

PACE

Pharmaceutical Assistance
Contract for the Elderly

Alosa
Health

Balanced information for better care

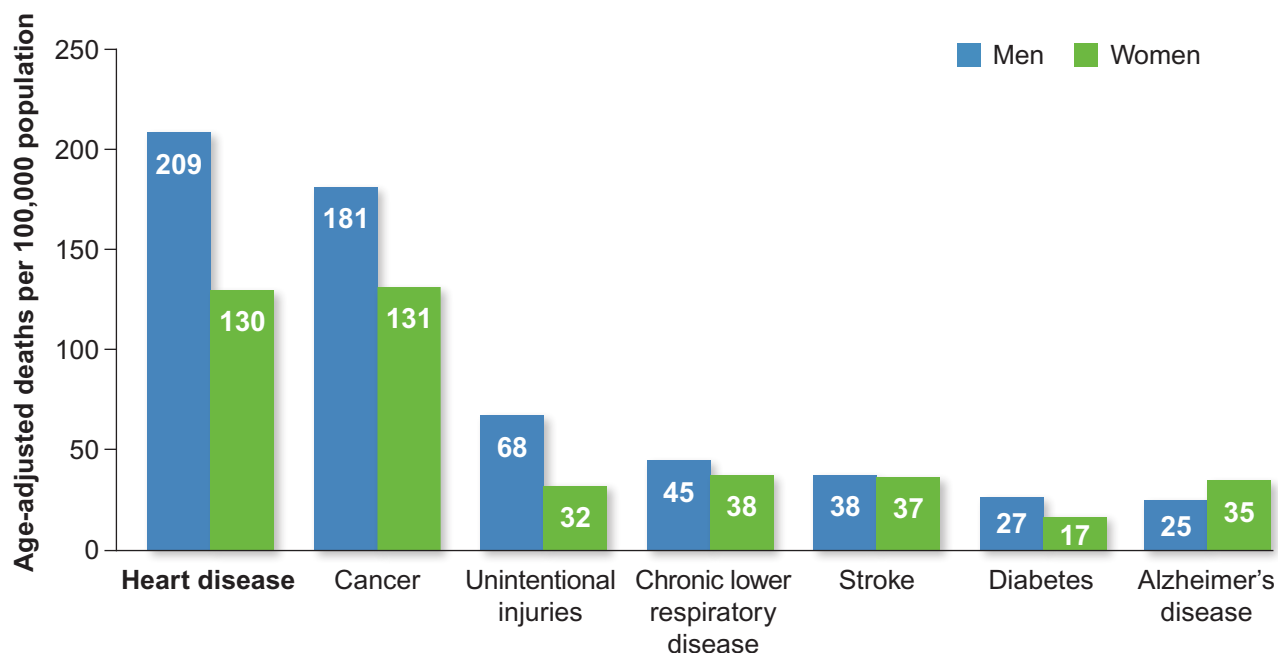
Preventing cardiovascular disease

Evidence-based recommendations on risk, lipid-lowering drugs, aspirin, and lifestyle



Cardiovascular disease remains lethal

FIGURE 1. Cardiovascular disease (CVD) remains a major cause of death in the U.S.¹



Evidence-based strategies can reduce its risk substantially.

**Assess need for
lipid-lowering therapy**



**Encourage healthful diet
and physical activity**



**Re-evaluate the
need for aspirin**



**Control high blood
pressure**



**Support tobacco
cessation**



Manage diabetes



Assessing CVD risk can guide management decisions

A validated tool like the Pooled Cohort Equation (PCE) can help measure a patient's CVD risk and inform recommendations.

