed/8043318)

**Article Published Date**: May 01, 1994

**Authors**: K Owen, C R Pick, S E Libretto, M J Adams

**Study Type**: Animal Study

**Additional Links**

- **Diseases**: Alveolar Capillary Congestion : CK(2) : AC(1), Death: Statin-Induced : CK(2) : AC(1), Lethargy : CK(2) : AC(1), Lung Damage : CK(6) : AC(3), Pulmonary Alveolar Proteinosis : CK(2) : AC(1)
- **Problem Substances**: Statin Drugs : CK(3705) : AC(437)

---

**Topic: Cochlear Neuronal Damage**

*Simvastatin treatment induces morphology alterations and cell death in mouse cochlear neuronal cells.* - GMI Summary


**Article Published Date**: Feb 01, 2009

**Authors**: Do-Sim Park, Hong-Seob So, Jeong-Han Lee, Hyun-Young Park, Young-Jin Lee, Ji-Hyun Cho, Kui-Hyun Yoon,
**Topic: Death: Statin-Induced**

*A statin drug exhibits toxicity in the animal model.* - GMI Summary

**Pubmed Data:** Hum Exp Toxicol. 1994 May ;13(5):357-68. PMID: 8043318

**Article Published Date:** May 01, 1994

**Authors:** K Owen, C R Pick, S E Libretto, M J Adams

**Study Type:** Animal Study

**Additional Links**

**Diseases:** Alveolar Capillary Congestion: CK(2) : AC(1), Death: Statin-Induced: CK(2) : AC(1), Lethargy: CK(2) : AC(1), Lung Damage: CK(6) : AC(3)

**Problem Substances:** Statin Drugs: CK(3705) : AC(437)

---

**Topic: Hearing Disorders**

*Simvastatin treatment induces morphology alterations and cell death in mouse cochlear neuronal cells.* - GMI Summary

**Pubmed Data:** Acta Otolaryngol. 2009 Feb ;129(2):166-74. PMID: 18607908

**Article Published Date:** Feb 01, 2009

**Authors:** Do-Sim Park, Hong-Seob So, Jeong-Han Lee, Hyun-Young Park, Young-Jin Lee, Ji-Hyun Cho, Kui-Hyun Yoon, Channy Park, Kijung Yun, Raekil Park

**Study Type:** In Vitro Study

**Additional Links**

**Diseases:** Cochlear Neuronal Damage: CK(1) : AC(1), DNA damage: CK(607) : AC(274), Hearing Disorders: CK(1) : AC(1), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances:** Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Neurotoxic: CK(879) : AC(87)

---

**Topic: Hypoadrenalism**

*Simvastatin may inhibit adrenal function and/or responsiveness.* - GMI Summary


**Article Published Date:** Oct 01, 2008

**Authors:** Taeko Matsuda, Yumiko Toyohira, Susumu Ueno, Masato Tsutsui, Nobuyuki Yanagihara

**Study Type:** In Vitro Study

**Additional Links**

**Diseases:** Hypoadrenalism: CK(38) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances:** Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)
**Topic: Infant Mortality**

*Drugs targeting cholesterol synthesis are embryo lethal in mice and likely contribute to birth defects in humans.* - GMI Summary

**Pubmed Data**: Drug Metab Rev. 2011 Feb ;43(1):69-90. PMID: 21247357

**Article Published Date**: Feb 01, 2011

**Authors**: Simon Horvat, Jim McWhir, Damjana Rozman

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Birth Defects : CK(154) : AC(24), Infant Mortality : CK(194) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Teratogenic : CK(271) : AC(50)

---

**Topic: Influenza A**

*Statin drugs may reduce T cell responses associated with inhibiting influenza A virus.* - GMI Summary


**Article Published Date**: Jan 01, 2010

**Authors**: Julie M Jameson, John Cruz, Anne Costanzo, Masanori Terajima, Francis A Ennis

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Influenza A : CK(243) : AC(76), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Immunosuppressive : CK(65) : AC(15)

---

**Topic: Insulin-like Growth Factor-1: Signaling Abnormalities**

*Simvastatin disrupts IGF-1 signaling by decreasing its activity.* - GMI Summary


**Article Published Date**: Feb 01, 2007

**Authors**: Takeharu Ogura, Yoshiyuki Tanaka, Tetsushi Nakata, Tomoko Namikawa, Hirofumi Kataoka, Yoshikazu Ohtsubo

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Insulin-like Growth Factor-1: Signaling Abnormalities : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Endocrine Disruptor : CK(283) : AC(56)

---

*Statin drugs disrupt IGF-I signaling.* - GMI Summary

A statin drug exhibits toxicity in the animal model. - GMI Summary

Pubmed Data : Hum Exp Toxicol. 1994 May ;13(5):357-68. PMID: 8043318

A statin drug exhibits toxicity in the animal model. - GMI Summary


Statin drugs induce a variety of potential adverse "peilotropic" effects. - GMI Summary
Statin drugs deplete dolichol, which may contribute to statin toxicity and neurodegenerative diseases. - GMI Summary

Pubmed Data: J Alzheimers Dis. 2004 Apr ;6(2):129-35. PMID: 15096696
Article Published Date: Apr 01, 2004
Authors: E Bergamini, R Bizzarri, G Cavallini, B Cerbai, E Chiellini, A Donati, Z Gori, A Manfrini, I Parentini, F Signori, I Tamburini
Study Type: Review

Topic: Neurologic Disorders

Statin drugs may interfere with neurological function in the brain by inhibiting cholesterol biosynthesis and synaptic transmission. - GMI Summary

Article Published Date: Sep 07, 2011
Authors: Tiffany Mailman, Manoj Hariharan, Barbara Karten
Study Type: Review

Topic: Optic Nerve Diseases

An experimental statin drug was demonstrated to cause a wide range of adverse effects in the animal model. - GMI Summary

Pubmed Data: Fundam Appl Toxicol. 1991 Feb ;16(2):320-9. PMID: 2055362
Article Published Date: Feb 01, 1991
Authors: R J Gerson, H L Allen, G R Lankas, J S MacDonald, A W Alberts, D L Bokelman
Study Type: Animal Study
**Topic: Proteinuria**

**Proteinuria is a known adverse effect of statin use.** - GMI Summary

**Pubmed Data** : Drug Discov Today. 2006 May ;11(9-10):458-64. PMID: 16635810

**Article Published Date** : May 01, 2006

**Authors** : Atul Tiwari

**Study Type** : Review

**Additional Links**

**Diseases** : Proteinuria : CK(78) : AC(19), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Rosuvastatin : CK(28) : AC(6), Statin Drugs : CK(3705) : AC(437)

---

**Topic: Pulmonary Alveolar Proteinosis**

**A statin drug exhibits toxicity in the animal model.** - GMI Summary

**Pubmed Data** : Hum Exp Toxicol. 1994 May ;13(5):357-68. PMID: 8043318

**Article Published Date** : May 01, 1994

**Authors** : K Owen, C R Pick, S E Libretto, M J Adams

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Alveolar Capillary Congestion : CK(2) : AC(1), Death: Statin-Induced : CK(2) : AC(1), Lethargy : CK(2) : AC(1), Lung Damage : CK(6) : AC(3), Pulmonary Alveolar Proteinosis : CK(2) : AC(1)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

---

**Topic: Skeletal Muscle Changes: Ultrastructural Changes**

**The statin drug atorvastatin induces adverse ultrastructural changes in muscle cells apparent through electron microscopy.** - GMI Summary


**Article Published Date** : Jan 01, 2004

**Authors** : Miroslaw Lańcut, Barbara Jedrych, Marta Lis-Sochocka, Krystyna Czerny

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : Skeletal Muscle Changes: Ultrastructural Changes : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11), Neurotoxic : CK(879) : AC(87)

---

**Topic: Tumors**

**Statins exhibit complex immunomodulatory properties, including T cell-mediated tumour immune tolerance.** - GMI Summary
Topic: Elderly: Age Specific Diseases

The adverse effects of statins may be amplified in the elderly, and include cancer, neurodegenerative conditions, heart failure and accelerated aging. - GMI Summary

Article Published Date : May 01, 2005
Authors : Beatrice Alexandra Golomb
Study Type : Commentary
Additional Links
Diseases : Cancers: All : CK(6410) : AC(2509), Elderly: Age Specific Diseases : CK(348) : AC(33), Heart Failure : CK(452) : AC(85), Neurodegenerative Diseases : CK(1481) : AC(410), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)

Topic: Ichthyosis

Cholesterol-lowering drugs may contribute to skin disorders. - GMI Summary

Article Published Date : Nov 01, 1987
Authors : M L Williams, K R Feingold, G Grubauer, P M Elias
Study Type : Review
Additional Links
Diseases : Ichthyosis : CK(1) : AC(1), Skin Problems: Compromised Barrier Function : CK(3) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances : Cholesterol Lowering Drugs : CK(1038) : AC(90), Statin Drugs : CK(3705) : AC(437)

Topic: Kidney Damage

Statin drugs induce cell death in mouse kidney cells. - GMI Summary

Article Published Date : Oct 01, 1997
Authors : O Iimura, F Vrtovsnik, F Terzi, G Friedlander
**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Kidney Damage: CK(103) : AC(36), Statin-Induced Pathologies: CK(1470) : AC(206)

**Problem Substances**: Statin Drugs: CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Apoptotic: CK(5) : AC(5), Cytotoxic: CK(45) : AC(28), Nephrotoxic: CK(133) : AC(33)

---

**Topic: Myopathy: Iatrogenic**

**Statin drugs are associated with iatrogenic myopathy.** - GMI Summary


**Article Published Date**: Oct 01, 2010

**Authors**: Frank L Mastaglia

**Study Type**: Review

**Additional Links**

**Diseases**: Myopathy: Iatrogenic : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Topic: Neurodevelopmental Disorders**

**Postmortem analysis of Alzheimer brains reveals a loss in membrane cholesterol content, indicating that statin drugs may be contribute to neurodegenerative conditions.** - GMI Summary


**Article Published Date**: Apr 01, 2011

**Authors**: Elisa Biondi

**Study Type**: Review

**Additional Links**

**Diseases**: Neurodevelopmental Disorders : CK(157) : AC(12), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

---

**Topic: Neuromyotoxicity**

**Statin drugs have been identified to cause neuromyotoxicity.** - GMI Summary

**Pubmed Data**: Drugs Today (Barc). 2005 Apr ;41(4):267-93. PMID: 16034491

**Article Published Date**: Apr 01, 2005

**Authors**: Steven K Baker, Mark A Tarnopolsky

**Study Type**: Review

**Additional Links**

**Diseases**: Neuromyotoxicity : CK(1) : AC(1)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11), Neurotoxic : CK(879) : AC(87)
**Topic: Ovarian Failure**

*Simvastatin reduces steroid hormone production in rat ovarian cells.* - GMI Summary


**Article Published Date**: Sep 21, 2011

**Authors**: Israel Ortega, Amanda B Cress, Donna H Wong, Jesus A Villanueva, Anna Sokalska, Benjamin C Moeller, Scott D Stanley, Antoni J Duleba

**Study Type**: In Vitro Study

**Additional Links**
- Diseases: Ovarian Diseases: CK(9) : AC(4), Ovarian Failure: CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
- Problem Substances: Simvastatin : CK(657) : AC(114)
- Adverse Pharmacological Actions: Endocrine Disruptor: Ovary : CK(2) : AC(2)

---

**Topic: Skeletal Muscle: Drug-Induced Changes**

*Statin therapy alters the expression of genes that regulate calcium homeostasis and membrane repair in skeletal muscle.* - GMI Summary


**Article Published Date**: Jul 01, 2010

**Authors**: Annette Draeger, Verónica Sanchez-Freire, Katia Monastyrskaya, Hans Hoppeler, Matthias Mueller, Fabio Breil, Markus G Mohaupt, Eduard B Babychuk

**Study Type**: In Vitro Study

**Additional Links**
- Diseases: Skeletal Muscle: Drug-Induced Changes : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
- Problem Substances: Statin Drugs : CK(3705) : AC(437)

---

**Topic: Squamous cell carcinoma**

*Statin therapy may increase the risk for posttransplantation squamous cell carcinoma.* - GMI Summary


**Article Published Date**: Aug 01, 2010

**Authors**: Luca Mascitelli, Francesca Pezzetta, Mark R Goldstein

**Study Type**: Commentary

**Additional Links**
- Diseases: Skin Cancer : CK(397) : AC(169), Squamous cell carcinoma : CK(69) : AC(32), Statin-Induced Pathologies : CK(1470) : AC(206)
- Problem Substances: Statin Drugs : CK(3705) : AC(437)

---

**Topic: Stroke: Hemorrhagic**

*Statin after intracerebral hemorrhage may increase the riks of new hemorrhage.* - GMI Summary

---
**Topic: Suicidal Behavior**

Some patients on simvastatin could be vulnerable to depression, violence, or suicide during the initial treatment period. - GMI Summary

