

Management of Hypertriglyceridemia in Adults With ASCVD

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Studies have shown that rates of atherosclerotic cardiovascular disease (ASCVD) events remain high in patients with elevated triglycerides (TGs), which are considered a risk-enhancing factor for ASCVD.

Classification of Hypertriglyceridemia

According to the 2018 American College of Cardiology (ACC)/American Heart Association (AHA) guideline, hypertriglyceridemia (HTG) is categorized as:¹

- Moderate: TG levels between 150 to 499 mg/dL
- Severe: TG levels \geq 500 mg/dL or higher

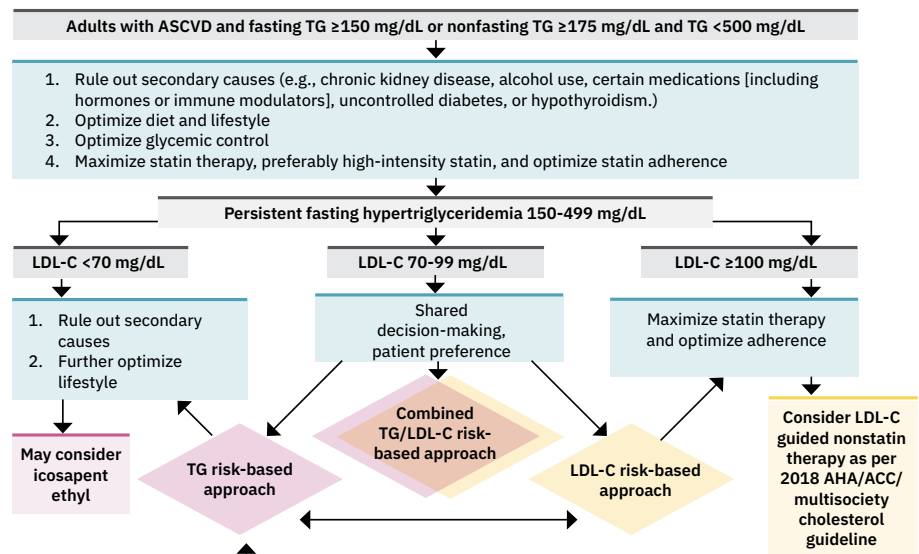
Managing Elevated Triglycerides in ASCVD

According to an ACC Solution Set Oversight Committee algorithm for managing adults with ASCVD and moderately elevated TG levels (Figure 1), key steps in HTG management include:²

- Before considering pharmacological therapy for elevated TGs, it is important to identify and address any secondary factors that may contribute to high TG levels, such as chronic kidney disease, alcohol use, certain medications (including hormones or immune modulators), uncontrolled diabetes, or hypothyroidism.
- In addition to diet and lifestyle modifications including limiting fat and alcohol intake, statins (HMG-CoA reductase inhibitors)² are recommended, and can reduce TGs by 20% to 40%.
- If statin therapy does not sufficiently lower TG levels to the desired range, a second-line treatment option includes omega-3 such as icosapent ethyl (2 g twice daily), which can reduce TG levels by 30% to 50% and have shown to reduce ASCVD risk in those with ASCVD or diabetes.³ Other second-line therapy options include fibrates, which reduce TG levels by 40% to 60%.
- Additionally, novel medications, such as angiopoietin-like protein 3 (ANGPTL3) inhibitors, are also in development and have shown the potential to reduce TG levels by 50% to 70%.

For more information, access Cardi-OH's expanded resource on [ASCVD risk reduction](#).

Figure 1. Managing Adults With ASCVD and Moderately Elevated Triglyceride Levels



Adapted from 2021 ACC Expert Consensus Decision Pathway on the Management of ASCVD Risk Reduction in Patients With Persistent Hypertriglyceridemia: a report of the American College of Cardiology Solution Set Oversight Committee

References

1. 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(25):e1082-e142. doi:10.1161/CIR.0000000000000625.
2. Virani SS, Morris PB, Agarwala A, et al. 2021 ACC Expert Consensus Decision Pathway on the Management of ASCVD Risk Reduction in Patients With Persistent Hypertriglyceridemia: a report of the American College of Cardiology Solution Set Oversight Committee. *J Am Coll Cardiol*. 2021;78(9):960-993. doi:10.1016/j.jacc.2021.06.011.
3. Bhatt DL, Steg PG, Miller M, et al. Cardiovascular risk reduction with icosapent ethyl for hypertriglyceridemia. *N Engl J Med*. 2019;380(1):11-22. doi:10.1056/NEJMoa1812792.

The Ohio Cardiovascular and Diabetes Health Collaborative is funded by the Ohio Department of Medicaid and administered by the Ohio Colleges of Medicine Government Resource Center. The views expressed in this document are solely those of the authors and do not represent the views of the state of Ohio or federal Medicaid programs.

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