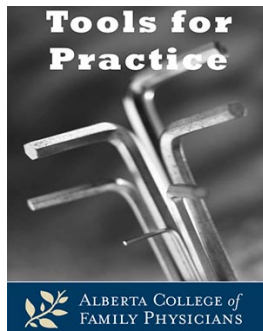


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Statins and the elderly: The Who, What and When?

Clinical Question: Which elderly patients should be offered what type of statin for cardiovascular disease (CVD) prevention?

Bottom-Line: For primary prevention age 65-75, consider moderate-potency statins (example 10-20mg atorvastatin) for moderate or higher risk individuals ($\geq 10\%$ risk of CVD over 10 years based on Framingham score). No evidence to start statins in primary prevention patients > 75 . In secondary prevention age 65-82, there is evidence for moderate-potency (to high, as tolerated) statin. Pravastatin should likely not be first-line given the possible cancer signal for those > 65 .

Evidence:

- Secondary Prevention: One systematic review of nine randomized controlled trials (RCTs), 19,569 patients aged 65-82 years, ~5 years follow-up.¹ Statistically significant reductions in:
 - All cause mortality: Relative Risk (RR) 0.78 (0.65-0.89).
 - Estimated Number Needed to Treat (NNT)=28.
 - Other outcomes: Coronary heart disease mortality (NNT=34), non-fatal myocardial infarction (NNT=38), stroke (NNT=58).
- Primary Prevention: One systematic review of eight RCTs, 24,674 patients aged 65-82 years, ~3.5 years follow-up.² Statistically significant reductions in:
 - Myocardial infarction: RR 0.61 (0.43-0.85), NNT 84.
 - Stroke: RR 0.76 (0.62-0.93), NNT 143.
 - No statistically significant reduction in death or CVD death.
- Harms: Musculoskeletal adverse events,³ Number Needed to Harm=77 (average RCT 3.4 years).
 - Cancer: Meta-regression⁴ of pravastatin trials suggests cancer incidence (multiple types⁵) increases in older patients:
 - Risk Ratio: 0.92 at age 55, 1.06 at age 65, and 1.22 at age 75.
 - May be spurious as older patient numbers low.
 - Cancer incidence not increased with other statins.^{6,7}

Context:

- Meta-analyses of patients ≥ 65 are primarily from subgroups of RCTs and include few >75 (especially in primary prevention). Most used moderate-potency statin therapy (pravastatin 40mg or atorvastatin 10mg).¹⁻³
- For patients >75 , US guidelines⁸ advise:
 - Offering statins to patients with CVD.
 - Data does not clearly support use in those without CVD.
 - Age is not an indication to stop statins in those tolerating it.
- Canadian guidelines⁹ advise clinical judgement guide therapy.
- Screening for lipid therapy should likely end at 75:
 - Risk calculators¹⁰ generally do not include age >75 and there is no evidence for primary prevention >75 .

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Disclosure:

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References:

1. Afilalo J, Duque G, Steele R, *et al.* J Am Coll Cardiol. 2008; 51:37-45.
2. Savarese G, Gotto AM Jr, Paolillo S, *et al.* J Am Coll Cardiol. 2013; 62:2090-9.
3. Roberts CG, Guallar E, Rodriguez A. J Gerontol A Biol Sci Med Sci. 2007; 62:879-87.
4. Bonovas S, Sitaras NM. CMAJ. 2007; 176(5):649-54.
5. Shepherd J, Blauw GJ, Murphy MB, *et al.* Lancet. 2002; 360:1623-30.
6. Mihaylova B, Emberson J, Blackwell L, *et al.* Lancet. 2012; 380:581-90.
7. Dale KM, Coleman CI, Henyan NN, *et al.* JAMA. 2006; 295:74-80.
8. Stone NJ, Robinson JG, Lichtenstein AH, *et al.* Circulation. 2014; 129(25 Suppl 2):S1-S45.
9. Anderson TJ, Grégoire J, Hegele RA, *et al.* Can J Cardiol. 2013; 29:151-67.
10. Payne R. The University of Edinburgh Cardiovascular Risk Calculator. Online resource, last updated 28 May 2010. Available at <http://cvrisk.mvm.ed.ac.uk/calculator/calc.asp>. Accessed July 21, 2014.

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