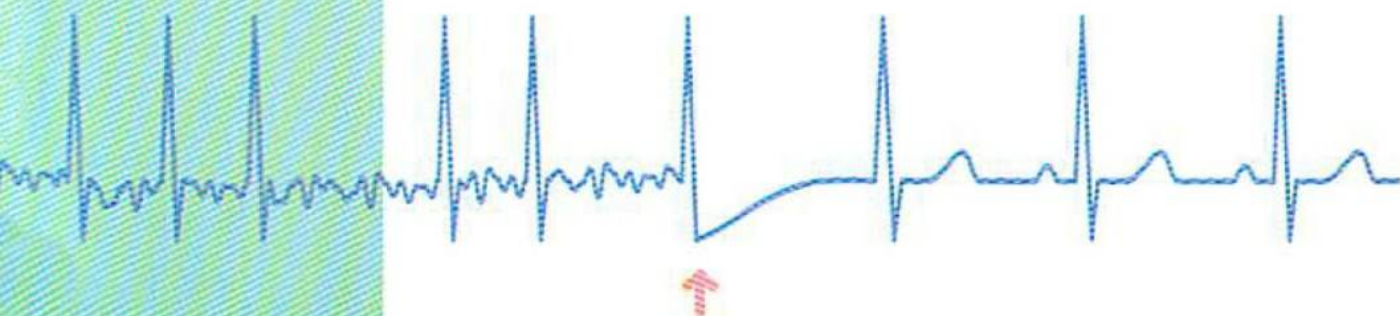
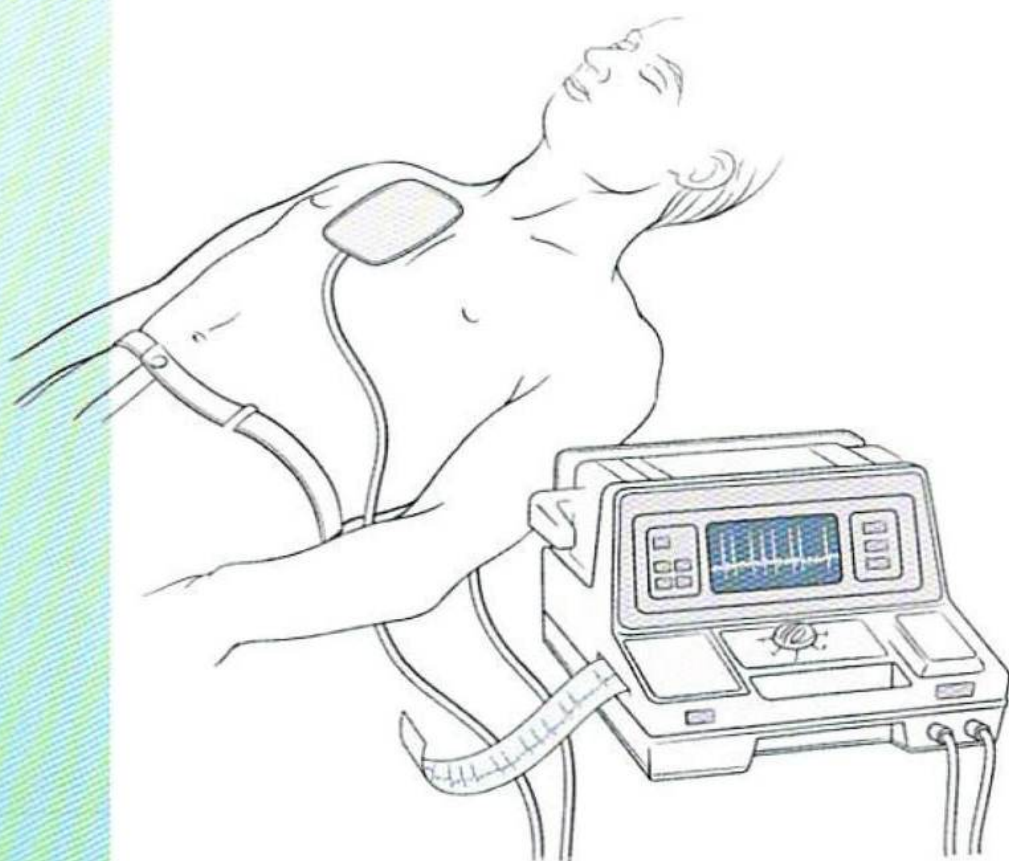


Electrical Cardioversion



A Patient's Guide

What Is Electrical Cardioversion?

