

What are statins?

Statins are the most commonly prescribed type of medication to treat [high cholesterol](#) . Statins lower total cholesterol and LDL (bad) cholesterol, and are the first choice drug for most women with high cholesterol. Statins work by reducing the production of cholesterol in the liver, and by triggering your liver to remove LDL (bad) cholesterol from the blood.

In addition to their cholesterol-lowering effects, statins can also reduce the risk of heart attack and stroke in women who do not have high cholesterol.

See also: [Cholesterol Drugs – Statins](#)

How are statins used in women with PAD?

Because women with PAD are at high risk for heart disease and stroke, it is especially important that they get their cholesterol levels under control. Statins are one of the first-choice drugs to lower cholesterol in women with high cholesterol, including in women with PAD.

Because they have benefits beyond lowering cholesterol, statins are increasingly prescribed for women who do not have high cholesterol. Statins can prevent heart attack and stroke in women at high risk for these conditions, either because they already have some form of artery disease (such as [PAD](#) or [coronary artery disease](#)) or because of other risk factors.

Although statins are primarily used to lower cholesterol and prevent heart attack and stroke, they may have additional benefits in women with [PAD in the legs](#) . Some studies have shown that statins can delay the onset of

[PAD symptoms](#)

in the early stages of the disease, and increase pain-free walking distance in women who already suffer from leg pain caused by PAD.

Statins

Generic Names:

Atorvastatin / Simvastatin / Rosuvastatin / Fluvastatin / Lovastatin / Pravastatin

Brand Names:

Lipitor / Zocor / Crestor / Lescol / Mevacor, Altoprev / Pravachol

How they are given:

Oral (tablet)

What they are used for:

- To lower cholesterol and prevent heart attack and stroke in women with artery disease, including PAD
- To lower total cholesterol and LDL (bad) cholesterol in women with high cholesterol
- To prevent heart disease and stroke in women at high risk for artery disease (aged 60 or older, high cholesterol, high blood pressure, diabetes, or smoking)

You should not be treated with them if:

- You have had an allergic reaction to statin drugs in the past
- You have liver disease
- You are pregnant or may become pregnant (see below)

Pregnancy and nursing:

You should not take statin drugs if you are pregnant or may become pregnant.

Who should receive statin drugs?

Women with PAD who have [LDL \(bad\) cholesterol](#) levels of 100 mg/dL or more should take statins to reduce their risk of heart attack and stroke.

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Even if your LDL (bad) cholesterol level is less than 100 mg/dL, your doctor may recommend statins if you are at

very high risk

for heart attack or stroke because of other risk factors you have.

You may be considered at very high risk if you have PAD and:^{3,4}

- Multiple major heart disease risk factors, especially [diabetes](#)
- A history of [heart attack](#) or unstable [chest pain](#) (angina)
- More than one component of the [metabolic syndrome](#) :
 - Waist measurement more than 35 inches in women (40 inches in men)
 - Unhealthy levels of certain fats in the blood, especially:
 - High triglycerides (200 mg/dL or higher)

- Low HDL (good) cholesterol (less than 50 mg/dL [less than 40 mg/dL for men])
- High non-HDL cholesterol (130 mg/dL or higher)

- Elevated [blood pressure](#) (135/85 mm Hg or higher)
- Elevated blood sugar (Fasting blood sugar 100 mg/dL or higher)

What should my cholesterol goals be?

Most women with PAD should aim to get their LDL (bad) cholesterol level lower than 100 mg/dL when taking statin drugs. If you are at **very high risk** for heart attack or stroke (see above), your doctor may recommend an LDL cholesterol goal of less than 70 mg/dL.

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Who should not take statin drugs?

You should not take statin drugs if you are pregnant, if you have liver disease, or if you have had an allergic reaction to a statin drug in the past.

What are the benefits of statin drugs in women with PAD?

In women with high cholesterol, statins lower LDL (bad) cholesterol levels by 30% to 40%.⁴ Statins reduce the risk of developing PAD by 40% to 50% in women with high cholesterol who are at high risk for PAD.

^{5,6}

Statin drugs can improve survival and prevent heart problems in women with PAD, even if they don't have high cholesterol.^{7,8} Statins can reduce the risk of dying or having a heart attack by up to 50% in women with PAD.^{9,10} One trial that included 6,748 patients with PAD (26% were women), found that those taking statins were 22% less likely to have heart

attack, stroke, die, or need a procedure to treat artery disease within 5 years compared with women not taking statins. ⁸ Women benefit just as much from statin drugs as men do.

