

# Percutaneous Trans Luminal Coronary Angioplasty

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## DESCRIPTION

Interventional cardiologists perform angioplasty, which opens narrowed arteries. They use a long, thin tube called a catheter that has a small balloon on its tip. They inflate the balloon at the blockage site in the artery to flatten or compress the plaque against the artery wall. Angioplasty is also called percutaneous trans luminal coronary angioplasty (PTCA).

Although angioplasty deals with the coronary arteries in the heart, balloon angioplasty can also be used to open narrowed vessels in many other parts of your body. For example, a physician can perform carotid angioplasty to open narrowed carotid arteries, which are the arteries that supply blood to the brain. A stroke most often occurs when the carotid arteries become blocked and the brain does not get enough oxygen. Angioplasty can also be performed in the aorta (the main artery that comes from your heart), the iliac artery (in your hip), the femoral artery (in your thigh), the popliteal artery (behind your knee), and the tibial and peroneal arteries (in your lower leg). The procedures are performed in the cardiac catheterization laboratory (also called the cath lab). Patients are not advised to eat or drink anything after midnight the night before the procedure except diabetic people who should consult about your food and insulin intake, because not eating can affect your blood sugar levels.

Talk to your doctor about any medicines (prescription, over-the-counter, or supplements) that you are taking. This is especially important if you are taking blood-thinning medicines or anti-platelet medicines. You will most likely have blood tests, an electrocardiogram, and a chest x-ray taken before the procedure.

You will be given an anesthetic medicine with a needle to numb the area around where the catheter will be inserted and then a small incision will be made in the skin. When doctors see the artery into which the catheter will go, a special needle is used to penetrate it.

Doctors usually put the catheter into an artery in your leg, arm, or wrist. Many doctors use the artery in the leg; however, radial artery access (through the wrist) is becoming common practice. You should not feel pain during this part of the procedure.

Doctors gently thread the catheter through the artery and into your heart. They use a video monitor (like a TV screen) to see the process. Once the catheter reaches the blocked artery, a harmless dye is injected, and the doctor will take a picture of the coronary arteries (called a coronary angiogram). The angiogram helps the doctor see the size and location of the blockage.

Once doctors know the exact location of the blockage, they thread what is called a guide wire through the same artery in the leg and advance it across the blockage. Then, the balloon-tipped catheter is slipped over the guide wire and advanced to the blockage. When this catheter reaches the blockage, the balloon is inflated. As the balloon expands, it presses against the plaque, compressing it against the artery wall. The balloon is then deflated. Doctors may inflate and deflate the balloon a number of times. The catheter, guide wire, and deflated balloon are then removed.

If doctors are placing a stent in the artery, the stent is put at the tip of the catheter, over the balloon. When the catheter is positioned at the blockage, the balloon is inflated, expanding the stent. Once the stent is open, the balloon is deflated. The catheter, guide wire, and deflated balloon are then removed, leaving the stent behind to hold the artery open.

## CONCLUSION

Firm pressure will be applied to the site where the catheter was inserted to stop any bleeding. You will also be bandaged.

The procedure usually takes about 1-1/2 to 2-1/2 hours, and most patients will spend the night in the hospital.

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