



VA/DoD CLINICAL PRACTICE GUIDELINE FOR THE MANAGEMENT OF DYSLIPIDEMIA FOR CARDIOVASCULAR RISK REDUCTION

**Department of Veterans Affairs
Department of Defense**

Patient Summary

QUALIFYING STATEMENTS

The Department of Veterans Affairs and the Department of Defense guidelines are based upon the best information available at the time of publication. They are designed to provide information and assist decision-making. **They are not intended to define a standard of care and should not be construed as one. Neither should they be interpreted as prescribing an exclusive course of management.**

This Clinical Practice Guideline is based on a systematic review of both clinical and epidemiological evidence. Developed by a panel of multidisciplinary experts (all practicing clinicians), it provides a clear explanation of the logical relationships between various care options and health outcomes while rating both the quality of the evidence and the strength of the recommendations.

Variations in practice will inevitably and appropriately occur when clinicians take into account the needs of individual patients, available resources, and limitations unique to an institution or type of practice. Every health care professional making use of these guidelines is responsible for evaluating the appropriateness of applying them in the setting of any particular clinical situation.

These guidelines are not intended to represent TRICARE policy. Further, inclusion of recommendations for specific testing and/or therapeutic interventions within these guidelines does not guarantee coverage of civilian sector care. Additional information on current TRICARE benefits may be found at www.tricare.mil or by contacting your regional TRICARE Managed Care Support Contractor.

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Why is an abnormal fat level in the blood (dyslipidemia) important and how does it affect my health?

- Dyslipidemia is defined as abnormal fat levels in the blood that contribute to plaque buildup (cholesterol, fatty substances, etc.) in vessels and arteries. Plaque build-up is responsible for heart and blood vessel disease.
- Two kinds of blood fat matter: HDL, the “good” cholesterol; and LDL, the “bad” cholesterol

What happens when fatty substances build up in blood vessels (atherosclerotic cardiovascular disease [ASCVD])?

Atherosclerosis is the buildup of plaque (cholesterol, fatty substances, etc.) in the walls of the blood vessels that carry blood from the heart and other parts of the body. This plaque clogs the vessels and makes it more difficult for the blood to flow to the body. When a plaque breaks, it causes a blood clot. If it happens in a blood vessel of the heart, then the blood cannot flow and this can cause a heart attack. If a clot closes a blood vessel of the brain, this can cause a stroke.

How many people have abnormal fat levels in their blood (dyslipidemia)?

About 71 million adults in the US have dyslipidemia. Dyslipidemia increases the risk of diseases of the heart and blood vessels. [\[1\]](#)

What treatments are available?

Your doctor may suggest these positive lifestyle changes to help your heart:

- Stop smoking and stay away from places where others are smoking tobacco.
- Increase your physical activity.
- Adopt a healthy diet. Your doctor may ask you to see a dietitian.
- If you are overweight, adopt a healthy diet and engage in regular physical activity to lose weight or, at least not gain more weight. Even a small amount of weight loss can help your heart a lot.

Table 1 shows some components of the Mediterranean diet, a diet that your doctor or dietitian may suggest.



Table 1. Summary of Dietary Recommendations in the Mediterranean Diet* [2]

Food	Goal
<i>Recommended</i>	
Olive oil	≥ 4 tbsp. per day
Tree nuts and peanuts	≥ 3 servings per week
Fresh fruits including natural fruit juices	≥ 3 servings per day
Vegetables	≥ 2 servings per day
Seafood (primarily fatty fish)	≥ 3 servings per week
Legumes	≥ 3 servings per week
Sofrito†	≥ 2 servings per week
White meat	In place of red meat
Wine with meals (optional)	≥ 7 glasses per week
<i>Discouraged</i>	
Soda drinks	< 1 drink per day
Commercial baked goods, sweets, pastries‡	< 3 servings per week
Spread fats	< 1 serving per day
Red and processed meats	< 1 serving per day

*Adapted from Estruch, et al. (2013)

† Sofrito is a sauce made with tomato and onion, and often includes garlic, herbs, and olive oil.

‡ Commercial bakery goods, sweets, and pastries included cakes, cookies, biscuits, and custard, and did not include those that are homemade.

If you do not see a dietitian, additional tools to plan food choices and menus are on the United States Department of Agriculture website, <http://www.choosemyplate.gov/>. Table 2 shows some advice on physical activity for adults and older adults.



