



Abbott

# WHAT TO EXPECT WITH YOUR ICD



**An ICD, or Implantable Cardioverter Defibrillator, is a small, battery-powered device that can help you if your heart sometimes beats dangerously fast.**

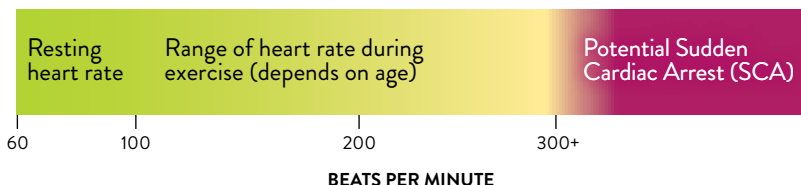
**Since first being introduced over 35 years ago, the ICD has saved hundreds of thousands of lives around the world.**



## WHY WOULD YOU NEED AN ICD?

The heart is powered by a complex, natural electrical system that helps it maintain a healthy rhythm while pumping blood throughout the body. However, for some people the electrical signals can become blocked or very chaotic at times, causing the heart to beat too quickly. A normal, resting heart rate of 60 to 100 beats per minute can suddenly race to 300 or more beats per minute.

When this happens, the heart muscle quivers and loses its power to pump blood, a condition called Sudden Cardiac Arrest (SCA).



An ICD is able to tell the difference between a fast heart rate caused by exercise, which is normal, and a very fast heart rate that could be dangerous.

SCA affects people of both genders and a variety of ages. The causes are wide-ranging including: genetics, smoking, being significantly overweight, diabetes, high cholesterol and previous heart conditions, for example. No matter what the reason, however, SCA is a life-threatening event.

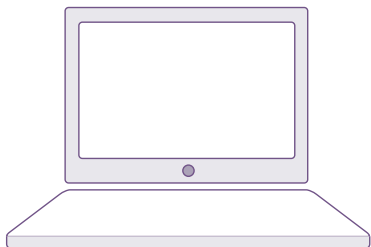
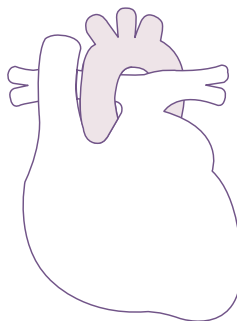
If a patient has an ICD, it recognizes when the heart is not beating right, and provides an electrical shock to restore a normal rhythm.

An ICD device can save your life.

## WHAT IS AN ICD?

### HEART RATE MANAGER

An ICD is a medical device that is placed under the skin, usually near the heart. It can monitor your heart's rhythm for very fast and potentially dangerous heart rhythms, called ventricle fibrillations (VF), and sends an electrical shock to the heart muscle to restore your normal heart rhythm.

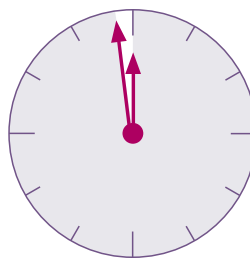


### INFORMATION INSIGHTS

It also stores information about your heart that can be viewed by your doctor, to help make sure your device is programmed to meet your specific needs.

### ON-CALL, AROUND-THE-CLOCK

An ICD is with you 24 hours a day. An external defibrillator can also be used to stop ventricle fibrillation, but it needs to be located and applied within four to six minutes to avoid major complications.



## WHAT DOES A SHOCK FEEL LIKE?

People experience a wide range of sensations from an ICD shock. Some may experience a flutter in their chest while others may experience a more intense impact. In any case, your ICD likely responded to a very dangerous heart rhythm. However, there is a low possibility the device has delivered an inappropriate shock. If so, your ICD may need to be adjusted or “fine tuned” to avoid unnecessary therapy.

The number of times a shock occurs varies by person. Some people have ICDs implanted for years and never experience a single shock. Others are shocked more frequently. It all depends on the needs of your heart.

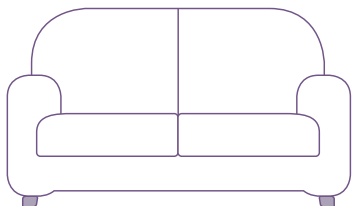
Because your doctor knows your medical condition, it is best to ask him or her what you might expect in regards to shocks. It is important to know that not even your doctor can fully predict the therapy you may ultimately need.



## WHAT DO I DO IF I GET SHOCKED?

The best thing to do is to find a spot where you can rest and sit or lay down. After a few moments, your heart should go back to a normal rhythm. You may feel a bit lightheaded for a short time. Some people only need a few minutes to recover while others may take hours. If you receive a shock, follow up with your doctor, as he or she may want to see you. Your doctor knows your medical condition so it is best to ask them what you should do if you receive a shock.

