

A Guide to Your Pacemaker

Information for Patients and Families

- You are having your procedure at:

Royal Columbian Hospital
330 East Columbia Street
New Westminster, B.C.

- Report to **Patient Registration** at your hospital 'Check-in Time'.
- Patient Registration is just off the main lobby (located in the **Health Care Centre** or **Green Zone**).

- You are having your procedure at

Jim Pattison Outpatient Care and Surgery Centre
9750 – 140 Street
Surrey, B.C.

- Come in through the Main Entrance or the underground parkade.
- Take the elevator to the 4th floor (Level 4).
- Follow the signs to Surgical Day Care (which opens at 6:30_{AM})

This booklet tells you about your pacemaker. This booklet will tell you about what to expect before, during and after your hospital stay.

Your nurse will help you to understand the information and how to take care of yourself when you are having a pacemaker.

- Take your time.
- Write down any questions you might have.
- Talk to us about your concerns and ask questions.

We are here to help you and your family.

Cardiac Services Program

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Resources

Pacemaker coordinator 1-855-529-7223

Medic Alert 1-800-668-1507
www.medicalert.ca

Medtronic Electromagnetic Compatibility Guide
For information on magnetic fields, high voltage, and radiation
[www.medtronic.com/ca-en/
your-health/electromagnetic-guide.html](http://www.medtronic.com/ca-en/your-health/electromagnetic-guide.html)

Words to Know

Antibiotic – medicines used to treat or control infections caused by bacteria or other organisms

Cardiac Resynchronization Therapy (CRT) – a device used to trigger the heart's lower chambers (ventricles) to pump in a coordinated way (resynchronize) by sending tiny electrical impulses into the heart muscle.

Cardiologist – (sounds like 'card-ee-all-oh-jist') A doctor who specializes in the study of the heart.

Electrocardiogram (EKG or ECG) – 'Electro' means electrical activity, 'cardio' means heart, and 'gram' means a print out. An electrocardiogram is a test that checks the electrical activity of the heart. The heart's electrical activity is then printed out. The test can show problems with the heart's natural electrical system.

Electrophysiologist - a heart doctor who specializes in the study of the electrical activity of the heart.

Health care provider - This can include your doctors, nurses, physiotherapists, dietitians, dentists, chiropractors, massage therapists, ambulance attendants, and others that provide medical care.

Heart monitor – This machine records the electrical activity of the heart, known as the heart rhythm. Some monitors also record blood pressure and pressures within the heart. The monitor has many alarms that sound an alert when the patient's numbers are outside the range set by the nurse. The heart monitor can be seen in two places: at the patient's bedside and at the main desk.

Implantable Cardioverter Defibrillator (ICD) – a device used to send electrical pulses or shocks to the heart to help control life-threatening arrhythmias

Incision – The opening in your skin made to insert the pacemaker.

Intravenous line – An intravenous is commonly called the IV (‘intra’ means into, and ‘venous’ means vein).

We insert a small flexible tube through the skin (the IV site) into a vein in the hand, arm, or foot. We give medicine and fluid through the intravenous.

Pace maker – A medical device used to control or help a person’s heart beat at a normal rate.

Having a Pacemaker

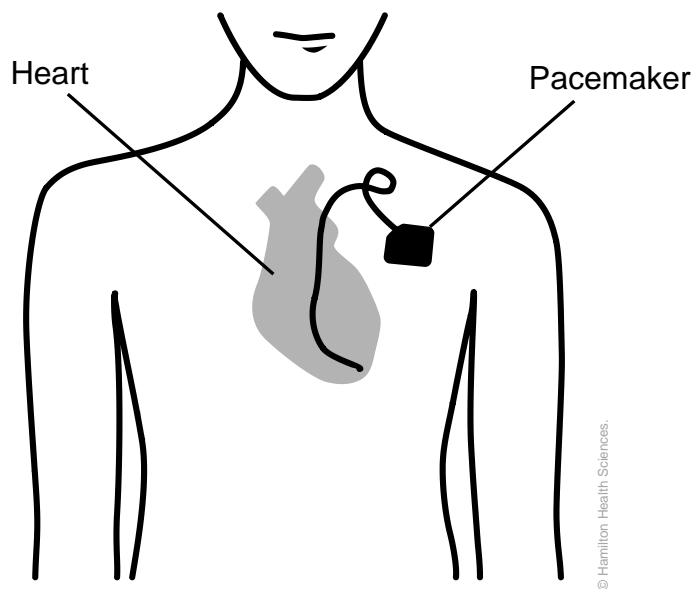
Why do I need a pacemaker?