**Category: Adverse Pharmacological Actions**

**Topic: Myotoxicity**

Statin administration in animals results in a myopathy characterized by decreased muscle force and elevated plasma CK level. - GMI Summary

**Statins increase exercise-related muscle injury, which worsens with the age of the individual.** - GMI Summary
Statin drugs have been linked to rhabdomyolysis, myositis and kidney failure. - GMI Summary


Article Published Date: Oct 21, 2011

Authors: Alberico L Catapano

Study Type: Review

Additional Links

Diseases: Kidney Damage: Drug-Induced : CK(69) : AC(18), Kidney Failure : CK(228) : AC(42), Myositis : CK(15) : AC(2), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11), Nephrotoxic : CK(133) : AC(33)

Simvastatin-induced inhibition of mitochondrial respiration is likely associated myotoxicity. - GMI Summary


Article Published Date: Aug 04, 2011

Authors: Peter J Mullen, Anja Zahno, Peter Lindinger, Swarna Maseneni, Andrea Felser, Stephan Krähenbühl, Karin Brecht

Study Type: In Vitro Study

Additional Links

Diseases: Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5)

Problem Substances: Simvastatin : CK(657) : AC(114)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Statin-associated myopathy is underestimated and occurs in 5-10% of patients who receive them. - GMI Summary


Article Published Date: Aug 01, 2011

Authors: Loukianos S Rallidis, Katerina Fountoulaki, Maria Anastasiou-Nana

Study Type: Human Study

Additional Links

Diseases: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)
Statin-induced myalgia occurs in ~10% of lipid clinic outpatients. - GMI Summary


Article Published Date : Jul 20, 2011

Authors : Gualberto Ruano, Andreas Windemuth, Alan H B Wu, John P Kane, Mary J Malloy, Clive R Pullinger, Mohan Kocherla, Kali Bogaard, Bruce R Gordon, Theodore R Holford, Ankur Gupta, Richard L Seip, Paul D Thompson

Study Type : Human Study

Quercetin is able to ameliorate statin-drug induced skeletal muscle myopathy in an animal model. - GMI Summary


Article Published Date : Jul 20, 2011

Authors : Jamal Bouitbir, Anne-Laure Charles, Andoni Echaniz-Laguna, Michel Kindo, Frédéric Daussin, Johan Auwerx, François Piquard, Bernard Geny, Joffrey Zoll

Study Type : Animal Study

The incidence of statin-related myopathy may be as high as 10.5%. - GMI Summary


Article Published Date : Mar 18, 2011

Authors : Thomas F Whayne

Study Type : Review

Severe rhabdomyolysis due to rosuvastatin in a liver transplant subject with HIV has been reported. - GMI Summary


Article Published Date : Mar 01, 2011

Authors : Ana Moreno, Jesús Fortún, Javier Graus, Miguel A Rodríguez-Gandía, Carmen Quereda, María J Pérez-Elías, Javier Nuño, Philip Wikman, Santiago Moreno, Rafael Bárcena

Study Type : Human: Case Report
Statin-induced myopathy occurs in between 10-15% of users. - GMI Summary

Article Published Date: Feb 23, 2011
Authors: Thura T Abd, Terry A Jacobson
Study Type: Review
Additional Links
Diseases: Myopathies : CK(199) : AC(18)
Problem Substances: Atorvastatin : CK(231) : AC(37), Rosuvastatin : CK(28) : AC(6), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Statin-induced focal myositis of the upper extremities has been reported. - GMI Summary

Article Published Date: Feb 01, 2011
Authors: M Wagner, M Mühldorfer-Fodor, K J Prommersberger, R Schmitt
Study Type: Human: Case Report
Additional Links
Diseases: Myositis : CK(15) : AC(2), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Statin drugs are associated with iatrogenic myopathy. - GMI Summary

Article Published Date: Oct 01, 2010
Authors: Frank L Mastaglia
Study Type: Review
Additional Links
Diseases: Myopathy: Iatrogenic : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Statin-mediated myopathy is likely mediated by reductions in protein prenylation and especially N-linked glycosylation. - GMI Summary

Article Published Date: Apr 15, 2010
Authors: Peter James Mullen, Barbara Lüscher, Hubert Scharnagl, Stephan Krähenbühl, Karin Brecht
Study Type: In Vitro Study
Additional Links
Diseases: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Low dose simvastatin induces compositional, structural and dynamic changes in rat. - GMI Summary

Article Published Date: Feb 01, 2010
Statin-induced myopathy is associated with skeletal muscle cell MHC I expression changes. - GMI Summary

Article Published Date: Feb 01, 2010
Authors: Pratibha Singh, Danielle Kohr, Manfred Kaps, Franz Blaes
Study Type: In Vitro Study
Adverse Pharmacological Actions: Myotoxicity

Coenzyme Q10 deficiency may be one mechanism for statin-induced myopathies. - GMI Summary

Article Published Date: Jan 01, 2010
Authors: Richard Deichmann, Carl Lavie, Samuel Andrews
Study Type: Review
Adverse Pharmacological Actions: Myotoxicity

An explanation of the mechanism of statin-induced contractile dysfunction in rat cultured skeletal myofibers. - GMI Summary

Article Published Date: Jan 01, 2010
Authors: Syoko Tanaka, Kazuho Sakamoto, Masaya Yamamoto, Anna Mizuno, Tomoyuki Ono, Satoshi Waguri, Junko Kimura
Study Type: In Vitro Study

Statin drugs, particularly simivastatin, increase the risk for significant creatine kinase elevation. - GMI Summary

Muscle problems due to statins have been underestimated and may be as prevalent as 10%.

Neuroleptic malignant syndrome as a possible statin drug reaction has been reported.

Statin-induced muscle toxicity may be associated with altered oxidation of fatty acids.

Statin-induced Ca(2+) release from ryanodine-sensitive stores and mitochondria an may
Contribute to myotoxicity. - GMI Summary


Article Published Date : Jan 01, 2009

Authors : Takayuki Hattori, Kuniaki Saito, Masao Takemura, Hiroyasu Ito, Hirotoshi Ohta, Hisayasu Wada, Yoshitatsu Sei, Mitsunobu Kawamura, Mitsuru Seishima

Study Type : In Vitro Study

Additional Links

Diseases : Myopathies : CK(199) : AC(18)
Problem Substances : Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Review: Clinical characterization and molecular mechanisms of statin myopathy. - GMI Summary


Article Published Date : Aug 01, 2008

Authors : Peter P Toth, Charles R Harper, Terry A Jacobson

Study Type : Review

Additional Links

Diseases : Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Statin drugs may contribute to a wide range of disorders via interference with mitochondrial function. - GMI Summary


Article Published Date : Jan 01, 2008

Authors : Beatrice A Golomb, Marcella A Evans

Study Type : Review

Additional Links

Diseases : Mitochondrial Dysfunction : CK(95) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

The adverse effects associated with statin drug use has been linked to mitochondrial dysfunction. - GMI Summary

Article Published Date : Jan 01, 2008

Authors : Beatrice A Golomb, Marcella A Evans

Study Type : Review

Additional Links

Diseases : Mitochondrial Dysfunction : CK(95) : AC(35), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Muscle complaints occur in 10% or more of patients started on high-dose statins. - GMI Summary

Muscle complaints occur in 10% or more of patients started on high-dose statins.
**Statin use may be contraindicated in hypothyroidism.** - GMI Summary


**Article Published Date**: Mar 01, 2007

**Authors**: Simona L Bar, Daniel T Holmes, Jiri Frohlich

**Study Type**: Human: Case Report

**Additional Links**

- **Diseases**: Hyperlipidemia: CK(864) : AC(105), Hypothyroidism : CK(391) : AC(75), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin therapy may result in progressive myopathy with up-regulation of MHC-I associated with an endoplasmic reticulum stress response.** - GMI Summary

**Pubmed Data**: Neuromusc Disord. 2007 Feb ;17(2):194-200. Epub 2007 Jan 22. PMID: 17241784

**Article Published Date**: Feb 01, 2007

**Authors**: Merrilee Needham, Victoria Fabian, Wally Knezevic, Peter Panegyres, Paul Zilko, Frank L Mastaglia

**Study Type**: Human: Case Report

**Additional Links**

- **Diseases**: Myopathies : CK(199) : AC(18), Skeletal Muscle Changes to MHC I expression : CK(4) : AC(2), Skeletal Muscle Changes: Endoplasmic Reticulum Stress : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Pharmacological Actions**: Anti-Inflammatory Agents : CK(1025) : AC(400)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Simvastatin decreases coenzyme q10 levels in the left ventricle of the heart and skeletal muscle.** - GMI Summary

**Pubmed Data**: Physiol Res. 2007;56 Suppl 2:S49-54. Epub 2007 Sep 5. PMID: 17824807

**Article Published Date**: Jan 01, 2007

**Authors**: J Kucharská, A Gvozdjáková, F Simko

**Study Type**: Animal Study

**Additional Links**

- **Diseases**: Cardiovascular Diseases : CK(3885) : AC(623), Drug-Induced Nutrient Depletion: Statin Drugs: CK(115) : AC(17), Hypertension : CK(1341) : AC(257), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Cardiotoxic : CK(467) : AC(53), Myotoxicity : CK(259) : AC(11)

---

**Asymptomatic statin-induced rhabdomyolysis after long-term therapy with the hydrophilic drug**
**pravastatin has been reported.** - GMI Summary

**Pubmed Data**: Clin Ther. 2007 Jan ;29(1):172-6. PMID: 17379057

**Article Published Date**: Jan 01, 2007

**Authors**: Christoph Schindler, Marcus Thorns, Klaus Matschke, Sems Malte Tugtekin, Wilhelm Kirch

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Rhabdomyolysis: CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**It is thought that as many as 25% of statin users who exercise may experience muscle fatigue, weakness, aches, and cramping due to statin therapy and potentially dismissed by the patient and physician.** - GMI Summary


**Article Published Date**: Dec 01, 2006

**Authors**: Amie J Dirks, Kimberly M Jones

**Study Type**: Review

**Additional Links**

**Diseases**: Muscle Damage: Exercise-Induced : CK(61) : AC(6), Myalgias : CK(25) : AC(3), Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38), Apoptotic : CK(1446) : AC(1045)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Statin drugs induce ultrastructural damage in skeletal muscle in patients without myalgia.** - GMI Summary

**Pubmed Data**: J Pathol. 2006 Sep ;210(1):94-102. PMID: 16799920

**Article Published Date**: Sep 01, 2006

**Authors**: A Draeger, K Monastyrskaya, M Mohaupt, H Hoppeler, H Savolainen, C Allemann, E B Babiychuk

**Study Type**: Human Study

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)

---

**Myopathy is a therapeutic limitation of statin drug therapy.** - GMI Summary

**Pubmed Data**: Expert Opin Drug Saf. 2006 Sep ;5(5):651-66. PMID: 16907655

**Article Published Date**: Sep 01, 2006

**Authors**: Atul Tiwari, Vinay Bansal, Anita Chugh, Kasim Mookhtiar

**Study Type**: Review

**Additional Links**

**Diseases**: Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Myotoxicity : CK(259) : AC(11)
Statin treatment may contribute to presymptomatic neuromuscular disorders. - GMI Summary

Article Published Date: Jul 24, 2006
Authors: Georgios Tsivgoulis, Konstantinos Spengos, Nikolaos Karandreas, Marios Panas, Athina Kladi, Panagioti Manta
Study Type: Human: Case Report
Additional Links
Diseases: Myopathies: CK(199) : AC(18), Neuromuscular Diseases: CK(11) : AC(2), Presymptomatic Metabolic Myopathy : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Exposure to atorvastatin is associated with lactone and acid metabolites that are increased several-fold in patients with atorvastatin-induced myopathy. - GMI Summary

Article Published Date: Jun 01, 2006
Authors: Monica Hermann, Martin P Bogsrud, Espen Molden, Anders Asberg, Beata U Mohebi, Leiv Ose, Kjetil Retterstøl
Study Type: Human Study
Additional Links
Diseases: Myopathies: CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Atorvastatin : CK(231) : AC(37)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

The incidence of statin-induced rhabdomyolysis is higher in practice than in controlled trials in which high-risk subjects are excluded. - GMI Summary

Article Published Date: May 01, 2006
Authors: Kenneth A Antons, Craig D Williams, Steven K Baker, Paul S Phillips
Study Type: Review
Additional Links
Diseases: Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Statin drugs have been linked to myopathy, including rhabdomyolysis. - GMI Summary

Pubmed Data: Arch Intern Med. 2005 Dec 12-26;165(22):2671-6. PMID: 16344427
Article Published Date: Dec 12, 2005
Authors: Karen E Hansen, Julie P Hildebrand, Edwin E Ferguson, James H Stein
Study Type: Human Study
Additional Links
Diseases: Myopathies : CK(199) : AC(18), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11)

Fluvastatin-induced dermatomyositis has been reported. - GMI Summary
**Exercise exacerbates cerivastatin-induced skeletal muscle toxicity.** - GMI Summary