**Rest**  
(Sit or lay down)



**Call**  
your clinic

## RECEIVING YOUR DEVICE

As with all medical procedures, talk with your doctor beforehand to review any special instructions, which may include eating and drinking limitations. Implanting your ICD device usually takes one to two hours. Remember that your doctor is your best source of information about your procedure. Be sure to consult with your doctor before your procedure and discuss any concerns you might have afterwards, including risks.

Although implant procedures vary depending on the individual person, typical implant procedures include the following steps:

- 1 You will be given medicine to help with discomfort and relaxation. You will still be aware of your surroundings and be able to hear and talk with your doctor.
- 2 Insulated wires, called leads, will be placed in your heart and will be connected to your ICD device. This is usually the most time-consuming part of the procedure.
- 3 Once the leads are in place, your doctor might ask you to go through some simple actions, such as taking a deep breath or coughing, to confirm the placement of any leads.
- 4 Your doctor will then connect the leads to the ICD, set the ICD in place – under the skin, usually near the collarbone – and close the incision.\*



Approximate  
Dimensions:  
70 mm high x  
51 mm wide x  
12 mm thick  
(size varies by device)

\*If you are concerned about having a small scar or bump in this location after the incision heals, ask your doctor before surgery about the possibility of placing the device where it will be less noticeable to others.





## WHAT TO EXPECT IN YOUR RECOVERY

No two people are alike so recovery time will vary, based on the individual. Your stay in the hospital could be anywhere from several hours to several days. After the surgery, you will feel some discomfort and be tired. As you recover, you should feel better.

You may experience some tenderness at the implant site for a while. Be sure to report any redness, soreness or tenderness around the implant site. If you notice these signs after you are already home, contact your doctor to let them know – do not wait for your next appointment.

A small percentage of people will develop complications because of their ICD device implant. This may include infection, a reaction to a drug used during the procedure or to the device itself, and blood loss or damage to a blood vessel, heart wall or other organs. Your doctor is your best source of information about complications as well as other information about your procedure and your device. You can also review information available at [abbott.cardiovascular](http://abbott.cardiovascular).

Be sure to ask your doctor if you have any questions. Also, read any literature that comes with your device, paying close attention to items labeled as ‘warning’ or ‘important’ as these contain important safety information.

## THE PATH TO YOUR BEST POSSIBLE LIFE

After surgery you will need to take it easy for a while. Your doctor will let you know when it is safe to resume activities. It is important that you avoid bumping or hitting the area around your implant, because you may damage the device or leads. Contact sports may be off-limits. Also, if you participate in an activity that affects your chest or arm – swimming or golf, for example – you might want to discuss this with your doctor before receiving your device. It may affect what device is selected and where and how it is implanted.

After you receive your device, your energy level may increase. Many people find they are able to actually do more physically than they were before receiving the device, as their symptoms improved.

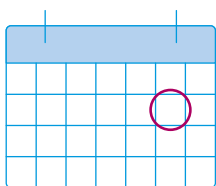




## FOLLOW-UP: AN IMPORTANT PART OF THE JOURNEY

After your surgery, you will likely be asked to visit the doctor several times. During these important visits your doctor will confirm your device is working properly. If adjustments to your ICD are needed, they can be made painlessly in your clinic using technology that communicates directly with your ICD to update settings.

If changes are made to your ICD at the time of your visit, a follow-up appointment may be needed.



It is very important to keep your follow-up appointment schedule with your doctor.

## STAYING CLOSE, EVEN FROM A DISTANCE

Some ICD devices use wireless or Bluetooth® technology for remote monitoring while others require a wand. Remote monitoring collects device information and can send it to your clinic. This includes device battery status, your heart rhythm information or any specific irregularity in rhythm being monitored by your doctor. If you have experienced any shocks or therapy, that information will also be shared with your clinic through remote monitoring transmissions. In order for remote monitoring to work, your transmitter or monitoring device should be connected and plugged in near your bed. When properly connected, your ICD information will be collected at night while you sleep and be sent to your doctor as scheduled.

## BLUETOOTH CONNECTED DEVICES

### GETTING STARTED

Some Abbott ICD devices come with Bluetooth® wireless technology that allows remote monitoring via a mobile application (app) on a smartphone.

In order to take advantage of this feature, you will need to download the associated mobile app from wherever you get your mobile apps – Apple<sup>+</sup> App Store<sup>+</sup> or Google Play<sup>+</sup>.



If your device connects with an Abbott app, you will need to download the app onto your smartphone. It is important to confirm that your smartphone is compatible with the mobile app. You can do this by checking the compatibility listed for devices and operating systems, wherever you get your mobile apps. Abbott recommends that the mobile app be downloaded before your procedure, so the app is ready to be paired with your new ICD device right away. It's important to talk to your doctor to determine when it's right for you to download the app.



