Considering an ICD?
You have options.

If your doctor has recommended an implantable cardiac defibrillator (ICD) for you, you'll have a couple of decisions to make. First, do you want to get a device? And if so, which type of device? This tool and conversations with your doctor can help you learn more. So together you can make the right decision for you.

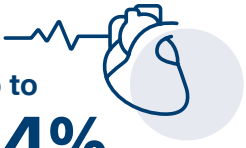
Why is my doctor recommending a device?

Your doctor will share details about your specific medical condition. But in general, ICDs are used to protect people from sudden cardiac death. Sudden cardiac arrest happens when the electrical system in your heart stops working. That means your heart stops pumping blood to your body. Without treatment, someone experiencing sudden cardiac arrest can die within minutes. That is called a sudden cardiac death.

Only **1 in 10 people** who have sudden cardiac arrest outside the hospital without an ICD survive.[1] With an ICD >95% live.[2,3]

How does an ICD work?

An ICD will monitor your heart rhythm. If it detects an abnormal life-threatening rhythm—called an arrhythmia—it will deliver a shock to restore your heart's normal rhythm. Some patients say having an ICD is like having a paramedic with them at all times. Depending on your medical condition and type of heart rhythm, your doctor may recommend an ICD that provides a type of pacing called ATP, or anti-tachycardia pacing. While not painful, some patients report they can feel the ATP being delivered. In some patients, ATP can be used instead of a shock to restore their heart's normal rhythm.



Up to
34%
are more likely to live having an ICD.[2,3]

Can an ICD prolong my life?

In studies of people at risk for sudden cardiac arrest, those with an ICD were **23%–34% more likely to live** compared to people without an ICD.[2,3] An ICD is there in case you need it. Think of an ICD like a seat belt. If you're in an accident, a seat belt will protect you. An ICD is similar. You may never need it. But if you do, it could save your life. An ICD is the most effective treatment for preventing sudden cardiac death.

Do I want a device?

Only you and your doctor can make that decision. But here's some information that may help you decide.

No

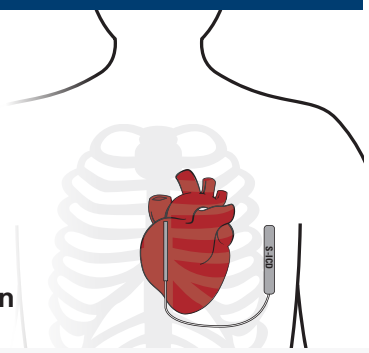
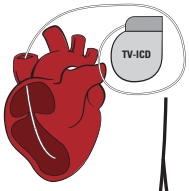
You may be at a place in your life where you choose not to get an implant. Just be sure you understand the risk of not having an ICD.

Yes

You may choose to get an ICD to reduce the risk of sudden cardiac death. Learn more about the different types of devices on the following pages.

S-ICD or TV-ICD?

If you choose to get an ICD from Boston Scientific, you have two options: subcutaneous (S-ICD) and transvenous (TV-ICD). The main difference between the two devices is where the lead–that's the wire that will deliver the shock to your heart–is placed. With a TV-ICD, the lead is placed inside the heart. An S-ICD's lead does not touch the heart; it is placed under the skin on your chest (refer to pictures below).

	S-ICD	TV-ICD
Device and lead location	 Device: **Under left arm** Lead: **Under skin**	 Device: **On upper-left chest** Lead: **Inside the heart**
Battery life	**Approximately 9 years[4]**	**Approximately 12 years***
Will I have a scar?	**Yes** 1 for device on rib cage under left arm 1–2 smaller ones on chest	**Yes** 1 for device on upper-left chest
Will the device be visible? How your implanted device will look can vary based on a number of factors: • How much body fat you have • How your body naturally heals • The size and thickness of your device • The implant technique (over or under the muscle) Talk to your doctor about what you can expect.	Todd is an EMBLEM™ S-ICD recipient and had his first S-ICD replacement 6 weeks prior to these photos in 2021. Jan is an EMBLEM™ S-ICD recipient since 2017.	Dennis is a DYNAGEN™ EL (Extended Longevity) ICD recipient since 2018. Jen is a TV-ICD recipient since 2019.
Can the device provide pacing if needed?	**No** However, if you develop a need for ATP or pacing in the future the S-ICD will be able to be upgraded to provide pacing and/or ATP upon FDA approval of the EMPOWER™ Leadless Pacemaker.**	**Yes** (including ATP and pacemaker capabilities)
Do I need an EKG screening to be eligible?	**Yes**	**No**

*Battery longevity dependent on device manufacturer, device settings, and amount of pacing required.
**Caution: Investigational device. Limited by US law to investigational use only. Not available for sale.

Frequently Asked Questions

Is surgery required?

Yes, a minor surgery is required to implant the ICD system. It takes a couple of hours. You might need to stay overnight in the hospital. After the surgery, it is likely that you will feel pain or discomfort, which will go away over time.

Will the ICD be visible?

For most people, there is a scar where the ICD is placed. There may also be a bump under your skin. How visible that bump is depends on your body type. Although it's not visible, you may feel the S-ICD electrode on your chest. **To see more images of the device implanted on other body types, scan the QR code at the bottom of this page or visit** www.bostonscientific.com/en-US/patients-caregivers/treatments-conditions/defibrillators.html

Is getting a shock painful?

People report a wide range of experiences. Some describe it as a mild thump, while others describe it as a kick in the chest. While the shock may be painful, it's over in an instant.

How likely am I to receive therapy (shock or ATP) from my ICD?

Your doctor can best answer this question based on your type of heart condition.

What are the risks?