**Article Published Date** : Dec 01, 2005

**Authors** : Jennifer L Seachrist, Cho-Ming Loi, Mark G Evans, Kay A Criswell, Charles E Rothwell

**Study Type** : Human Study

**Additional Links**


**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11)

---

**Some 10% to 20% of heart transplant patients appear to suffer adverse side effects of initial statin therapy.** - GMI Summary

**Pubmed Data** : Transplant Proc. 2005 Nov ;37(9):4071-3. PMID: 16386629

**Article Published Date** : Nov 01, 2005


**Study Type** : Human Study

**Additional Links**


**Pharmacological Actions** : Anticholesterolmic Agents : CK(298) : AC(38)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Hepatotoxic : CK(95) : AC(34), Myotoxicity : CK(259) : AC(11)

---

**Statin toxicity may mimic viral hepatitis.** - GMI Summary


**Article Published Date** : Nov 01, 2005

**Authors** : F Cokça, S Ozkan, G Nergisoglu, O Memikoglu, A Azap

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : Hepatitis: Acute : CK(5) : AC(1), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions** : Anticholesterolmic Agents : CK(298) : AC(38)

**Problem Substances** : Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11), Nephrotoxic : CK(133) : AC(33)
**Statin-induced myopathic weakness causing disability is an underappreciated side effect.** - GMI Summary

**Pubmed Data** : Neurorehabil Neural Repair. 2005 Sep ;19(3):259-63. PMID: 16093417

**Article Published Date** : Sep 01, 2005

**Authors** : Bruce H Dobkin

**Study Type** : Human Study

**Additional Links**

**Diseases** : Myopathies : CK(199) : AC(18)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11)

---

**Review: molecular pathogenesis of statin myopathy.** - GMI Summary

**Pubmed Data** : Muscle Nerve. 2005 May ;31(5):572-80. PMID: 15712281

**Article Published Date** : May 01, 2005

**Authors** : Steven K Baker

**Study Type** : Review

**Additional Links**

**Diseases** : Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11)

---

**Statins alter mitochondrial function which may be associated with myotoxicity in skeletal muscle.** - GMI Summary

**Pubmed Data** : Biochem Biophys Res Commun. 2005 Apr 15 ;329(3):1067-75. PMID: 15752763

**Article Published Date** : Apr 15, 2005

**Authors** : Pascal Sirvent, Jacques Mercier, Guy Vassort, Alain Lacampagne

**Study Type** : In Vitro Study

**Additional Links**

**Diseases** : Mitochondrial Dysfunction : CK(95) : AC(35), Mitochondrial Myopathies : CK(33) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11)

---

**Statin drugs have been identified to cause neuromyotoxicity.** - GMI Summary

**Pubmed Data** : Drugs Today (Barc). 2005 Apr ;41(4):267-93. PMID: 16034491

**Article Published Date** : Apr 01, 2005

**Authors** : Steven K Baker, Mark A Tarnopolsky

**Study Type** : Review

**Additional Links**

**Diseases** : Neuromyotoxicity : CK(1) : AC(1)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11), Neurotoxic : CK(879) : AC(87)

---

**A dermatomyositis-like syndrome has been linked to statin drug use.** - GMI Summary

A dermatomyositis-like syndrome has been linked to statin drug use. - GMI Summary


Statin drugs induce cell death in rat myotubes. - GMI Summary


Among top sports performers only about 20% tolerate statin treatment without side-effects. - GMI Summary


Statin drugs may induce selenium deficiency which may explain many of its enigmatic side effects. - GMI Summary

Rhabdomyolysis induced by a single dose of a statin has been reported. - GMI Summary

Pubmed Data: Heart. 2004 Jan;90(1):e3. PMID: 14676266

Article Published Date: Jan 01, 2004

Authors: S Jamil, P Iqbal

Study Type: Human: Case Report

Additional Links

Diseases: Rhabdomyolysis: CK(37): AC(6), Statin-Induced Pathologies: CK(1470): AC(206)

Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

The statin drug atorvastatin induces adverse ultrastructural changes in muscle cells apparent through electron microscopy. - GMI Summary


Article Published Date: Jan 01, 2004

Authors: Miroslaw Lańcut, Barbara Jedrych, Marta Lis-Sochocka, Krystyna Czerny

Study Type: In Vitro Study

Additional Links


Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11), Neurotoxic: CK(879): AC(87)

Statins appear to cause muscle damage and impair oxidative metabolism. - GMI Summary


Article Published Date: Jan 01, 2004

Authors: S Gambelli, M T Dotti, A Malandrini, M Mondelli, M L Stromillo, C Gaudiano, A Federico

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Pravastatin-associated polymyositis has been reported. - GMI Summary


Article Published Date: Jan 01, 2004

Authors: Akio Takagi, Yasusi Shiio

Study Type: Human: Case Report
Review: muscle symptoms associated with lipid-lowering drugs. - GMI Summary

Pubmed Data: Cardiovasc Drugs Ther. 2003 Sep-Nov;17(5-6):459-65. PMID: 15107601

Article Published Date: Sep 01, 2003

Authors: Sylvia Franc, Sylvie Dejager, Eric Bruckert, Marina Chauvenet, Philippe Giral, Gérard Turpin

Study Type: Human Study

Statin-associated myopathy is a significant problem with a prevalence rate between 1-5%.- GMI Summary

Pubmed Data: JAMA. 2003 Apr 2;289(13):1681-90. PMID: 12672737

Article Published Date: Apr 02, 2003

Authors: Paul D Thompson, Priscilla Clarkson, Richard H Karas

Study Type: Review

The total rhabdomyolysis rate for cerivastatin was 16 - 80 times more frequent than with other statins without providing additional efficacy.- GMI Summary


Article Published Date: Sep 01, 2002

Authors: Michael H Davidson

Study Type: Review

Rhabdomyolysis is a rare but clinically important adverse event of statin monotherapy or combination therapy. - GMI Summary


Article Published Date: Sep 01, 2001

Authors: M A Omar, J P Wilson, T S Cox

Study Type: Review
Muscular side effects associated with statin drug use are related to oxidative stress. - GMI Summary


Article Published Date: Aug 01, 2001

Authors: H Sinzinger, G Lupattelli, F Chehne, A Oguogho, C D Furberg

Study Type: Human Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11), Oxidant: CK(63): AC(23)

Influenza vaccine has been reported to be a possible trigger of rhabdomyolysis induced acute renal failure in those taking statin drugs. - GMI Summary


Article Published Date: May 01, 2000

Authors: E Plotkin, J Bernheim, S Ben-Chetrit, A Mor, Z Korzets

Study Type: Human: Case Report

Additional Links

Diseases: Rhabdomyolysis: CK(37): AC(6), Statin-Induced Pathologies: CK(1470): AC(206)


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Fatal rhabdomyolysis associated with simvastatin in a renal transplant patient has been reported. - GMI Summary


Article Published Date: Mar 01, 2000

Authors: W J Weise, C J Possidente

Study Type: Human: Case Report

Additional Links


Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Polymyalgia, hypersensitivity pneumonitis and other reactions have been reported in patients taking statin drugs. - GMI Summary


Article Published Date: Mar 01, 1999

Authors:
Lovastatin increases exercise-induced skeletal muscle injury in human subjects. - GMI

Summary

Pubmed Data: Metabolism. 1997 Oct;46(10):1206-10. PMID: 9322808
Article Published Date: Oct 01, 1997
Authors: P D Thompson, J M Zmuda, L J Domalik, R J Zimet, J Staggers, J R Guyton
Study Type: Human Study

The myotoxicity of statin drugs may be due to the inhibition of the geranylgeranylation of low-molecular-weight proteins in the muscle cells. - GMI

Summary

Article Published Date: Jul 01, 1997
Authors: O P Flint, B A Masters, R E Gregg, S K Durham
Study Type: In Vitro Study

A possible increased risk of rhabdomyolysis during concomitant use of simvastatin and gemfibrozil has been reported. - GMI

Summary

Article Published Date: Dec 01, 1996
Authors: E P van Puijenbroek, P W Du Buf-Vereijken, P F Spooren, J J van Doormaal
Study Type: Human: Case Report

Statin therapy can be associated with high blood lactate/pyruvate ratio suggestive of
**mitochondrial dysfunction** - GMI Summary


**Article Published Date** : Sep 01, 1996

**Authors** : G De Pinieux, P Chariot, M Ammi-Saïd, F Louarn, J L Lejonc, A Astier, B Jacotot, R Gherardi

**Study Type** : Human Study

**Additional Links**

**Diseases** : Blood Lactate/Pyruvate Ratio: Elevated : CK(10) : AC(1), Coenzyme Q10 Deficiency : CK(42) : AC(5), Mitochondrial Dysfunction : CK(95) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions** : Enzyme Inhibitors : CK(340) : AC(201)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Myotoxicity : CK(259) : AC(11)

---

**Statin drugs exhibit myotoxic, neurotoxic, hepatotoxic and testicule damaging properties in the anima model.** - GMI Summary

**Pubmed Data** : Toxicol Pathol. 1996 Jul-Aug;24(4):468-76. PMID: 8864188

**Article Published Date** : Jul 01, 1996

**Authors** : K M Walsh, M A Albassam, D E Clarke

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Brain Damage : CK(65) : AC(28), Liver Damage: Drug-Induced : CK(36) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206), Testicular Diseases : CK(37) : AC(14)

**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38), Enzyme Inhibitors : CK(340) : AC(201)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Hepatotoxic : CK(95) : AC(34), Myotoxicity : CK(259) : AC(11), Neurotoxic : CK(879) : AC(87)

---

**Simvastatin worsens the myocardial mitochondrial respiration during ischemia probably due to depletion of coenzyme Q10.** - GMI Summary


**Article Published Date** : Sep 01, 1995

**Authors** : K Satoh, A Yamato, T Nakai, K Hoshi, K Ichihara

**Study Type** : Animal Study

**Additional Links**

**Diseases** : Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Mitochondrial Dysfunction : CK(95) : AC(35), Myocardial Ischemia : CK(83) : AC(36), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions** : Enzyme Inhibitors : CK(340) : AC(201)

**Problem Substances** : Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions** : Cardiotoxic : CK(467) : AC(53), Myotoxicity : CK(259) : AC(11)

---

**Pravastatin-associated myopathy has been reported.** - GMI Summary

**Pubmed Data** : Recenti Prog Med. 1995 May ;86(5):198-200. PMID: 7604176

**Article Published Date** : May 01, 1995

**Authors** : T Scalvini, D Marocolo, B Cerudelli, I Sleiman, G P Balestrieri, G Giustina

**Study Type** : Human: Case Report

**Additional Links**

**Diseases** : Myopathies : CK(199) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Pravastatin: CK(197): AC(31)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Statin drugs exhibit myotoxicity. - GMI Summary

Article Published Date: Mar 01, 1995
Authors: B A Masters, M J Palmoski, O P Flint, R E Gregg, D Wang-Iverson, S K Durham
Study Type: In Vitro Study
Additional Links
Diseases: Myopathies: CK(199): AC(18), Statin-Induced Pathologies: CK(1470): AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

Lovastatin causes depletion of coenzyme Q10 levels in the cardiac muscle and mitochondria of animals. - GMI Summary

Pubmed Data: Biochim Biophys Acta. 1994 Jul 6;1200(2):100-8. PMID: 8031828
Article Published Date: Jul 06, 1994
Authors: B A Diebold, N V Bhagavan, R J Guillory
Study Type: Animal Study
Additional Links
Problem Substances: Lovastatin: CK(63): AC(12)

Lovastatin has the potential of causing muscle damage. - GMI Summary

Article Published Date: Sep 01, 1993
Authors: A J Waclawik, S Lindal, A G Engel
Study Type: Animal Study
Additional Links
Diseases: Myopathies: CK(199): AC(18), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Lovastatin: CK(63): AC(12)
Adverse Pharmacological Actions: Myotoxicity: CK(259): AC(11)

A case of simvastatin-induced acute rhabdomyolysis with heart failure after initiation of treatment with fusidic acid has been reported. - GMI Summary

Article Published Date: Apr 01, 1992
Authors: C Dromer, C Vedrenne, T Billey, M Pages, B Fournié, A Fournié
Study Type: Human: Case Report
Additional Links
Diseases: Congestive Heart Failure: CK(147): AC(29), Rhabdomyolysis: CK(37): AC(6), Statin-Induced Pathologies: CK(1470): AC(206)
Rhabdomyolysis secondary to lovastatin therapy has been reported. - GMI Summary

Pubmed Data : Clin Chem. 1990 Dec ;36(12):2145-7. PMID: 2253372
Article Published Date : Dec 01, 1990
Authors : A A Manoukian, N V Bhagavan, T Hayashi, T A Nestor, C Rios, A G Scottolini
Study Type : Human: Case Report
Additional Links
Diseases : Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions : Myotoxicity : CK(259) : AC(11)

Statin drugs may interfere with neurological function in the brain by inhibiting cholesterol biosynthesis and synaptic transmission. - GMI Summary

