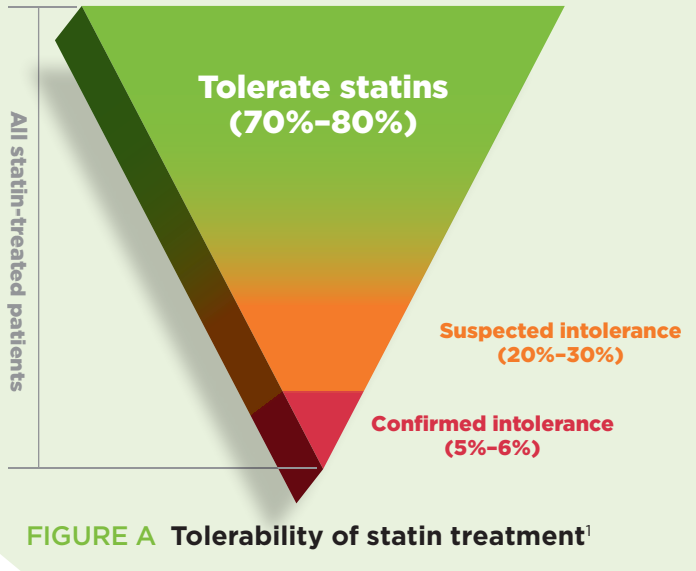


Statin-associated muscle symptoms (SAMS)

Use a systematic approach to assess suspected statin intolerance



- ▶ Statin intolerance is rarely life-threatening and may have a lower incidence than is commonly reported.²⁻⁴
- ▶ Statins have been associated with a nocebo effect, whereby patients experience adverse effects based on the expectation of harm from a treatment.⁵
- ▶ For muscle-related adverse effects:
 - Incidence of statin-associated myalgia is lower in blinded RCTs (1% to 5%)⁶ compared to observational studies (7% to 29%).⁴
 - Myopathy incidence is ~ 1 in 10,000 per year.⁴
 - Rhabdomyolysis incidence is ~ 1 in 100,000 per year.⁴
- ▶ Involve patients in assessing and managing adverse effects.
- ▶ Advise patients to contact you if they experience muscle symptoms, and not to stop taking their statin.⁶

SAMS Assessment Guide

SAMS LESS LIKELY		SAMS MORE LIKELY	
Unilateral Non-specific distribution Tingling, twitching, shooting pain, nocturnal cramps or joint pain	Nature of symptoms^{4,6,7}	Bilateral Large muscle groups (eg, thighs, buttocks, calves, shoulder girdle) Muscle ache, weakness, soreness, stiffness, cramping, tenderness or general fatigue	
Onset before statin initiation Onset > 12 weeks after statin initiation	Timing of symptoms⁴	Onset 4–6 weeks after statin initiation Onset after statin dosage increase	
Non-statin causes of muscle symptoms including: <ul style="list-style-type: none"> • conditions eg, hypothyroidism, polymyalgia rheumatica • vitamin D deficiency • unaccustomed/heavy physical activity • medicines eg, glucocorticoids, antipsychotics, immunosuppressant or antiviral agents 	Other considerations^{4,7}	Risk factors for SAMS including: <ul style="list-style-type: none"> • medicine or food interactions • high-dose statin therapy • history of myopathy with other lipid-modifying medicines • regular vigorous physical activity • impaired hepatic or renal function • substance abuse (eg, alcohol, opioids, cocaine) • female • low BMI 	
	CK levels⁴	Elevated (> ULN; but may also be normal) Elevated CK levels decrease after statin ceased	
If SAMS is likely, proceed to the SAMS Management Algorithm (see overleaf)			