



Patient education: Stenting for the heart (The Basics)

Written by the doctors and editors at UpToDate

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What is stenting?

Stenting is a procedure used to treat some people with coronary heart disease. It is a way to open narrowed or blocked arteries in the heart ([figure 1](#)).

A heart stent is a tiny metal tube that is used to help hold open the blocked artery ([figure 2](#)). It is also called a "coronary stent." Most heart stents are coated with a medicine that helps keep the artery from getting narrow or blocked again.

Doctors do something called "cardiac catheterization" to look at the arteries in the heart. For this, they put a thin plastic tube into a blood vessel in your leg or arm, and move it up to your heart ([figure 3](#)). Next, they put a dye that shows up on X-ray into the tube. This part of the test is called "coronary angiography." It can show how many of your heart arteries are blocked and how serious the blockages are. Sometimes, the doctor will put in a stent as part of the same procedure. Other times, a stent is put in later, during a separate procedure.

Why might I need a stent?

Your doctor might recommend a stent if you have coronary heart disease and have:

- Chest pain (called "angina") that does not get better when you take medicines
- 1 or more heart arteries that are very narrow

People who are having a heart attack or recently had a heart attack also sometimes need stent placement.

How do I prepare for stenting?

The doctor or nurse will tell you if you need to do anything special to prepare.

Before your procedure, your doctor will do an exam. They might send you to get tests, such as:

- Blood tests – These might include kidney function tests and a complete blood count, along with others.
- Electrocardiogram ("ECG") – This test measures the electrical activity in your heart.

Your doctor will also ask you about your "health history." This involves asking you questions about any health problems you have or had in the past, past surgeries, and any medicines you take. Tell them about:

- Any medicines you are taking – This includes any prescription or "over-the-counter" medicines you use, plus any herbal supplements you take. It helps to write down and bring a list of any medicines you take, or bring a bag with all of your medicines with you.
- Any allergies you have, and if you have had a reaction to "contrast materials"
- Any bleeding problems you have – Certain medicines, including some herbs and supplements, can increase the risk of bleeding. Some health conditions also increase this risk.

You will also get information about:

- Eating and drinking before your procedure – You will need to "fast" for 6 to 8 hours before the procedure. This means not eating or drinking anything.
- Lowering the risk of infection – In some cases, you might also need to wash the area with a special soap.
- Stopping smoking, if you smoke – Smoking makes the treatment less effective in the long term.
- What help you will need when you go home – For example, you will need to have someone else bring you home or stay with you for some time while you recover.

Ask the doctor or nurse if you have questions or if there is anything you do not understand.

What happens during stenting?

When it is time for the procedure:

- You will get an "IV," which is a thin tube that goes into a vein. This can be used to give you fluids and medicines.

- You will be awake during the procedure, but your doctor will give you medicine to help you feel relaxed. They will also use "local anesthesia." This is medicine to numb a small part of your body so you don't feel pain.
- The doctors and nurses will monitor your breathing, blood pressure, and heart rate during the procedure.
- Your doctor will make a very small cut in the top inner part of your leg, or at your wrist.
- The doctor will put a thin plastic tube, called a "catheter," in a blood vessel that is just below the cut. The catheter has a tiny balloon on the end. They will gently push the tube through your blood vessels to your heart. You will not be able to feel this.
- While this is happening, an X-ray will take pictures of the tube in your body. This helps your doctor know when the tube has reached the correct place in your heart.
- Once the tube reaches the blocked artery, the doctor will use the balloon to open the artery. Then, they will put the stent in place. The stent holds the artery open so blood can flow through.
- The doctor will remove the tube from your body and put pressure on the cut to prevent bleeding. They will cover the cut with a bandage.
- The procedure usually takes about 1 to 2 hours.

What happens after stenting?

After the procedure, you will be taken to a recovery room. The staff will watch you closely as your anesthesia wears off. You might need to stay in the hospital overnight.

Your doctor will prescribe [aspirin](#) and another medicine to help prevent clots inside the stent. It is very important that you take these medicines as directed and that you keep taking them unless your doctor says that it's OK to stop. People who stop taking these medicines too soon increase their risk of a heart attack or even death.

Before you leave the hospital, your doctor will tell you when you can drive and do your usual activities again. Most people are able to go back to their normal activities a few days after the procedure.

What are the risks of stenting?

Your doctor will talk to you about all of the possible risks, and answer your questions. The most common problems are:

- Bleeding
- Bruising
- Soreness in the area where the tube was put in

These problems can last for a few days, especially if the tube was put in the leg.

Other problems can happen during or after stenting, but they are rare. They include:

- A small tear in the inside of a coronary artery, which usually heals by itself. Some people with this problem need another procedure or (in rare cases) surgery to fix the tear.
- Heart damage
- A blood clot inside the stent. This can block blood flow to the heart and cause a heart attack or even death. It can happen as early as 1 day or as late as 1 year or more after you get a stent.
- Dangerous heart rhythms
- Death

When should I call the doctor?

