

ATP-III Treat to Goal Statin Dosing Guide

(from baseline LDL-C)

The primary focus of treatment for the prevention of coronary heart disease (CHD) is the reduction of LDL-C. Treatment intensity is stratified by risk into 3 groups as defined by the National Cholesterol Education Program's Adult Treatment Panel—III (ATP-III) guidelines published in May 2001. Patients will fall into one of three groups with a corresponding LDL goal as defined below based on a CHD risk assessment.

Blood Level LDL-C (mg/dL)	Treatment Groups		
	Group I LDL Goal: 160	Group II LDL Goal: 130	Group III LDL Goal: 100
110	At Goal	At Goal	S-5
115			
120			
125			
130			
135			
140			
145	S-5	S-10	S-20
150			
155			
160			
165	S-5	S-10	S-80
170			
175			
180			
185			
190			
195			
200			
210			
220			
230	S-10	S-80	A-40*
240			
250			
260	S-40	A-40*	A-80*
270			
280	S-80	A-80*	A-80*
290			
300			
310			
320			
330	A-40*	A-80*	A-80*
340			
350			

Group I:	This group consists of primary prevention patients with low risk for atherosclerosis. Low risk is defined as non-diabetics with no or one risk factors and a <10% 10-year CHD risk as determined by their Framingham Score. The LDL goal is 160mg/dL.
Group II:	This group consists of primary prevention patients with moderate risk for atherosclerosis. Moderate risk is defined as non-diabetics with two or more CHD risk factors and a 10-20% 10-year CHD risk as determined by their Framingham Score. The LDL goal is 130mg/dL.
Group III:	This group consists of patients with present CHD, diabetics and other CHD risk equivalent patients. CHD risk equivalents include patients with diabetes, peripheral arterial disease, symptomatic carotid artery disease, abdominal aortic aneurysm or a >20% 10-year CHD risk as determined by their Framingham Score. The LDL goal is <100mg/dL.

S-5	Simvastatin 5mg
S-10	Simvastatin 10mg
S-20	Simvastatin 20mg
S-40	Simvastatin 40mg
S-80	Simvastatin 80mg
A-40*	Atorvastatin 40mg *Special Order Req.*
A-80*	Atorvastatin 80mg *Special Order Req.*

Beyond Documented Limits

CHD Risk Factors:

- Age -- Male ≥ 45
- Female ≥ 55, or premature menopause w/o estrogen replacement
- Family History (definite MI or sudden death at <55 in father/1st degree relative; <65 mother/1st degree relative)
- Cigarette smoking, including ex-smokers <1 yr
- Hypertension (≥ 140/90mmHg-on more than one occasion, or on antihypertensive medication)
- Low HDL <40mg/dL

Negative Risk Factor: (subtract one risk factor)

- High HDL ≥ 60mg/dL

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145	S-5	S-5	S-10
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155			S-40
160	S-5	S-10	S-80
165			
170		S-20	A-40*
175			
180			
185	S-10	A-80*	
190			
195	S-40	A-80*	
200			
210	S-10	A-80*	
220			
230	S-20	A-80*	
240			
250	S-40	A-80*	
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270	S-80	A-80*	
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Prescribing Notes

Dosing	Dose QPM (atorvastatin can be QAM) BID dosing less effective than 2X QPM No evidence that titration is necessary, but common with Sim 80, Ator 40&80
Labs	General guide, adapt to patient-specific concerns --- Lipid Profile: Baseline, ≥ 6wks after start or dose change, yearly after achieving goal --- LFTs: Baseline, ≥ 4wks of high dose statin (Sim 80mg, Ator 40&80mg), Q 6-12mo as needed --- CPKs: not routine, only if complications occur
Lifestyle Mods	Statin use is ALWAYS in addition to lifestyle modifications, may require reminders to pts Impact varies by patient, usually a 5-15% reduction in LDL levels Patients can eat through the best statins available
HDL	Statins are not first line agents (use niacin or gemfibrozil, ↑ HDL 20-35%) All statin ↑ HDL levels, but not usually more than 10%
Triglycerides	Statins are not first line agents (use niacin or gemfibrozil, ↓ TG 30-60%) Greater TG baseline yields greater statin response, limited effect at high (200-500) TG levels
Combo Tx	Statin+ fibrate or niacin increases risk of rhabdomyolysis All statins have warnings in their labeling stating increased risk of myopathies when combined with fibrates Simvastatin 10mg is the only statin labeled for concomitant use with fibrates
Drug Interactions	Simvastatin, atorvastatin, & lovastatin are metabolized via hepatic CYP 450 3A4 - avoid 3A4 inhibitors Pravastatin is renally excreted (Note: max LDL reduction is ~37% with 80mg) and free of 3A4 drug interactions Common 3A4 inhibitors are listed in the table below (Non-Formulary Requests Section)

Non-Formulary Requests

MTFs are required to have simvastatin as the only formulary statin. When simvastatin does not meet the clinical needs of the patient and medical necessity is established, MTFs should obtain the most appropriate alternative. Wherever possible, procedures should be streamlined for these cases, requiring little, if any, involvement by the patient in the process.

Please contact the Pharmacy Department for your MTF-specific procedures.

Examples of medical necessity include:

Potential Drug Interactions	Chronic meds: amiodarone, cyclosporine, HIV protease inhibitors, nefazodone, -azole antifungals [itraconazole, ketoconazole & fluconazole (if dose >200mg/day)], & macolides (erythro-, clarithro-, only in chronic use, else see Short Term meds) Short Term meds: DO NOT CONVERT, temporary cessation of simvastatin most prudent
Inadequate Therapy	Patients not achieving their LDL goal with simvastatin 80mg or new patients not expected to achieve their LDL goal with simvastatin 80mg (based on LDL results and chart provided) should begin atorvastatin (40mg or 80mg as required to attain goal) immediately.
Adverse Reactions	Beyond common initial self-limiting events (i.e., gastrointestinal distress)
Allergy	History of simvastatin allergy



DoD Pharmacoeconomic Center

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