

## NON-HDL-C = TOTAL CHOLESTEROL MINUS HDL-C

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Non-HDL cholesterol (non-HDL-C) represents the cholesterol components carried by atherogenic lipoproteins such as LDL, very low-density lipoprotein (VLDL) and intermediate density lipoprotein (IDL). Higher non-HDL-C levels indicate increased risk of atherosclerosis. Non-HDL-C is calculated as total cholesterol minus HDL cholesterol.

According to the ESC cholesterol guideline, non-HDL-C evaluation is recommended for risk assessment, particularly in people with high TG levels, diabetes, obesity, or very low LDL-C levels.

<b>Non-HDL Cholesterol Goals for Three Risk Categories (ESC Guidelines 2019)</b>	
<b>Risk Category</b>	<b>Non-HDL Secondary Goal</b>
Very High-Risk Individuals	< 85 mg/dL
High-Risk Individuals	100 mg/dL
Moderate-Risk Individuals	130 mg/dL

The 2019 AHA/ACC cholesterol guideline identifies four statin treatment groups:

- \* Secondary ASCVD prevention for which high-intensity statin therapy is recommended;
- \* Severe hypercholesterolemia (LDL-C 190 mg/dL or greater) for which maximally-tolerated statin therapy is recommended;
- \* Patients with diabetes for which moderate- or high-intensity statin therapy is recommended depending upon risk; and
- \* Primary prevention

The use of statin therapy in primary prevention patient begins with ASCVD risk estimation using pooled cohort equations ([tools.acc.org/ascvd-risk-estimator](https://tools.acc.org/ascvd-risk-estimator)) and considers the presence of risk enhancing factors (see guideline), and the patient's thoughts and values. Although the guideline recommends statin therapy when 10-year risk estimate is 7.5% or greater, a clinician-patient risk discussion must occur before prescribing a statin.

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### References:

American Heart Association. *Cholesterol Management Guide for Healthcare Practitioners*. [https://www.heart.org/-/media/files/health-topics/cholesterol/chlstrmngmntgd\\_181110.pdf](https://www.heart.org/-/media/files/health-topics/cholesterol/chlstrmngmntgd_181110.pdf). Accessed April 30, 2020.

Arnett, DK, Blumentahl RS, Albert A, et al. 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2019;140:e596-e646. <https://doi.org/10.1161/CIR.0000000000000678>.

Grundy SM, Stone NJ, Bailey AL, et al. 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation*. 2019;139:e1082-e1143. <https://doi.org/10.1161/CIR.0000000000000625>.

Mach F, Baigent C, Catapano A, et al. 2019 ESC/EAS Guidelines for the management of dyslipidaemias: *lipid modification to reduce cardiovascular risk*: The Task Force for the management of dyslipidaemias of the European Society of Cardiology (ESC) and European Atherosclerosis Society (EAS). *European Heart Journal*. 2019;41:1,111-188. <https://doi.org/10.1093/eurheartj/ehz455>.