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## Understanding Pacemakers

**Partners** at *Heart*



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# Understanding Pacemakers

Partners at Heart



## WHAT IS A PACEMAKER AND WHAT DOES IT LOOK LIKE?

A pacemaker is a small device (about the size of two silver dollars stuck together) placed under the skin of your chest just below the collarbone. A pacemaker helps to regulate your heart rhythm. The pacemaker runs on batteries and sends out electrical impulses that keep the heart beating at its proper speed.

### A pacemaker has two parts:

- ▶ A pulse generator, which is the battery/timer unit
- ▶ One or more electrodes and wires that carry the electrical impulses to the heart

## WHY DO I NEED A PACEMAKER?

A pacemaker will keep your heart contracting and pumping blood. It is needed when there is a problem with the heart's electrical system.

## WHAT HAPPENS WHEN MY HEART HAS ELECTRICAL DISTURBANCES?

You may have very slow heartbeats or both slow and fast heartbeats if there is a problem in any of the heart's electrical conduction system. Dizziness, fainting spells, shortness of breath, and blurred vision may be symptoms of a heart rhythm disturbance.

## TELL ME ABOUT THE PROCEDURE?

Having a pacemaker implant is not considered major surgery. The procedure takes only one to two hours and is performed under local anesthesia with the patient sedated, but awake.

The surgeon makes a three to four inch incision in the upper chest area and a small pocket is made under the skin over a vein. The pacemaker will rest in this pocket. As the physician watches progress on a monitor, the wires are guided through a vein into the heart's chambers. The electrode rests directly against the inner wall of the heart. The battery/timer is attached to the wires and placed in the pocket under the skin.

## WHAT ARE THE RISKS?

Complications are usually rare with pacemaker insertion. However, as with any operation, possible complications include bleeding problems or infection. Problems specific to pacemaker implants include the possibility of a wire becoming dislodged after surgery, which would require a return to the operating room to have the wire repositioned. Another possible complication is collapse of a lung when the lead is passed under the collar bone into the subclavian vein and then into the heart.

## HOW WILL I FEEL WITH MY NEW PACEMAKER?

Many patients realize a dramatic improvement in their well-being after the pacemaker is inserted. Your pacemaker may require some fine tuning, and medications may be adjusted, but chances are good that you will feel a lot better.

We know the decision to undergo pacemaker surgery may be stressful, but it is an important decision that you and your doctor will make together.

## WHAT MAY I DO WHEN I GET HOME?

Do not get water on the incision for at least seven to ten days following surgery. Take sponge baths until it is okay to tub bathe or shower. Some doctors will instruct their patients to wipe the incision with alcohol or other antiseptic. You will also be told when you should have your stitches removed. Often, tiny strips of tape are placed over the incision instead of stitches. These can be removed if they don't wear off in a few weeks' time.

## Call your doctor if:

- ▶ The incision is red or draining
- ▶ The incision is hot to the touch or very tender
- ▶ You have a fever

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## **WHAT MAY I DO WHEN I GET HOME?** *continued*

Antibiotics are often used to prevent infection after pacemaker surgery. It takes a few weeks for the pacemaker wire to become secure. Do not lift weights or do hard arm exercises. **DO NOT** lift more than five pounds, or do things like playing tennis, for a few weeks. Slow arm circle exercises may help the soreness go away.

## **WHAT ABOUT DIET AND ACTIVITIES?**

Eating a balanced may help to speed recovery after surgery. Follow your doctor's advice regarding the activities you can return to within a few weeks without fear of causing problems with the pacemaker. You should avoid contact sports that could result in the pacemaker being hit or crushed. Ask your doctor about specific activities.

## **WHAT ABOUT ELECTRICAL INTERFERENCE?**

Your pacemaker has built in features that will protect it from outside electrical interference. Since 1977, pacemakers have been well protected against signals from microwave ovens and electrical appliances.

## **HOW DOES MY PACEMAKER WORK?**

The pacemaker is always sensing your own heartbeats. It paces your heart only when it has waited a certain amount of time and no heartbeats have occurred.

## **CAN THE BATTERY/TIMER OR WIRES OF MY PACEMAKER BE CHANGED?**

Most pacemakers can be programmed. This means the doctor can adjust the pacemaker from outside the body, without surgery.

The life-span of a pacemaker will depend on how much it is being used and how much energy is required to pace the heart. Pacemakers usually last from four to eight years.