Article Published Date : Sep 07, 2011
Authors : Tiffany Mailman, Manoj Hariharan, Barbara Karten
Study Type : Review
Additional Links
Diseases : Drug-Induced Toxicity : CK(503) : AC(76), Neurologic Disorders : CK(42) : AC(18), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Statin drugs exhibit neurotoxicity in an animal neuronal cell line. - GMI Summary

Article Published Date : Sep 01, 2011
Authors : K Vural, M I Tuğlu
Study Type : Animal Study
Additional Links
Diseases : Brain Damage : CK(65) : AC(28), Neurodegenerative Diseases : CK(1481) : AC(410), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions : Antiproliferative : CK(965) : AC(680)
Problem Substances : Atorvastatin : CK(231) : AC(37), Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Neurotoxic : CK(879) : AC(87)

Statin drugs adversely effect memory likely through depletion of coenzyme q10 and interference with mitochondrial function in the brain. - GMI Summary

Article Published Date : Jul 08, 2011
Authors : M Fux, J Levine, A Aviv, R H Belmaker
Postmortem analysis of Alzheimer brains reveals a loss in membrane cholesterol content, indicating that statin drugs may be contribute to neurodegenerative conditions. - GMI Summary

Article Published Date: Apr 01, 2011
Authors: Elisa Biondi
Study Type: Review
Additional Links
Diseases: Neurodevelopmental Disorders: CK(157) : AC(12), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Simvastatin interferes with oligodendrocyte function, particularly the prior step in remyelination, indicating it may be harmful in demyelination diseases like MS. - GMI Summary

Pubmed Data: J Neurosci Res. 2010 Nov 15 ;88(15):3361-75. PMID: 20857509
Article Published Date: Nov 15, 2010
Authors: Inge Smolders, Ilse Smets, Olaf Maier, Martin vandeVen, Paul Steels, Marcel Ameloot
Study Type: In Vitro Study
Additional Links
Diseases: Demyelinating Diseases: CK(1194) : AC(240), Multiple Sclerosis: CK(664) : AC(130), Neuropathies: CK(322) : AC(62), Statin-Induced Pathologies: CK(1470) : AC(206)
Problem Substances: Simvastatin: CK(657) : AC(114)
Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Mevastatin accelerates loss of synaptic proteins and neurite degeneration in neurons. - GMI Summary

Article Published Date: Sep 01, 2010
Authors: Madhuvanthi Kannan, Joern R Steinert, Ian D Forsythe, Andrew G Smith, Tatyana Chernova
Study Type: In Vitro Study
Additional Links
Pharmacological Actions: Anticholesterolmic Agents: CK(298) : AC(38), Apoptotic: CK(1446) : AC(1045)
Problem Substances: Lovastatin: CK(63) : AC(12)
Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Simvastatin inhibits brain cholesterol biosynthesis without positively altering molecular indices of Alzheimer disease pathology. - GMI Summary
Severe statin-induced rhabdomyolysis mimicking Guillain-Barré syndrome in four patients with diabetes mellitus treated with fusidic acid has been reported. - GMI Summary

Simvastatin delays nerve regeneration. - GMI Summary

Statin-associated adverse cognitive effects have been reported with 90% resolving after drug discontinuation. - GMI Summary

Statin drugs inhibit central nervous system remyelination. - GMI Summary
Simvastatin treatment induces morphology alterations and cell death in mouse cochlear neuronal cells. - GMI Summary

Statin drugs interfere with neurological healing by inhibiting myelin formation. - GMI Summary

Simvastatin exhibits neurotoxicity in the animal model. - GMI Summary
### Statins have been associated with cell death in primary neuronal culture. - GMI Summary

**Article Published Date**: Jan 01, 2007
**Authors**: Pia März, Uwe Otten, André R Miserez
**Study Type**: In Vitro Study
**Additional Links**
- **Diseases**: Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

### Psychiatric adverse reactions associated with cholesterol-lowering drugs have been reported. - GMI Summary

**Pubmed Data**: Drug Saf. 2007 ;30(3):195-201. PMID: 17343428
**Article Published Date**: Jan 01, 2007
**Authors**: Michael Tatley, Ruth Savage
**Study Type**: Human Study
**Additional Links**
- **Diseases**: Aggression : CK(37) : AC(5), Depression: Unipolar : CK(442) : AC(69), Memory Disorders: Drug-Induced : CK(47) : AC(9), Psychiatric Disorders : CK(47) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)
- **Problem Substances**: Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

### Statins-induced MELAS syndrome has been reported. - GMI Summary

**Article Published Date**: Jan 01, 2007
**Authors**: Joseph E Thomas, Nora Lee, Paul D Thompson
**Study Type**: Human: Case Report
**Additional Links**
- **Diseases**: MELAS Syndrome : CK(20) : AC(2), Mitochondrial Diseases : CK(92) : AC(33)
- **Problem Substances**: Statin Drugs : CK(3705) : AC(437)
- **Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)

### Simvastatin-induced decline in cognition has been reported. - GMI Summary

**Article Published Date**: Oct 01, 2006
**Authors**: Kalpana P Padala, Prasad R Padala, Jane F Potter
**Study Type**: Human: Case Report
**Additional Links**
- **Diseases**: Cognitive Decline/Dysfunction : CK(350) : AC(71), Memory Disorders : CK(171) : AC(55), Memory Loss : CK(89) : AC(30), Statin-Induced Pathologies : CK(1470) : AC(206)
- **Problem Substances**: Simvastatin : CK(657) : AC(114)
- **Adverse Pharmacological Actions**: Neurotoxic : CK(879) : AC(87)
Statin drugs have been linked to neurotoxicity. - GMI Summary


Article Published Date: Oct 01, 2006

Authors: J J de Langen, E P van Puijenbroek

Study Type: Human Study

Additional Links

Diseases: Neuropathies: CK(322) : AC(62), Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Short-term memory loss associated with rosvastatin has been reported. - GMI Summary


Article Published Date: Aug 01, 2006

Authors: Laura Galatti, Giovanni Polimeni, Francesco Salvo, Marcello Romani, Aurelio Sessa, Edoardo Spina

Study Type: Human: Case Report

Additional Links

Diseases: Memory Disorders : CK(171) : AC(55), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances: Rosuvastatin : CK(28) : AC(6), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Statin neuropathy misdiagnosed as diabetic autoimmune polyneuropathy has been reported. - GMI Summary


Article Published Date: Aug 01, 2005

Authors: Tom Brooks Vaughan, David S H Bell

Study Type: Human: Case Report

Additional Links

Diseases: Neuropathies : CK(322) : AC(62), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Statin drugs have been identified to cause neuromyotoxicity. - GMI Summary


Article Published Date: Apr 01, 2005

Authors: Steven K Baker, Mark A Tarnopolsky

Study Type: Review

Additional Links

Diseases: Neuromyotoxicity : CK(1) : AC(1)

Problem Substances: Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Myotoxicity : CK(259) : AC(11), Neurotoxic : CK(879) : AC(87)
Statin drug use results in decrements in cognitive functioning. - GMI Summary


Article Published Date: Dec 01, 2004

Authors: Matthew F Muldoon, Christopher M Ryan, Susan M Sereika, Janine D Flory, Stephen B Manuck

Study Type: Human Study

Additional Links

Diseases: Cognitive Decline/Dysfunction: CK(350) : AC(71), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Lipid lowering drugs increase the risk of peripheral neuropathy. - GMI Summary

Pubmed Data: J Epidemiol Community Health. 2004 Dec;58(12):1047-51. PMID: 15547071

Article Published Date: Dec 01, 2004

Authors: Giovanni Corrao, Antonella Zambon, Lorenza Bertù, Edoardo Botteri, Olivia Leoni, Paolo Contiero

Study Type: Human Study

Additional Links

Diseases: Peripheral Neuropathies: CK(111) : AC(24), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Cholesterol Lowering Drugs: CK(1038) : AC(90), Fenofibrates: CK(83) : AC(11), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Statin-associated peripheral neuropathy has been recorded in the biomedical literature. - GMI Summary

Pubmed Data: Pharmacotherapy. 2004 Sep;24(9):1194-203. PMID: 15460180

Article Published Date: Sep 01, 2004

Authors: Pang H Chong, Alexandra Boskovich, Natasa Stevkovic, Russell E Bartt

Study Type: Human Study

Additional Links

Diseases: Peripheral Neuropathies: CK(111) : AC(24), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Simvastatin-induced mononeuropathy has been reported. - GMI Summary


Article Published Date: Jun 01, 2004

Authors: Rosana H Scola, Ana P Trentin, Francisco M B Germiniani, Elcio J Piovesan, Lineu C Werneck

Study Type: Human: Case Report

Additional Links

Diseases: Neuropathies: CK(322) : AC(62), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

The statin drug atorvastatin induces adverse ultrastructural changes in muscle cells apparent through electron microscopy. - GMI Summary

Cognitive impairment associated with statin drug use has been reported. - GMI Summary

Pubmed Data: Pharmacotherapy. 2003 Dec ;23(12):1663-7. PMID: 14695047

Atorvastatin-induced polyneuropathy has been reported. - GMI Summary


Statin drugs show no cognitive or anti-amyloid benefits and may be associated with cognitive impairment. - GMI Summary

Pubmed Data: Pharmacotherapy. 2003 Jul ;23(7):871-80. PMID: 12885101

Statin therapy has been associated with small fibre neuropathy. - GMI Summary

Pubmed Data: J Neurol Sci. 2003 Apr 15 ;208(1-2):105-8. PMID: 12639733
Statin use is associated with with neuropathy. - GMI Summary


Long-term exposure to statin drugs may substantially increase the risk of polyneuropathy. - GMI Summary

Pubmed Data : Neurology. 2002 May 14 ;58(9):1333-7. PMID: 12011277

Statin-induced memory loss has been reported. - GMI Summary


Users of lipid-lowering drugs are at increased risk of peripheral neuropathy. - GMI Summary

Lovastatin induces neuronal cell death through interacting with signal transduction pathways that cell control growth and survival. - GMI Summary

Article Published Date: Feb 01, 2001
Authors: N García-Román, A M Alvarez, M J Toro, A Montes, M J Lorenzo

Lovastatin may adversely affect neuropsychological tests of attention and psychomotor speed. - GMI Summary

Article Published Date: May 01, 2000
Authors: M F Muldoon, S D Barger, C M Ryan, J D Flory, J P Lehoczky, K A Matthews, S B Manuck

Simvastatin exhibits neurotoxic properties. - GMI Summary

Pubmed Data: Brain Res. 2000 Mar 17;859(1):169-72. PMID: 10720627
Article Published Date: Mar 17, 2000
Authors: T Kumano, T Mutoh, H Nakagawa, M Kuriyama

Lovastatin induces neuronal cell death. - GMI Summary

Article Published Date: Jun 01, 1999
Authors: M Michikawa, K Yanagisawa
Long-term statin treatment may be associated with chronic peripheral neuropathy. - GMI Summary

Article Published Date: Jan 01, 1999
Authors: U Jeppesen, D Gaist, T Smith, S H Sindrup
Study Type: Human: Case Report
Additional Links
Diseases: Neuropathies: CK(322) : AC(62), Statin-Induced Pathologies: CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Peripheral neuropathy induced by lipid-lowering therapy has been reported. - GMI Summary

Article Published Date: Jul 01, 1998
Authors: P E Ziajka, T Wehmeier
Study Type: Human: Case Report
Additional Links
Diseases: Peripheral Neuropathies: CK(111) : AC(24), Cholesterol Lowering Drugs: CK(1038) : AC(90), Lovastatin: CK(63) : AC(12), Pravastatin: CK(197) : AC(31), Simvastatin: CK(657) : AC(114), Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Statin drugs are associated with adverse mental effects. - GMI Summary

Pubmed Data: Tidsskr Nor Laegeforen. 1997 Sep 20 ;117(22):3210-3. PMID: 9411859
Article Published Date: Sep 20, 1997
Authors: I Buajordet, S Madsen, H Olsen
Study Type: Human Study
Additional Links
Diseases: Aggression: CK(37) : AC(5), Anxiety Disorders: CK(546) : AC(79), Depression: Unipolar: CK(442) : AC(69), Impotence: CK(3) : AC(1), Sleep Disorders: CK(103) : AC(10), Statin-Induced Pathologies: CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)
Problem Substances: Statin Drugs: CK(3705) : AC(437)
Adverse Pharmacological Actions: Neurotoxic: CK(879) : AC(87)

Simvastatin exhibits neurotoxicity in a neuronal cell model. - GMI Summary

Article Published Date: Dec 06, 1996
Authors: I Sato-Suzuki, S Murota
Study Type: In Vitro Study
Additional Links
Diseases: Brain Damage: CK(65) : AC(28), Neurotoxicity: CK(8) : AC(4), Statin-Induced Pathologies: CK(1470) : AC(206)
Pharmacological Actions: Antiproliferative: CK(965) : AC(680), Enzyme Inhibitors: CK(340) : AC(201)
Problem Substances: Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Statin drugs exhibit myotoxic, neurotoxic, hepatotoxic and testicule damaging properties in the anima model. - GMI Summary