Call your doctor or nurse if any of the following happen after your stenting:

- You have chest pain that does not get better with 1 dose of sublingual (under the tongue) [nitroglycerin](#).
- You get a fever, or have pain, swelling, or redness where the tube went in.

What else should I know?

Before you go home from the hospital, make sure that you know what problems to look out for and when you should call the doctor. Make sure that you understand your doctor or nurse's instructions. Ask questions about anything you do not understand.

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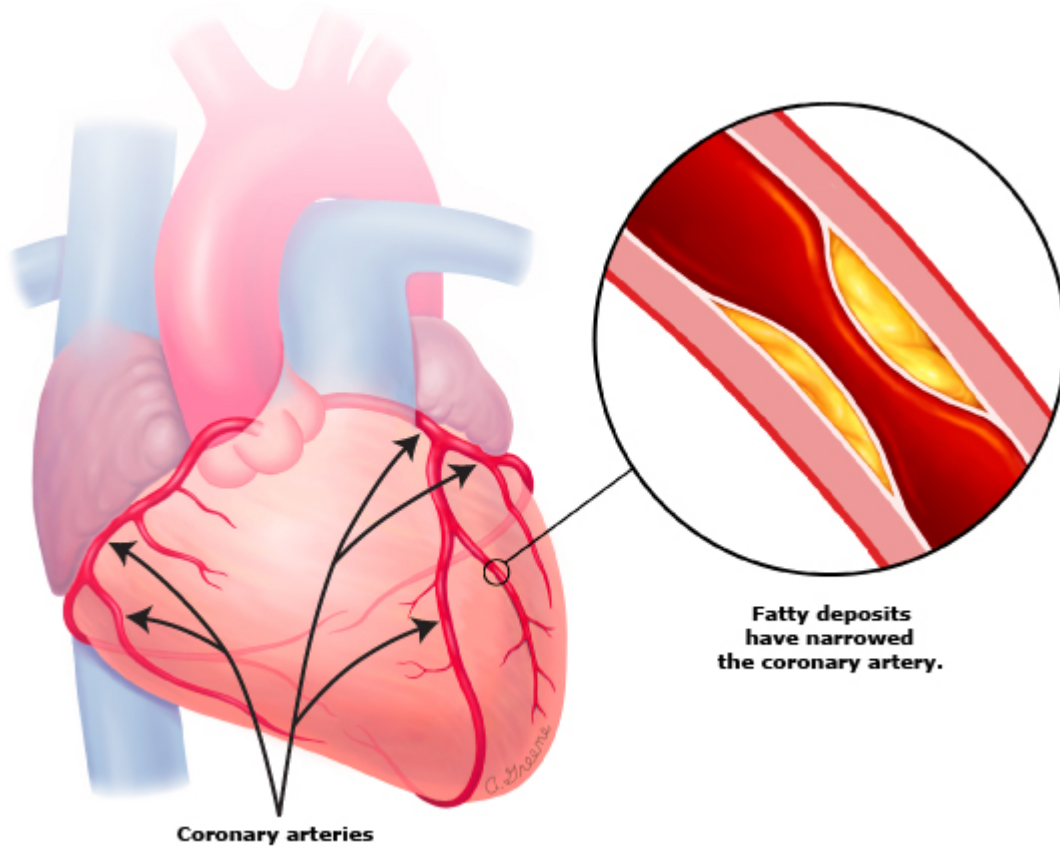
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GRAPHICS

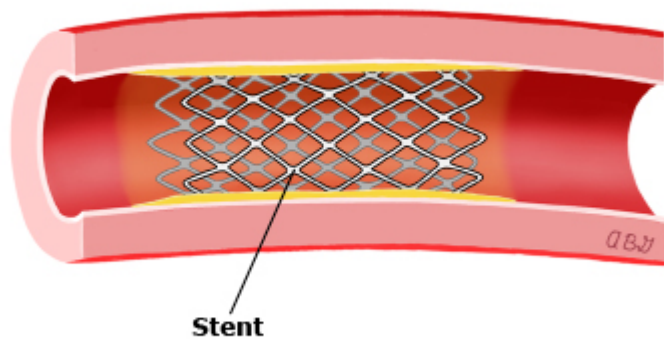
Coronary heart disease



In people with coronary heart disease, the coronary arteries get clogged with fatty deposits called plaques.

Graphic 61785 Version 5.0

Arterial stent



A stent is a tiny metal tube that helps prop open an artery (blood vessel). Most stents are coated with a medicine that helps keep the artery from getting narrow or blocked again.

Graphic 86256 Version 2.0

Cardiac catheterization



For a cardiac catheterization, the doctor makes a very small cut in the top, inner part of your leg, or just above your hand. They put a thin plastic tube, called a "catheter," in a blood vessel that is just below the cut. Then, they move the tube through your blood vessels to your heart. When the tube is in place, your doctor can do different tests. Most people have a test called "coronary angiography." For this test, the doctor injects a dye that creates pictures to show if your heart arteries are clogged.

Graphic 77943 Version 7.0