People usually need a pacemaker when their heartbeat is too slow. A pacemaker does not treat or fix a fast or irregular heartbeat.

What is a pacemaker?

A pacemaker is a device inserted into your upper chest. It is usually placed just below the skin near your collarbone.

Pacemakers weigh about 135 grams or less than 5 ounces. Another way to describe a pacemaker is that they are about the size and weight of an old fashioned pocket watch.



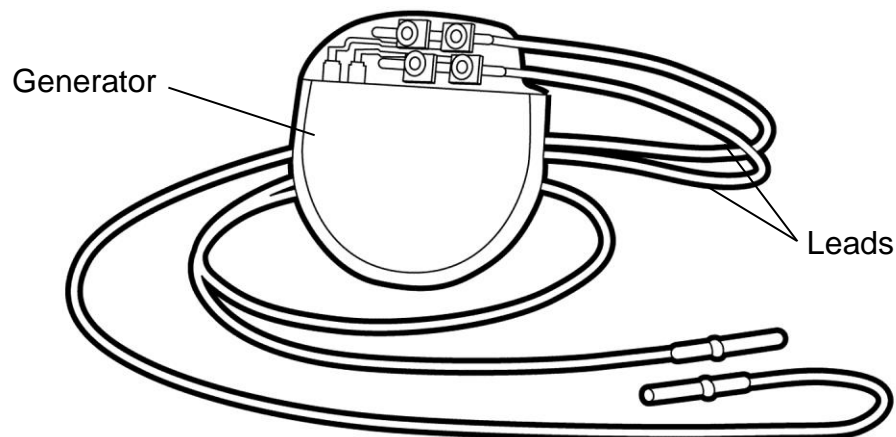
© Hamilton Health Sciences.

The pacemaker has two parts:

- The battery or generator
- The pacing wires, called leads (sounds like 'leeds')

The **generator** monitors your heart beat and rhythm. When needed, it sends an impulse to your heart, triggering a heart beat.

The **leads** go from the pacemaker to the inside of your heart. They are attached to the heart muscle. A pacemaker can have one, two, or three leads.



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How long does a pacemaker last?

The **leads** can last more than 20 years before they must be replaced.

The **battery** life of a pacemaker depends on the type of pacemaker. Usually, the battery lasts between 6 to 15 years. It depends on how the pacemaker is set and how often you use it.

Most people have their battery checked every 6 months to 12 months at a Pacemaker Clinic or their heart specialist's office. If your pacemaker is also a Cardiac Resynchronization Device (CRT), your electrophysiologist might arrange for you to have your device monitored remotely (wirelessly).

Preparing for a Pacemaker

Weeks or Days Before

Once you and your doctor have decided a pacemaker is right for you, you will have an appointment with a heart specialist in a Pacemaker Clinic.

What to bring to your appointment:

- BC Services Card or BC CareCard
(your personal health number)
- Glasses and hearing aids, if needed
- A list of all the medicines you take
- Someone to be with you during the visit to support you, take notes for you, and help you remember what was discussed.

Note: If you do not speak or understand English well enough to have medical conversations, we can arrange for a medical interpreter (This service is free.). Let us know when we call to make your appointment. If you prefer, you can bring a family member or friend to interpret for you.



During your visit:

- We arrange for blood tests, an electrocardiogram (ECG), and maybe a chest x-ray.
- We let you know where to have these tests done.
- We tell you about how the pacemaker is put in place.
- We give you special instructions about:
 - How to prepare for the procedure such as when to stop eating and drinking, and how to clean your skin.
 - Which medicines you need to take and not take on your procedure day.
- Ask any questions you might have about the procedure.

