

# Cardioversion or TEE Cardioversion

## What is cardioversion?

**Cardioversion** [car-dee-oh-VER-zhuhn] is a procedure that treats an **arrhythmia** [uh-RITH-mee-uh], which is an irregular or fast heartbeat. The goal is to restore your heart to a normal rhythm.

Before having cardioversion, your doctor may recommend a **transesophageal** [tranz-eh-sof-uh-JEE-uh] **echocardiogram** [ek-oh-CAR-dee-oh-gram], or **TEE**. This test checks for blood clots in the heart that can sometimes form because of an arrhythmia.

If the TEE finds clots, the clots would need to be treated before having the cardioversion. It's possible for the cardioversion to knock the clots loose, which could cause a stroke or other serious complications.

## Why do I need cardioversion?

You might need cardioversion to:

- **Treat symptoms of arrhythmia.** Arrhythmia can cause dizziness, fatigue (tiredness), 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 health problems.

## How is 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 and procedures. Be sure to ask all of your questions.
- 2 Follow your doctor's directions about medicines. Take medicines as 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 Guide and go over it with your family or others who are important to you.

## How is a TEE done?

During a TEE, a small ultrasound device is passed down your throat into your **esophagus** [eh-SOF-uh-guhs] (food tube) so that it rests behind your heart. Special sound waves (**ultrasound**) are used to make images 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:

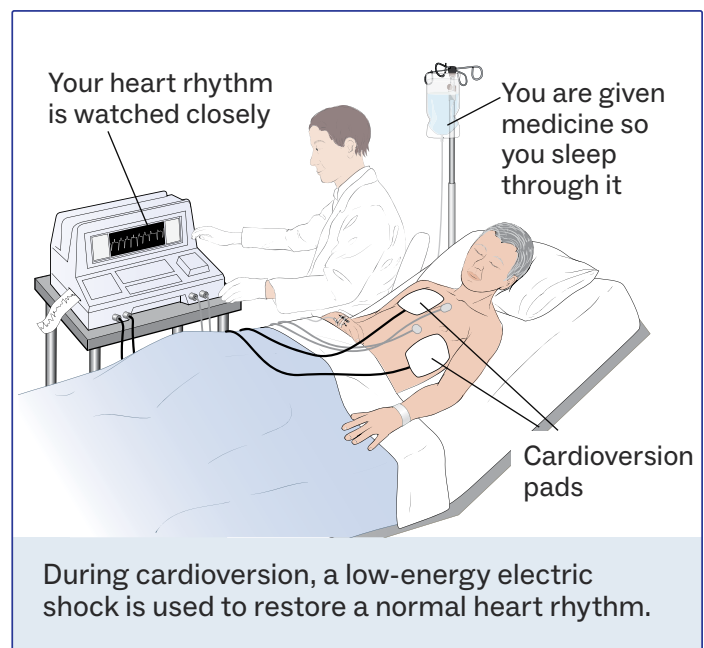
- **Arrange for a ride to and from the hospital, and plan to take the day off from work.** Don't drive for 24 hours after. You'll probably be at the hospital for several hours. Ask someone to be with you at home for the rest of the day.
- **Take your blood clot medicine (if prescribed).**  
**Anticoagulants** [an-tee-koh-ag-yuh-luhnts] are medicines that help prevent blood clots from forming. They're sometimes called "blood thinners," although they do not thin your blood.
- **Tell your doctor about all of the medications you are taking.** This includes prescription medicines, over-the-counter remedies (such as cough syrup, allergy pills, or pain relievers), inhalers, patches, vitamins, and herbal supplements. 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-zuh] (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 medicine, 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.

## 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 3 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.



### Notes

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## What happens during the TEE test?

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

- **You get 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.
- **The ultrasound is inserted.** The doctor moves a small, flexible tube down your throat and into your esophagus. The tube has a tiny ultrasound device at the end. 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 are made of your heart.** When the device is resting right behind your heart, the doctor takes detailed pictures of your heart to check for blood clots. The procedure usually lasts about 10 to 15 minutes. When they are finished taking pictures, the tube will be removed.
- **Treatment decisions are made.** If the images show there are no clots, the team can move forward with the cardioversion.  
If the images show you have one or more clots in your heart, you will NOT have cardioversion until the clots are treated. You will need to take an anticoagulant until the clots dissolve.