Article Published Date: Jul 01, 1996
Authors: K M Walsh, M A Albassam, D E Clarke
Study Type: Animal Study
Additional Links
Diseases: Brain Damage : CK(65) : AC(28), Liver Damage: Drug-Induced : CK(36) : AC(6), Statin-Induced Pathologies: CK(1470) : AC(206), Testicular Diseases : CK(37) : AC(14)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38), Enzyme Inhibitors : CK(340) : AC(201)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34), Myotoxicity : CK(259) : AC(11), Neurotoxic : CK(879) : AC(87)

Lovastatin exhibits neurotoxic properties. - GMI Summary

Article Published Date: Oct 01, 1995
Authors: Y V Bobryshev, O V Pavlov, Y V Balabanov, K Ashwell
Study Type: In Vitro Study
Additional Links
Diseases: Neurotoxicity : CK(8) : AC(4), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Enzyme Inhibitors : CK(340) : AC(201)
Problem Substances: Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87)

Lovastatin exhibits toxicity in human fetal brain cells. - GMI Summary

Article Published Date: Jan 01, 1995
Authors: O V Pavlov, Bobryshev YuV, Balabanov YuV, K Ashwell
Study Type: Human In Vitro
Additional Links
Pharmacological Actions: Antiproliferative : CK(965) : AC(680)
Problem Substances: Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions: Neurotoxic : CK(879) : AC(87), Teratogenic : CK(271) : AC(50)

Lovastatin may adversely affect myelin formation and the remyelination process. - GMI Summary

Article Published Date: Apr 01, 1994
Authors: L Sepp-Lorenzino, P S Coleman, J N Larocca
Some statin drugs are may cause neurological problems due to their ability to cross the blood-brain barrier. - GMI Summary

Article Published Date : Feb 01, 1994
Authors : A Saheki, T Terasaki, I Tamai, A Tsuji
Study Type : Animal Study

Psychiatric disorders with use of simvastatin have been reported. - GMI Summary

Article Published Date : Jun 26, 1993
Authors : N Duits, F M Bos
Study Type : Human: Case Report

Statins have been associated with arrest of DNA synthesis and proliferation in glial cells. - GMI Summary

Pubmed Data : J Neurochem. 1986 Apr;46(4):1283-91. PMID: 3633306
Article Published Date : Apr 01, 1986
Authors : T J Langan, J J Volpe
Study Type : In Vitro Study

Topic: Hepatotoxic

Statin drugs increase the risk of diabetes and cause abnormal liver enzyme elevations. - GMI Summary

Liver failure and damage are rare but severe unintended consequences of statin drug use. - GMI Summary

Atorvastatin-induced acute pancreatitis has been reported. - GMI Summary

Review: Drug-induced liver injury associated with statins. - GMI Summary

Cholestatic jaundice induced by atorvastatin has been observed. - GMI Summary
**Simvastatin-ezetimibe-induced hepatic failure necessitating liver transplantation has been reported. - GMI Summary**

**Pubmed Data**: Pharmacotherapy. 2008 Sep ;28(9):1188-93. PMID: 18752389

**Authors**: Sony Tuteja, Nikolaos T Pyrsoopoulos, William R Wolowich, Kamran Khanmoradi, David M Levi, Gennaro Selvaggi, Geoffrey Weisbaum, Andreas G Tzakis, Eugene R Schiff

**Study Type**: Human: Case Report

**Diseases**: Liver Damage: Drug-Induced : CK(36) : AC(6), Organ Transplantation: Liver : CK(78) : AC(17), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Simvastatin : CK(557) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Hepatotoxic : CK(95) : AC(34)

**Atorvastatin has been reported to have caused severe acute hepatitis with symptomatic cholestasis for more than 3 months and bile duct injury. - GMI Summary**

**Pubmed Data**: Acta Gastroenterol Belg. 2008 Jul-Sep;71(3):318-20. PMID: 19198578

**Authors**: J F Rahier, J Rahier, I Leclercq, A P Geubel

**Study Type**: Human: Case Report

**Diseases**: Bile Duct Injury : CK(6) : AC(2), Chemically-Induced Liver Damage : CK(497) : AC(145), Cholestasis : CK(95) : AC(21), Statin-Induced Pathologies : CK(1470) : AC(206)

**Pharmacological Actions**: Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Hepatotoxic : CK(95) : AC(34)

**Reversible acute hepatitis induced by rosuvastatin has been reported. - GMI Summary**

**Pubmed Data**: South Med J. 2008 Jul ;101(7):768. PMID: 19209117

**Article Published Date**: Jul 01, 2008

**Authors**: Alessandro Oteri, Maria Antonietta Catania, Alessandra Russo, Francesco Salvo, Luciano Giacci, Achille Patrizio Caputi, Giovanni Polimeni

**Study Type**: Human: Case Report

**Diseases**: Chemically-Induced Liver Damage : CK(497) : AC(145), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Rosuvastatin : CK(28) : AC(6)

**Adverse Pharmacological Actions**: Hepatotoxic : CK(95) : AC(34)
Autoimmune hepatitis after treatment with fluvastatin has been reported. - GMI Summary

Pubmed Data: Liver Int. 2007 May ;27(4):592. PMID: 17403199
Article Published Date: May 01, 2007
Authors: Agustin Castiella, Javier Fernandez, Eva Zapata
Study Type: Human: Case Report
Additional Links
Diseases: Hepatitis: Autoimmune : CK(16) : AC(3)
Problem Substances: Fluvastatin : CK(13) : AC(3), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34), Immunotoxic : CK(129) : AC(21)

Rosuvastatin’s hepatotoxic potential may due to its exceptionally high rate of uptake in the liver. - GMI Summary

Article Published Date: Feb 28, 2007
Authors: Giuseppe Famularo, Luca Miele, Giovanni Minisola, Antonio Grieco
Study Type: Review
Additional Links
Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Rosuvastatin : CK(28) : AC(6)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Autoimmune hepatitis triggered by statins has been reported. - GMI Summary

Pubmed Data: J Clin Gastroenterol. 2006 Sep ;40(8):757-61. PMID: 16940892
Article Published Date: Sep 01, 2006
Authors: Vamsee Alla, Joseph Abraham, Junaid Siddiqui, Dimple Raina, George Y Wu, Naga P Chalasani, Herbert L Bonkovsky
Study Type: Human: Case Report
Additional Links
Diseases: Hepatitis: Autoimmune : CK(16) : AC(3)
Problem Substances: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34), Immunotoxic : CK(129) : AC(21)

Acute cholestatic hepatitis associated with atorvastatin use has been reported. - GMI Summary

Article Published Date: Jan 01, 2006
Authors: M L de Castro, J A Hermo, A Baz, C de Luaces, R Pérez, J Clofent
Study Type: Human: Case Report
Additional Links
Diseases: Chemically-Induced Liver Damage : CK(497) : AC(145), Cholestasis : CK(95) : AC(21), Hepatitis: Cholestatic : CK(15) : AC(5), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Hepatotoxic : CK(95) : AC(34)

Fluvastatin has been linked to adverse hepatic reactions. - GMI Summary

Pubmed Data: Drug Saf. 2006 ;29(12):1163-72. PMID: 17147462
Some 10% to 20% of heart transplant patients appear to suffer adverse side effects of initial statin therapy. - GMI Summary


Rosuvastatin-associated hepatitis with autoimmune features has been reported. - GMI Summary

Pubmed Data: Eur J Gastroenterol Hepatol. 2005 May;17(5):589-90. PMID: 15827453

Autoimmune hepatitis associated with atorvastatin use has been reported. - GMI Summary

Acute cholestatic hepatitis induced by cerivastatin has been reported. - GMI Summary

Published Date: May 18, 2002

Authors: Miquel Torres, Javier Sobrino, Carmen Asensio, Dolors López

Study Type: Human: Case Report

Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Cholestasis: CK(95) : AC(21), Hepatitis: Cholestatic: CK(15) : AC(5), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Cerivastatin: CK(1) : AC(1), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

---

Atorvastatin-induced cholestatic hepatitis in a young woman with systemic lupus erythematosus has been reported. - GMI Summary

Published Date: Aug 09, 1999

Authors: J Jiménez-Alonso, J M Osorio, F Gutiérrez-Cabello, A López de la Osa, L León, J D Mediavilla García

Study Type: Human: Case Report

Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: Cholestatic: CK(15) : AC(5), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Atorvastatin: CK(231) : AC(37), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

---

Acute cholestatic hepatitis associated with pravastatin has been reported. - GMI Summary

Published Date: May 01, 1999

Authors: M Hartleb, G Rymarczyk, K Januszewski

Study Type: Human: Case Report


Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Pravastatin: CK(197) : AC(31), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)

---

Hepatitis associated with treatment with lovastatin has been reported. - GMI Summary

Published Date: Mar 01, 1998

Authors: M Bruguera, P Joya, J Rodés

Study Type: Human: Case Report

Diseases: Chemically-Induced Liver Damage: CK(497) : AC(145), Hepatitis: CK(35) : AC(18), Statin-Induced Pathologies: CK(1470) : AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298) : AC(38)

Problem Substances: Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Hepatotoxic: CK(95) : AC(34)
Statin drugs exhibit myotoxic, neurotoxic, hepatotoxic and testicule damaging properties in the anima model. - GMI Summary

Article Published Date : Jul 01, 1996
Authors : K M Walsh, M A Albassam, D E Clarke
Study Type : Animal Study

Lovastatin-induced acute cholestatic hepatitis has been reported. - GMI Summary

Article Published Date : Feb 24, 1995
Authors : H Huchzermeyer, R Münzenmaier
Study Type : Human: Case Report

Acute hepatitis induced by lovastatin has been reported. - GMI Summary

Article Published Date : Sep 01, 1994
Authors : S Grimbert, D Pessayre, C Degott, J P Benhamou
Study Type : Human: Case Report

Statin drugs may enhance respiratory impairment of liver mitochondria under pathophysiological conditions, such as ischemia. - GMI Summary

Article Published Date : Aug 03, 1994
Authors : K Satoh, T Nakai, K Ichihara
Study Type : Animal Study

Problem Substances : Lovastatin : CK(63) : AC(12)
Problem Substances : Atorvastatin : CK(231) : AC(37)
Problem Substances : Pravastatin : CK(197) : AC(31)
Problem Substances : Simvastatin : CK(657) : AC(114)
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Hepatotoxic : CK(95) : AC(34)
Lovastatin-induced cholestasis has been reported. - GMI Summary

Pubmed Data: CMAJ. 1993 Feb 1;148(3):374. PMID: 8439902

Authors: E M Yoshida, A Levin

Study Type: Human: Case Report

Severe liver toxicity requiring discontinuation occurs in 5% of simvastatin-treated patients and 4.5% of pravastatin-treated patients. - GMI Summary


Authors: M Ballarè, M Campanini, G Airoldi, G Zaccala, M C Bertoncelli, G Cornaglia, M Porzio, A Monteverde

Cholestatic jaundice during lovastatin medication has been reported. - GMI Summary


Authors: U Spreckelsen, R Kirchhoff, H Haacke

Simvastatin has been reported to cause cholestatic hepatitis. - GMI Summary

Pubmed Data: Recenti Prog Med. 1991 Apr;82(4):233-5. PMID: 1857844

Authors: M Ballaré, M Campanini, E Catania, G Bordin, G Zaccala, A Monteverde

An experimental statin drug was demonstrated to cause a wide range of adverse effects in the
animal model. - GMI Summary

Pubmed Data : Fundam Appl Toxicol. 1991 Feb;16(2):320-9. PMID: 2055362
Article Published Date : Feb 01, 1991
Authors : R J Gerson, H L Allen, G R Lankas, J S MacDonald, A W Alberts, D L Bokelman
Study Type : Animal Study

A case of hepatitis caused by simvastatin has been reported. - GMI Summary

Article Published Date : Jan 01, 1991
Authors : P Feydy, W V Bogomoletz

Topic: Endocrine Disruptor

Statin use is associated with lower testosterone levels. - GMI Summary

Pubmed Data : Urology. 2010 Nov;76(5):1048-51. PMID: 20605197
Article Published Date : Nov 01, 2010
Authors : Bulent Akduman, Daniel J Tandberg, Colin I O'Donnell, Alexa Hughes, Mark A Moyad, E David Crawford
Study Type : Human Study

Statin therapy contributes to low testosterone and hypogonadism in men with erectile dysfunction - GMI Summary

Article Published Date : Apr 01, 2010
Authors : Giovanni Corona, Valentina Boddi, Giancarlo Balercia, Giulia Rastrelli, Giulia De Vita, Alessandra Sforza, Gianni Forti, Edoardo Mannucci, Mario Maggi
Study Type : Human Study
**Statin therapy is associated with lower total testosterone in men with type 2 diabetes.** - GMI Summary


**Article Published Date**: Apr 01, 2009

**Authors**: Roger D Stanworth, Dheeraj Kapoor, Kevin S Channer, T Hugh Jones

**Study Type**: Human Study

**Additional Links**

**Diseases**: Statin-Induced Pathologies: CK(1470) : AC(206), Testosterone: Too Low : CK(277) : AC(65)

**Additional Keywords**: Sex Hormone-Binding Globulin : CK(80) : AC(9)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Endocrine Disruptor : CK(283) : AC(56)