Risk factors considered in the PCE include:²

- age
- sex
- race (White, Black, other)
- blood pressure
- cholesterol (total, HDL, LDL)
- diabetes
- smoking
- treatment for hypertension

ASCVD* Risk Estimator Plus

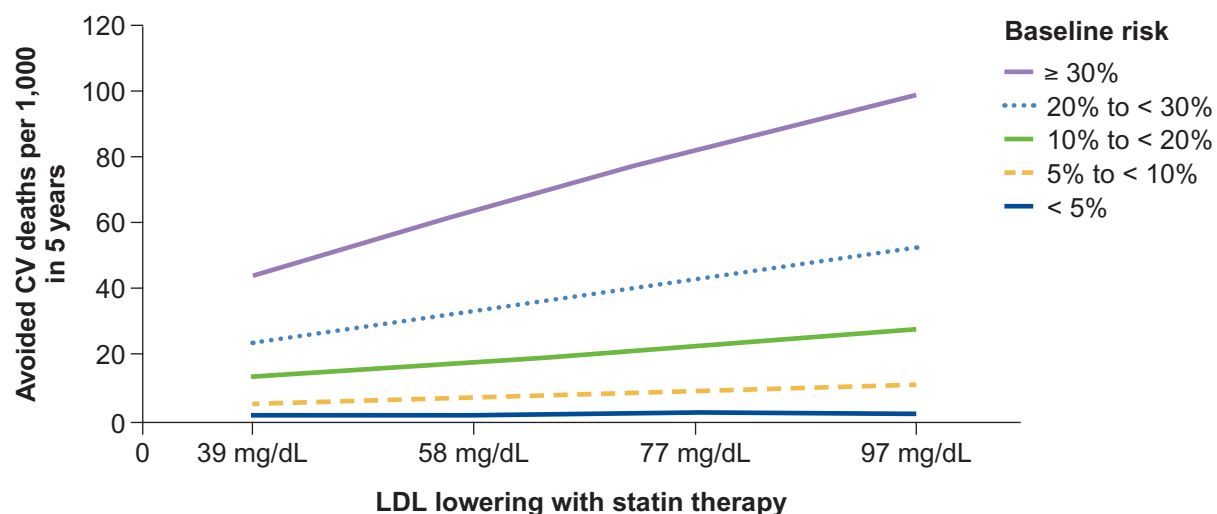


PCE is a good general predictor of CV events, but it overestimates risk in more affluent people and underestimates it in poorer ones. It is also somewhat less well validated in patients who are not Black or White (e.g., Hispanic, Asian). It can be accessed through the QR code above or at <https://tools.acc.org/ascvd-risk-estimator-plus>.

Risk assessment tools are well validated, but using them hasn't been shown in randomized trials to reduce CVD. However, **using these tools does improve adherence to risk reduction strategies** such as statin use, smoking cessation, and antihypertensive medications.

Statins prevent CVD in most patients regardless of CVD risk, but their absolute benefit is larger for high-risk patients.

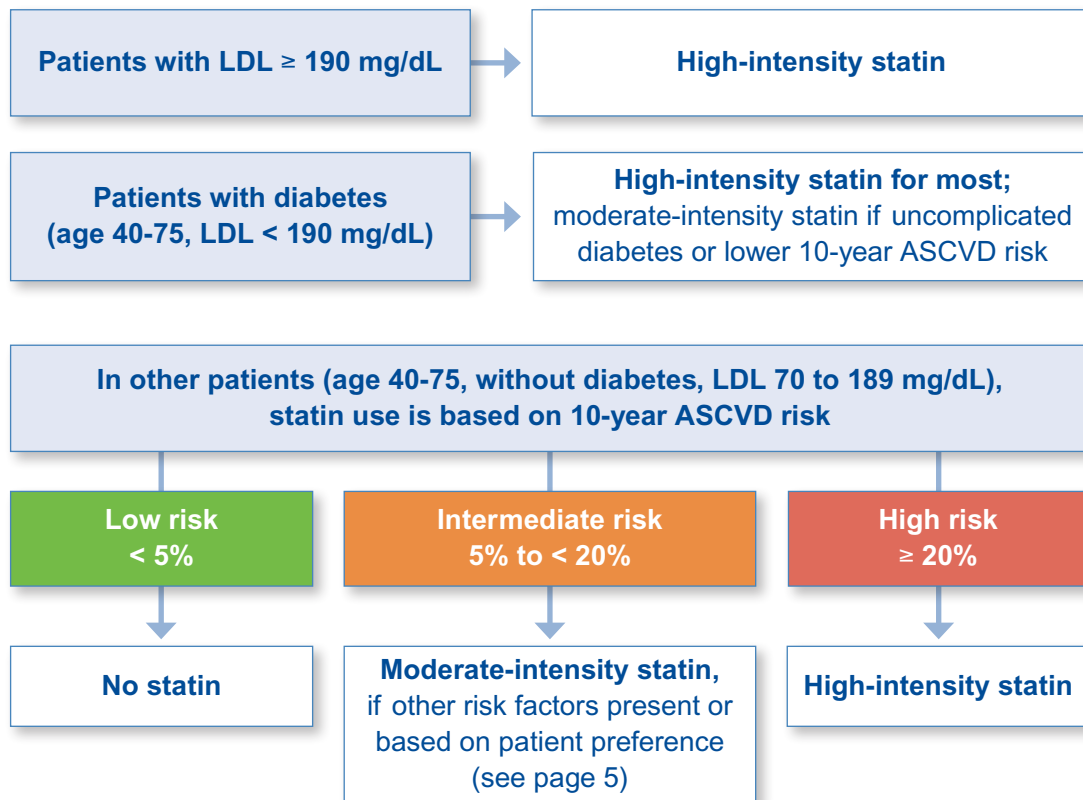
FIGURE 2. Across a spectrum of baseline risk, lowering LDL with a statin reduces CVD risk. The proportion of cardiovascular deaths avoided is greatest for those with highest risk.³



