

# Pacemaker Implantation

## What is a pacemaker implantation?

Pacemaker implantation is the procedure done to put a pacemaker under the skin of your chest.

## When is it used?

This procedure is most often done when your heart rate is too slow. A slow heart rate is called bradycardia. Because of the slow heart rate, your heart pumps less blood, causing symptoms such as fatigue, shortness of breath, or fainting.

## How do I prepare for pacemaker implantation?

Plan for your care and recovery after the operation. Allow for time to rest and try to find people to help you with your day-to-day duties.

If you need a minor pain reliever in the week before surgery, choose acetaminophen rather than aspirin, ibuprofen, or naproxen. This helps avoid extra bleeding during surgery. If you are taking daily aspirin for a medical condition, ask your provider if you need to stop taking it before your surgery.

Follow any instructions your healthcare provider may give you. Eat a light meal, such as soup or salad the night before the procedure. Do not eat or drink anything after midnight and the morning before the procedure. Do not even drink coffee, tea, or water. Follow your provider's instructions about not smoking before and after the procedure. Smokers heal more slowly after surgery. They are also more likely to have breathing problems during surgery. For this reason, if you are a smoker, you should quit at least 2 weeks before the procedure. It is best to quit 6 to 8 weeks before surgery. Also, your wounds will heal much better if you do not smoke after the surgery.

## What happens during the procedure?

The procedure is usually done with a local anesthetic. You may also be given other medicines to relax you and keep you from feeling pain during the procedure. If you feel discomfort during the procedure, tell your healthcare provider right away.

The nurse will wash your upper chest and sometimes shave it.

Your healthcare provider will make a cut in the skin of your chest and separate the tissues to make a place for the pacemaker. The pacemaker system consists of 1 or 2 electrodes and a battery unit. The electrodes (wires that are insulated nearly to their tips) are inserted into a vein under your collarbone. With the help of X-rays, your provider will place the electrodes in your heart. The tips of the electrodes make contact with your heart muscle and transmit the electrical impulse that stimulates the heartbeat. The other ends of the electrodes are connected to the pacemaker, which contains batteries and electronic circuits. Your provider will place the pacemaker under the skin of your upper chest and sew the pocket closed.

### **What happens after the procedure?**

You will usually be able to go home the next morning. In some cases you may be able to go home late the same day. This will help you get ready for leaving the hospital.

Before you leave the hospital, your healthcare provider will check your pacemaker using a small table-top computer, called a programmer, and a wand. Your provider will put the wand on your body, about where the pacemaker is located. The wand will give information from the pacemaker about what the heart is doing and how well the pacemaker is working. If needed, your provider can adjust the pacemaker using the programmer and the wand. This test is not painful, and it usually takes just a few minutes.

You may learn how to use your telephone to check the function of the pacemaker. The pacemaker can also be checked at follow-up visits with your provider.

Your healthcare provider will explain how the pacemaker might affect your lifestyle and when the battery in the pacemaker may need to be replaced.

You will need to have regular checkups to make sure the pacemaker is working properly. Ask your provider what other steps you should take and when you should come back for a checkup.

### **What are the benefits of this procedure?**

Your heart may beat in a healthy rhythm, and you may be able to go back to a more normal lifestyle.

### **What are the risks associated with this procedure?**

- A local anesthesia may not numb the area quite enough and you may feel some minor discomfort. Also, in rare cases, you may have an allergic reaction to the drug used in this type of anesthesia. Local anesthesia is considered safer than general anesthesia.
- The wire could puncture one of the lungs, the vein, or the heart cavity.
- Like any electrical or mechanical device, the pacemaker may need a replacement if it stops working properly.
- The pacemaker wire may become dislodged or break.
- You may have infection or bleeding.

You should ask your healthcare provider how these risks apply to you.

#### **When should I call my healthcare provider?**

Call your provider right away if:

- Your pulse is too slow, too fast, or irregular.
- Your symptoms return.
- The site where the pacemaker was put in becomes red or swollen or begins leaking fluid, pus, or blood.

Call during office hours if:

- You have questions about the procedure or its result.
- You want to make another appointment.

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