**Possible gynecomastia induced by rosuvastatin has been reported.** - GMI Summary

**Pubmed Data**: Pharmacotherapy. 2008 Apr ;28(4):549-51. PMID: 18363539

**Article Published Date**: Apr 01, 2008

**Authors**: Alessandro Oteri, Maria Antonietta Catania, Rita Travaglini, Alessandra Russo, Saffi E Giustini, Achille P Caputi, Giovanni Polimeni

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Gynecomastia : CK(29) : AC(7), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Rosuvastatin : CK(28) : AC(6), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Endocrine Disruptor : CK(283) : AC(56)

**Simvastatin disrupts IGF-1 signaling by decreasing its activity.** - GMI Summary


**Article Published Date**: Feb 01, 2007

**Authors**: Takeharu Ogura, Yoshiyuki Tanaka, Tetsushi Nakata, Tomoko Namikawa, Hirofumi Kataoka, Yoshikazu Ohtsubo

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Insulin-like Growth Factor-1: Signaling Abnormalities : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Endocrine Disruptor : CK(283) : AC(56)

**Atorvastatin appears to increase the risk of deteriorating blood sugar control.** - GMI Summary


**Article Published Date**: Jun 01, 2006

**Authors**: Jun Sasaki, Mikio Iwashita, Suminori Kono

**Study Type**: Review

**Additional Links**

**Diseases**: Diabetes Mellitus: Type 1 : CK(933) : AC(212), Hyperglycemia : CK(145) : AC(47)

**Problem Substances**: Atorvastatin : CK(231) : AC(37)

**Adverse Pharmacological Actions**: Endocrine Disruptor : CK(283) : AC(56)
Statin drugs disrupt IGF-I signaling. - GMI Summary


Article Published Date: Sep 10, 2004

Authors: Kirk W Siddals, Emma Marshman, Melissa Westwood, J Martin Gibson

Study Type: In Vitro Study

Additional Links


Problem Substances: Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)

Simvastatin may adversely affect mood and testosterone in men. - GMI Summary


Article Published Date: Feb 01, 2003

Authors: Markku T Hyyppä, Erkki Kronholm, Arja Virtanen, Aila Leino, Antti Jula

Study Type: Human Study

Additional Links


Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)

High-dose simvastatin reduces testosterone levels in men. - GMI Summary

Pubmed Data: Metabolism. 2000 Sep ;49(9):1234-8. PMID: 11016911

Article Published Date: Sep 01, 2000

Authors: A S Dobs, H Schrott, M H Davidson, H Bays, E A Stein, D Kush, M Wu, Y Mitchel, R D Illingworth

Study Type: Human Study

Additional Links

Diseases: Low Testosterone: CK(287): AC(66)

Problem Substances: Simvastatin: CK(657): AC(114), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)

Simvastatin lowers testosterone secretion in male patients. - GMI Summary


Article Published Date: Apr 01, 1996

Authors: C Azzarito, L Boiardi, W Vergoni, M Zini, I Portioli

Study Type: Human Study

Additional Links

Diseases: Low Testosterone: CK(287): AC(66), Statin-Induced Pathologies: CK(1470): AC(206)

Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)

Problem Substances: Simvastatin: CK(657): AC(114)

Adverse Pharmacological Actions: Endocrine Disruptor: CK(283): AC(56)
Men treated with cholesterol-lowering drugs complain more frequently of erectile dysfunction. - GMI Summary

Pubmed Data: J Clin Pharm Ther. 1996 Apr ;21(2):89-94. PMID: 8809645
Authors: E Bruckert, P Giral, H M Heshmati, G Turpin
Study Type: Human Study
Additional Links
Diseases: Erectile Dysfunction: CK(403) : AC(35), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Cholesterol Lowering Drugs : CK(1038) : AC(90), Fenofibrates : CK(83) : AC(11), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)

Cholesterol-lowering medications reduce DHEA-secretory responses and sperm motility. - GMI Summary

Pubmed Data: Metabolism. 1993 Sep ;42(9):1146-52. PMID: 8412767
Authors: A S Dobs, P S Sarma, D Schteingart
Study Type: Human Study
Additional Links
Diseases: DHEA: Low : CK(28) : AC(7), Sperm Quality: Low : CK(134) : AC(26), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Cholesterol Lowering Drugs : CK(1038) : AC(90), Pravastatin : CK(197) : AC(31), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)

Simvastatin suppresses human testicular testosterone synthesis. - GMI Summary

Authors: A G Smals, J J Weusten, T J Benraad, P W Kloppenborg
Study Type: In Vitro Study
Additional Links
Diseases: Low Testosterone : CK(287) : AC(66), Pregnancy: Environmental Exposures : CK(20) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56), Teratogenic : CK(271) : AC(50)

Statin treatment results in significantly reduced serum levels of aldosterone. - GMI Summary

Authors: H Ide, S Fujiya, Y Aanuma, Y Agishi
Study Type: Human Study
Additional Links
Diseases: Aldosterone levels: Low : CK(10) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)
Lovastatin inhibits testosterone production in testicular cells. - GMI Summary

Article Published Date: Sep 01, 1990
Authors: P G Andreis, L Cavallini, G Mazzocchi, G G Nussdorfer
Study Type: In Vitro Study

Diseases: Low Testosterone : CK(287) : AC(66), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents : CK(298) : AC(38)
Problem Substances: Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56)

Topic: Carcinogenic

Statins increase the risk of prostate cancer. - GMI Summary

Article Published Date: Dec 01, 2011
Authors: Chih-Ching Chang, Shu-Chen Ho, Hui-Fen Chiu, Chun-Yuh Yang
Study Type: Human Study

Diseases: Prostate Cancer : CK(712) : AC(280)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Carcinogenic : CK(416) : AC(81)

Statin use has an adverse effect on biochemical outcomes following radical prostatectomy. - GMI Summary

Article Published Date: Oct 01, 2011
Authors: Chad R Ritch, Greg Hruby, Ketan K Badani, Mitchell C Benson, James M McKiernan
Study Type: Human Study

Diseases: Prostate Cancer : CK(712) : AC(280), Prostatectomy : CK(10) : AC(1)
Problem Substances: Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Carcinogenic : CK(416) : AC(81)

Ezetimibe and simvastatin use is associated with increased cancer incidence and death. - GMI Summary

Article Published Date: Oct 01, 2009
Authors: Ian Hamilton-Craig, Karam Kostner, David Colquhoun, Stan Woodhouse
Study Type: Meta Analysis

Diseases: Cancers: All : CK(6410) : AC(2509)
Problem Substances: Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions: Carcinogenic : CK(416) : AC(81)
The use of statins for LDL suppression is associated with increased risk for cancer. - GMI

Summary


Article Published Date : Jul 31, 2007

Authors : Alawi A Alsheikh-Ali, Prasad V Maddukuri, Hui Han, Richard H Karas

Study Type : Meta Analysis

Additional Links

Diseases : Cancers: All : CK(6410) : AC(2509), Chemically-Induced Liver Damage : CK(497) : AC(145), High Cholesterol : CK(865) : AC(192), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances : Lovastatin : CK(63) : AC(12), Pravastatin : CK(197) : AC(31), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Carcinogenic : CK(416) : AC(81)

Pravastatin therapy was associated with an increasing risk of cancer as age increases. - GMI

Summary

Pubmed Data : CMAJ. 2007 Feb 27 ;176(5):649-54. PMID: 17325332

Article Published Date : Feb 27, 2007

Authors : Stefanos Bonovas, Nikolaos M Sitaras

Study Type : Meta Analysis

Additional Links

Diseases : Cancers: All : CK(6410) : AC(2509), Statin-Induced Pathologies : CK(1470) : AC(206)

Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Pravastatin : CK(197) : AC(31)

Adverse Pharmacological Actions : Carcinogenic : CK(416) : AC(81)

Topic: Cardiotoxic

The statin drug lovastatin induces concentration-dependent cell death in cardiomyoctyes. - GMI

Summary


Article Published Date : Jan 01, 2008

Authors : Simon W Rabkin, Michael Y Tsang

Study Type : In Vitro Study

Additional Links

Diseases : Heart Failure : CK(452) : AC(85), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Cardiotoxic : CK(467) : AC(53), Cytotoxic : CK(45) : AC(28)

statin-induced inhibition of protein synthesis is an underlying mechanism for statin-induced cardiomyocyte cell death. - GMI

Summary


Article Published Date : Jan 01, 2007

Authors : Simon W Rabkin, Parth Lodha, Jennifer Y Kong

Study Type : In Vitro Study

Additional Links
Simvastatin decreases coenzyme q10 levels in the left ventricle of the heart and skeletal muscle. - GMI Summary

Pubmed Data: Physiol Res. 2007;56 Suppl 2:S49-54. Epub 2007 Sep 5. PMID: 17824807

Atorvastatin worsens left ventricular diastolic function, which is improved through coenzyme q10 supplementation. - GMI Summary

Pubmed Data: Am J Cardiol. 2004 Nov 15 ;94(10):1306-10. PMID: 15541254

Lovastatin-induced cardiac toxicity involves both oncotic and apoptotic cell death. - GMI Summary


Atrial fibrillation induced by simvastatin treatment in a 61-year-old man has been reported. - GMI Summary

The depletion of coq10 by statin drugs may be contributing to increasing rates of congestive heart failure. - GMI Summary


Lipophilic statin drugs worsen myocardial ischemia in dogs. - GMI Summary


Type 2 diabetic patients patients treated with statin drugs have decreased coq10 levels and may be associated with subclinical diabetic cardiomyopathy reversible by CoQ10 supplementation. - GMI Summary

Lovastatin enhances the susceptibility of LDL cholesterol to oxidation. - GMI Summary

Article Published Date: Jun 30, 1997
Authors: A Palomäki, K Malminiemi, T Metsä-Ketelä
Study Type: Human Study
Additional Links
Diseases: Cholesterol: Oxidation: CK(329) : AC(96), Coronary Artery Disease : CK(942) : AC(133), High Cholesterol : CK(865) : AC(192)
Problem Substances: Lovastatin: CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Cardiotoxic : CK(467) : AC(53), Oxidant : CK(63) : AC(23)

Simvastatin worsens the myocardial mitochondrial respiration during ischemia probably due to depletion of coenzyme Q10. - GMI Summary

Article Published Date: Sep 01, 1995
Authors: K Satoh, A Yamato, T Nakai, K Hoshi, K Ichihara
Study Type: Animal Study
Additional Links
Diseases: Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Mitochondrial Dysfunction : CK(95) : AC(35), Myocardial Ischemia : CK(83) : AC(36), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Enzyme Inhibitors : CK(340) : AC(201)
Problem Substances: Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions: Cardiotoxic : CK(467) : AC(53), Myotoxicity : CK(259) : AC(11)

Lovastatin causes depletion of coenzyme Q10 levels in the cardiac muscle and mitochondria of animals. - GMI Summary

Pubmed Data: Biochim Biophys Acta. 1994 Jul 6 ;1200(2):100-8. PMID: 8031828
Article Published Date: Jul 06, 1994
Authors: B A Diebold, N V Bhagavan, R J Guillory
Study Type: Animal Study
Additional Links
Diseases: Coenzyme Q10 Deficiency : CK(42) : AC(5), Drug-Induced Nutrient Depletion: Statin Drugs : CK(115) : AC(17), Heart Failure : CK(452) : AC(85), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances: Lovastatin : CK(63) : AC(12)
Adverse Pharmacological Actions: Cardiotoxic : CK(467) : AC(53), Myotoxicity : CK(259) : AC(11)

A case of simvastatin-induced acute rhabdomyolysis with heart failure after initiation of treatment with fusidic acid has been reported. - GMI Summary

Article Published Date: Apr 01, 1992
Authors: C Dromer, C Vedrenne, T Billey, M Pages, B Fournié, A Fournié
Study Type: Human: Case Report
Additional Links
Diseases: Congestive Heart Failure : CK(147) : AC(29), Rhabdomyolysis : CK(37) : AC(6), Statin-Induced Pathologies : CK(1470) : AC(206)
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Simvastatin: CK(657): AC(114)

Lovastatin decreases coenzyme Q levels associated with compromised cardiac function in humans. - GMI Summary

Pubmed Data: Proc Natl Acad Sci U S A. 1990 Nov;87(22):8931-4. PMID: 2247468
Article Published Date: Nov 01, 1990
Authors: K Folkers, P Langsjoen, R Willis, P Richardson, L J Xia, C Q Ye, H Tamagawa
Study Type: Human Study

Additional Links
Problem Substances: Lovastatin: CK(63): AC(12), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Cardiotoxic: CK(467): AC(53)

Topic: Oxidant

Atorvastatin treatment reduces exercise capacities in rats and exacerbates metabolic perturbations and oxidative stress in skeletal muscle. - GMI Summary

