

Drug-Drug Interaction: Amlodipine with Simvastatin or Lovastatin

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A potentially clinically significant drug-drug interaction between amlodipine and certain hydroxymethylglutaryl-coenzyme A (HMG-CoA) reductase inhibitors, also known as "statins," has been identified. Pharmacokinetic data has shown that amlodipine, a calcium channel blocker frequently used for hypertension, significantly raises plasma levels of simvastatin and lovastatin through CYP450 enzyme inhibition. The National Lipid Association cites statin drug interactions as a key modifiable risk factor for the development of statin-associated myotoxicity, including rhabdomyolysis, a rare, serious syndrome involving the rapid breakdown of skeletal muscle, with the release of potentially nephrotoxic substances.

This interaction is addressed in the <u>2018 Guideline on the Management of Blood Cholesterol</u>, a <u>scientific statement</u> by the American Heart Association (AHA), and a <u>clinical perspective</u> from the National Lipid Association.

Clinical Recommendations

For patients currently prescribed amlodipine with either simvastatin or lovastatin, the following is recommended:

- Simvastatin or lovastatin should be switched to an alternative statin that does not have a significant interaction with amlodipine, such as rosuvastatin, atorvastatin, or pravastatin.
- The choice of statin should be based on the indication for treatment and desired statin intensity. For patients with existing cardiovascular disease who require a high-intensity statin for secondary prevention, atorvastatin 40 to 80 mg or rosuvastatin 20 to 40 mg are preferred. For moderate-intensity therapy, atorvastatin 10 to 20 mg, rosuvastatin 5 to 10 mg, or pravastatin 40 to 80 mg can be used. If a low-intensity statin is indicated, pravastatin 10 to 20 mg daily is an appropriate alternative.
- If combination therapy with amlodipine and lovastatin or simvastatin is deemed necessary, the dose of simvastatin or lovastatin should not exceed 20 mg per day.
- For more information on selecting the appropriate statin intensity and guidance for switching simvastatin or lovastatin to an equivalent dose of an alternative statin, providers can refer to the <u>2018 AHA/ACC Guideline on the Management of Blood Cholesterol</u> and the <u>Assessment and management of statin-associated muscle symptoms (SAMS): A clinical perspective from the National Lipid Association</u>, which was published in 2023.

 Providers can also use the <u>American College of Cardiology's Statin Intolerance Tool</u> to quickly screen for drug interactions and receive guidance for clinical management of patients taking statins.

As shown in **Table 1**, several strengths of statins are available on the <u>Medi-Cal Rx Contract</u> <u>Drugs List</u>.

Table 1. Selected Statin Products Available on the Medi-Cal Rx Contract Drugs List

HMG-CoA Reductase Inhibitors (Statins)	Available Strengths
Atorvastatin	10 mg, 20 mg, 40 mg, 80 mg
Rosuvastatin	5 mg, 10 mg, 20 mg, 40 mg
Pravastatin	10 mg, 20 mg, 40 mg, 80 mg
Lovastatin	10 mg, 20 mg, 40 mg
Simvastatin	5 mg, 10 mg, 20 mg, 40 mg, 80 mg*

^{*} The FDA recommends that healthcare professionals should maintain patients on simvastatin 80 mg only if they have been taking this dose for longer than 12 months without evidence of muscle toxicity; new patients should not be prescribed simvastatin 80 mg or escalated to this dose.

For a complete list of covered products, check the <u>Contract Drugs & Covered Products Lists</u> page on the <u>Medi-Cal Rx Web Portal</u>.