What to plan before your procedure:

- A ride to the hospital.
- A ride from the hospital after the pacemaker has been put in place. **You cannot drive for at least 1 week after you have had the pacemaker put in.**
- Someone to be with you in the hospital if:
 - You would like someone to help you keep track of the information we give you.
 - You need help reading or speaking English.
- Someone to stay with you for at least 24 hours when you return home.

If you are already in a hospital and need a pacemaker

The doctors and nurses in that hospital:

- Give you information and instructions about the procedure.
- Arrange for blood work and tests.
- Arrange for you go by ambulance, if needed, to a hospital where the pacemaker will be put in.

The evening before the procedure

- Eat a healthy snack in the evening.
- Clean your upper body and neck with Chlorhexidine Gluconate 4% solution following the instructions given to you during your clinic visit. Remember to rinse off the solution.
- Put on clean clothes after you wash.
- **Do not eat anything after midnight (12:00_{AM}).**
- If you wake up during the night, you can drink clear fluid if needed (such as water, apple juice, or clear tea without milk).

The morning of your procedure

Note: If you do not follow these instructions, your procedure could be cancelled.

- Do not eat anything after 12:00_{AM} (midnight).
- At 5:00_{AM}, drink 1 or 2 glasses of apple or cranberry juice.
- Do not drink anything after 5:00_{AM}.
- If your doctor has said you can take certain medications in the morning before your procedure, take these medications with a small sip of water.

If you are a diabetic, ask your doctor about which medications you should take.

- Remove all jewellery.
- Take a shower or bath.
- Clean the skin of your upper body, front and back, and your neck again with Chlorhexidine Gluconate 4% solution. Remember to rinse off the solution.
- Put on freshly washed clothes after you have cleaned your skin.

What to bring to hospital:

- BC Services Card or BC CareCard (your personal health number)
- Photo identification
- A list of all the medicines you take
- Bring all of your medications with you
- Dentures
- Hearing aid and spare batteries
- Glasses
- Someone to drive you to the hospital and take you home.

Please leave valuables at home such as jewellery, money, or credit cards.

Inserting the Pacemaker

It takes less than 1 hour to put the pacemaker in place. We use a special room that looks like an operating room to do this.

Before the procedure

We ask you to change into a hospital gown.

During the procedure, you can wear:

- your socks
- underpants
- glasses
- hearing aid(s)

***Remember to not to wear any jewellery.**

The surgeon explains the procedure to you. Ask any questions you have. We then ask you to sign a consent form agreeing to the procedure. We also ask you to agree to allow your personal information related to the pacemaker to be stored outside of Canada.

We attach you to a heart monitor and start an intravenous line.

We give you an antibiotic through your intravenous to help prevent infection.

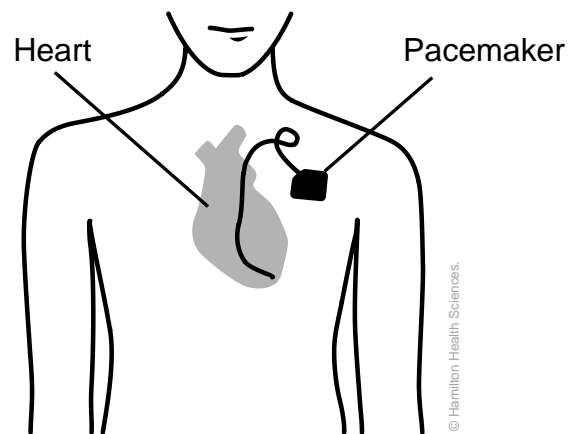
We give you medicine to help you relax before the procedure. This medicine might make you feel drowsy.

Just before we start the procedure, we will ask you to take out your dentures.

How the pacemaker is placed

We usually place the pacemaker on the left side of the body.

Let your doctor know if you are left handed or have concerns about where the pacemaker is placed.