#### ABBOTT IMPLANTABLE DEVICE

Your ICD device is implanted to help manage your heart rhythm irregularities.



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#### CLINICIAN PORTAL

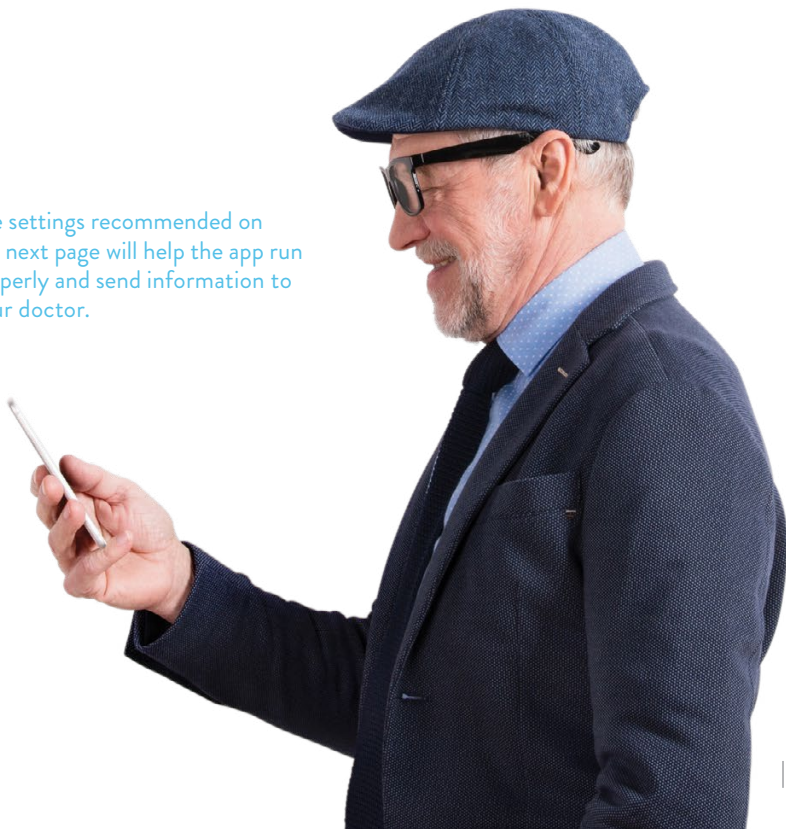
When properly connected, the mobile app automatically sends your heart rhythm information to your clinic, based on the settings set by your doctor.

## HOW DOES THE MOBILE APP WORK?

An ICD device that has an associated mobile app for remote monitoring uses Bluetooth® wireless technology to transfer information between your device and the app. The app then uses a secure internet connection to send your heart's information directly to your doctor for review. Your doctor will set a schedule for collecting information from your device, based on your individual health needs.

























If you have a device that has Bluetooth® wireless technology and can be monitored via a mobile app, there are certain settings that will help the app run properly and send information to your doctor easily. Mobile apps from Abbott support both Apple<sup>+</sup> and Android<sup>+</sup> operating systems.

The settings recommended on the next page will help the app run properly and send information to your doctor.



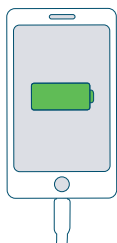
## USE THESE SMARTPHONE SETTINGS TO STAY CONNECTED

If you update the operating system of your smartphone, please check the settings on your phone, as updates may effect Bluetooth® technology or internet connections for the app, impacting if the app works properly.

Phone Type	Setting	OFF-ON
	Bluetooth®, cellular data/Wi-Fi*†	
	Bluetooth®, Location Services & cellular data/Wi-Fi**	
	Background app refresh	
	Background data usage	
	Automatically update apps	
	Automatically update apps	
	Font size STANDARD	
	Font size NORMAL	
	Battery Low Power Mode	
	Battery Saver	
	Offload unused apps	
	Battery optimization specifically for mobile app	

\*These may be app-specific settings, based on your smartphone operating system. Please check for app-specific settings to ensure the app can connect to the internet and Bluetooth® technology while open in the background.

 = iPhone† Setting       = Android‡ Setting



It is best practice to plug your smartphone in at night before going to bed and keeping your smartphone near you while sleeping. An Abbott remote monitoring mobile app typically checks your device and sends information to your doctor during the middle of the night while you sleep.







## ICD EFFECTS ON MEDICATION AND DIET

Usually, having an ICD does not replace medication. They work together. But your doctor may change the amount or type of medication you take. Also, depending on your overall health, your doctor may recommend changes to your diet.