*ASCVD = Atherosclerotic cardiovascular disease

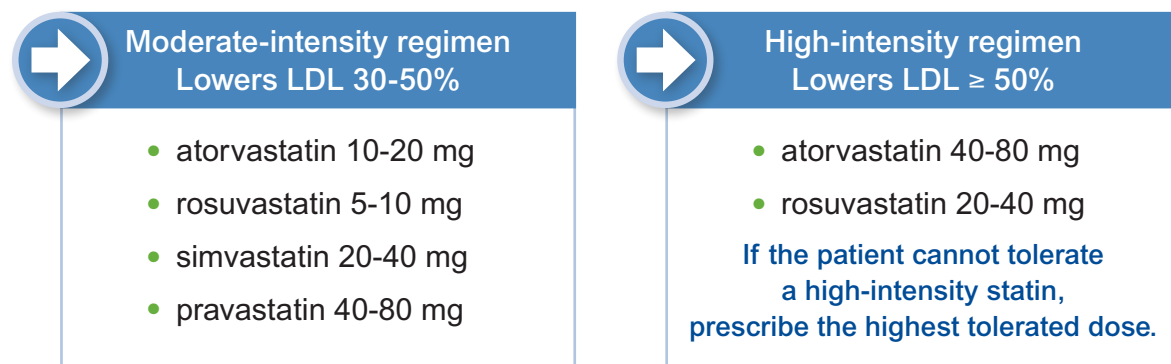
In primary prevention, decide on statin use based on CVD risk

FIGURE 3. The 2019 ACC/AHA* guideline recommends statins for people with very high LDL, diabetes, or a 10-year risk of 5 to 20% plus other risk factors, or based on patient preference.⁴



For primary prevention, in most cases the goal of statin therapy does not require achieving a given LDL level, as long as adherence is adequate.

FIGURE 4. Select statin intensity based on patient risk factors.⁵



* ACC/AHA: American College of Cardiology and American Heart Association

For patients at intermediate risk, additional factors can help determine statin use

Presence of these additional risk factors may suggest the need for a statin:

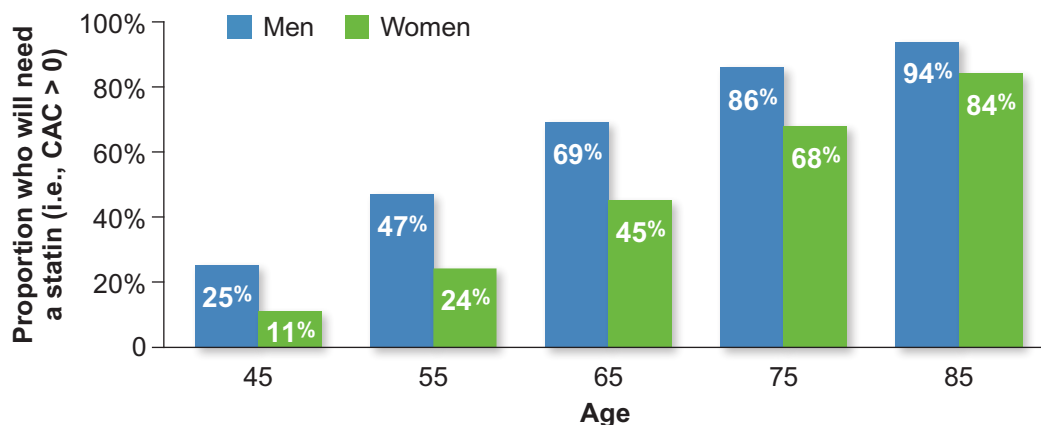
- family history of premature ASCVD
- chronic kidney disease
- metabolic syndrome
- inflammatory diseases (e.g., rheumatoid arthritis, psoriasis, lupus)
- chronic infections (HIV, hepatitis C)
- conditions specific to women (e.g., preeclampsia, premature menopause)
- ethnicity (e.g., South Asian ancestry)
- persistently elevated LDL ≥ 160 mg/dL
- triglycerides ≥ 175 mg/dL
- laboratory biomarkers
 - high-sensitivity C-reactive protein
 - lipoprotein(a)
 - apolipoprotein
- Coronary Artery Calcium (CAC) score > 0

For some, the CAC score can help determine if a statin is needed.

- For patients at intermediate ASCVD risk, a CAC score = 0 is highly predictive of low CVD risk.⁵ A score of zero may reassure the patient and clinician that statin therapy is likely not needed.
- CAC tests are usually not covered by insurance. Costs vary, generally between \$100-400.
- Statin choices can often be made based on other risk factors without measuring the CAC.
- For patients with intermediate risk plus additional risk factors who are not taking a statin due to preference or prior intolerance, a CAC score will be useful only if a score > 0 would change the decision to use a statin.

Most older adults have a CAC score > 0 , which could make CAC a less useful tool.

FIGURE 5. As patients age, the likelihood of a CAC > 0 increases, especially for men. This can affect its utility for the decision to prescribe a statin.⁶



Estimates of the likelihood of a CAC score > 0 based on age can be found at mesa-nhlbi.org/Calcium/input.aspx

Managing statin use in older patients

For adults over 75, don't withhold or stop a statin based on age alone.





While primary prevention trials are lacking, observational evidence suggests patients over 75 may still benefit from starting or continuing statins for primary prevention.^{7,8}

The 2018 AHA/ACC guideline suggests a moderate-intensity statin for adults over 75, stopping only for functional decline, multimorbidity, frailty, or life-expectancy < 2.5 years.^{6,9}

Side effects should not limit statin recommendation, but may limit adherence.

- Statin-associated muscle symptoms occur in 5-10% of patients, are typically mild and observed early, and usually resolve. Patients with mild muscle symptoms can safely try a different statin or lower dose.
- Cognitive symptoms may be reported by patients but are not documented in clinical trials.
- A small increase in serum glucose in some patients taking statins should not prevent their use, as the overall benefit is positive, especially among patients with diabetes or prediabetes.