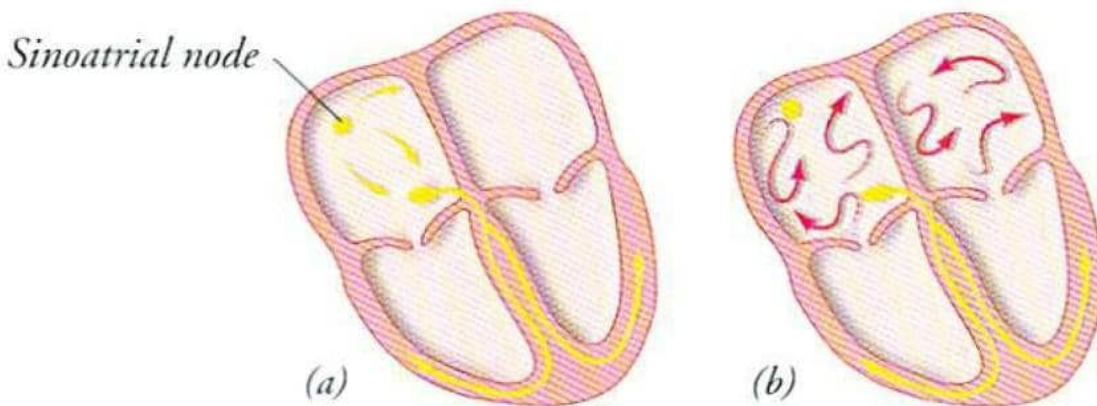
Electrical cardioversion is a medical procedure during which the heart is given a brief electric shock to **convert** (change) an abnormal heart rhythm back to a normal, regular rhythm.

Why Is Cardioversion Done?


Most elective or “non-emergency” cardioversions are done to treat **atrial fibrillation**, an abnormal rhythm that starts in the heart’s upper chambers (atria).

Normally, the electrical impulses that control the heartbeat start in the sinoatrial node, a cluster of cells in the right atrium. The node produces electrical impulses at regular intervals and sets the proper pace for the heartbeat.

In atrial fibrillation, the sinoatrial node no longer sets the pace for the heartbeat. Instead, multiple tiny waves of electrical activity flow across the atria in a continuously changing manner. This causes the walls of the atria to quiver. The heart rhythm is irregular, erratic, and usually rapid.



The heart’s electrical activity during (a) normal heart rhythm and (b) atrial fibrillation.



Atrial fibrillation can cause annoying symptoms, such as palpitations, dizziness, and fatigue. In some cases, the quivering of the atria may cause blood clots to form inside the heart chambers. These clots can break loose, leave the heart, and cause a stroke.

Atrial fibrillation may stop by itself or it may require treatment to stop it. Doctors may prescribe drugs to restore a normal heart rhythm. If drugs do not work, electrical cardioversion may be the next step.

Cardioversion is also done in emergency situations to correct a rapid heart rhythm (called a **tachycardia**) that is associated with low blood pressure, chest pain, shortness of breath, or fainting.

How Does Cardioversion Work?

During cardioversion, two large pads (or patches) are placed on the chest and back. A perfectly-timed electrical shock is sent between the pads. The shock causes the heart cells to contract all at once. This stops all electrical activity in the heart for a moment. When the electrical activity starts again, the normal heart rhythm is restored.



Atrial fibrillation

*Cardioversion
shock*

*Normal heart
rhythm*

Before Cardioversion

If you are scheduled to have electrical cardioversion for atrial fibrillation, your doctor may prescribe **anticoagulants** (“blood thinners”) for several weeks before and after the procedure. Anticoagulants help prevent blood clots from forming inside the quivering atria and reduce the risk of a stroke.

In some cases, doctors may recommend a special ultrasound test of the heart, called a **transesophageal echo** or **TEE**, before cardioversion. The TEE gives images of the heart that are sharp and clear and it can help determine whether or not there are blood clots inside the atria. If the pictures show no clots, you may not need anticoagulants before cardioversion.