## WHEN AN ICD BATTERY RUNS LOW

Most device batteries last six to twelve years, depending on the device and how often it delivers therapy to your heart. Since the device itself is sealed, when the battery gets too low to deliver therapy to your heart the device must be replaced. Your doctor will discuss a replacement ICD with you when it is needed.



## WONDERING ABOUT CERTAIN ACTIVITIES?

If you have any questions or concerns about an activity you would like to do, talk with your doctor. The next page offers some guidance on common activities many people ask about after receiving their ICD.

# LIVING WITH YOUR ICD

## Situation

### Home appliances and office equipment

(microwave ovens, blenders, toasters, electric knives, electric blankets, stoves, garage door openers, computers, tablets)

### Medical equipment

(x-rays, diagnostic ultrasound, CT scans, mammography, fluoroscopy, Magnetic Resonance Imaging)

### Electromagnetic interferences (EMI)

(devices that produce sufficient field strength and modulation of EMI; high-powered radio, television, radar transmitters/antennas; arc welders; induction furnaces; very large or defective electric motors; and internal combustion engines with poorly shielded ignition systems and some magnets.)

### Using a cell phone

### Using an MP3/multimedia player

### Going to the hospital

### Driving an automobile

### Traveling

## Insights

No known risks.

Before any procedure, talk with your healthcare provider to let them know you have an ICD. This includes any dental procedure.

Some ICD systems are MR Conditional, meaning it can be safe to have a MRI under specific conditions. Your doctor will need to confirm if your ICD is one of them.

Avoid electrical nerve and muscle stimulators (i.e. TENS units).

If you become lightheaded or feel palpitations (rapid, irregular heartbeat), your device may be experiencing electromagnetic interference. If you are near electrical equipment or magnets, simply turn off the equipment or walk away.

May interfere with ICD operation. Minimize risk by avoiding carrying the phone in a breast pocket over the ICD and holding the phone to the ear farthest from the ICD.

Abbott has special filters in their ICDs to reduce the possibility of cell phone interference.

No known risks.

Medical equipment may interfere with the function of an ICD.

Tell hospital personnel you have an ICD before you undergo any procedure.

Do not enter areas that have a “No ICD” or “No Pacing Devices” signs posted.

Having an ICD implanted should not affect your ability to drive, but it is best to discuss driving with your doctor before you begin driving again.

With some extra planning, you can travel to most locations.

Airport security systems are generally not a concern, but be sure to show your patient ID card before entering airport security areas.

Carry your physician’s name and number with you.

For more information, please visit [cardiovascular.abott](https://www.cardiovascular.abott.com) and search “Living with Your Device”.

#### **Abbott**

One St. Jude Medical Dr., St. Paul, MN 55117 USA, Tel: 1 651 756 2000

#### **Rx Only**

**Indications:** The devices are intended to provide ventricular antitachycardia pacing and ventricular defibrillation for automated treatment of life-threatening ventricular arrhythmias.

**Contraindications:** Contraindications for use of the pulse generator system include ventricular tachyarrhythmias resulting from transient or correctable factors such as drug toxicity, electrolyte imbalance or acute myocardial infarction.

**Adverse Events:** Implantation of the pulse generator system, like that of any other device, involves risks, some possibly life-threatening. These include but are not limited to the following: acute hemorrhage/bleeding, air emboli, arrhythmia acceleration, cardiac or venous perforation, cardiogenic shock, cyst formation, death, erosion, exacerbation of heart failure, extrusion, fibrotic tissue growth, fluid accumulation, hematoma formation, histotoxic reactions, infection, keloid formation, myocardial irritability, nerve damage, pneumothorax, thromboemboli, venous occlusion. Other possible adverse effects include mortality due to: component failure, device-programmer communication failure, lead abrasion, lead dislodgment or poor lead placement, lead fracture, inability to defibrillate, inhibited therapy for a ventricular tachycardia, interruption of function due to electrical or magnetic interference, shunting of energy from defibrillation paddles, system failure due to ionising radiation. Other possible adverse effects include mortality due to inappropriate delivery of therapy caused by: multiple counting of cardiac events including T waves, P waves or supplemental pacemaker stimuli. Among the psychological effects of device implantation are imagined pulsing, dependency, fear of inappropriate pulsing and fear of losing pulse capability.

Persons administering cardiopulmonary resuscitation (CPR) have reportedly been startled by voltage present on the patient's body surface during discharge of the pulse generator. The voltage decreases as the discharge disperses toward the periphery of the body, and is weakest at the furthest extension of the limbs. Nevertheless, there is a highly remote possibility that an arrhythmia may be induced in someone administering CPR to the patient at the time a countershock is delivered.

Refer to the User's Manual for detailed indications, contraindications, warnings, precautions and potential adverse events.

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