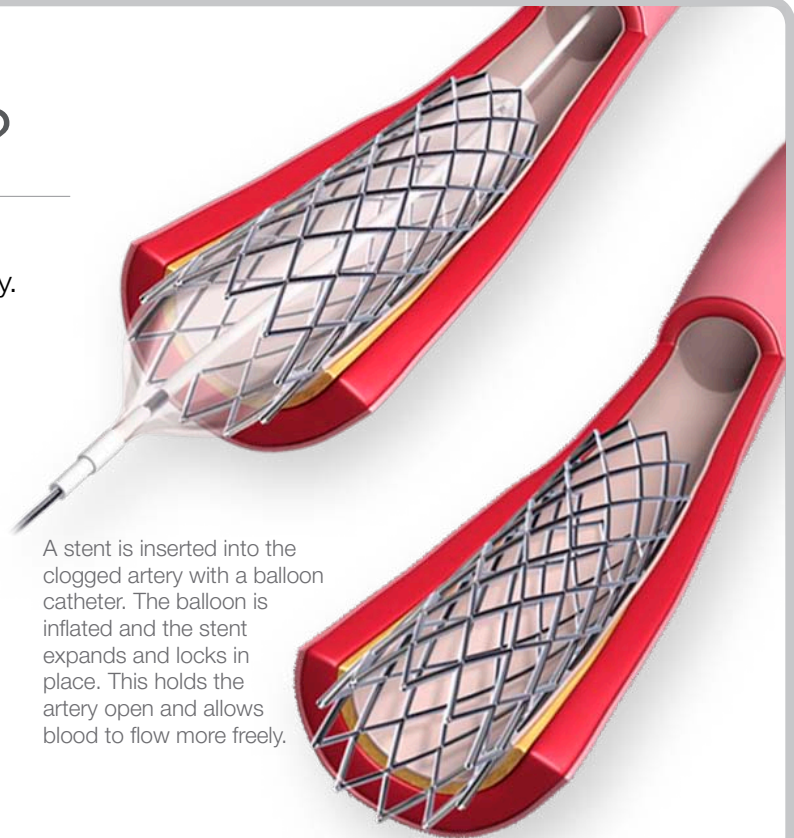




What Is a Stent?

A stent is a tiny wire mesh tube. It props open an artery and is left there permanently. When a coronary artery (an artery feeding the heart muscle) is narrowed by a buildup of fatty deposits called plaque, it can reduce blood flow. If blood flow is reduced to the heart muscle, chest pain can result. If a clot forms and completely blocks the blood flow to part of the heart muscle, a heart attack results.

Stents help keep coronary arteries open and reduce the chance of a heart attack.



A stent is inserted into the clogged artery with a balloon catheter. The balloon is inflated and the stent expands and locks in place. This holds the artery open and allows blood to flow more freely.

How are arteries opened?

To open a narrowed artery, a doctor may do a procedure called a percutaneous coronary intervention (PCI) or angioplasty. In it, a balloon-tipped tube (catheter) is inserted into an artery and moved to the point of blockage. Then the balloon is inflated. This compresses the plaque and opens the narrowed spot. When the opening in the vessel has been widened, the balloon is deflated and the catheter is withdrawn.

How are stents used?

When a stent is used, it's collapsed and put over the balloon catheter. It's then moved into the area of the blockage. When the balloon is inflated, the stent expands, locks in place and forms a scaffold. This holds the artery open. The stent stays in the artery permanently and holds it open. This improves blood flow to the heart muscle and relieves symptoms (usually chest pain).

Stents are used depending on certain features of the artery blockage. Factors that affect whether a stent can

be used include the size of the artery and where the blockage is.

Stenting has become fairly common. Most angioplasty procedures are done using stents.

What are the advantages of using a stent?

In certain patients, stents reduce the renarrowing that sometimes occurs after balloon angioplasty or other procedures that use catheters.

Patients who have angioplasty and stents recover from these procedures much faster than patients who have coronary artery bypass surgery (CABG). They have much less discomfort, too.

Can stented arteries reclose?

In about a third of patients who've had angioplasty without a stent, the artery that was opened begins to become narrowed again within months of the procedure. This renarrowing is called **restenosis**.

Stents help prevent this. In recent years, doctors have

(continued)



used new types of stents called drug-eluting stents. These stents are covered with drugs that help keep the blood vessel from reclosing. Stents not coated with drugs are called bare metal stents. It's important that patients with either type of stent take their anti-clotting medicines as directed.

If stents don't work and the arteries reclose, you may need coronary artery bypass surgery (CABG).

What precautions should be taken after a stent procedure?

Patients who've had a stent procedure must take one or more blood-thinning agents. Examples are aspirin and clopidogrel. These medications help reduce the risk of a blood clot developing in the stent and blocking the artery.

- Aspirin is used indefinitely.
- Clopidogrel is used for one to 12 months (or perhaps even longer) after the procedure (depending on the type of stent).
- Clopidogrel can cause side effects, so blood tests will



be done periodically. It's important that you don't stop taking this medication for any reason without consulting your cardiologist who has been treating your coronary artery disease.

- For the next four weeks a magnetic resonance imaging (MRI) scan should not be done without a cardiologist's approval. But metal detectors don't affect the stent.

HOW CAN I LEARN MORE?

- 1 Call **1-800-AHA-USA1** (1-800-242-8721), or visit **heart.org** to learn more about heart disease and stroke.
- 2 Sign up to get *Heart Insight*, a free magazine for heart patients and their families, at **heartinsight.org**.
- 3 Connect with others sharing similar journeys with heart disease and stroke by joining our Support Network at **heart.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What are potential complications from this procedure?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **heart.org/answersbyheart** to learn more.