Article Published Date: Aug 18, 2011
Authors: Jamal Bouitbir, Anne-Laure Charles, Laurence Rasseneur, Stéphane P Dufour, Francois Piquard, Bernard Geny, Joffrey Zoll
Study Type: Animal Study

Additional Links
Diseases: Oxidative Stress: CK(1724): AC(691), Statin-Induced Pathologies: CK(1470): AC(206)
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Oxidant: CK(63): AC(23)

Atorvastatin increases myocardial indices of oxidative stress in a porcine model of hypercholesterolemia and chronic ischemia. - GMI Summary

Article Published Date: Jul 01, 2008
Authors: Neel R Sodha, Munir Boodhwani, Basel Ramlawi, Richard T Clements, Shigetoshi Mieno, Jun Feng, Shu-Hua Xu, Cesario Bianchi, Frank W Sellke
Study Type: Animal Study

Additional Links
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Oxidant: CK(63): AC(23)

Statin therapy appears to be associated with increased oxidation injury. - GMI Summary

Muscular side effects associated with statin drug use are related to oxidative stress. - GMI

Summary


Increased lipid peroxidation in a patient with CK-elevation and muscle pain during statin therapy has been reported. - GMI Summary


Lovastatin enhances the susceptibility of LDL cholesterol to oxidation. - GMI Summary


Topic: Endocrine Disruptor: Insulin Resistance
**Statin drugs contribute to insulin resistance in human subjects.** - GMI Summary


Article Published Date : Nov 01, 2011

Authors : E Moutzouri, E Liberopoulos, D P Mikhailidis, M S Kostapanos, A A Kei, H Milionis, M Elisaf

Study Type : Human Study

Additional Links

Diseases : Insulin Resistance : CK(741) : AC(194)

Problem Substances : Ezetimibe (trade name Zetia) : CK(20) : AC(1), Rosuvastatin : CK(28) : AC(6), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)

**Statin therapy may cause insulin resistance which may negate their purported beneficial effects on cardiac remodelling in heart failure.** - GMI Summary


Article Published Date : Feb 03, 2011

Authors : Kenan Yalta

Study Type : Review

Additional Links

Diseases : Heart Failure : CK(452) : AC(85), Insulin Resistance : CK(741) : AC(194)

Problem Substances : Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)

**Atorvastatin causes insulin resistance and increases ambient glycemia in hypercholesterolemic patients** - GMI Summary


Article Published Date : Mar 23, 2010

Authors : Kwang Kon Koh, Michael J Quon, Seung Hwan Han, Yonghee Lee, Soo Jin Kim, Eak Kyun Shin

Study Type : Human Study

Additional Links

Diseases : High Cholesterol : CK(865) : AC(192), Hyperglycemia : CK(145) : AC(47), Insulin Resistance : CK(741) : AC(194), Statin-Induced Pathologies : CK(1470) : AC(206)

Problem Substances : Atorvastatin : CK(231) : AC(37), Insulin : CK(17) : AC(5), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions : Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)

**Simvastatin contributes to insulin resistance in non-diabetic patients.** - GMI Summary


Article Published Date : Jan 01, 2010

Authors : William L Baker, Ripple Talati, C Michael White, Craig I Coleman

Study Type : Meta Analysis

Additional Links

Diseases : Insulin Resistance : CK(741) : AC(194)

Pharmacological Actions : Anticholesteremic Agents : CK(298) : AC(38)

Problem Substances : Simvastatin : CK(657) : AC(114)

Adverse Pharmacological Actions : Endocrine Disruptor: Insulin Resistance : CK(50) : AC(18)
Rosuvastatin treatment is associated with an increase in insulin resistance in hyperlipidaemic patients with impaired fasting glucose. - GMI Summary

In a pooled analysis of data from 5 statin trials, intensive-dose statin therapy was associated with an increased risk of new-onset diabetes compared with moderate-dose statin therapy. - GMI Summary
There are 17 randomized trials on statin treatment showing an increased incidence of diabetes.

Simvastatin contributes to insulin resistance in non-diabetic patients.

Rosuvastatin treatment is associated with an increase in insulin resistance in hyperlipidaemic patients with impaired fasting glucose.

Acute onset and worsening of diabetes concurrent with administration of statins has been reported.
**Statin drugs are known in some cases to induce autoimmune myopathies such as dermatomyositis, polymyositis, and immune-mediated necrotizing myopathies (IMNM).** - GMI

**Summary**


**Article Published Date** : Jun 01, 2011

**Authors** : Andrew L Mammen

**Study Type** : Review

**Additional Links**

**Diseases** : Dermatomyositis : CK(14) : AC(4), Polymyositis : CK(7) : AC(3), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Immunotoxic : CK(129) : AC(21)

---

**Atorvastatin exhibits immunotoxic and genotoxic properties.** - GMI Summary


**Article Published Date** : Aug 15, 2008

**Authors** : Goran Gajski, Vera Garaj-Vrhovac, Visnja Orescanin

**Study Type** : Human In Vitro

**Additional Links**

**Diseases** : DNA damage : CK(607) : AC(274), Immune Disorders: Low Immune Function : CK(377) : AC(109), Oxidative Stress : CK(1724) : AC(691), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Genotoxic : CK(70) : AC(37), Immunotoxic : CK(129) : AC(21)

---

**Atorvastatin exhibits immunotoxic and genotoxic properties - Article 2.** - GMI Summary


**Article Published Date** : Jan 01, 2008

**Authors** : Goran Gajski, Vera Garaj-Vrhovac

**Study Type** : Human In Vitro

**Additional Links**

**Diseases** : DNA damage : CK(607) : AC(274), Immune Disorders: Low Immune Function : CK(377) : AC(109), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances** : Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Genotoxic : CK(70) : AC(37), Immunotoxic : CK(129) : AC(21)
Autoimmune hepatitis after treatment with fluvastatin has been reported. - GMI Summary

Pubmed Data : Liver Int. 2007 May ;27(4):592. PMID: 17403199
Article Published Date : May 01, 2007
Authors : Agustin Castiella, Javier Fernandez, Eva Zapata
Study Type : Human: Case Report
Additional Links
Diseases : Hepatitis: Autoimmune : CK(16) : AC(3)
Problem Substances : Fluvastatin : CK(13) : AC(3), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Hepatotoxic : CK(95) : AC(34), Immunotoxic : CK(129) : AC(21)

Lupus erythematosus and other autoimmune diseases related to statin therapy have been reported. - GMI Summary

Article Published Date : Jan 01, 2007
Authors : B Noël
Study Type : Human Study
Additional Links
Problem Substances : Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Immunotoxic : CK(129) : AC(21)

Autoimmune hepatitis triggered by statins has been reported. - GMI Summary

Pubmed Data : J Clin Gastroenterol. 2006 Sep ;40(8):757-61. PMID: 16940892
Article Published Date : Sep 01, 2006
Authors : Vamsee Alla, Joseph Abraham, Junaid Siddiqui, Dimple Raina, George Y Wu, Naga P Chalasani, Herbert L Bonkovsky
Study Type : Human: Case Report
Additional Links
Diseases : Hepatitis: Autoimmune : CK(16) : AC(3)
Problem Substances : Atorvastatin : CK(231) : AC(37), Simvastatin : CK(657) : AC(114)
Adverse Pharmacological Actions : Hepatotoxic : CK(95) : AC(34), Immunotoxic : CK(129) : AC(21)

Lupus-like syndrome associated with statin therapy has been reported. - GMI Summary

Pubmed Data : Dermatology. 2004 ;208(3):276-7. PMID: 15118389
Article Published Date : Jan 01, 2004
Authors : Bernard Noël, Renato G Panizzon
Study Type : Human: Case Report
Additional Links
Diseases : Lupus-Like Syndrome : CK(10) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)
Problem Substances : Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions : Immunotoxic : CK(129) : AC(21)

Systemic autoimmune reactions have been reported to be caused by statin drugs. - GMI Summary
Topic: Cytotoxic

The statin drug lovastatin induces concentration-dependent cell death in cardiomyoctyes. - GMI Summary

statin-induced inhibition of protein synthesis is an underlying mechanism for statin-induced cardiomyocyte cell death. - GMI Summary

Statin drugs can act directly on mitochondria either in vivo or in vitro inducing permeability transition, which is a process involved in cell death. - GMI Summary
Lovastatin-induced cardiac toxicity involves both oncotic and apoptotic cell death. - GMI Summary


Article Published Date: Dec 15, 2003

Authors: Simon W Rabkin, Jennifer Y Kong

Study Type: In Vitro Study

Additional Links

Diseases: Heart Failure: CK(452): AC(85), Statin-Induced Pathologies: CK(1470): AC(206)
Pharmacological Actions: Apoptotic: CK(1446): AC(1045)

Problem Substances: Lovastatin: CK(63): AC(12), Statin Drugs: CK(3705): AC(437)

Adverse Pharmacological Actions: Cardiotoxic: CK(467): AC(53), Cytotoxic: CK(45): AC(28)

Statin drugs induce cell death in mouse kidney cells. - GMI Summary


Article Published Date: Oct 01, 1997

Authors: O Iimura, F Vrtovsnik, F Terzi, G Friedlander

Study Type: In Vitro Study

Additional Links

Diseases: Kidney Damage: CK(103): AC(36), Statin-Induced Pathologies: CK(1470): AC(206)

Problem Substances: Statin Drugs: CK(3705): AC(437)


Statin drugs reduce coq10 levels which may result in mitochondrial dysfunction and cellular damage. - GMI Summary


Article Published Date: Mar 01, 1993

Authors: G Ghirlanda, A Oradei, A Manto, S Lippa, L Uccioli, S Caputo, A V Greco, G P Littarru

Study Type: Human Study

Additional Links

Diseases: Drug-Induced Toxicity: CK(503): AC(76), High Cholesterol: CK(865): AC(192), Myopathies: CK(199): AC(18)

Additional Keywords: Drug-Nutrient Depletion: CK(64): AC(10), Statin-Coq10 Depletion: CK(36): AC(7)


Adverse Pharmacological Actions: Cytotoxic: CK(45): AC(28)

Topic: Nephrotoxic

Statin drugs have been linked to rhabdomyolysis, myositis and kidney failure. - GMI Summary


Article Published Date: Oct 21, 2011

Authors: Alberico L Catapano

Study Type: Review

Additional Links

There is a dose-response relationship in statin-induced rhabdomyolysis. - GMI Summary

Pubmed Data: Can J Cardiol. 2011 Mar-Apr;27(2):146-51. PMID: 21459261
Article Published Date: Mar 01, 2011
Authors: Anne Holbrook, Mitchell Wright, Melani Sung, Christine Ribic, Steven Baker
Study Type: Human Study
Additional Links
Problem Substances: Atorvastatin: CK(231): AC(37), Statin Drugs: CK(3705): AC(437)
Adverse Pharmacological Actions: Nephrotoxic: CK(133): AC(33)

Acute renal failure with the combined use of rosvuastatin and fenofibrate has been reported. - GMI Summary

Article Published Date: Jun 01, 2010
Authors: Hakan Buyukhatipoglu, Yusuf Sezen, Unal Guntekin, Idris Kirhan, Omer Faruk Dag
Study Type: Human: Case Report
Additional Links
Diseases: Kidney Failure: Acute: CK(31): AC(7)
Adverse Pharmacological Actions: Nephrotoxic: CK(133): AC(33)

Simvastatin-induced rhabdomyolysis and acute renal injury has been reported. - GMI Summary

Article Published Date: Jan 01, 2008
Authors: Abdelkarim Waness, Sami Bahlas, Saad Al Shohaib
Study Type: Human: Case Report
Additional Links
Problem Substances: Simvastatin: CK(657): AC(114)
Adverse Pharmacological Actions: Nephrotoxic: CK(133): AC(33)

Statin toxicity may mimic viral hepatitis. - GMI Summary

Article Published Date: Nov 01, 2005
Authors: F Cokça, S Ozkan, G Nergisoglu, O Memikoglu, A Azap
Study Type: Human: Case Report
Additional Links
Pharmacological Actions: Anticholesteremic Agents: CK(298): AC(38)
Problem Substances: Simvastatin: CK(657): AC(114)
Statin drugs induce cell death in mouse kidney cells. - GMI Summary

Article Published Date : Oct 01, 1997
Authors : O Iimura, F Vrtovsnik, F Terzi, G Friedlander
Study Type : In Vitro Study

Lovastatin monotherapy has been reported to have been a cause of rhabdomyolysis, acute renal failure and hepatopathy. - GMI Summary

Pubmed Data : Jpn Heart J. 1997 Jul ;38(4):541-5. PMID: 9350151
Article Published Date : Jul 01, 1997
Authors : P H Chu, W J Chen, C W Chiang, Y S Lee
Study Type : Human: Case Report

Terminal renal failure in lovastatin therapy with pre-existing chronic renal insufficiency has been reported. - GMI Summary

Article Published Date : Jan 01, 1996
Authors : G Biesenbach, O Janko, U Stuby, J Zazgornik
Study Type : Human: Case Report