## What happens after?

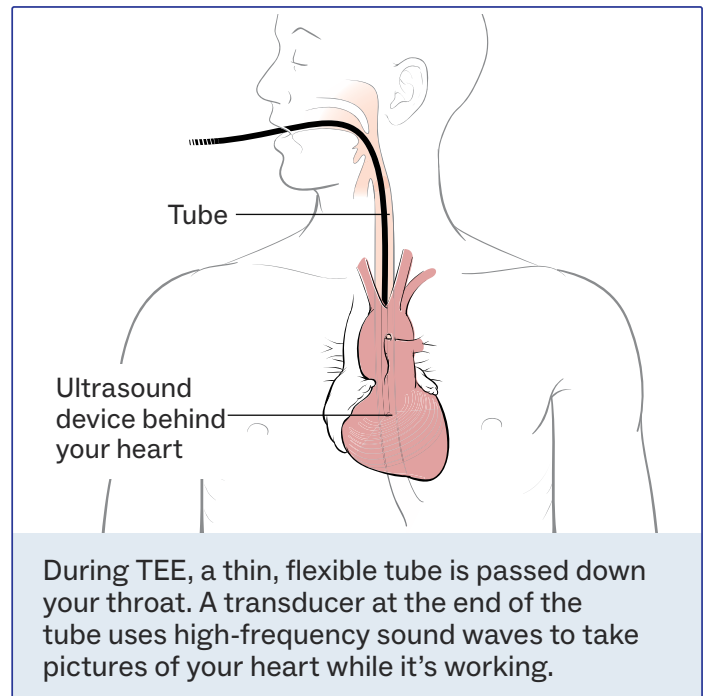
After the procedure, you may be moved to a recovery area, or you may stay in the same room. Healthcare providers will watch you closely for any complications.

### My follow-up appointment

Date /Time: \_\_\_\_\_

Place: \_\_\_\_\_

Doctor: \_\_\_\_\_



## 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	Risks and possible complications	Alternatives
<p><b>Possible benefits of cardioversion:</b></p> <ul style="list-style-type: none"> <li>Restores your heartbeat to a normal rhythm.</li> <li>Eases symptoms caused by arrhythmia, such as dizziness, shortness of breath, extreme tiredness, or chest discomfort.</li> </ul> <p><b>Possible benefits of TEE:</b></p> <ul style="list-style-type: none"> <li>Shows the formation of blood clots in the heart.</li> <li>Prevents complications from blood clots being released during cardioversion.</li> <li>May show additional information on how well your heart is working.</li> </ul>	<p><b>Serious problems with cardioversion or the TEE test are rare.</b></p> <p><b>Possible risks and complications for cardioversion:</b></p> <ul style="list-style-type: none"> <li>Soreness or redness on your chest where the cardioversion pads were used. This is usually mild and temporary.</li> <li>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.</li> <li>An allergic reaction to the anesthesia medicine. Tell your doctor if you have had reactions to anesthesia in the past.</li> <li>In rare cases, cardioversion can dislodge a clot that has formed in your heart, which can cause a stroke or other complications.</li> <li>In rare cases, the heart rhythm problem can get worse. If the procedure causes a severe problem, you will have emergency treatment.</li> </ul> <p><b>Possible risks and complications for TEE:</b></p> <ul style="list-style-type: none"> <li>Temporary, minor discomfort in your throat or mouth.</li> <li>In very rare cases, the test can injure your esophagus, which can cause infection or bleeding. If this happens, the problem will be treated right away.</li> </ul>	<p><b>Alternatives to cardioversion:</b></p> <ul style="list-style-type: none"> <li>Taking medicine to restore your heart rhythm.</li> <li>Having heart surgery or a cath lab procedure.</li> <li>Watching and waiting, depending on your symptoms and doctor's advice.</li> </ul> <p><b>Alternatives to a TEE:</b> There are no alternatives that provide the same information a TEE does.</p>

### Questions for my doctor

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