Use of Coenzyme Q10 While Taking Statins

What is Coenzyme Q10?

It is an enzyme essential to mitochondrial ATP generation and antioxidant function in lipid and mitochondrial membranes. Statins have been shown to create an acquired CoQ10 deficiency. This acquired deficiency may lead to muscle pain (myopathy) by inhibiting the biosynthesis of cholesterol. Statin-induced CoQ10 deficiency is more prevalent in people with a pre-existing deficiency such as the elderly, congestive heart failure, or those with unmasked mitochondrial defects.

HMG-CoA Reductase Inhibitors Safety

HMG-CoA reductase inhibitors, commonly referred to as Statins, are generally reported to be well tolerated. One of the most significant adverse effects associated with Statin use has been a muscular pain called myopathy, characterized by muscle tenderness or pain.

Mechanism for Use with Statins

It is believed that the inhibition of HMG-CoA reductase in a Statin inhibits the formation of mevalonate, which is essential in CoQ10 formation. It is theorized that the reduction in CoQ10 levels is a possible cause of Statin-induced myopathy.

Doses Used

Patients will normally take doses of CoQ10 in the range of 50 to 200 mg daily. Doses over 100 mg daily should be given in divided doses to minimize adverse effects.

CoQ10 Safety

This agent appears to be well tolerated. The most common side effects are gastrointestinal and occur in less than 1% of patients. CoQ10 may affect blood glucose levels and so diabetic patients may need to monitor levels more closely.

Cost

Since the agent is relatively safe, the risk is primarily financial, as the agent is fairly costly, about 20 to 25 dollars per month.