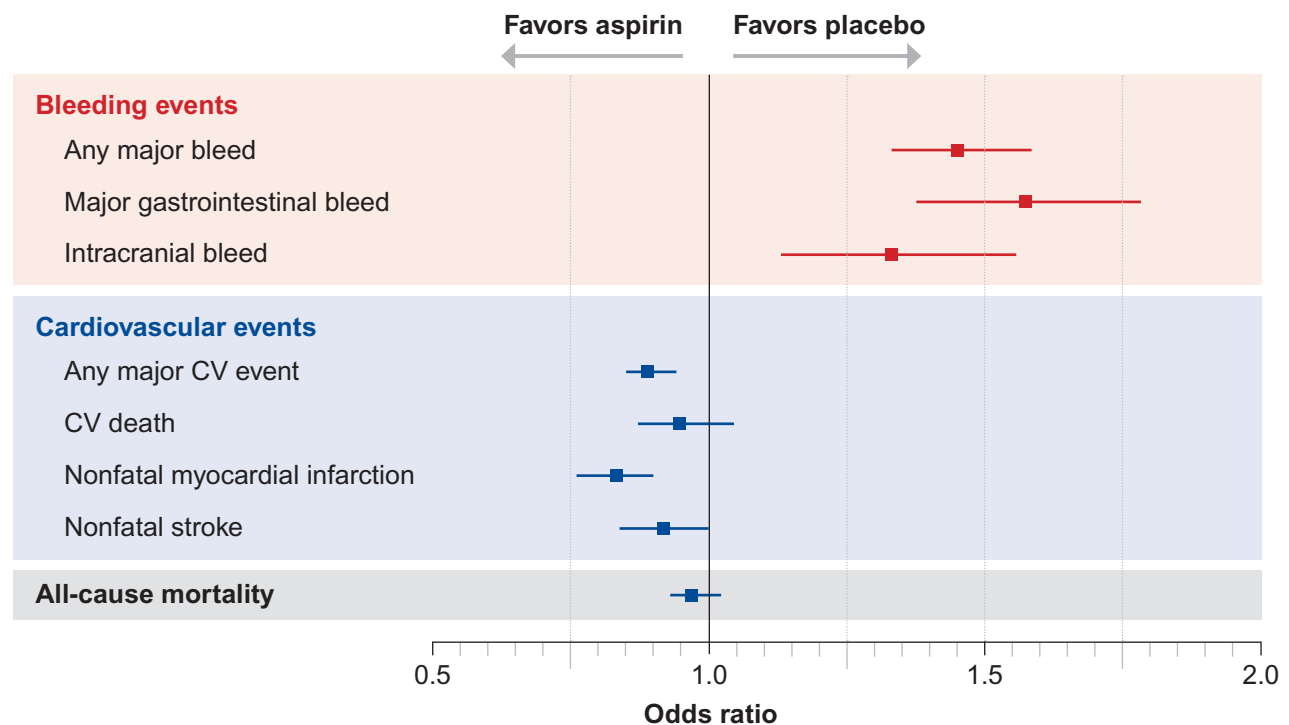
Other lipid-lowering medications have less compelling evidence in primary prevention.

 Ezetimibe Zetia, generics <ul style="list-style-type: none">• Reduces CVD when given alone; not studied with statins for primary prevention• Low cost and few side effects: could be used for intermediate- or high-risk patients unable to tolerate a statin¹⁰	 PCSK9 inhibitors alirocumab (Praluent), evolocumab (Repatha) May be useful for patients with LDL \geq 190 mg/dL, but no trial data in other patient groups for primary prevention ^{11,12}	 Icosapent ethyl Vascepa, generics <ul style="list-style-type: none">• Derivative of omega-3 fatty acids• Limited evidence for primary CVD prevention• Use only in patients with triglycerides \geq 150 mg/dL (despite maximally tolerated statins), diabetes, and at least 2 other CVD risk factors¹³	 Fibrates, niacin, omega-3 fatty acids <ul style="list-style-type: none">• Includes over the counter fish oil products• No evidence supporting their use to prevent CVD
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Aspirin no longer has a major role in primary prevention of CVD

Aspirin leads to a small reduction in cardiovascular events, but a significant increase in risk of bleeding, with no net benefit in mortality.