1. The doctor then injects numbing medicine (freezing) into your skin to freeze the area where the pacemaker is being put so you do not feel pain during the procedure. This freezing wears off in 4 to 5 hours.
2. A small cut or incision is made on your chest just below your collarbone.
3. We use a special x-ray camera to guide the pacemaker lead (s) through a large vein into your heart.
4. Once the lead is in placed inside your heart, the other end of the lead is attached to the pacemaker generator.
5. The pacemaker is tested to make sure it is working properly.
6. The generator is placed just under your skin.
7. The incision is closed with stitches that dissolve over time. Your stitches might have little white tapes called 'steri-strips' overtop. These can help prevent scarring.

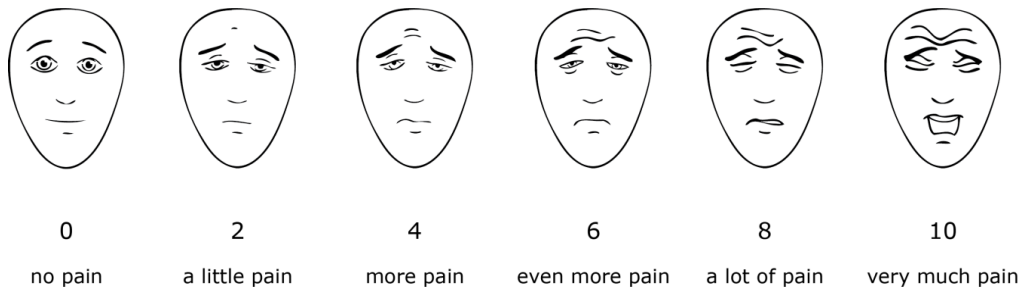
If your doctor uses some other way to close the incision, we give you instructions before you go home on how to care for the incision.
8. We place a small bandage over the incision.

Recovering in hospital

These are some of the things you can expect while you are recovering in the hospital.

- We give you acetaminophen (Tylenol) regularly to prevent pain from becoming a problem.

To help us know how much pain you are having, we use a pain scale like this one here. These faces show how much something can hurt (not what your face looks like when in pain). From left to right, the faces show more and more pain. You can point to the face that shows how much you hurt, or tell us how much you hurt using words or a number from 0 to 10.¹



- We keep the heart monitor on you for the first 2 hours after the procedure. We monitor your heart rate to make sure the pacemaker is working properly.
- We check your heart rate and blood pressure often. These must be close to your normal heart rate and blood pressure before you can go home.
- You can eat and drink as you normally would.
- If you need to go to the toilet, please ask for help the first time you get up.

¹ Faces Pain Scale – Revised (FPS-R). www.iasp-pain.org/fpsr. Copyright © 2001, International Association for the Study of Pain®. Reproduced with permission.

Just before you leave:

- We remove your intravenous.
- We give you any special instructions for follow-up appointments and for caring for your incision.

If you came from another hospital to have your pacemaker put in, we transfer you back to that hospital when we feel you are ready to go.

Before you leave, make sure:

- You ask any questions you have, and write down the answers.
- You have any prescriptions for medications.
- You have information on when you have an appointment with Pacemaker Clinic and heart specialist.
- You know when to get help.
- You have the temporary pacemaker identification card and information booklet about your pacemaker. (Your permanent card comes in the mail in about 2 to 3 months.)
- You have all your personal belongings.
- You have someone to take you home.

Going Home with a Pacemaker

We expect that you will recover quickly from the procedure.

This section contains information about when to see your doctor, when to get help, as well as special instructions to follow during the first 4 to 6 weeks to take care of yourself and your pacemaker.

When to see your doctor

Within the first week of going home:

- Call your family doctor's office to make an appointment.
- Tell the office this is your first visit after having had a pacemaker put in.

The Pacemaker Clinic will call you with an appointment time. This appointment usually happens 4 to 6 weeks after your procedure.

