



## EDITORIAL

# Muscle pain and use of statin drugs



Manual therapists, confronted by patients complaining of chronic muscular pain, need to be aware of a possible source of that pain – their patient’s medication, particularly if statins are being taken.

One of the main reported side effects of statin consumption involves development of the symptoms of myopathy. This is confirmed by both past and recent research (Fernandez et al., 2011; Sathasivam, 2012; Ito et al., 2014).

Ito et al. (2014) found that people taking statins had double the risk of muscle pain when they were prescribed various other drugs, and that these side effects were commonly what led to people stopping taking the anti-cholesterol medication. These researchers described the results of examination of data relating to more than 10,000 current and former statin users. They report that approximately one third experienced muscular pain that either started, or became more severe, when statins were being taken. Around, 60% of those who subsequently abandoned statins stated that the main reason was the side effects.

People in the study, who quit using statins because they could not tolerate them, were taking, on average, three other medications that could interfere with the normal metabolism of statins. Overall, after controlling for other myopathy risk factors, the study found that people taking additional medications were 80 percent more likely to stop taking statins.

In an earlier report on this topic, Tomlinson and Mangione (2005), noted that: “All of the statins are associated with the adverse effects of myopathy. Myopathy refers to any disease of muscles, acquired or inherited, with symptoms including muscle weakness primarily in the extremities. Symptoms of myopathy may occur at any time after the initiation of statin therapy.”

They report that factors that may increase the risk of myopathy are advanced age, being female, having a small body frame and being frail. Multisystem disease – such as diabetes, or involving the liver or kidneys, also increases risk, as does the use of a variety of concurrent medications and substances.

See Fig. 1 for a list of drugs and substances that may interact with statins to result in myopathy – including Vitamin B3, some antibiotics and anti-fungal drugs, calcium channel blockers, other anti-cholesterol medications (Fibrates), as well as moderate alcohol intake.

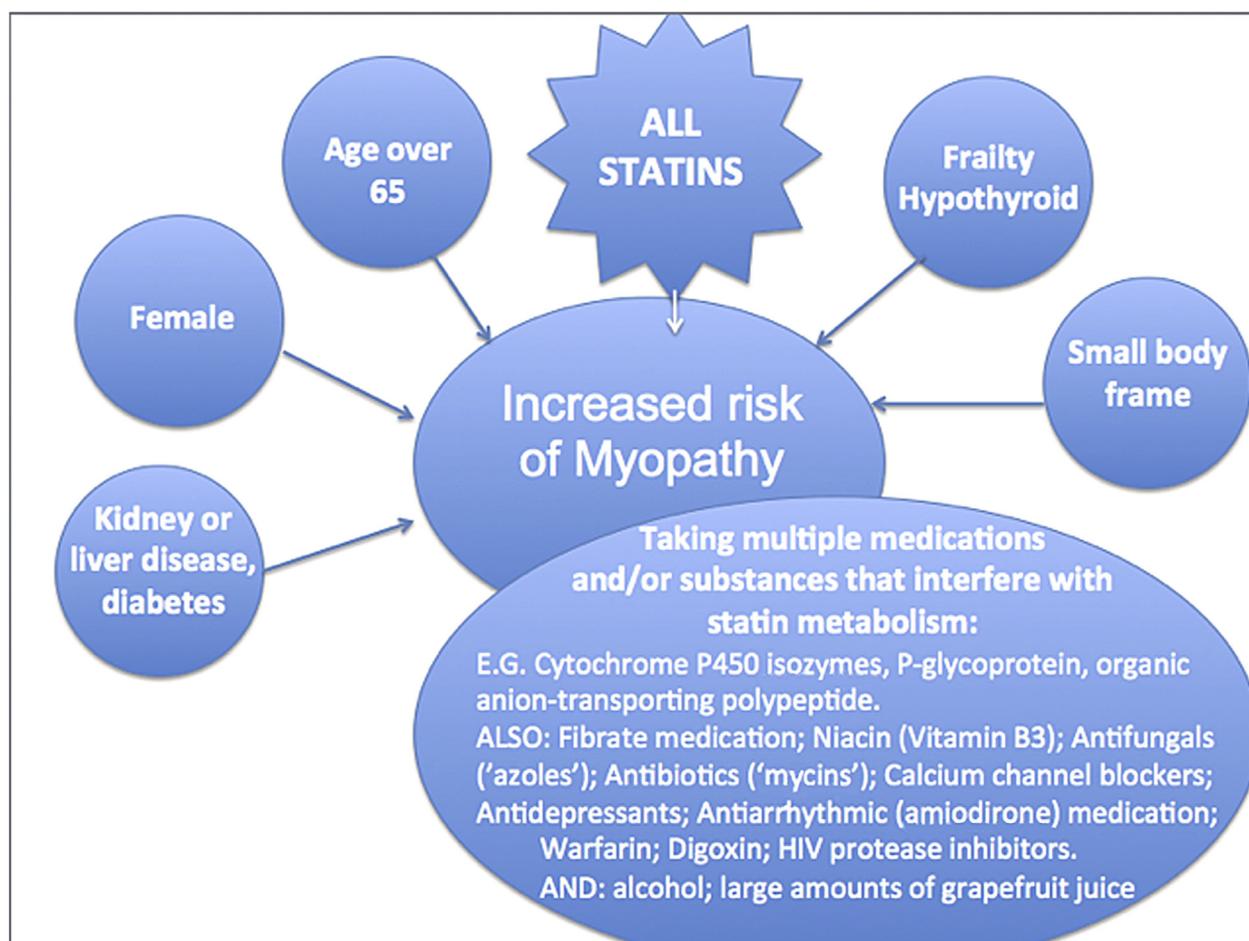
Sinzinger et al. (2002) have summarized the main myopathic symptoms associated with statin use as including: lower-extremity pain and weakness – for example when climbing stairs; poor grip strength, for example difficulty in opening jars; weakness associated with the shoulder, hip and knee muscles, and a tendency to severe cramps. Particularly affected are the abdominal, low back, biceps brachii and masseter muscles.

Other possible statin-related symptoms include fatigue, temporary memory loss and confusion, increased levels of blood-sugar and Type 2 Diabetes, skin rashes and digestive disturbances.

Various theories have been advanced to explain the incidence of muscular pain in connection with statin use – including interference with ubiquinone (CoEnzyme Q10) metabolism, and/or increased instability of muscle cell membranes due to reduction of cholesterol levels (Thompson et al., 2003).

The potential benefits, to some patients, of use of statins, should be weighed against the side effects – and alternatives – such as an apple a day.

Briggs et al. (2013) have published – in the British Medical Journal - the results of a comparative assessment of the relative health benefits of statin use as against consumption of an apple daily. Their conclusion was that: “For statin therapy, offering the treatment to an extra 17 million individuals and assuming 70% compliance would prevent 9400 vascular deaths each year. Assuming 70% compliance with the apple, even though “apples are of course both delicious and nutritious,” the estimated reduction in vascular deaths would be 8500. They add that prescribing statins to all those eligible would lead to 1200 cases of myopathy, 200 cases of rhabdomyolysis, and 12,300 new diagnoses of diabetes mellitus.”



**Figure 1** Factors that increase the risk of developing myopathy (after Sinzinger et al., 2002; Tomlinson and Mangione, 2005; Sathasivam, 2012; Ito et al., 2014).

## References

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