Table 2. Key Guidelines for Adults & Older Adults [3]

All Adults	Older Adults
Avoid inactivity. Some physical activity is better than none and adults who participate in any amount of physical activity gain some health benefits.	Be as physically active as abilities and conditions allow when unable to do 150 minutes of moderate-intensity aerobic* activity a week.
For substantial health benefits, do at least 150 minutes (2 hours and 30 minutes) a week of moderate intensity or 75 minutes (1 hour and 15 minutes) of vigorous aerobic* physical activity, or an equivalent combination of moderate and vigorous intensity aerobic* activity.	Do exercises that maintain or improve balance if at risk of falling.
Do muscle-strengthening activities that are moderate or high intensity and involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.	Consider level of fitness before determining level of activity.
For additional and more extensive health benefits, increase aerobic physical activity to 300 minutes (5 hours) a week of moderate intensity, or 150 minutes a week of vigorous intensity aerobic* physical activity, or an equivalent combination of moderate and vigorous intensity activity as additional health benefits are gained by engaging in physical activity beyond this amount.	Understand how chronic conditions affect ability to do regular physical activity safely.

*Aerobic activity should be performed in episodes of at least 10 minutes, and preferably, it should be spread throughout the week.

Medication(s) your doctor may prescribe include:

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| <ol style="list-style-type: none"> 1. Statins <ol style="list-style-type: none"> a. Atorvastatin b. Fluvastatin c. Lovastatin d. Pravastatin e. Rosuvastatin f. Simvastatin | <ol style="list-style-type: none"> 2. Fibrates <ol style="list-style-type: none"> a. Fenofibrate b. Fenofibric Acid c. Gemfibrozil 3. Niacin 4. Ezetimibe 5. Fish Oil |
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What can I do to manage my care?

Good communication with your doctor is essential. Consider asking the following questions when you meet with your doctor:

- Can you help me quit smoking?
- Do you know any local resources to help me lose weight?
- Are my diet and food choices healthy?
- Do you know any local resources to help me increase my physical activity?
- Do I need to take medication (what are the benefits and the harms)?
- Am I on the appropriate dose of my medicine?

Frequently Asked Questions

1. **Question (Q):** What side-effect(s) should I look for while on medication?
Answer (A): The side-effect(s) you may get will depend on which medication(s) you take. Talk to your doctor about the possible side-effects of the medication(s) you are taking.
2. **Q:** Why do I no longer need to have my cholesterol and liver routinely tested while on medication?
A: Experts do not think it is necessary anymore, based on the scientific literature.
3. **Q:** Is it safe for me to get pregnant while on medication?
A: This will depend on the medication(s) you are taking. If you think you may get pregnant, ask your pharmacist or provider if it is safe to get pregnant while on the medication(s) you are taking.
4. **Q:** Now that I am on medication, can I go back to my usual diet or should I continue the dietary changes discussed with the dietitian?
A: No, your medication and the changes recommended by your dietitian work differently on cholesterol and the heart. The benefits add up and you should continue to eat healthy while on medication.
5. **Q:** I don't want to go to the gym; are there other ways for me to increase my physical activity?
A: Yes, most health benefits occur with at least 150 minutes (2 hours and 30 minutes) a week of moderate intensity physical activity, such as brisk walking and do not require you to go to the gym. Types of exercises done outside the gym can be found on the National Institutes of Health website, <http://go4life.nia.nih.gov/exercises>.
6. **Q:** How will my increase in physical activity impact my other health conditions?
A: Ask your doctor if you have any disease where it is not a good idea to increase your physical activity. But for most people, physical activity is good. Scientific research shows that, in addition to heart disease, it can also help with diabetes, high blood pressure, joint pain, and depression. You can check you fitness and track your physical activity on the health.gov website, <http://www.health.gov/paguidelines/resources/>.
7. **Q:** Where can I find more information about cholesterol and heart disease?
A: For more information about cholesterol and heart disease see the following websites:
 - VA/DoD Tobacco Use Clinical Practice Guideline, <http://www.healthquality.va.gov/guidelines/cd/mtu/index.asp>
 - VA/DoD Obesity Clinical Practice Guideline, <http://www.healthquality.va.gov/guidelines/CD/obesity/VADoDCPGManagementOfOverweightAndObesityFINAL070714.pdf>
 - VA/DoD Diabetes Mellitus Clinical Practice Guideline, http://www.healthquality.va.gov/guidelines/CD/diabetes/DM2010_FUL-v4e.pdf



References

1. Centers for Disease Control and Prevention (CDC). Vital signs: prevalence, treatment, and control of high levels of low-density lipoprotein cholesterol-United States, 1999-2002 and 2005-200. *MMWR Morb Mortal Wkly Rep.* Feb 4 2011;60(4):109-114.
2. Estruch R, Ros E, Salas-Salvado J, et al. Primary prevention of cardiovascular disease with a Mediterranean diet. *N Engl J Med.* Apr 4 2013;368(14):1279-1290.
3. U.S. Department of Health and Human Services. Physical activity guidelines for Americans. U.S. Department of Health and Human Services, HealthierUS.gov, ODPHP Publication No. U0036; 2008.