

Pacemaker for Kids

A pacemaker system is a small device and battery with leads (wires) attached to the heart. It can treat slow heart rates by causing the heart to beat at a normal rate.

How does a pacemaker work?

A pacemaker tracks every beat of the heart. The pacemaker will “pace” the heart if a heartbeat does not occur when it is supposed to. Pacing the heart, which is painless, sends an electric signal to the heart to produce a heartbeat.

The pacemaker can be programmed for each patient. It can pace the heart at different rates that vary with each patient and level of activity. For example, it can pace the heart at 50 beats a minute while the patient is at rest, and at 150 beats a minute while the patient is active.

Where is a pacemaker placed?

It is most often placed in the chest above or below the chest (pectoralis) muscle. In most cases, the leads are advanced through a vein leading to the heart and attached to the inside of the heart. The leads can be placed in the atrium (a top chamber in the heart), the ventricle (a bottom chamber in the heart) or both.

What happens when a pacemaker is placed?

Patients who receive their first pacemaker will have the leads and device placed at the same time while “asleep” under general anesthesia.

To put the device in, the doctor often makes an incision on the chest near the armpit. The doctor then creates a “pocket” for the device above or below the chest muscle.

The leads are then placed into the heart by passing them through the vein running from the left chest to the heart. Once the leads are in the heart, they are secured to the inner wall of the heart.

The pacemaker is attached to the leads and placed into the “pocket,” after which the incision is closed.

Patients often go home the day after the procedure.

Will my child have restrictions?

Restrictions vary for each patient, so please discuss with your child’s doctor.

Your child will be given a sling. Most patients use the sling for their arm on the side of the device for two to three days.

After two to three days of rest, your child can start range-of-motion exercises. Your child should not raise the elbow above the shoulder for six weeks.

What happens when the battery in the pacemaker begins to run out?

Most batteries last 8 to 10 years or more. When the battery is low, the pacemaker can be exchanged while keeping the leads in place. This is often done through the prior incision. The doctor will then take out the old device and attach a new one. Patients can go home the same day and will only need to restrict activity for two weeks.

How are pacemakers monitored?

Patients have their first pacemaker clinic visit about four to six weeks after surgery. Then, your child will have an exam and the pacemaker checked in clinic every six months. Sometimes, your child will have a chest X-ray to confirm that the leads are in the right place.

Between clinic visits, your child's doctor may request a remote transmission. This is data sent over the phone to tell the doctor about the pacemaker (use and battery life) and the leads.

Who to Call

Pediatric Cardiology
(608) 263-6420, option "2"

After hours and weekends call **(608) 263-6420**. Please ask for the pediatric electrophysiologist on call.

Website

uwhealthkids.org/hearts

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 2/2022 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#8235.