

## How to determine the goal LDL-C level and whether to start drug therapy: Assess Risk

(Everything NCEP III advises is based on the risk of the individual patient. The higher the risk the earlier we start interventions and the more strict are the goals of therapy.)

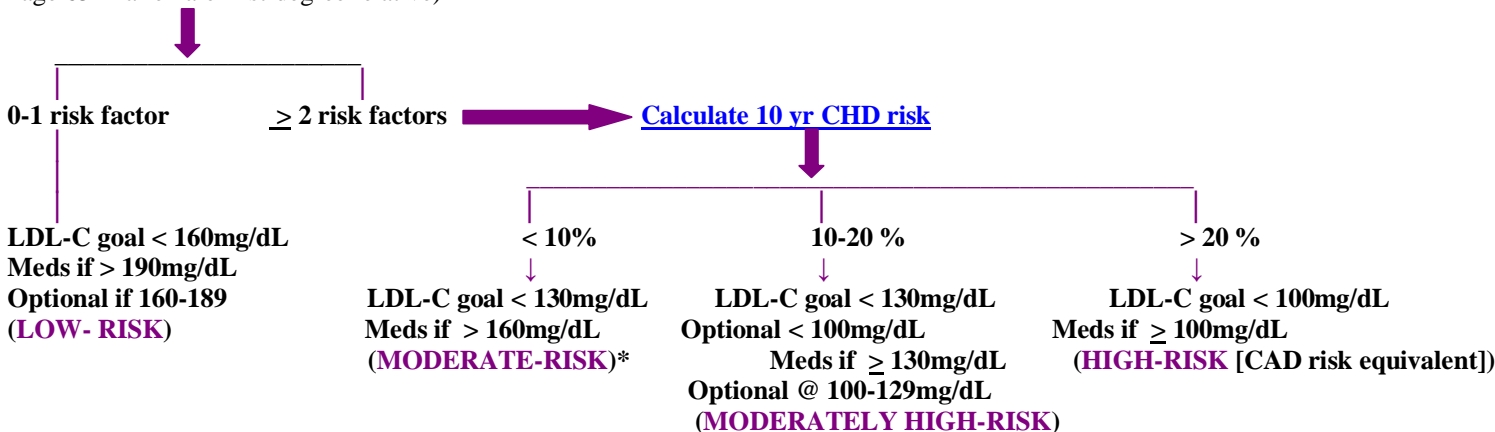
### If any...

- Coronary artery disease
- Peripheral vascular disease
- Abdominal aortic aneurysm
- Symptomatic carotid disease
- Diabetes mellitus

LDL-C goal < 100mg/dl—(**HIGH-RISK**)  
(< 70mg/dL optional if ACS or CVD with other risk factors like DM, Met S, tobacco dependence)—(**VERY HIGH-RISK**)  
All should be on a statin regardless of LDL level.

### If none of the above, count risk factors below

- Hypertension (blood pressure  $\geq$ 140/90 mm Hg or taking meds)
- Cigarette smoking
- HDL-C < 40 mg/dL (subtract 1 risk factor if HDL-C is  $\geq$ 60)
- Age  $\geq$ 40 years (men) or  $\geq$ 55 years (women)
- Family history of coronary artery disease (before age 55 in a male first-degree relative or before age 65 in a female first-degree relative)



\*The following *practical* **EMERGING RISK FACTORS** should be checked in patients in the **MODERATE-RISK** subset—especially those with strong family history—to more accurately determine risk—bumping them to **MODERATELY HIGH-RISK** subset and the optional < 100mg/dL LDL-C goal.

- TG > 150mg/dL; Cholesterol/HDL ratio < 4 (just a marker of risk – not a treatment goal); FBS > 100mg
- High *hs*-CRP (cardio)—3 to 10 (the most proven and easily attainable marker (not a treatment goal) of vascular inflammation). This particular marker can be used as a clinical decision tool to bump any subset to higher risk.
- Coronary Calcium scoring or carotid ultrasonography is recommended to further ascertain risk especially in patients in the moderate risk or moderately high risk category. If the test is significantly positive, they would become in effect coronary heart disease equivalents.

If LDL-C goal is reached, treat secondary targets. NCEP target if HDL-C is low is normalize LDL-C then check

**Triglycerides:** If triglyceride level is  $\geq$ 200 mg/dL, calculate non-HDL-C level (total cholesterol minus HDL-C);

**Non-HDL-C goal** is 30 mg/dL higher than the LDL-C goal.

**Metabolic syndrome (Insulin resistance)**—usually abnormalities in the triglyceride/HDL axis: If three or more of the following are present, treat with Therapeutic Lifestyle Changes (TLC)—weight reduction, increased, physical activity, antihypertensive treatment (if blood pressure is elevated—some form of A II blockade), aspirin—low dose (if coronary disease is present), and therapy to reduce triglycerides and raise HDL-C levels—statin in combination with a fenofibrate and/or ezetimibe.

- Waist > 40 inches (men) or > 35 inches (women)
- Triglyceride level  $\geq$  150 mg/dL
- HDL-C level < 40 mg/dL (men) or < 50 mg/dL (women)
- Blood pressure  $\geq$ 130/85 mm Hg
- Glucose level >100 mg/dL

TLC should be part of every risk reduction program. For patients at high and moderate risk requiring drug therapy, clinicians should seek to lower LDL-C levels 30% to 40%.