FIGURE 6. A meta-analysis of trials comparing aspirin vs. placebo in patients who have not had a prior cardiac event found limited benefits but substantial bleeding risk.¹⁴



For most patients, the risks of aspirin outweigh its benefits.^{4,15}

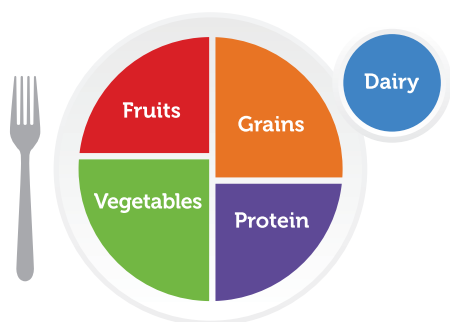


Stop aspirin for primary prevention, particularly in patients who are over 60 or are at increased risk for bleeding.*

*Risk factors for bleeding include advanced age, use of non-steroidal anti-inflammatory medications or anti-platelet agents, or a history of gastrointestinal or other major bleeding.

Lifestyle modification is a powerful way to reduce cardiovascular risk

Plant-predominant diets reduce CVD risk and events.



Current guideline recommendations for a balanced diet at myplate.gov

A Mediterranean diet has been shown in a randomized trial to reduce CV death, myocardial infarction, and stroke by 30%.¹⁶

- High intake of olive oil, fruit, nuts, vegetables, and cereals
- Moderate intake of fish and poultry
- Low intake of dairy products, red meat, processed meats, and sweets

A DASH diet resulted in a 25% reduction in coronary heart disease in patients with pre-hypertension.¹⁷

- High in fruits and vegetables
- Low in sodium
- Low in saturated fat

High fiber diet (25-40 grams of fiber/day)¹⁸

- Lowers LDL and triglycerides 5-10%

TABLE 1. Physical activity reduces CVD risk factors and outcomes.¹⁹⁻²⁴

EXERCISE	Improves lipids	Lowers blood pressure	Improves diabetes control	Reduces CV events
Aerobic exercise (movement that increases the heart rate)	+	+++	+	+++
Strength or resistance training	+		+	+++

+ small effect; ++ moderate effect; +++ large effect

Smoking cessation is the single lifestyle modification that can lead to the greatest reduction in cardiovascular disease.



- Prescribe medications and connect patients to resources to help them succeed.
- 1-800-QUIT-NOW can link patients with resources and information. Numbers for other languages can be found at cdc.gov/tobacco/campaign/tips/quit-smoking/quitline

Primary care physicians can help patients modify lifestyle in just a few minutes

Using the five A's of behavior change can help patients make effective, incremental modifications.

Assess the patient's current behaviors and readiness for change:

- "How many days a week do you engage in exercise?"
- "What did you eat for breakfast, lunch, and dinner yesterday?"

Advice with recommendations tailored to a patient's risk factors.

Agree on SMART goals that have clear links to action.²⁵

Specific: "What do you want to do?"

Measurable: "How will you know when you've reached it?"

Achievable: "Is it in your power to accomplish it?"

Realistic: "Can you realistically achieve it?"

Timely: "When exactly do you want to accomplish it?"

Examples of SMART goals:

Not SMART	SMART
I will quit smoking.	I will start using daily nicotine patches (7 mg) tomorrow and will set a quit date for 2 weeks from today.
I will exercise more.	I will walk briskly for 30 minutes on Tuesdays and Thursdays before I leave work.
I will cut down on sugar intake.	On workdays, I will use sugar substitutes in my coffee every morning and drink zero-calorie flavored water instead of regular soda with lunch.

Assist the patient to overcome their own specific barriers.

Arrange follow-up with resources and support.