Preparing for Cardioversion

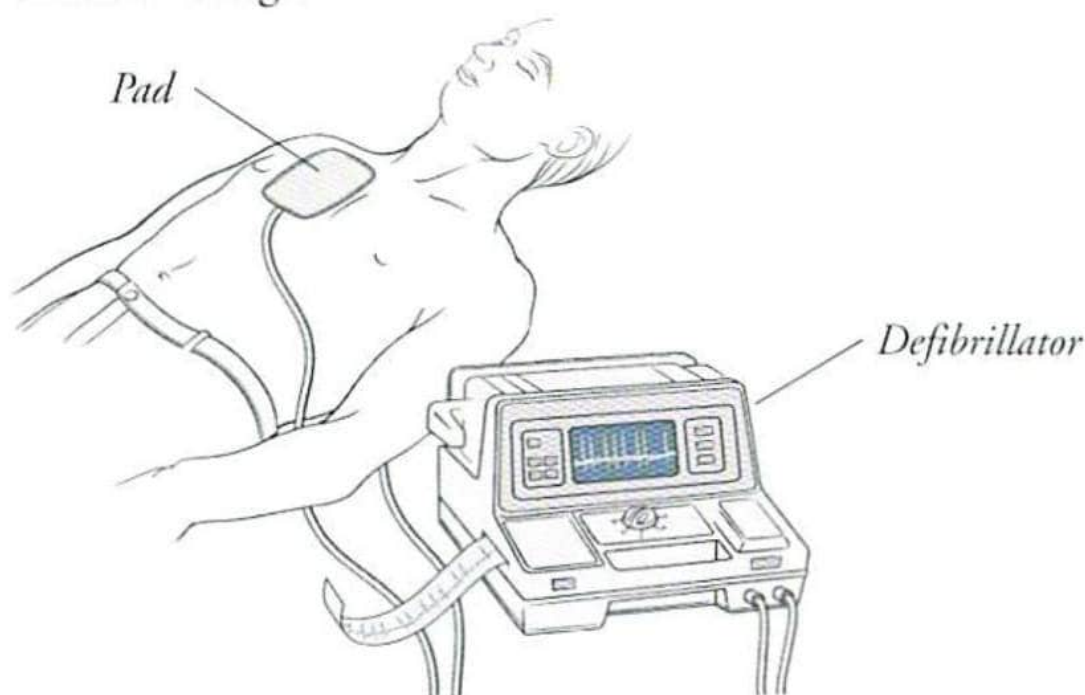
- Do not eat or drink anything for 8 hours before the procedure.
- You may take any medications prescribed by your doctor with small sips of water.
- Make arrangements for someone to drive you to and from the hospital.
- Bring a list of all the medications you are currently taking.
- The procedure will be explained to you and you will be asked to sign a consent form.

What Happens During Cardioversion

Electrical cardioversion is usually done at a hospital or surgery center, as an outpatient procedure. The medical team includes a cardiologist, a nurse, and/or an anesthesiologist.

Small sticky electrodes are placed on your chest to monitor your heartbeat. An intravenous line is then inserted into a vein in your arm or hand, so that medications can be injected. A blood pressure cuff is placed on your other arm. You will be asked to remove eye glasses and dentures and to empty your bladder before the procedure starts.

Two large sticky **pads** (also called patches or paddles) are then placed on your chest and back. The pads are connected by wires to a **defibrillator**, a device that allows the medical team to apply the proper amount of electrical charge.



The anesthesiologist (or the nurse) will then give you a sedative through the intravenous line. Once you are relaxed and asleep, the doctor delivers the shock through the pads. Additional shocks at higher energy levels may be delivered if the first shock does not restore a normal heart rhythm. The procedure takes about half an hour.

You should not feel any pain from the shock. Once the procedure is over, you will be awakened. You probably will not remember what happened during the procedure.

After the procedure, the nurse will monitor your blood pressure and heart rhythm. You may be observed for several hours, to make sure your heart rhythm is stable.

After Your Cardioversion

- **Have someone drive you home.** Do not drive until the next day, because the sedative may make you drowsy.
- For a day or two, the skin on your chest and back may feel a little sore and appear red, like a mild sunburn. Your doctor may prescribe an ointment to relieve the discomfort.
- **Call your doctor** if you have any symptoms, such as palpitations, dizziness, fainting spells, or chest pain.



Is Cardioversion Safe?

Electrical cardioversion is usually safe. The main risk is the rare possibility of a stroke.

In people with atrial fibrillation, the quivering of the atria may cause blood clots to form. Restoring a normal rhythm by cardioversion can cause blood clots from the heart to break loose and cause a stroke.

To help prevent blood clots and thus reduce the risk of stroke, your doctor may prescribe anticoagulants, or “blood thinners,” for several weeks before and after cardioversion (see page 4).

Sometimes, cardioversion can be done safely without having to take anticoagulants before the procedure. This may be the case if you have had fibrillation for less than 48 hours, or if a TEE (see page 4) has not shown any blood clots in the atria.

The Results

Cardioversion is very effective. In people who have had atrial fibrillation for less than a year, it restores a regular heart rhythm in about 90 percent of cases.

But cardioversion does not prevent fibrillation from recurring. In fact, only about 25 percent of patients will still have a normal heart rhythm one year after cardioversion. For this reason, your doctor may ask you to take medications to help prevent a recurrence.

For patients who have a recurrence of their abnormal rhythm, cardioversion can be done again.

Put your heart in the right place

247 
**HEART &
VASCULAR
SPECIALISTS**

Specializing in :
Interventional Cardiology &
Peripheral Vascular Disease

Phone : (800) 247-0309
Fax : (800) 336-7779
www.247HVS.com

Todos los derechos reservados. Prohibida cualquier forma de
reproduction total o parcial de esta publicacion sin el permiso
expreso de la editorial.