

Care of Your Child with a Pacemaker



Children's Heart Centre

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www.bcchildrens.ca

Name: _____

Pacemaker name: _____

Model number: _____

Pacemaker serial number: _____

Ventricular lead name and model number: _____

Ventricular lead serial number: _____

Atrial lead name and model number: _____

Atrial lead serial number: _____

Surgical Date: _____

Your child's pacemaker's lower rate is set to: _____

Directory

Pacemaker Specialist: _____

Contact Number: _____

Or after regular hours, contact the cardiologist on call at: _____

Cardiac Surgeon: _____

Contact Number: _____

Nurse Clinician: _____

Contact Number: _____

Care of Your Child With a Pacemaker

Your child has had a pacemaker inserted to help treat his or her irregular heart beat (arrhythmia).

It is normal to have lots of questions about how the pacemaker will affect your child. This booklet helps answer those questions. Please be sure to discuss any questions or concerns you may have with your child's health care team.

What is a Pacemaker?

A pacemaker is an electronic device that monitors the heart's electrical activity and maintains a normal heart rate and rhythm. Your child's pacemaker is a small device, containing a battery and electronic circuits. The pacemaker is connected to the heart by one or more wires, called leads.

Transvenous and epicardial pacemakers

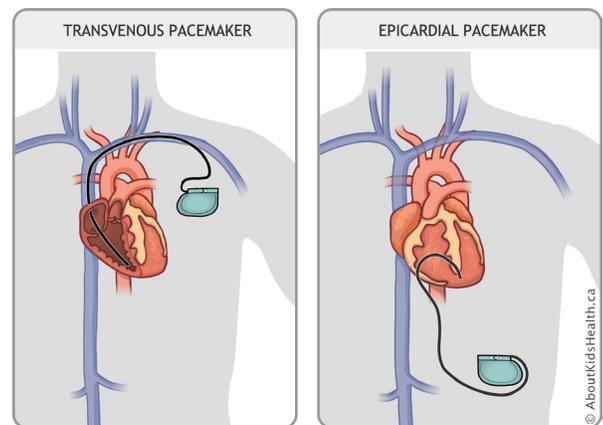


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The leads of your child's pacemaker can be placed in one of two ways:

1. A transvenous pacemaker: the leads are placed inside the heart through the veins.
2. An epicardial pacemaker: the leads are stitched to the heart muscle on the outside of the heart.

GUIDELINES FOR YOUR CHILD'S RECOVERY FROM SURGERY

How do I care for my child's surgical wound?

To place the pacemaker, a surgeon or cardiologist will need to make an incision in your child's chest or abdomen. Your child's nurse will show you how to take care of the surgical wound.

Keep the surgical wound clean until it is healed. Your child can have a shower as soon as he or she is feeling well enough after surgery.

For 7 days after the surgery, your child should have showers rather than baths to avoid soaking the wound in water.

When should we come back to visit a doctor?

Your child needs to be seen by a cardiologist within the first few weeks after surgery and then on an ongoing basis. It is important to check that the pacemaker is working as it should and to check its battery.

When can my child return to school?

Your child can return to school when the discomfort from the surgery goes away. This is usually within one week after surgery. If the pacemaker is located in your child's upper chest, he or she should not carry a backpack or heavy books on the side where the pacemaker was inserted for 6 weeks. After 6 weeks, it is okay for your child to carry a light pack that is worn over both shoulders.

What you can do:

- ▶ Tell your child's teachers about your child's pacemaker and any activity he or she cannot do.
 - Talk to your child's cardiologist before your child returns to physical education (PE) classes.
 - Talk to your child's PE instructors and coaches about your child returning slowly to normal levels of activity, and how he or she can safely participate in physical activities.

What activities should my child avoid in the first 6 weeks after the surgery?

Activity Restrictions for Transvenous Pacemakers

The pacemaker generator should be protected from being forcefully hit. If your child uses the arm or shoulder on the side of the pacemaker forcefully and repeatedly, the leads could be damaged. If the leads are damaged, there is a small but real chance that the pacemaker may not work.

What you can do:

In the first 6 weeks after surgery:

- ▶ Make sure your child brushes his/her hair and teeth with the arm on the opposite side of the pacemaker.
- ▶ Make sure your child rides in a car using a correctly fitting seat belt in the usual position.

TIP: You can buy a padded adaptor for the seatbelt. www.aboutsofttouch.com gives more information.

- ▶ Don't let your child swing the arm or shoulder on the side of the body that the pacemaker is on or repeatedly reach over his/her head with this arm. For example, activities including golf, tennis, bowling, baseball, basketball, volleyball and swimming should be avoided during this time.
- ▶ Don't let your child lift weights or objects that are more than 1.5 to 4.5 kg, or 5 to 10 pounds.

Activity Restrictions for Epicardial Pacemakers

For epicardial pacemakers, it is important that your child avoid activities where the pacemaker is likely to be forcefully hit.

If you have any questions about an activity, or if you are unsure if it is safe for your child to do, discuss it with your child's nurse or cardiologist.

When can my child return to regular physical activities and sports?

