

Cardioversion or TEE Cardioversion

What is cardioversion?

Cardioversion [kahr-dee-oh-VUR-zuhnh] is a procedure that treats an irregular or fast heartbeat (arrhythmia [uh-RITH -mee-uh]). The goal is to restore your heart to a normal rhythm.

An arrhythmia can cause blood clots to form in your heart. If this happens, there's a chance that cardioversion could dislodge it. The clot could then travel to your lungs or brain and cause serious complications or a stroke.

To check for blood clots, your doctor may recommend a **transesophageal** [tranz-ih-sof-uh-JEE-uhl] **echocardiogram** [ek-oh-KAHR-dee-uh-gram], or **TEE**.

Why do I need cardioversion?

You might need cardioversion to:

- **Treat symptoms.** Arrhythmia can cause dizziness, tiredness (fatigue), chest discomfort, or shortness of breath.
- **Prevent blood clots.** Arrhythmia increases the chance that blood clots will form in your heart. If a clot leaves your heart, it can cause a stroke or other serious problems.

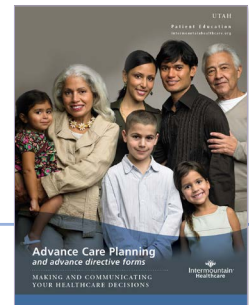
How is a cardioversion done?

During cardioversion, electrode pads are placed on your chest and side. A split-second shock is sent to your heart. This interrupts the abnormal heart rhythm, so the heart can start beating normally again.



What do I need to do next?

- 1 Talk with your doctor about the benefits, risks, and alternatives for these tests. Be sure to ask all of your questions.
- 2 Take all medicines exactly as your doctor ordered to prevent blood clots and keep your heart healthy.
- 3 Create or update your advance care directive. Ask your care team for a copy of Intermountain's ***Advance Care Planning*** booklet and go over it with your family or others who are important to you.



During a TEE, a small ultrasound device is passed down your throat into your esophagus [ih-SOF-uh-guhs] (food tube) so that it rests behind your heart. High-frequency sound waves (**ultrasound**) are used to take pictures of your heart while it is pumping.

If the TEE test finds a clot in your heart, you won't have the cardioversion. You will take medicine for several weeks and have the cardioversion later when the blood clots have dissolved. If no clots are found, the team will do the cardioversion right away.

Cardioversion is NOT the same as defibrillation, the emergency heart shock seen on TV or in movies. Cardioversion uses lower-level electric energy, sent at a precise moment in your heartbeat.

How do I get ready?

Here's how to get ready for your procedure:

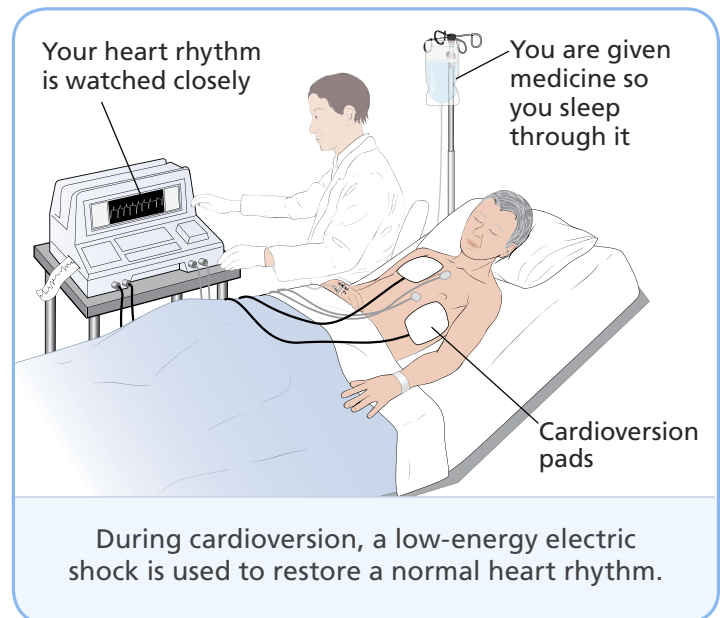
- **Take your blood clot (anticoagulation [an-tie-koh-ag-yuh-LAY-shun]) medicine if prescribed.** Some people call these medicines “blood thinners,” although they do not thin your blood.
- **Tell your doctor about all of the medicines you are taking,** including all prescriptions, over-the-counter drugs (such as allergy pills or cough syrup), inhalers, patches, vitamins, and herbal remedies. Many of these may keep your blood clot medicines from working as they should. Be sure to ask your doctor before taking any other medicines.
- **Tell your doctor if you've ever had an allergic reaction to anesthesia [an-uh-STHEE-zhuh]** (medicine that makes you sleep and prevents pain).
- **Follow all directions on when to stop eating or drinking before your procedure.** If you need to take pills, ask your healthcare team for advice.
- **Do not put lotions or creams on your chest or back the day of the procedure.** These can keep the cardioversion patches or pads from sticking to your skin.
- **Arrange for a ride to and from the hospital, and plan to take the day off from work.** Don't drive for 24 hours after. You'll probably be at the hospital for several hours. Ask someone to be with you at home for the rest of the day.

What happens during cardioversion?

Cardioversion takes just a few minutes.

- **You will get medicine to make you sleep.** You won't feel anything when it happens.
- **The medical team will monitor your heartbeat, heart rhythm, oxygen level, and breathing.**
- **The doctor will send a very brief electrical current to your heart** through the cardioversion pads. Often, a normal heartbeat returns immediately. If not, the doctor will try again, possibly up to three times. If your heart doesn't respond after the third time, the doctor will stop.

Because your heart rhythm is continuously monitored, the team will see right away if your heart has returned to a normal rhythm.



What happens during the TEE test?

