Cardiac Services BC
An agency of the Provincial Health Services Authority

Cardioversion

What is a ‘cardioversion’?

Cardioversion (sounds like kar-dee-oh-ver-shun) is a medical procedure that treats a heart rhythm problem. It is used to restore a fast or irregular heartbeat back to the normal rhythm.

Common heart rhythm problems treated with cardioversion include atrial fibrillation and atrial flutter.

Why is a cardioversion needed?

Normally, your heart has a regular beat. Electrical signals in your heart trigger your heart muscle to contract and pump blood. The electrical signals can be seen on a heart tracing or electrocardiogram (ECG).

When your heart beats too fast or not regularly, it can cause a person to feel a fluttering or thumping in the chest (palpitations), dizzy, lightheaded, short of breath, weak, extremely tired all the time, and even chest pressure or pain. These are signs that the heart is not pumping properly. A cardioversion can improve or relieve these symptoms. With a normal heart rhythm, you should be able to return to your daily activities and exercise.

What’s inside?

How is it done?

We give your heart a low-energy electric shock. The shock interrupts the heart's abnormal rhythm and restoring a normal rhythm. Sometimes it takes more than one shock. You are given medicine to sleep through the cardioversion so you do not feel the shock.

How successful is it?

Most people (more than 9 out of 10) will have their heart rhythm return to normal after a cardioversion. It is important to keep in mind that a cardioversion may not be a permanent solution. In half the people the heart rhythm problem can come back. For some people, it could return within hours or days of the cardioversion. For others, it might return weeks or months later. The chances of the problem returning depends on the general health of your heart and the medicines you are taking.

Nine out of 10 people will have their heart rhythm return to normal after a cardioversion.

Are there any risks?

While not common, cardioversion does have risks, however they are small.

Possible risks:

- Mild chest soreness (fairly common)
- Slight skin burns at the sites of the electrical shock (fairly common)
- Reaction to the medicine given to put you to sleep (small chance)
- A stroke caused by the shock dislodging a blood clot from inside the heart, travelling to the brain (very small chance)
- A serious abnormal heart rhythm triggered by the shock (very small chance)

Your doctor would only recommend a cardioversion if they feel the benefits to your health outweigh these small risks.

Chest soreness can easily be treated with pain medicine such as acetaminophen (Tylenol).

Mild burns can be easily treated with cool cloths, sunburn skin cream and pain medicine.

When taking blood thinners correctly, the risk of a stroke is about 1 in every 200 people.

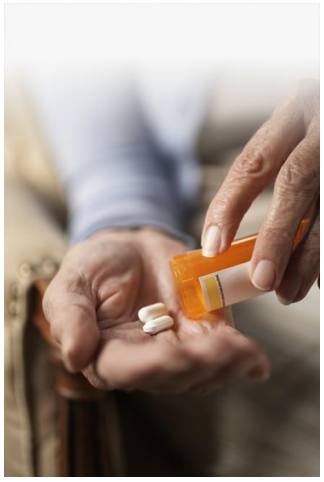
What can I expect before and after?

Preparing for the procedure

Your doctor's office gives you a date, time and location for your procedure.

Also, you will get specific instructions, such as:

- You need to take a blood thinner for at least 3 weeks before and for 4 weeks after the procedure. This is to help prevent blood clot and stroke.
- If you are taking warfarin (Coumadin), your I.N.R. must be above 2. If your I.N.R. drops below this any time in the 3 weeks before the procedure, it might need to be rescheduled. I.N.R. is a blood test used to check blood clotting when on blood thinners (anticoagulants).
- If you are taking apixaban (Eliquis), dabigatran (Pradaxa), or rivaroxaban (Xarelto), make sure you take the blood thinner as directed. If you miss a dose any time in the 3 weeks before the procedure, it might need to be rescheduled.



You need to take a blood thinner for at least 3 weeks before and for 4 weeks after the procedure.
This is to help prevent blood clot and stroke.

You might be told to not eat or drink anything from midnight (12 a.m.) the night before the procedure.

You get specific instructions on how to take your other medicines.

You must arrange for someone to pick you up and stay with you for at least 24 hours after the procedure.

You cannot drive or travel alone for 24 hours after the procedure. You should also defer any important decisions or signing of legal documents during this time. The after effects of the medicine given to sleep through the procedure (anesthetic) can make it hard for you to think clearly and react quickly.

If you do not speak or understand English well enough for medical conversations, have someone who speaks English call the hospital where you are having the procedure. Ask for a medical interpreter to be present. If you prefer, you can bring someone with you to interpret for you.

Before the procedure

- The procedure is usually done in a special heart unit of the hospital.
- A heart tracing (an electrocardiogram or ECG) is done to confirm your abnormal heart rhythm.
- You meet the heart specialist (cardiologist) who does the cardioversion. Ask any questions you have.
- You meet the anesthesiologist (doctor who gives you medicine to sleep) who will ask you some questions. They will explain how they put you to sleep. They will also explain any risks related to this.
- An intravenous (or IV) is placed in one of your arms so they can give medicine during the procedure. To place the IV, a small flexible tube is inserted through your skin into a vein in your arm.
- You are attached to a blood pressure and oxygen monitoring machine. They measure your blood pressure and oxygen levels during the procedure.
- Sticky patches are placed on your chest and back.
- The patches are attached to a machine. The machine records your heart rhythm.
- The anesthesiologist gives you the medicine to put you to sleep. You fall asleep within seconds.
- The cardiologist delivers a low-energy shock through the patches. Sometimes it takes more than one shock before your heart rhythm returns to normal.
- The cardioversion procedure takes about 5 to 10 minutes.
- The anesthesiologist wakes you up as soon as the cardioversion is completed. You might wake up with an oxygen mask on your face.

Who is present during the procedure?

- ✓ A registered nurse
- ✓ An anesthesiologist
- ✓ A cardiologist
- ✓ A respiratory therapist might also be there.

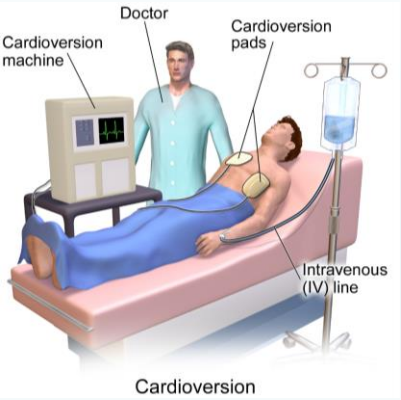


Image credit:Medical gallery of Blausen Medical 2014. Wikiversity Journal of Medicine

After the procedure

- You will feel very sleepy for a while.
- You stay in the hospital for a few hours until you are fully awake. During this time:
  - They monitor your heart rhythm.
  - Another ECG is done.
  - Your blood pressure and heart rate are checked often.
- When you are more fully awake, they give you something to eat and drink.
- Before you leave the hospital, you get instructions on how to care for yourself at home, what to watch for and who to follow up with afterwards.

Where can I get more information?

If you have any questions or concerns about the procedure, talk to your doctor or heart specialist.

You can also call HealthLink BC at 8-1-1 any time of the day or night and speak to a registered nurse.

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