When to get help

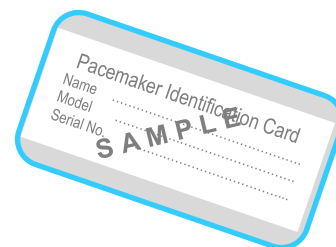
Call 9-1-1 or go to the nearest Emergency Department if you notice any of the following:

- Dizziness or light-headedness
- Blacking out or fainting
- Worsening pain in your chest or shoulder
- Shortness of breath or having a hard time to breathe
- Racing heart (palpitations)
- Increasing weakness
- Increasing tiredness
- Lots of hiccups or muscle twitching
- A fever of 38.5°C (101.3°F) or higher
- New bleeding through your pacemaker bandage

Contact your doctor or the Pacemaker Clinic right away if:

- Your bandage is wet with blood or other drainage.
- You have a fever over 38.5°C (101.3°F).
- You notice these things at the incision site:
 - redness
 - warmth or a feeling of heat
 - puffiness or swelling
 - green or yellow coloured liquid coming from your incision
 - pain or tenderness
- You feel unwell or think you have the flu.
(This could be signs of a blood infection. It must be treated right away.)
- You notice a new bruise over the site of the pacemaker.
(Some bruising in the area is normal right after the procedure and should go away over the next 6 weeks. A new bruise is **not normal**).
- You have swelling over the site of the pacemaker and the swelling is larger than an egg.
- You have pain that gets worse or does not improve with pain medicine.

Always have your pacemaker identification card with you.



If there is a problem with the pacemaker, the hospital uses your pacemaker identification card to contact the doctor who inserted your pacemaker.

Caring for yourself

Managing Pain

It is normal to have some pain at the pacemaker site for a few weeks following the procedure.

You will feel better sooner if:

- You control your pain by taking pain medicine regularly
 - You rest the arm on the pacemaker side.
- **To manage pain in the first 48 hours:**
 - Take regular strength acetaminophen (325 mg).
 - Take 1 to 2 pills every 4 to 6 hours.
 - **To manage pain after the first 48 hours:**
 - Continue to take regular strength acetaminophen, but begin to take them less often.
For example, instead of taking the acetaminophen 4 times a day, take it 3 times a day.

Taking your other medications

Return to taking your medications unless we gave you new instructions.

If you were taking a blood thinner before the procedure and we said you can return to taking this medicine, start taking it again as directed.

Bathing

- After 48 hours, you can start taking showers. Check when you can remove your bandage – see ‘Incision Care’.
- After 1 week:
 - You can take baths if you wish.
 - You can use unscented lotion on your incision site if it becomes itchy.

In the first 6 weeks:

- **Do not** let the shower spray directly on the incision area (or bandage).
- **Do on** scrub your incision. (See ‘Incision Care’)
- **Do not** soak the incision for a long time.

Doing any of these can delay healing.

Dressing and Clothing

When getting dressed, put the arm on the side with the pacemaker through the clothing first.

To protect your skin and keep your incision from getting irritated, wear loose-fitting clothing over your pacemaker area.

For women: You can wear a bra if it is comfortable. You might find it more comfortable to place a pad under the shoulder strap.

Sleeping

Sleep in any position that does not cause the area around your pacemaker to hurt.

Dealing with feelings and emotions

After your pacemaker, you may feel:

- fearful
- angry
- worried
- anxious
- uncertain
- irritable
- insecure
- depressed

As you recover, these feelings should start to improve. If you continue to have these feelings, it is best to talk to your doctor.

Activity

Rest the first day you are home.

Start these exercises **the day after you get home** and do them for the **next 2 weeks**.

1. To prevent stiffness and soreness:

- Gently roll your shoulders in forward circles 5 times.
- Gently roll your shoulders backward circles 5 times.



Do these 2 exercises 3 times a day.

Increase the number of circles you do each time, each day if you can.

2. To increase movement in your shoulder:

- Face the wall.
- Place both hands on the wall.
- Slowly 'walk' your fingers up the wall. Do not go above your shoulder height.
- Slowly 'walk' your fingers back down the wall.

Do this exercise 3 times a day.

During the first 6 weeks:

- **Do not** do any activities where you are repeatedly swinging or raising your arm.
Examples: throwing a ball, golfing, tennis, table tennis, vacuuming, or chopping wood
(You could cause the pacemaker lead(s) to move out of place.)
- **Do not** do any contact sports.
(You could damage the pacemaker.)

For most people, it is safe to return to sexual activity after a pacemaker. It will not harm your pacemaker. While your incision is healing, try not to support your weight with your arms during sexual activity.

Driving a vehicle

Do not drive for 1 week after your procedure.

