CASE STUDY

# Should statins be prescribed for elderly patients?

**LEON A. SIMONS** MD, FRACP

*There is no specific age at which statin therapy in elderly patients should be stopped.*

## Case scenario one – 2003

*Mr AK, aged 82 years, attends the emergency department as he has had more than four hours of retrosternal chest pain. In regard to coronary risk factors, apart from his age, he is a nonsmoker, he has been treated for hypertension for about 10 years, he does not have diabetes and there is no relevant family history of premature cardiovascular disease. His lipid levels in previous years were described as 'average with no need for medication'.*

*On examination, his body mass index is 26.2 kg/m$^2$, his blood pressure is lower than his usual reading at 110/70 mmHg, there are no abnormal cardiovascular signs and a resting ECG examination is suggestive of an anterior myocardial infarction. Dipstick urinalysis shows no abnormality. Urgent blood tests show a total creatine kinase (CK) level of 240 U/L (reference range <201 U/L), with the cardiac isoenzyme CK-MB representing 10% of total CK (reference range 4 to 6%). Electrolytes, creatinine, glucose and liver enzyme levels as well as blood count are all within normal limits. Total cholesterol is 4.9 mmol/L (reference range <4.0 mmol/L), triglycerides 1.6 mmol/L (reference range <2.0 mmol/L), HDL 1.0 mmol/L (reference range >1.0 mmol/L) and LDL 3.2 mmol/L (reference range <2.0 mmol/L).*

*Mr AK's clinical observations are stable, he is given nitrate and pain relief, and he undergoes urgent cardiac catheterisation. A culprit lesion is found in the left anterior descending artery and this is successfully stented. His subsequent course in hospital is uneventful and he is discharged to the care of his GP within seven days. His discharge medications are ramipril 2.5 mg twice daily, atorvastatin 40 mg/day, metoprolol 50 mg twice daily and aspirin 100 mg/day.*

### Consultant's comment

Given that this scenario took place in 2003, his overall management seems entirely appropriate. Although there is only suggestive rather than strong clinical trial evidence that the use of statin therapy in his age group will prevent a future coronary event, prescription of a high-dose statin after myocardial infarction and revascularisation is widely practised. Furthermore, many cardiologists prefer to offer atorvastatin 40 mg/day rather than 80 mg/day, as used in the relevant clinical trials.

## Case scenario one, continued – 2003 to 2013

*Mr AK maintains reasonably stable health over the intervening years to the present time. He continues with essentially the same medications, but in addition is taking paracetamol for osteoarthritis as prescribed by his GP. His family now ask the GP*

## Key points

- **Statins may prevent recurrent cardiovascular events in elderly patients.**
- **There is no specific age at which statin therapy in elderly patients should be stopped.**
- **Initiation of stain therapy in the very elderly may not be advisable as benefits are likely to be small and the likelihood of adverse events is increased in these patients.**

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Professor Simons is Associate Professor of Medicine and Director, University of NSW Lipid Research Department, St Vincent's Hospital, Sydney, NSW.



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*whether it might be time to suspend some of his more 'prophylactic' medications and rely on those needed for symptom relief. The GP telephones a consultant for further advice.*

### Consultant's comment

Although telephone advice is always difficult for a patient one does not know in person, it was especially difficult in the case of a 92-year-old man, but some brief opinions were expressed. Although his use of an ACE inhibitor, beta blocker and aspirin in 2003 had a reasonable scientific basis for an 82-year-old person, the use of a statin was already acknowledged to be a little more empirical (but justified). However, we do not really know what might happen if a statin drug is suspended in a 92-year-old person. On the other hand, if suspension was followed within, say, six to 12 months by a cardiovascular event, we might be left with serious regret. Hence, telephone advice was largely empirical – to leave all the medications unchanged, to check his blood pressure regularly and there is no need for lipid testing. This is provided the patient maintains reasonable quality of life and remains free of side effects or other major comorbidity. The matter of life expectancy was not introduced as this seemed irrelevant.

## Case scenario two

*Ms CF, a 92-year-old woman with good cognitive function, had a confirmed cerebral thrombosis and hemiparesis in December 2010 in the face of untreated systolic hypertension and a modest cholesterol problem that was previously untreated (total cholesterol 5.7 mmol/L, triglycerides 1.9 mmol/L, HDL 1.0 mmol/L, and LDL 3.8 mmol/L). During her two weeks in hospital she makes some recovery from hemiparesis, her blood pressure is stabilised with a calcium channel blocker and she is discharged to an in-patient rehabilitation program.*

*While the attending neurologist was uncertain, the geriatrician managing her stroke rehabilitation decides against using medication for Ms CF's lipid problem. Ms CF does well at rehabilitation and eventually graduates to the use of a walking stick. She manages well at home with her family over the next two years.*

### Consultant's comment

This second case has been presented for discussion to contrast the potential role of statin drugs following a thrombotic stroke in a 92-year-old person versus the continuing use that was endorsed in the first case of a 92-year-old man who had been receiving statin therapy for the previous 10 years. Ms CF has a history of systolic hypertension and this deserved further and better treatment. There is good clinical trial evidence of further cardiovascular disease prevention by statin therapy in patients surviving an ischaemic stroke. However, it is most unlikely that initiation of statin therapy in this case will add to the quality or length of her life. In elderly patients, the likelihood of adverse events and drug interactions is increased.[1]

## Conclusion

There is no specific age when ongoing statin therapy should be stopped, but initiation is not advisable when benefits are likely to be small and life expectancy is limited. **CT**


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### Reference


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