

Coronary Angioplasty and Stent Placement

General Information

Your doctor wants you to have a coronary angioplasty. You have an artery in your heart that is blocked with cholesterol deposits called plaque.

Without having to use open heart surgery, your doctor can open your narrowed arteries by inflating a “balloon” catheter to break up the plaque. This is also known as coronary angioplasty. After the angioplasty, the cardiologist may place a stent (a small tube made of wire mesh) to increase your chance of keeping the blockage or narrowing open.

How Your Heart Works

The heart is a powerful muscle that pumps oxygen-rich blood throughout your body. The blood vessels that supply oxygen to your heart muscle to give it nourishment.

There are two major coronary arteries which run on the outer surface of the heart. They divide into branches which go into the heart muscle are called coronary arteries

- The right coronary artery supplies blood to the right side of the heart. It also sends blood to a portion of the back of the heart's left side.
- The left coronary artery usually has two branches. One major branch (the left anterior descending coronary artery) supplies blood to the front of the heart. The other branch (the circumflex coronary artery) supplies blood to the side and part of the back of the heart.

Sometimes plaque collects in the coronary arteries. This is called atherosclerosis. Because the arteries narrow, your heart does not always get enough oxygen-rich blood to do its work. As a result of this, you may feel chest pressure or pain. If the artery is completely blocked, you may have a heart attack.

Although no one knows for sure how or why the plaque builds up, this seems to happen to at-risk people who:

- Smoke
- Have high blood pressure
- Eat high-fat, high-cholesterol food, or for other reasons have a high cholesterol level
- Are overweight
- Have a lot of tension or stress
- Have diabetes
- Have a family history of heart disease

Before the Procedure

- If you have diabetes, remind your cardiologist of your diet, medicine or insulin needs.
- If you have an allergy to the x-ray dye, tell your cardiologist or nurse.
- At the hospital, you will sign a consent form and wear a hospital gown.
- Your arm and/or groin will be cleaned and shaved, if needed.
- A nurse will start an intravenous (IV) line for medicine during the test
- You may receive medicine to relax you.

During the Procedure

- Small, sticky patches are placed on your chest to record your heartbeat.
- The catheter will be placed (usually) in your groin. The area will be cleaned and shaved. (The catheter may be put in your arm).
- A numbing medicine will be injected where the balloon catheter will go in.
- A tube (introducer sheath) is put into your artery. Using x-ray, your doctor will put a small guide wire to the blocked area.
- Your doctor will guide a catheter with a deflated balloon on its tip over the wire to the blockage.
- X-ray dye is injected so your doctor can take an x-ray of the blocked artery.
- With the catheter in place, the doctor will slowly inflate the balloon. If you feel discomfort or pressure in your chest, tell your doctor.
- The balloon will be inflated and deflated many times to flatten the plaque.
- Your doctor will remove the balloon catheter. Your newly opened artery will allow for better blood flow to your heart.

After the Procedure

- After the balloon angioplasty, you will be taken to either the intensive care unit or cardiovascular care unit so you can be watched slowly.
- Until the sheath is taken out of your groin (or arm), you will need to stay in bed. You cannot sit up or bend where the tube is located.
- Your knee or arm may be braced to remind you not to move.
- The sheath will be taken out within 4 to 6 hours.
- If you feel any chest discomfort or pressure, tell the nurse immediately.
- You may eat and drink, although there will be limitations. Your doctor will talk with you about your diet.