

Leadless Pacemaker Placement

What is a pacemaker and why do I need it?

A pacemaker is a small device that corrects your heart rhythm. A pacemaker is used to correct:

- **Damage to the sinus node** that makes it fire slowly—usually caused by aging or heart disease
- **A problem with electrical signals** moving through the heart
- **A slowed or irregular heartbeat** caused by heart failure or by heart medicines you must take (such as beta blockers)

These problems can cause symptoms such as dizziness, lightheadedness, shortness of breath, fatigue, or fainting.

What are the possible benefits, risks, and complications of a pacemaker?

The table below lists the most common possible benefits, risks, and complications for this procedure. Other benefits and risks may apply in your unique medical situation. Talk with your doctor about these risks and benefits. Be sure to ask any questions you might have.

What do I need to do next?

- 1 Arrange for time off work or school.** You can return to work or school when your doctor says it’s okay, usually after a week or so.
- 2 Tell your doctor about all the medications you are taking.** This includes prescription medicines, over-the-counter remedies (such as cough syrup, allergy pills, or pain relievers), inhalers, patches, vitamins, and herbal supplements.
- 3 Follow your doctor’s directions about medicines.** You may be asked to stop taking anticoagulants (sometimes called “blood thinners”) before the procedure.
- 4 Arrange for a ride.** You will need someone to drive you to and from the hospital.
- 5 Follow all instructions on when to stop eating and drinking before the procedure.** This is to help avoid any problems with anesthesia. If you don’t follow directions, the procedure may have to be postponed.

Possible benefits	Risks and possible complications	Alternatives
<ul style="list-style-type: none"> • Relief of symptoms, such as dizziness or fainting • Better supply of oxygen to the body, which can relieve shortness of breath or fatigue 	<ul style="list-style-type: none"> • Bleeding or infection where the pacemaker’s pulse generator was inserted • Problems related to the anesthetic • Nerve or blood vessel damage • Problems caused by electronic devices 	<ul style="list-style-type: none"> • There is currently no alternative to a pacemaker if you have a slowed heartbeat. • If your heartbeat goes too fast or your heart muscle is weakened, your doctor may consider an implantable cardioversion device (ICD) instead of a pacemaker.

What are the parts of a leadless pacemaker?

Leadless pacemakers are made up of a battery and computer chips sealed in a small case about the size of a AAA battery or smaller. It is placed directly in the lower right chamber (ventricle) of the heart and sends signals directly to the heart muscle without wires.

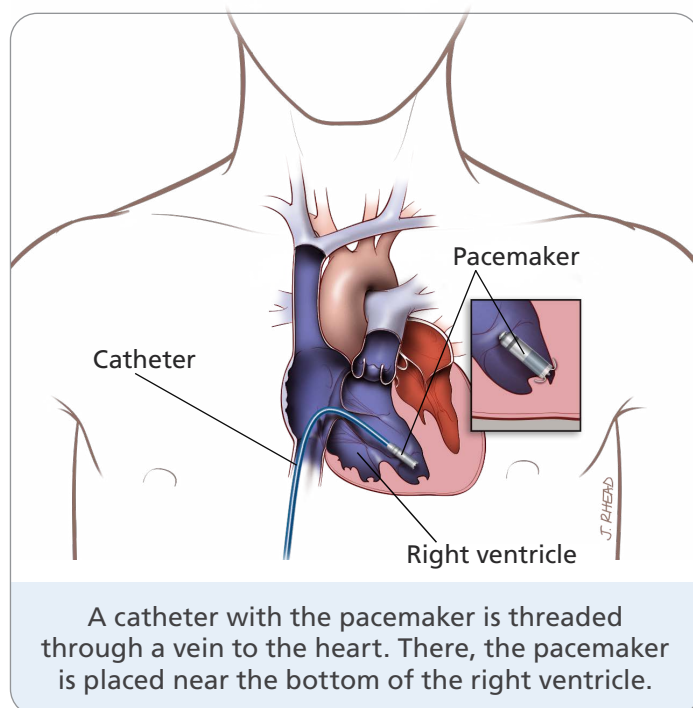
How do leadless pacemakers work?

A leadless pacemaker is designed to mimic the heart's natural rhythm when there are disturbances, such as pauses, in the natural rhythm. It provides 2 functions: **pacing and sensing**.

- **Pacing:** The pacemaker sends an electrical impulse to the heart when the heart's own rhythm is too slow or is interrupted.
- **Sensing:** The pacemaker "senses" (monitor) the heart's natural electrical activity. When the pacemaker senses a natural heartbeat, it will not deliver a pacing pulse.

What happens during the procedure?

- 1 You will receive some medication to help you relax during the procedure.
- 2 Your doctor will insert a straw-like catheter system into a vein, typically near the upper thigh area of your leg. The catheter system moves the pacemaker into the right ventricle of the heart.
- 3 The pacemaker is placed against the heart wall and secured with flexible tines.
- 4 The doctor uses X-ray guidance to move the pacemaker into your heart.
- 5 Your doctor tests the pacemaker to ensure it is working properly. The catheter system is then removed.
- 6 A special closure device may be placed in the insertion site to help prevent bleeding.
- 7 You will be moved to recovery.



What happens after the procedure?

You will be moved to a recovery area where you will rest in bed for 3 to 4 hours. You will be discharged to home when the doctor says it's okay.

Living with a pacemaker

Let people know

- **Carry your pacemaker ID card at all times.** If you are given a pacemaker ID card, it is important to carry it with you in case of emergency. It is also helpful if your pacemaker sets off alarms.
- **Tell all other healthcare providers.** They need to know you have a pacemaker before doing any procedures that involve needles or incisions.
- **Tell your dentist.** Your dentist can avoid using devices that produce electromagnetic fields which can interfere with the device.

Airport screening is safe

Screening devices may set off an alarm, but they won't harm the pacemaker. If you set off an alarm, show your device ID. Ask them not to search you with the hand-held screening wand, since it contains a magnet.