Although the main purpose of statin drugs is to prevent heart attack and stroke, they may also have additional benefits in women with PAD. Studies have found that statins reduce leg pain symptoms,¹¹ improve walking speed and ability to perform daily tasks,¹² increase pain-free walking time,¹³ and slow the loss of walking ability that happens gradually over time.^{14,15}

Are statin drugs underused in PAD patients?

Yes. Although most women with PAD benefit from statin drugs to reduce their risk heart attack and stroke, one study found that only half of PAD patients receive them.¹⁶ Despite the fact that all forms of artery disease put you at high risk for heart disease and stroke, patients with PAD are 30% less likely to receive statins than patients with [coronary artery disease](#)

. This may be because doctors are less aware of the heart risks of PAD, and are therefore less likely to prescribe medication to prevent future problems. If you have PAD, ask your doctor if you would benefit from taking a statin drug to prevent heart attack and stroke.

What are the side effects of statins, and what should I watch for?

Serious side effects of statins are rare, occurring in less than 1 in 250 women taking the drug. Only about 1 in 20 women need to stop taking the drug because of side effects.¹⁷ The main side effects of concern are liver damage and muscle problems.

Less than 2% of patients taking statins experience an increase in liver enzymes that can signal liver damage.¹⁸ Because of this risk, your doctor will order a blood test to check your liver function 6 to 12 weeks after you first start taking statins (or after changing your dose). If the blood test indicates a problem, your doctor will lower your dose of statins or tell you to stop taking them altogether. This usually resolves the problem without any permanent liver damage. Your doctor may continue to monitor your liver function with blood tests every 6 months for as

long as you are taking statins.

Although rare, serious muscle problems are another possible side effect of statin drugs. In rare cases, statins can cause the breakdown of muscle proteins that release into the blood and can result in kidney damage. The chances of this happening are less than 1 in 10,000 for women taking the usual dose of statin drugs.¹⁹ If you experience severe muscle aches throughout the body, muscle weakness, or dark or brown urine, stop taking statins and seek medical attention right away. In most cases, these problems go away when the drug is stopped, and the risk of death is less than one in every one million patients treated with statins.

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Less-serious muscle problems are common in women taking statins.¹⁸ Check with your doctor if you are taking statins and experience new muscle aches, pain or tenderness. She or he will perform a blood test to see if the drug is causing muscle problems; you may need to take a lower dose or temporarily stop taking the drug.

One in three women taking statins will experience one or more non-serious side effects.¹⁷ These are usually mild and do not pose a serious risk to your health, but talk to your doctor if you experience any of them. Lowering your dose or switching to a different statin drug may be able to reduce or eliminate the side effects while maintaining the benefits of statins for your heart health. Common side effects include:

- Nausea, gas, upset stomach, diarrhea, constipation
- Headache, dizziness
- Rash
- Sleep disturbances

My doctor has prescribed a statin. What else should I know?

If you are taking a statin, be sure to tell your doctor about any other medications you are taking, including prescription drugs, over-the-counter medication, and any herbal or dietary supplements. This is important because some medications can interfere with statins or increase the risk of side effects, including:

- Other cholesterol drugs
- The blood-thinner [warfarin](#) (Coumadin)
- Antibiotic and antifungal medications
- Antidepressants
- Drugs that inhibit the immune system (*immunosuppressants*)
- B-vitamins

You should not drink grapefruit juice while taking statins because this can increase the risk of side effects from the drug.

Never stop taking statins without first talking to your doctor. Women taking statins typically need to continue taking them for the rest of their lives. If you stop taking the stain, your cholesterol levels and your risk for heart attack and stroke will likely go back up.

Are any other drugs used to treat high cholesterol in women with PAD?

Statins are the first-choice cholesterol-lowering drugs in women with PAD. In some cases, a type of drug called a *fibric acid derivative* may also be used. Fibric acid derivatives may be the drug of choice for women who:

- Have normal levels of LDL (bad) cholesterol AND
- Have low levels of HDL (good) cholesterol AND
- Have high *triglyceride* levels (a harmful fat in the blood)

By raising your levels of HDL (good) cholesterol, fibric acid derivatives can prevent problems like heart attack and stroke.

In rare cases, statin drugs may not lower your cholesterol levels enough, and you will need additional drugs to reach your cholesterol goals. See [cholesterol drugs](#) for information about other medications used to treat high cholesterol.

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