Statin drugs have been shown to cause adverse effects in pregnant rats and their offspring, including fetal death. - GMI Summary

Article Published Date : Oct 17, 2011

Topic: Teratogenic
Risk documentation occured in only 20% of women age 15-45 prescribed a medication known to contribute to birth defects. - GMI Summary

Drugs targeting cholesterol synthesis are embryo lethal in mice and likely contribute to birth defects in humans. - GMI Summary

Warfarin and lovastatin exhibit embryotoxic potential. - GMI Summary

Gestational exposure to lovastatin followed by cardiac malformation misclassified as holoprosencephaly has been reported. - GMI Summary
Central nervous system and limb anomalies have been reported in first-trimester statin exposure. - GMI Summary

Statin drugs cause early embryo lethality in animals. - GMI Summary

Lovastatin exhibits toxicity in human fetal brain cells. - GMI Summary
Simvastatin suppresses human testicular testosterone synthesis. - GMI Summary


Article Published Date: Apr 01, 1991

Authors: A G Smals, J J Weusten, T J Benraad, P W Kloppenborg

Study Type: In Vitro Study

Additional Links

Diseases: Low Testosterone: CK(287) : AC(66), Pregnancy: Environmental Exposures: CK(20) : AC(3), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Endocrine Disruptor : CK(283) : AC(56), Teratogenic : CK(271) : AC(50)

Topic: Genotoxic

Atorvastatin exhibits immunotoxic and genotoxic properties. - GMI Summary


Article Published Date: Aug 15, 2008

Authors: Goran Gajski, Vera Garaj-Vrhovac, Visnja Orescanin

Study Type: Human In Vitro

Additional Links

Diseases: DNA damage: CK(607) : AC(274), Immune Disorders: Low Immune Function: CK(377) : AC(109), Oxidative Stress: CK(1724) : AC(691), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Genotoxic : CK(70) : AC(37), Immunotoxic : CK(129) : AC(21)

Atorvastatin exhibits immunotoxic and genotoxic properties - Article 2. - GMI Summary


Article Published Date: Jan 01, 2008

Authors: Goran Gajski, Vera Garaj-Vrhovac

Study Type: Human In Vitro

Additional Links

Diseases: DNA damage: CK(607) : AC(274), Immune Disorders: Low Immune Function: CK(377) : AC(109), Oxidative Stress: CK(1724) : AC(691), Statin-Induced Pathologies: CK(1470) : AC(206)

Problem Substances: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

Adverse Pharmacological Actions: Genotoxic : CK(70) : AC(37), Immunotoxic : CK(129) : AC(21)

Topic: Inflammatory

Statin drug use is associated with a significantly increased risk of rheumatoid arthritis. - GMI Summary


Article Published Date: Oct 06, 2011
Pravastatin-induced colitis has been reported. - GMI Summary


Article Published Date: Aug 01, 2008

Authors: Ashis Mukhopadhya, Hugh Gilmour, John Plevris

Study Type: Human: Case Report

Ulcerative colitis after statin treatment has been reported. - GMI Summary

Pubmed Data: Postgrad Med J. 2002 May ;78(919):286-7. PMID: 12151572

Article Published Date: May 01, 2002

Authors: W E Rea, D C S Durrant, D A R Boldy

Study Type: Human: Case Report

Topic: Endocrine Disruptor: Thyroid

Hypothyroidism misdiagnosed as statin intolerance has been reported. - GMI Summary


Article Published Date: Jul 07, 2009

Authors: Eric V Krieger, Robert H Knopp

Study Type: Human: Case Report

Simvastatin induced rhabdomyolysis and hypothyroidism has been reported. - GMI Summary
**Statins exhibit complex immunomodulatory properties, including T cell-mediated tumour immune tolerance.** - GMI Summary


**Article Published Date**: Aug 01, 2010

**Authors**: K J Lee, J Y Moon, H K Choi, G Y Hur, K H Jung, S Y Lee, J H Kim, C Shin, J J Shim, K H In, S H Yoo, K H Kang, S Y Lee

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Immune Disorders: Low Immune Function : CK(377) : AC(109), Tumors : CK(186) : AC(105)

**Pharmacological Actions**: Antiproliferative : CK(965) : AC(680), Cell cycle arrest : CK(356) : AC(286), Interleukin-10 downregulation : CK(65) : AC(18)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Immunosuppressive : CK(65) : AC(15)

---

**Statin-induced vasculitis has been reported.** - GMI Summary


**Article Published Date**: Aug 01, 2010

**Authors**: Deepali Sen, Elliot D Rosenstein, Neil Kramer

**Study Type**: Human: Case Report

**Additional Links**

**Diseases**: Autoimmune Diseases : CK(4016) : AC(752), Statin-Induced Pathologies : CK(1470) : AC(206), Vasculitis : CK(34) : AC(10)

**Pharmacological Actions**: Anticholesterolmic Agents : CK(298) : AC(38)

**Problem Substances**: Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Immunosuppressive : CK(65) : AC(15)

---

**Statin drugs may reduce T cell responses associated with inhibiting influenza A virus.** - GMI Summary


**Article Published Date**: Jan 01, 2010

**Authors**: Julie M Jameson, John Cruz, Anne Costanzo, Masanori Terajima, Francis A Ennis

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Influenza A : CK(243) : AC(76), Statin-Induced Pathologies : CK(1470) : AC(206)
**Problem Substances:** Lovastatin: CK(63) : AC(12), Statin Drugs: CK(3705) : AC(437)
**Adverse Pharmacological Actions:** Immunosuppressive: CK(65) : AC(15)

---

**Topic: Cataractogenic**

**Atorvastatin contributes to cataract formation in the white rat.** - GMI Summary


*Article Published Date:* Jan 01, 2002

*Authors:* Paweł Zakrzewski, Jolanta Milewska, Krystyna Czerny

*Study Type:* Animal Study

**Additional Links**

*Diseases:* Cataract : CK(180) : AC(53), Lens Diseases : CK(6) : AC(4)

**Problem Substances:** Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Cataractogenic : CK(3) : AC(2)

---

**Statin drugs may contribute to lens opacities.** - GMI Summary


*Article Published Date:* Jan 01, 1990

*Authors:* R J Gerson, J S MacDonald, A W Alberts, J Chen, J B Yudkovitz, M D Greenspan, L F Rubin, D L Bokelman

*Study Type:* Review

**Additional Links**

*Diseases:* Cataract : CK(180) : AC(53), Lens Diseases : CK(6) : AC(4), Lens Opacities : CK(1) : AC(1)

**Pharmacological Actions:** Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances:** Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Cataractogenic : CK(3) : AC(2)

---

**Topic: Apoptotic**

**Statin drugs decrease de novo cholesterol synthesis and increase apoptosis in rat and human periovulatory granulosa cells.** - GMI Summary


*Article Published Date:* Mar 01, 2005

*Authors:* Emilia Rung, P Anders Friberg, Ruijin Shao, D G Joakim Larsson, Eva Ch Nielsen, Per-Arne Svensson, Björn Carlsson, Lena M S Carlsson, Håkan Billig

*Study Type:* In Vitro Study

**Additional Links**

*Diseases:* Ovarian Diseases : CK(9) : AC(4), Ovulation Disorders : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances:** Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions:** Apoptotic : CK(5) : AC(5), Endocrine Disruptor: Ovary : CK(2) : AC(2)

---

**Statin drugs induce cell death in mouse kidney cells.** - GMI Summary


*Article Published Date:* Oct 01, 1997
**Topic: Endocrine Disruptor: Ovary**

Simvastatin reduces steroid hormone production in rat ovarian cells. - GMI Summary


**Article Published Date**: Sep 21, 2011

**Authors**: Israel Ortega, Amanda B Cress, Donna H Wong, Jesus A Villanueva, Anna Sokalska, Benjamin C Moeller, Scott D Stanley, Antoni J Duleba

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Ovarian Diseases : CK(9) : AC(4), Ovarian Failure : CK(3) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Simvastatin : CK(657) : AC(114)

**Adverse Pharmacological Actions**: Endocrine Disruptor: Ovary : CK(2) : AC(2)

Statin drugs decrease de novo cholesterol synthesis and increase apoptosis in rat and human periovulatory granulosa cells. - GMI Summary


**Article Published Date**: Mar 01, 2005

**Authors**: Emilia Rung, P Anders Friberg, Ruijin Shao, D G Joakim Larsson, Eva Ch Nielsen, Per-Arne Svensson, Björn Carlsson, Lena M S Carlsson, Håkan Billig

**Study Type**: In Vitro Study

**Additional Links**

**Diseases**: Ovarian Diseases : CK(9) : AC(4), Ovulation Disorders : CK(1) : AC(1), Statin-Induced Pathologies : CK(1470) : AC(206)

**Problem Substances**: Lovastatin : CK(63) : AC(12), Simvastatin : CK(657) : AC(114), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions**: Endocrine Disruptor: Ovary : CK(2) : AC(2)

**Topic: Endocrine Disruptor: Pancreas**

High doses of atorvastatin modifies the secretory process in the exocrine portion of the pancreas. - GMI Summary


**Article Published Date**: Jan 01, 2004

**Authors**: Krystyna Czerny, Jadwiga Romanowska, Ewa Kifer-Wysocka, Włodzimierz Matysiak, Teresa Maslyk

**Study Type**: Animal Study

**Additional Links**

**Diseases**: Pancreatic Diseases : CK(9) : AC(3)

**Problem Substances**: Atorvastatin : CK(231) : AC(37), Statin Drugs : CK(3705) : AC(437)
Adverse Pharmacological Actions: Endocrine Disruptor: Pancreas : CK(2) : AC(1)

**Topic: Immunoreactive**

*Lovastatin alters the immunological balance towards a Th2 dominant state.* - GMI Summary

**Article Published Date** : Nov 29, 2002
**Authors** : Romesh Stanislaus, Anne G Gilg, Avtar K Singh, Inderjit Singh
**Study Type** : Animal Study

**Diseases** : Immune Dysregulation: TH1/TH2 imbalance : CK(129) : AC(33)
**Pharmacological Actions** : Interleukin-10 downregulation : CK(65) : AC(18), Interleukin-6 Downregulation : CK(395) : AC(132)

**Problem Substances** : Lovastatin : CK(63) : AC(12), Statin Drugs : CK(3705) : AC(437)

**Adverse Pharmacological Actions** : Immunoreactive : CK(50) : AC(5)

---

**Topic: Ulcerogenic**

*Atorvastatin-induced severe gastric ulceration has been reported.* - GMI Summary

**Pubmed Data** : World J Gastroenterol. 2005 May 28 ;11(20):3159-60. PMID: 15918210
**Article Published Date** : May 28, 2005
**Authors** : Ihab I El-Hajj, Fadi H Mourad, Nina S Shabb, Kassem A Barada
**Study Type** : Human: Case Report

**Diseases** : Gastric Ulcer : CK(247) : AC(93), Statin-Induced Pathologies : CK(1470) : AC(206)
**Pharmacological Actions** : Anticholesteremic Agents : CK(298) : AC(38)

**Problem Substances** : Atorvastatin : CK(231) : AC(37)

**Adverse Pharmacological Actions** : Ulcerogenic : CK(34) : AC(8)

---

**Topic: Embryotoxic**

*Warfarin and lovastatin exhibit embryotoxic potential.* - GMI Summary

**Article Published Date** : Aug 01, 2010
**Authors** : Karlfried Groebe, Katrin Hayess, Martina Klemm-Manns, Gerhard Schwall, Wojciech Wozny, Margino Steemans, Annelieke K Peters, Chaturvedala Sastri, Petra Jaeckel, Werner Stegmann, Helmut Zengerling, Rainer Schöpf, Slobodan Poznanovic, Tina C Stummann, Andrea Seiler, Horst Spielmann, André Schrattenholz
**Study Type** : In Vitro Study

**Diseases** : Prenatal Chemical Exposures : CK(268) : AC(73)
**Problem Substances** : Lovastatin : CK(63) : AC(12), Warfarin : CK(236) : AC(27)

**Adverse Pharmacological Actions** : Embryotoxic : CK(7) : AC(4), Teratogenic : CK(271) : AC(50)

---

**Topic: Hemorrhagic**
Statin after intracerebral hemorrhage may increase the risks of new hemorrhage. - GMI Summary


Article Published Date: Jun 15, 2011

Authors: Anders G Olsson

Study Type: Commentary

Additional Links


Pharmacological Actions: Anticholesterolmic Agents: CK(298) : AC(38)

Problem Substances: Statin Drugs: CK(3705) : AC(437)

Adverse Pharmacological Actions: Hemorrhagic: CK(3) : AC(1)

Copyright Information

This website is for information purposes only. By providing the information contained herein we are not diagnosing, treating, curing, mitigating, or preventing any type of disease or medical condition. Before beginning any type of natural, integrative or conventional treatment regime, it is advisable to seek the advice of a licensed healthcare professional. © Copyright 2008-2011 GreenMedInfo.com, Journal Articles copyright of original owners, MeSH copyright NLM.