VA/DOD CLINICAL PRACTICE GUIDELINE ON LIPID MANAGEMENT FOR CARDIOVASCULAR DISEASE RISK REDUCTION

Department of Veterans Affairs

Department of Defense

Patient Summary

I. What is atherosclerotic cardiovascular disease?

Atherosclerotic cardiovascular disease (ASCVD) is a group of conditions affecting the heart and blood vessels. ASCVD is the leading cause of death around the world.

ASCVD is caused by deposits of cholesterol, a waxy, fat-like substance, that builds up inside the lining of the arteries, forming what is referred to as “plaque”. This plaque starts in childhood and can progress to partially or completely block the flow of blood in the arteries of the heart or brain. Sudden blockage of an artery causes a lack of oxygen needed by the heart or brain cells to live. This causes a heart attack or stroke. Heart attacks and strokes may cause permanent damage to the heart or brain and sometimes lead to death.

Plaques contain many substances, including cholesterol, fibrous tissue, and sometimes clots (see Figure 1). Cholesterol is produced by the liver and is also found in certain foods. “Good” cholesterol (HDL) can protect individuals from heart disease, but “bad” cholesterol (LDL) and can increase the risk of ASCVD. The body needs cholesterol for good health, but too much cholesterol can build up in plaques inside the arteries and increase the risk of heart attacks and strokes.

Figure 1. Atherosclerosis Disease Progression

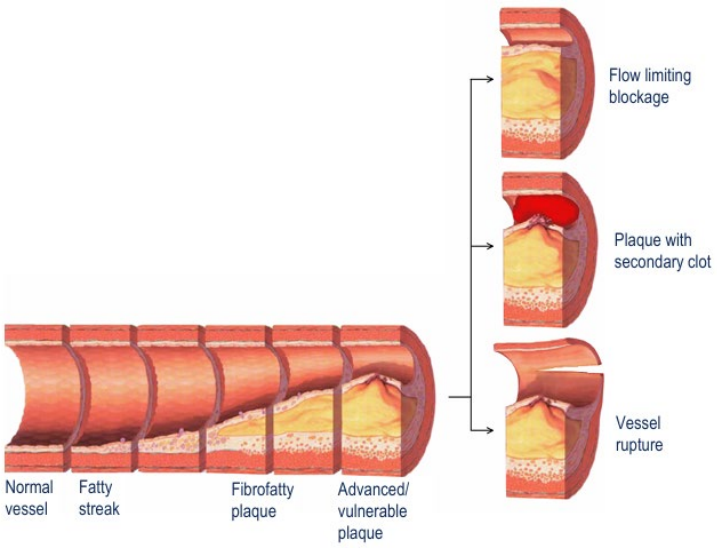

Image source: https://commons.wikimedia.org/wiki/File:Late_complications_of_atherosclerosis.PNG

II. How to reduce the risk of atherosclerotic cardiovascular disease?

Many factors increase the risk of ASCVD. Individuals can work with their healthcare team to estimate the risk of a heart attack or stroke, then develop a plan that will show how that risk will change based on their choices.

The risk of ASCVD can be reduced by modifying some of these risk factors:

- Choose a healthy dietary pattern, e.g., Mediterranean diet (see Table 1. Mediterranean and Other Heart Healthy Diets)
- Maintain regular physical activity (see Table 2. Summary of Exercise Recommendations)
- Quit smoking and using nicotine
- Control blood pressure
- Control blood sugar
- Strive to achieve or maintain a healthy weight

Sometimes, diet, exercise, and other lifestyle changes can lower cholesterol. Changing behavior to improve health can be difficult and take time, so persevere and be patient. Healthcare providers may provide referrals to a health and wellness coach, registered dietitian, physical therapist, or tobacco educator who can offer support and guidance through these lifestyle changes.

Lifestyle changes, while essential to one's health, may not be enough to reduce cholesterol and the risk of cardiovascular disease. A healthcare provider may also prescribe medications; most commonly, statins. For individuals at a higher risk of ASCVD, additional medications may be prescribed (for example: ezetimibe, PCSK9 inhibitors, bempedoic acid, icosapent ethyl). Statins and these other medications lower cholesterol levels and reduce the risk of heart attack and

stroke. Research has not shown that supplements and/or herbal formulations reduce risk.

Medications should be continued even when cholesterol is lowered. If medications are stopped, then cholesterol levels will likely rise again. Additionally, these medications may have effects beyond cholesterol lowering, including anti-inflammatory properties, which are beneficial in ASCVD.

Risk of heart attack and stroke increases with age. Taking medications consistently will continue to reduce cardiovascular risk with aging. Furthermore, risk reduction is most significant when medications are taken over the long term.

Table 1. Mediterranean and Other Heart Healthy Diets

Eat More	Eat and Drink Less
• Fruits and vegetables • Whole grains • Seafood (primarily fatty fish) • Skinless poultry • Tree nuts, seeds, peanuts, nut butters • Beans and legumes • Non-tropical vegetable oils (olive, canola, avocado, etc.) • Low-fat dairy products (milk, cheese)	• Added sugar • Sugar-sweetened beverages • Sodium • Highly processed foods • Refined carbohydrates • Saturated fats • Tropical vegetable oils (coconut, palm oil, etc.) • High-fat and processed meats • Alcoholic beverages

Table 2. Summary of Exercise Recommendations

Exercising to Lower the Risk of Cardiovascular Disease
• Avoid being sedentary. • Any movement is better than no movement. Some exercise is better than no exercise. Even activities not typically thought of as exercise such as walking, doing the dishes, taking the stairs instead of the elevator, or working in the yard, are associated with lower risk for ASCVD. • Start low and go slow. Over days and weeks, try to add a little more movement as tolerated. Increasing activity too rapidly can lead to injuries and burnout. • If possible, aim to build up to 150 minutes/week of moderate-intensity exercise. • Do as much as possible. The more physically active you are, the more you can lower your risk!

III. Example questions to ask your care team:

- What are my cardiovascular risk factors?
- What is my ten-year risk of heart attack or stroke?
- Do I need any additional tests?
- What changes should I make to reduce my risk?
- Can you refer me to someone who will help me improve my diet, exercise, stress, and/or sleep?
- I smoke cigarettes and I am interested in quitting. Can you help me stop smoking?
- Will I benefit from taking medication?
- If you are prescribed medication, ask the following questions:

- How does this medication work?
- How much benefit should I expect?
- How long does the medication take to become effective?
- Will I need any blood tests while taking this medication?
- Do I still need to take the medication even after my cholesterol levels improve?
- What are the common and serious side effects?
- Does this medication interact with any of my medications or supplements?
- What time of day should I take my medication?
- Are there any foods or supplements I should avoid while taking this medication?

IV. References

1. U.S. Department of Veterans Affairs. *Mediterranean diet. Nutrition and Food Services* 2015; www.nutrition.va.gov/docs/UpdatedPatientEd/Mediterraneandiet.pdf. Accessed October 9, 2025.

2. Centers for Disease Control and Prevention. https://www.cdc.gov/cholesterol/index.html. Accessed October 9, 2025

3. National Heart, Lung, and Blood Institute. https://www.nhlbi.nih.gov/health/blood-cholesterol/treatment. Accessed October 9, 2025.