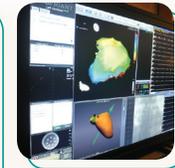


Implantable Cardioverter-Defibrillator [ICD]



Implantable Cardioverter-Defibrillator [ICD]-

Typically for treatment of ventricular tachycardia, ventricular fibrillation, or sudden cardiac arrest.

What is an implantable cardioverter-defibrillator?

Defibrillation, or shock, can be the only way to stop some lethal heart arrhythmias before they kill. For people at high risk for the deadliest types of arrhythmias — ventricular tachycardia and ventricular fibrillation — an internal “shocking” device can be the best defense against sudden cardiac arrest.

An implantable cardioverter-defibrillator [ICD] is a pager-sized electronic device inserted into your chest like a pacemaker to constantly monitor your heart rhythm. When it detects a very fast or very chaotic heartbeat, the ICD can deliver a shock to the heart muscle to return it to a normal rhythm.

What does it treat?

The ideal candidate for an ICD is anyone who has had or is at a high risk of having ventricular tachycardia, fibrillation or sudden cardiac arrest. Someone who has both coronary artery disease (the main cause of heart attacks) and an arrhythmia (what causes cardiac arrest) is at especially high risk for sudden cardiac death, and can benefit from an ICD.

Facts about implantable cardioverter-defibrillators

- Prior to your ICD procedure, you might have to undergo an electrocardiogram [ECG], an echocardiogram [Echo], an electrophysiology [EP] study, a Holter monitor test, an event recording, or other tests.
- The ICD procedure is performed in a hospital with the patient under anesthesia.
- The ICD procedure typically takes between one and four hours.
- The ICD can be programmed by your doctor to perform different functions:
 - **recording of heart activity:** The ICD records information about your heart’s electrical activity and rhythm, which can help your doctor evaluate your arrhythmia and reprogram your ICD as necessary.
 - **low-energy pacing therapy:** If the ICD detects an abnormally fast heartbeat, it will deliver painless, low-energy impulses to stimulate the heart to beat normally.
 - **cardioversion therapy:** If the ICD detects a dangerously fast heartbeat, it will deliver an electrical shock to slow the rhythm down; this can feel like being thumped or kicked in the chest.
 - **defibrillation therapy:** If the cardioversion doesn’t work, or you develop a life-threatening chaotic heartbeat, the ICD will deliver a stronger electrical shock to reset your heart to its regular rhythm.

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- As with any procedure, there are risks. Of course, every precaution is taken to reduce risks. Your doctor will talk with you about the potential risks of the procedure.
- Your doctor or Nurse Navigator/educator will provide you with detailed directions about how to prepare for your ICD procedure in terms of your medications, diet, etc.

What happens during the procedure?

- You will be lying down, and a nurse will hook you up to an IV, which will deliver fluids.
- An anesthesiologist will administer medication via the IV to make sure you're comfortably asleep during the procedure.
- The doctor will numb an area of your upper chest, and make small incisions where the ICD and the leads will be inserted.
- One or two wires called leads, which will carry electrical signals from the ICD to the chambers of your heart, are threaded through a vein and guided into the ventricle(s). The lead tips are attached to the heart muscle, and the other ends are attached to a battery-operated pulse generator, which is placed under the skin in your upper chest.
- Once the leads are in place, the doctor will test them to ensure they're located correctly, working properly. Once the leads have been tested, the doctor will attach them to the ICD.
- Once the implant is complete, the doctor will use an external device to program the final rate and settings for your ICD.

What will you feel?

- You might feel discomfort at the implant site for the first 48 hours following the procedure. If discomfort persists or becomes severe, call your doctor.

What happens afterward?

- Once you're fully awake, your doctor will talk with you and your loved ones about the procedure and its results.
- You may be able to go home the same day, or you might need to stay at the hospital overnight and go home the next day.
- Arrange for a ride to and from the hospital, and for help at home following the procedure.
- You will also receive a temporary ID card that indicates the type of pacing device and leads you have, the implant date and your doctor's name. Carry this card with you at all times, in case you require medical care. You will receive a permanent card within three months.
- ICDs last from three to six years. As long as you keep your followup appointments, your healthcare team will monitor the function of your device, and will let you know when it should be changed. Exchanging your old pulse generator for a new one is a relatively minor outpatient procedure compared with your initial implantation, because the leads stay in place.