Your child can return to his or her regular activities 6 weeks after the surgery. Most sports are fine. Sports in which the pacemaker is likely to be hit forcefully should be avoided. If the pacemaker is damaged, it may not work when it is needed. Examples of sports to avoid include: karate, boxing, wrestling, tackle football and uneven parallel bars in gymnastics. Your child may be able to participate in some contact sports at a non-competitive level if he or she wears a protective pad over the pacemaker. Please discuss this with your child's nurse or cardiologist.

TIP: You can buy clothes and aides, such as Paceguard™, a T-shirt with a protective pad that helps to protect the pacemaker site. www.paceguard.com gives more information.

To decide if a sport is okay you also need to think about:

- ▶ Your child's age
- ▶ Your child's size and the size of their playmates/teammates
- ▶ Your child's heart condition
- ▶ The location of your child's pacemaker

What you can do:

- ▶ Talk to the cardiologist about your child's sports and activities.
- ▶ Tell your child's family and friends that the pacemaker is fragile. Your child will need another surgery if it is broken.
- ▶ Encourage your child to use his or her best judgment when deciding whether or not to take part in an activity.
- ▶ Talk to your child about which sports are okay to do and why.

Call for help if...

Call your child's cardiologist or the clinic nurse if your child has any of the following:

- ▶ Increased pain, redness, swelling or drainage from the wound
- ▶ Edges of surgical wounds coming apart
- ▶ Fever above 38°Celsius
- ▶ Dizziness, fainting
- ▶ Palpitations, "heart racing"
- ▶ Decreased exercise tolerance
- ▶ Increased tiredness or irritability
- ▶ Chest pain or difficulty breathing
- ▶ Pulse rate less than the lower rate limit

GUIDELINES FOR LIVING WITH A PACEMAKER

What sources of electrical and magnetic charges do I need to be aware of?¹

Everyday household appliances

Most electrical appliances give off low levels of electromagnetic fields that will not interfere with your child's pacemaker. Your child can be around most household appliances and tools that are in good repair and are properly grounded, including:

- ▶ Microwave ovens
- ▶ TVs, AM/FM radios, DVD players, remote controls
- ▶ Personal computers, printers, fax machines
- ▶ Hand-held appliances such as hair dryers, shavers. (Do not hold these appliances against the pacemaker.)
- ▶ Electric blankets, heating pads.

What you can do:

- ▶ Keep cell phones and other electronic devices at least 15 centimeters or 6 inches (e.g. an adult hand's length) away from the pacemaker site to minimize the chance of interference.
- ▶ If your child feels "funny" or not right around any electrical equipment, he or she should step away from the area and see if symptoms resolve.

Industrial Equipment

There are a few strong sources of electromagnetic fields that could interfere with your child's pacemaker. To allow your child's pacemaker to work properly, you should move your child away from:

- ▶ Industrial arc welders and furnaces
- ▶ Large generators and power plants
- ▶ Large magnets, such as those used in some large stereo speakers, magnetic therapy products, the magnetic vests worn in some laser tag games.
- ▶ Antennas used to operate CB or ham radios and other radio transmitters
- ▶ Large TV or radio transmitting towers and power lines carrying over 100,000 volts (keep a distance of 25 feet)

Hospitals and medical equipment

Always tell all health care providers that your child has a pacemaker.

- ▶ X-rays and CT scans are ok.
- ▶ No Magnetic Resonance Imaging (MRI) tests because of the strong magnets used in this type of test.

Store and airport security systems

Your child may walk through security screening archways. They should **not** stop and/or wait next to the detection equipment.

The pacemaker may trigger the alarm. Have your child's pacemaker ID card handy so you can show it. Request a hand search for your child. Ask that the handheld screening tool be held 12 inches away from your child's pacemaker. The handheld scanner contains a magnet that may temporarily interfere with the pacemaker.

1. Adapted from "Electromagnetic Compatibility Guide" (Medtronic, 2006) Questions About Electromagnetic Interference (EMI): Living With an ICD (Medtronic, 2003)

Can we travel with the Pacemaker?

Yes. Here are some ways you can prepare for traveling and any possible emergencies during your trip:

1. Get travel insurance to ease the high costs of care in other countries.
2. Always carry the pacemaker device ID card.
3. Be prepared to follow the recommendations for security systems at airports in this brochure.
4. Have your child wear a Medic Alert™ bracelet or necklace. See www.medicalert.ca for more information.
5. Bring enough medicine to last the whole time you will be away from home. Carry it in your hand luggage when travelling.
6. Make an emergency plan and carry it with you and your child at all times.
 - a. Check with your child's cardiologist and/or the website of your child's pacemaker device manufacturer for Pediatric Electrophysiology support at the places you are traveling to. They often have a listing of doctors around the world that can help you in case of an emergency.
 - b. Ask your child's cardiologist to give you a summary of your child's pacemaker settings.
 - c. Make a list of your child's medical emergency contact information. Include contact numbers of people in your home area such as a relative or close friend and contact numbers for the places you are traveling to. Keep this information with your child.

Additional Resources Available

For Your Pacemaker: Patient Manual (Medtronic, 2002)
Electromagnetic Compatibility Guide (Medtronic, 2006)
Common Questions About Pacemakers for Parents of Tots to Teens (Medtronic, 2001)

Developed by the health care professionals of the Children's Heart Centre with assistance from the Learning & Development Department.

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