

## Potential Benefits of Ubiquinone in Patients with Statin Induced Myalgia

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### Abstract

Coenzyme Q-10 is well known for its role in cellular respiration, antioxidant properties and pro-inflammatory gene expression. Q-10 blood levels naturally decrease with age, but also in patients treated with cholesterol lowering statin drugs. Consequently myalgia and myopathy tend to occur. Patients reported improved muscular condition after administering ubiquinone dietary supplements containing ubiquinone.

**Keywords:** Ubiquinone; Statin; Myalgia

### Introduction

Cholesterol lowering statin drugs often cause muscular destruction [1]. This side effect appears to be related to the decrease of ubiquinone blood and muscular levels which occur in patients treated with statins because cholesterol and ubiquinone share the same synthesis route [2].

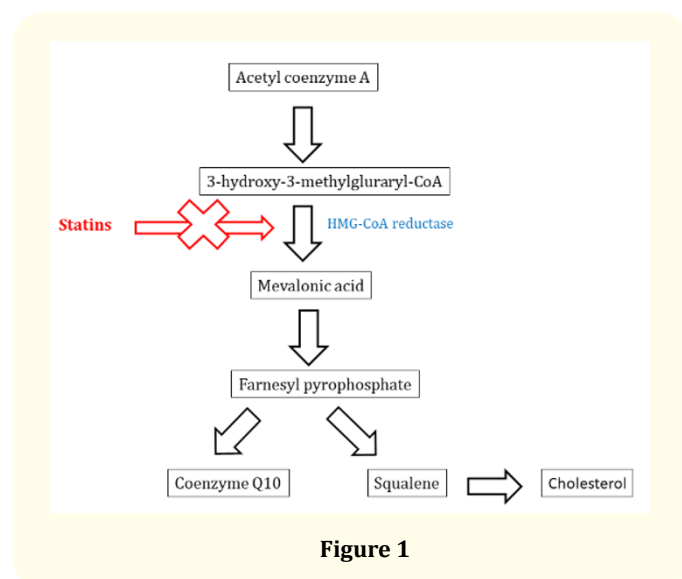


Figure 1

Some studies show that increasing exogenous intake of ubiquinone in order to maintain normal blood and muscular levels may contribute to lowering the muscular side effect risks in patients treated with statins for high blood cholesterol [3].

### Case Presentation

Three patients (2 women – age 75 and 1 man – age 79) with high blood pressure and high blood cholesterol levels, undergoing long term treatments with simvastatin 40mg/day, complained to the local pharmacist of muscular pain in the legs and difficulty walking. The pharmacist reported this complaint to the prescribing physicians and was told that the benefit – risk ratio is positive for all 3 patients despite the side effects. Knowing the connection between ubiquinone and cholesterol synthesis as well as the statin mechanism of action, the pharmacist recommended all 3 patients a dietary supplement containing Coenzyme Q-10 to be administered daily in a 200mg/day dosage alongside the statin prescribed by the physicians.

### Results and Discussion

After 3 months of administering simvastatin 40mg/day and ubiquinone 200mg/day, one of the women reported to the pharmacist a complete remission of the muscular symptoms, and the other one indicated a significant improvement. After 4 months of administering the same combination, the male patient also reported a significant improvement in the muscular symptoms.

### Conclusion

The pharmacist can play a major role not only in identifying and reporting drug side effects observed in patients, but also in presenting viable therapeutic options for neutralizing them.

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