Statin Risk Benefit

Statin medications have previously received adverse publicity regarding the risk of muscle problems including rhabdomyolysis. (See Statin Advisory) The risks of these side effects are low and are far outweighed by the proven benefits of this class of medication. Such publicity is unfortunate in that it generates fear and uncertainty, undermines risk reduction strategies and may lead to discontinuation or under-dosing of statin medications. Such a response may result in adverse cardiovascular and cerebrovascular outcomes due to **lost benef**it. As with all drugs the pros and cons of therapy need to be weighed carefully. Based on the available data, the NLA Statin Safety Task Force has concluded that all currently marketed statins are safe and share a low risk of serious adverse effects (AEs). Any possible risks are greatly outweighed by their protective effects against thromboembolic stroke and CAD.

The risk of serious myopathy or rhabdomyolysis with use of stains is low:

Drug	Reported Cases of Fatal Rhabdomyolysis per 1,000,000 US prescriptions since launch [1]
Cerivastatin[1]	3.16
Lovastatin[1]	0.19
Simvastatin[1]	0.12
Pravastatin[1]	0.04
Atorvastatin[1]	0.04
Fluvastatin[1]	0.00
Rosuvastatin[2]	0.00

Risk: To put risk and benefit in a clearer perspective, for every 100,000 patients with statins in large secondary outcome trials, 4 will suffer rhabdomyolysis and 33 will suffer myositis

Benefit: Extrapolated to 100,000 patients, the benefits of statin therapy are:

4S Trial (6 years): prevention of 4000 deaths, 7000 nonfatal heart attacks and 6000 myocardial revascularization procedures.
CARE (5 years): prevention of 15000 cardiovascular events in unselected patients, 20700 cardiovascular events in patients > age 60 and 22800 cardiovascular events in women.
LIPID (6.1 years): prevention of 3000 deaths, 2800 non-fatal heart attacks, 900 strokes, 2300 bypass surgeries, 2000 angioplasties and 8200 admissions for unstable angina.
HPS (5 years): prevention of 7000-10000 heart attacks, stroke or revascularization procedures.
PROVE-IT (18-36 months-mean 24 months) high dose versus moderate dose statin in patients with acute coronary syndromes demonstrates an incremental benefit of 3.9 % absolute and 16% relative risk reduction in the primary end-point - a composite of death from any cause, myocardial infarction, documented unstable angina requiring re-hospitalization, revascularization (performed at least 30 days after randomization), and stroke. For 100,000 patients treated this means the prevention of 3900 further events.
TNT (4.9 years) high dose vs low dose statin in a chronic CHD population showed similar incremental benefits on combined cardiovascular endpoints (death from CHD, nonfatal non-procedure-related myocardial infarction, resuscitation after cardiac arrest or fatal or nonfatal stroke). The incremental benefit was 2.2 % absolute and relative risk reduction of 22%. For 100,000 patients treated this means the prevention of 3400 major cardiovascular events.

In summary:
- The risk of serious muscle problems with statins is low.
- The benefits of statin therapy significantly outweigh any risk.
- Higher dosing of statins or use of a more potent statin provides incremental benefits in high risk patients.
- Fear of statin adverse effects should not prevent appropriate lipid lowering therapy.

Statin Risk Benefit References:
1. Staffa JS, Chang J, Green L. Cerivastatin and Reports of Fatal Rhabdomyolysis, N Engl J Med;2002:346(7):539-540.
2. Olsson GO. Safety and efficacy of rosuvastatin. www.thelancet.com Vol 354 July 10, 2004.
3. McKenney JM, Davidson, MH, Jacobson TA, et al. Final conclusions and recommendations of the National Lipid Association Statin Safety Assessment Task Force. AM J Cardiol. 2006;97 (suppl 8A0:89C-94C.