Every surgical procedure has some risks. This includes infection and bleeding. In the rare case your ICD becomes infected, removal may be required. Because the TV-ICD leads are inside the heart, removal is more complicated than removing the S-ICD leads, which are under the skin. While uncommon, your ICD could deliver a shock when not necessary, which is called an "inappropriate shock." Ask your doctor for more information.

How long will recovery take?

Full recovery normally takes 4–6 weeks. Be sure to follow your doctor's instructions. Ask about resuming normal activities based on your specific situation.

Will having an ICD limit my ability to exercise and do other activities?

Your doctor may ask you to avoid strenuous activity, especially upper-body activity, for a few months after the procedure. This is so you have time to heal. After that, you may be able to do most of the things you did before your implant.

Your underlying heart condition and device will factor into the type and amount of exercise you can do. Be sure to talk to your doctor about what level of physical activity is best for you. If the S-ICD is selected, your doctor may recommend an exercise test to check the settings on your implanted device for the heart rate you achieve during activity.

Can the ICD be turned off?

Yes, it can be turned off at any time without surgery.

To learn more about your options, scan the QR code or visit
www.bostonscientific.com/en-US/patients-caregivers/treatments-conditions/defibrillators.html

1. National Heart, Lung, and Blood Institute. Sudden cardiac arrest. nhlbi.nih.gov/health-topics/sudden-cardiac-arrest. Accessed June 2021.

2. Goldenberg I, Gillespie J, Moss AJ, et al. Long-term benefit of primary prevention with an implantable cardioverter-defibrillator: An extended 8-year follow-up study of the Multicenter Automatic Defibrillator Implantation Trial II. *Circulation.* 2010 Sep 28;122(13):1265–71.

3. Bardy GH, Lee KL, Mark DB, et al. Amiodarone or an implantable cardioverter-defibrillator for congestive heart failure. *N Engl J Med.* 2005 Jan 20; 352(3): 225–37.

4. Van Der Stuijt W, Williams JL, Brisben AJ, et al. Real world battery longevity of the subcutaneous implantable cardioverter-defibrillator (S-ICD). *Eur Heart J.* 2023;44(Supplement_2) doi:10.1093/eurheartj/ehad655.684.

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Implantable Cardioverter Defibrillators

Important Safety Information
An implantable cardioverter defibrillator is designed to monitor and treat heart rhythm problems, greatly reducing the risks associated with them. These devices are sensitive to strong electromagnetic interference (EMI) and can be affected by certain sources of electric or magnetic fields. Some of the risks encountered during the implant procedure include, but are not limited to, the following: Bleeding, formation of a blood clot, damage to adjacent structures (tendons, muscles, nerves), puncture of a lung or vein, damage to the heart (perforation or tissue damage), dangerous arrhythmias, heart attack, stroke, death. Some of the risks encountered after the ICD system is implanted may include, but are not limited to, the following: Infection, erosion of the skin near your device, lead(s) may move out of place in the heart, device may move from the original implant site, difficulty coping with having an implanted device. The device might be prevented from shocking or pacing due to electromagnetic interference. Electrodes on the lead or the pacing pulses may cause an irritation or damaging effect on the surrounding tissues, including heart tissue and nerves. You may receive a shock or pacing therapy when it is not needed (unnecessary therapy). The device might not be able to detect or appropriately treat your heart rhythms. The device may exhibit malfunctions that may result in lost or compromised ability to deliver therapy. You may experience some discomfort from the incision as you recover from the surgery. With all medical procedures there are risks associated. In rare cases device failure or death can occur. Be sure to talk with your doctor so that you thoroughly understand all of the risks and benefits associated with the implantation of this system. To obtain a copy of the device Patient Handbook for more detailed device safety information, go to www.bostonscientific.com, or you can request a copy by calling 1-866-484-3268 or writing to Boston Scientific, 4100 Hamline Ave. N., St. Paul, MN 55112. Rx only.

S-ICD™ System

Important Safety Information
An implantable cardioverter defibrillator is designed to monitor and treat heart rhythm problems, greatly reducing the risks associated with them. These devices are sensitive to strong electromagnetic interference (EMI) and can be affected by certain sources of electric or magnetic fields. As with all ICD systems, there are risks associated with the S-ICD System. Some of the risks that may be encountered during the implant procedure include the following: Formation of a blood clot; damage to adjacent structures (tendons, muscles, nerves); injury to or pain in upper extremity including clavicle, shoulder, and arm; dangerous arrhythmias; stroke. After the system is implanted, other infrequent risks may occur, including: Infection; erosion of the skin near your device; electrode and device may move out of place; fainting (syncope); delivery of a shock or therapy when it is not needed (unnecessary therapy); inability to detect or appropriately treat your heart rhythms due to electromagnetic interference or malfunction; difficulty coping with having an implanted device; bleeding or formation of a blood clot (hematoma); pain and discomfort; injury to or pain in upper extremity including clavicle, shoulder, and arm; allergic reaction; need for surgical replacement. You may experience some discomfort from the incision as you recover from the surgery. In rare cases severe complications can occur, such as device failures or death. Your physician should discuss all potential benefits and risks with you and describe the appropriate medical care. Refer to the product labeling for specific indications, contraindications, warnings/precautions and adverse events. Rx only

Device Quality and Reliability
It is Boston Scientific's intent to provide implantable devices of high quality and reliability. However, these devices may exhibit malfunctions that may result in lost or compromised ability to deliver therapy. Refer to Boston Scientific's CRM product performance report on www.bostonscientific.com for more information about device performance, including the types and rates of malfunctions that these devices have experienced historically. While historical data may not be predictive of future device performance, such data can provide important context for understanding the overall reliability of these types of products. Also, it is important that you talk with your doctor about the risks and benefits associated with the implantation of a device. 92481216 Rev. B.4

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