



**Secondary Prevention: % LDL (mmol/L) change to reach LDL target by risk category.**

ATP III Very High Risk			CCS High Risk			Moderate Risk		
Initial	Target	% Change	Initial	Target	% Change	Initial	Target	% Change
LDL	LDL <	LDL	LDL	LDL <	Min. ↓ 50%	LDL	LDL <	Min. ↓ 40%
5.00	1.8	-64%	5.0	2.0	-60%	5.00	3.0	-40%
4.80	1.8	-63%	4.8	2.0	-58%	4.80	2.9	-40%
4.60	1.8	-61%	4.6	2.0	-57%	4.60	2.8	-40%
4.40	1.8	-59%	4.4	2.0	-55%	4.40	2.6	-40%
4.20	1.8	-57%	4.2	2.0	-52%	4.20	2.5	-40%
4.00	1.8	-55%	4.0	2.0	-50%	4.00	2.4	-40%
3.80	1.8	-53%	3.8	1.9	-50%	3.80	2.3	-40%
3.60	1.8	-50%	3.6	1.8	-50%	3.60	2.2	-40%
3.40	1.8	-47%	3.4	1.7	-50%	3.40	2.0	-40%
3.20	1.8	-44%	3.2	1.6	-50%	3.20	1.9	-40%
3.00	1.8	-40%	3.0	1.5	-50%	3.00	1.8	-40%

**Dose response to Medication (statins & fibrates) % LDL Reduction**

Drug mg.	5	10	20	40	80	200	400	900
Lovastatin			24-28%	28-34%	39-42%			
Pravastatin		18-25%	21-28%	27-33%				
Simvastatin	23-30%	27-32%	30-40%	36-43%	45-47%			
Fluvastatin	13%	13%	19%	29%	36%			
Atorvastatin		38-41%	44-46%	50-51%	54-61%			
Rosuvastatin	42-46%	52%	55%	63%				
Gemfibrozil	† Avoid in patients with renal impairment							12-16%
Fenofibrate	† Avoid in patients with renal impairment					21-32%		
Bezafibrate	† Avoid in patients with renal impairment						2-15%	
Ezetimibe		19%	(Co-administration with statin yields incremental 21% LDL reduction)					

**Protocol:** Initiate lipid lowering immediately in high-risk patients (concomitant with dietary/therapeutic lifestyle modification).

- 1) Target initial medication dose to ↓ LDL by 50% to minimum of < 2.0 mmol/L for all risk levels. Consider target LDL < 1.8mmol/L for ATP III Very High Risk patients. Initiate therapy with dose required to achieve target LDL. Initiate therapy with dose required to achieve target LDL.
  - NB: Initiate rosuvastatin at 10-20 mg (5 mg in Asians/CKD). \*40 mg. contraindicated in Asian population.
  - NB: Caution with simvastatin 80 mg. [A to Z Trial](#) and max dose statin in populations at risk for myositis.
- 2) If initial LDL at target, raise HDL and lower triglycerides to target values with appropriate intervention: diet, exercise, weight loss, refined carbohydrate restriction, moderate alcohol intake or medication: fibrate, Niaspan® or salmon oil/omega-3 supplements (1gm OD-TID).
- 3) If LDL and triglycerides high and HDL-C low, consider combination therapy (fibrate or Niaspan®).
- 4) If unable to raise HDL sufficiently, lower LDL to achieve TC/HDL < 4 and/or LDL/HDL < 3.
- 5) If initial lipid profile normal look at other risk factors (LPa, homocysteine, apo-B and hs-CRP).
- 6) Follow Total cholesterol, LDL, HDL, triglycerides, CK and ALT in 2 months then every 6 months.
- 7) If LDL not at target increase statin dose to achieve target or switch to more potent statin. If LDL target not achievable on monotherapy add cholesterol absorption inhibitor (ezetimibe) or bile acid sequestrant (cholestyramine or colesevlam). Doubling statin dose adds ~ 6% LDL. Adding ezetimibe to statin therapy provides additional LDL lowering up to 20% reduction. See [Statin Cost Efficacy Grid](#).
- 8) Feedback results to patient to improve compliance.