If you have a TEE test before the cardioversion, here's what you can expect:

- **Medicine:** You may get medicine to make you feel relaxed and sleepy. A throat spray, gel, or liquid will numb your throat. You will be given a bite guard to protect your teeth.
- **Insertion:** The doctor will move a small, flexible tube down your throat and into your esophagus. You will need to swallow to help it go down. You may gag a bit, but this is normal. It may help to remember that the tube is no larger than most food you might swallow.
- **Images:** The tube has a tiny ultrasound device at the end. When the device is resting right behind your heart, the doctors take detailed pictures of your heart to check for clots. The procedure usually lasts about 10 to 15 minutes. When they are finished taking pictures, the tube will be removed.
- **Decision:** If the images show you have one or more clots in your heart, you will NOT have cardioversion today. You will need to take an anticoagulant (anti blood clot medicine) until the clots dissolve. You may be scheduled for a cardioversion on a later date. If the images show there are no clots, the team can move forward with the cardioversion.

What happens after?

After the procedure, you may be moved to a recovery area, or you may stay in the same room. Healthcare providers will watch you closely for any complications.

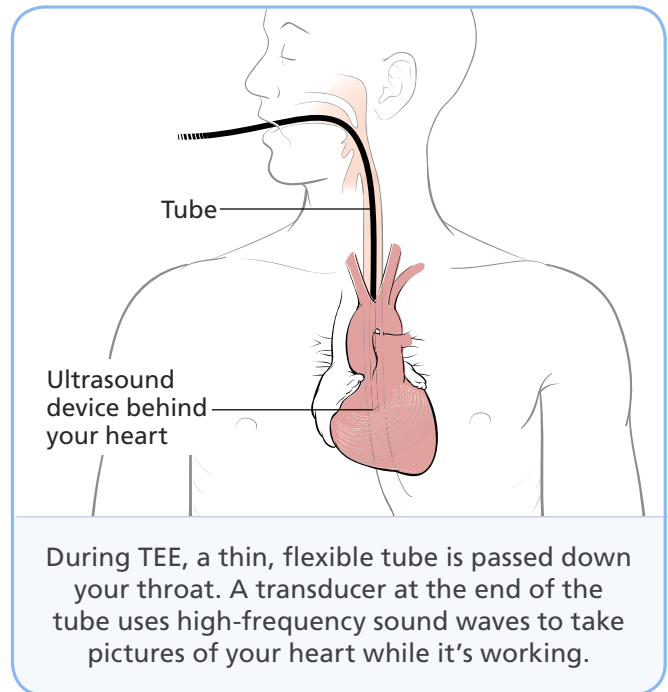


My follow-up appointment

Date/Time: _____

Place: _____

Doctor: _____



How do I care for myself at home?

- **Rest and relax.** You may feel weak or tired for the rest of the day due to the medicine you were given. Be careful as you walk or climb stairs. Do not drive, use dangerous machinery, go to work, or make any important decisions for 24 hours, unless your doctor tells you otherwise.
- **Take medicine as ordered by your doctor.** You may need to keep taking blood thinners or heart rhythm medicine for several weeks or months afterward, even if the cardioversion is successful.
- **If you had a cardioversion,** you may have red areas on your skin where the cardioversion pads were. These areas may be tender. The soreness and redness should go away in a few days.
- **If you had a TEE test,** wait to eat or drink until the feeling comes back in your throat, usually a couple of hours. Start with liquids and soft foods such as gelatin, pudding, or soup. You might have a sore throat for a few days. Gargling with warm water or using cough drops may help.

What are the risks and benefits of cardioversion and a TEE test?

The table below lists the most common possible benefits, risks, and alternatives for cardioversion and for the TEE test. Other benefits and risks may apply in your unique medical situation. Talking with your doctor is the best way to learn about these risks and benefits. Be sure to ask any questions you may have.

Possible benefits	Possible risks and complications	Alternatives
<p>Cardioversion can restore your heartbeat to a normal rhythm. In the process, it can ease symptoms caused by a fast or irregular heartbeat, such as dizziness, shortness of breath, extreme tiredness, or chest discomfort.</p> <p>A TEE helps your doctor check to see if there are clots in your heart before cardioversion. It helps to prevent a blood clot from being released during cardioversion.</p>	<p>Serious problems with cardioversion or the TEE test are rare.</p> <p>Possible risks and complications for cardioversion:</p> <ul style="list-style-type: none"> You may have soreness or redness on your chest where the cardioversion pads were used. This is usually mild and temporary. An irregular or fast heartbeat can return later. More than half of patients who have cardioversion need to have it again later at some point. You may have an allergic reaction to the anesthesia medicine. Tell your doctor if you have had reactions to anesthesia in the past. In rare cases, cardioversion can dislodge a clot that has formed in your heart. The clot can cause a stroke or other complications. Healthcare providers work to prevent this with anticoagulant medicines, using a TEE test to check for clots before the procedure, or both. In rare cases, the heart rhythm problem can get worse. If the procedure causes a severe problem, you will have emergency treatment. <p>Possible risks and complications for TEE:</p> <ul style="list-style-type: none"> You may have temporary, minor discomfort in your throat or mouth. In very rare cases, the test can injure your esophagus (food pipe), which can cause infection or bleeding. If this happens, the problem will be treated right away. 	<p>Alternatives to cardioversion include:</p> <ul style="list-style-type: none"> Taking medicine to restore your heart rhythm. Having heart surgery or a cath lab procedure, if the cause of the problem can be treated. Watching and waiting, depending on your symptoms and doctor's advice. <p>Alternatives to a TEE: Having the cardioversion without this test. But if a TEE test is recommended before cardioversion, it's a good idea to have the test. It can increase your safety during cardioversion.</p>

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