Connect the patient to resources that encourage a healthy lifestyle



Local options

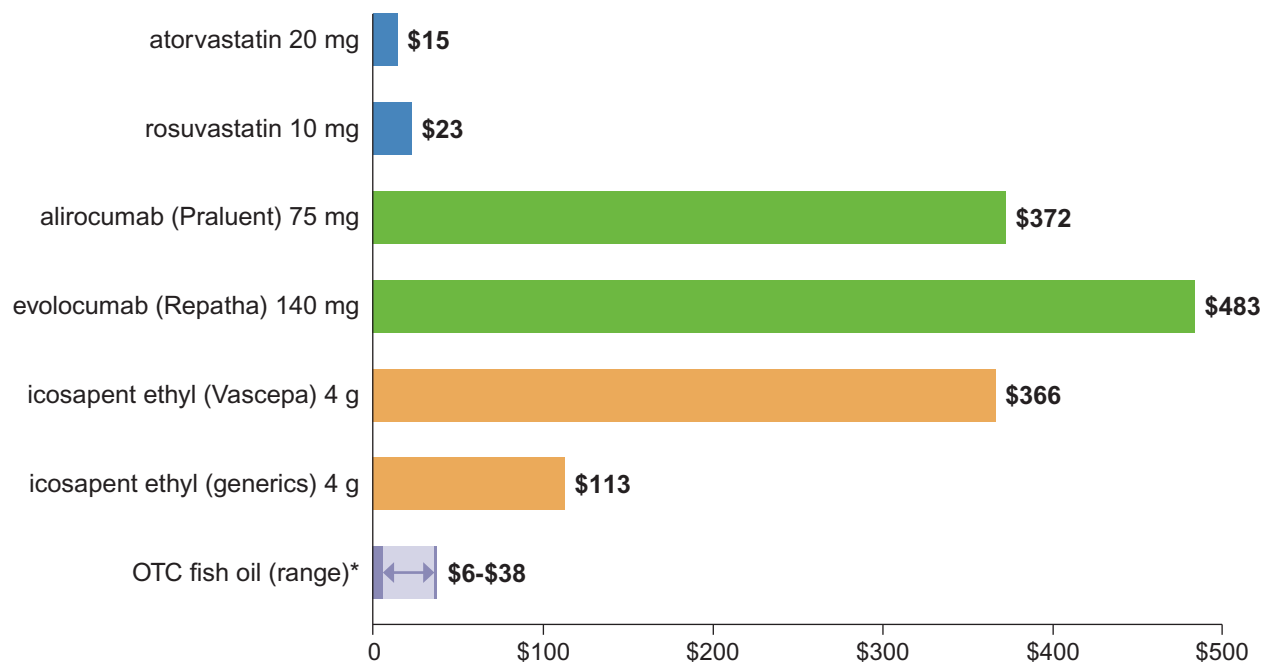
- Gyms, community centers (e.g., YMCA, YWCA)
- Support groups (e.g., Alcoholics Anonymous, Overeaters Anonymous)
- Food pantries, meal-delivery services
- Cooking classes
- Worksite wellness programs
- Local parks or green spaces



Virtual options

- Health and wellness coaches
- Wearable devices (e.g., FitBit, Apple Watch)
- Mobile apps (e.g., MyFitnessPal, Noom, Headspace)

FIGURE 7. Cost of a 30-day supply of lipid lowering therapies



*OTC fish oil products range from \$6 to \$38 per month depending on the product.

Prices from goodrx.com, December 2021. Listed doses are based on Defined Daily Doses by the World Health Organization and should not be used for dosing in all patients. These prices are a guide; patient costs will be subject to copays, rebates, and other incentives.

Key points

- Use a risk assessment tool such as the Pooled Cohort Equation to assess a patient's 10-year risk of cardiovascular disease and guide decisions on statin therapy.
- For patients with certain risk factors (diabetes, LDL \geq 190) or elevated 10-year risk, prescribe a statin to lower cholesterol and to reduce the risk of cardiovascular disease.
- For patients at intermediate risk, statin use will depend on the presence of additional risk factors. The coronary artery calcium score can help stratify risk but is usually not necessary.
- Statins are beneficial for older adults and should not be discontinued based on age alone.
- Don't use aspirin for primary prevention in most cases, especially in older adults. Most patients taking it for primary prevention should stop because of bleeding risk.
- Actively engage patients in discussions about lifestyle changes, including diet, exercise, and smoking cessation. Use SMART goals and connect patients with resources that can help them change behavior.

Visit AlosaHealth.org/CVDprevention
for links to a comprehensive evidence document and other resources.

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About this publication

These are general recommendations only; specific clinical decisions should be made by the treating clinician based on an individual patient's clinical condition. More detailed information on this topic is provided in a longer evidence document at AlosaHealth.org.



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