



Lipids in Primary Prevention: A Calculated Risk

Useful links

- http://www.ccsguidelineprograms.ca/index.php?option=com_content&view=article&id=88&Itemid=83
 - Links to 2012 Canadian Guideline on Dyslipidemia and Prevention of CVD and supportive tools and apps.

Online Framingham Risk Score calculators

- <http://cvrisk.mvm.ed.ac.uk/calculator/calc.asp>
 - Includes both FRS CVD and CHD risk calculators, along with others developed in the UK. Also has tools for communicating risk to patients.
- <http://www.framinghamheartstudy.org/risk/index.html>
 - Includes risk calculators for various CVD conditions such as CHD, stroke, MI, and PAD.

Relative and Absolute Benefit of Statins in Primary Prevention.

- Meta-analyses of statins in primary prevention report LDL reductions, in general, ranged between 23% and 32% in the trials and LDL levels achieved were not below 2 mmol/L.
- The table shows the absolute benefit that may be achieved from statin use in relation to different levels of risk as estimated from Framingham Risk Scores. Calculations are based on a 30% relative reduction in CVD events as reported in a recent Cochrane Review and represent a “best-case” scenario.

No Statin Treatment		Statin Treatment		
10-year risk of having a CVD event e.g., estimated from FRS	Probability of remaining event free	Estimated 10-year risk of having a CVD event	Probability of remaining event free	NNT for 10 years
5%	95%	3.5%	96.5%	67
10%	90%	7%	93%	33
15%	85%	10.5%	89.5%	22
20%	80%	14%	86%	17
25%	75%	17.5%	82.5%	13
30%	70%	21%	79%	11

Rows represent doses and cost of statins for comparable lipid lowering, as indicated in the 1st column

Approximate % LDL lowering	High Potency Statins		Lower Potency Statins			
	Atorvastatin*	Rosuvastatin	Simvastatin	Pravastatin	Fluvastatin	Lovastatin
22%	-	-	5 mg \$0.36	10 mg \$0.57	20 mg \$0.96	-
25-32%	-	-	10 mg \$0.71	20 mg \$0.67	40 mg \$1.34	20 mg \$0.72
31-39%	10 mg \$0.30*	-	20 mg \$0.88	40 mg \$0.81	80 mg \$1.62	40 mg or 80 mg 40mg \$1.32 80 mg \$2.64
37-45% (Rosuvastatin 10 mg 52%)	20 mg \$0.43*	5 or 10 mg 5 mg \$0.65 10 mg \$0.48	40 mg \$0.88	80 mg (2X 40 mg) \$1.62	-	80 mg 80 mg \$2.64
47-52%	40 mg \$0.46*	10 mg 10 mg \$0.48	80 mg** \$0.88	-	-	-
55-60%	80mg \$0.46*	20 mg \$0.60	-	-	-	-
63%	-	40 mg \$0.70	-	-	-	-

McKesson Canada Prices 2013 Costs are for generic brands when available. *approximate atorvastatin prices starting on April 1 2013 ** no longer recommended
Reference for equivalent doses Smith MEB et al http://www.rx.wa.gov/documents/statins_final_report_update5_1109.pdf