When you begin to drive:

- Drive for short distances.
- Keep your shoulders relaxed. Try not to raise your arms above your shoulders.
- Always wear a seatbelt. Some people with pacemakers find it more comfortable to use a small pillow as padding between the pacemaker area and the shoulder belt.



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If you are a commercial driver, talk with your heart doctor about when you can return to work.

Incision Care

You could have any one of these types of bandages over your pacemaker site. The incision should not bleed very much. If you see any blood or other drainage coming through your bandage, contact your doctor.

Type of bandage	What you should do
Large gauze pad	Remove after 48 hours.
Band-Aid-type	Remove after 1 week.
Small tapes over the incision	Remove after 1 week. To remove, gently lift the tapes from each end and roll towards the middle. It might help to loosen the tapes if you get the area wet in the shower first.

Watch for bruising.

Some bruising in the area is normal right after the procedure and should go away over the next 6 weeks.

Remember to contact your doctor or the Pacemaker Clinic right away if you notice new bruises or any bruise that gets larger (like the size of an egg).

Once your bandage is off, gently clean your incision with soap and water each day. Rinse well and pat the area dry.

Remember

- **Do not** let the shower spray directly on the incision area (or bandage).
- **Do on** scrub your incision. (See 'Incision Care')
- **Do not** soak the incision for a long time.

Doing any of these can delay healing.

Living with a Pacemaker

Tell others that you have a pacemaker

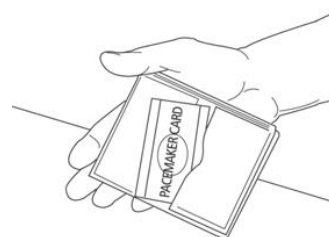
- **Attend follow-up appointments.**

Your pacemaker needs to be checked regularly. The Pacemaker Clinic contacts you to arrange for your appointment.

- **Always carry a pacemaker card with you.**

If you have an accident, this card tells people helping you that you have a pacemaker.

You might be asked to show your pacemaker ID card when going through any security scanner.



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- **Wear a medical alert bracelet or necklace.**

In an emergency, health care personnel can get your important medical information. (See the Resource page for more information about how to get your medical alert bracelet or necklace.



- **Tell all your health care providers you have a pacemaker.**

This allows them to take special precautions for certain types of medical procedures or therapies.

At home, work and in the community

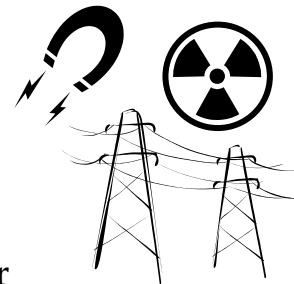
- **Using household items**

It is usually safe to be around or use any of the following:

Microwave ovens	Safe
Cellular telephones	Keep your cell phone at least 15 cm (6 inches) away from your pacemaker. Do not carry your cell phone in your breast pocket
Electric razors, hairdryers, electric toothbrushes	Use with caution. Keep at least 15 cm (6 inches) away from your pacemaker.
Lawnmowers, wee eaters, electric drills or saws	Use with caution.
Television sets, CD players, radios	Safe

Stay away from:

- **magnetic fields**
- **high voltage**
- **radiation**



If you need radiation therapy, tell your cancer doctor you have a pacemaker. Certain steps might be needed.

Magnetic fields, high voltage, or radiation could cause your pacemaker to not work as it should.

Try to stay away from industrial areas with magnetic fields and high voltage or radiation.

Try to stay away from welding equipment.

If you have entered an area with a magnetic field, high voltage, or radiation, **leave the area if you feel:**

- Light-headed
- Dizzy
- A change in your heart beat

Going through security systems

It is safe to pass through airport security systems, border security systems, or any anti-theft devices in stores or banks.

It is best to move through quickly and not stay near the device.

Before you walk through, we suggest you have your pacemaker identification card ready to show them.

Tell the security guard you have a pacemaker so that they can stay away from using or holding the detection wand over the pacemaker site.



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www.fraserhealth.ca

This information does not replace the advice given to you by your healthcare provider.

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To order: patienteduc.fraserhealth.ca

