Non-transvenous ICDs – Subcutaneous ICD (S-ICD) and Extravascular ICD (EV-ICD)

An ICD is a small device that sends a strong shock to your heart if you have an abnormal, life-threatening rhythm. The shock helps to restore an unsafe heart rhythm back to normal. An ICD has two parts, a battery (generator) and the lead(s).

Subcutaneous ICD (S-ICD)
This type of ICD has the generator placed under the skin below your armpit on your left side. The lead that sends the shock is secured under the skin but **above your breastbone**. This device does not pace your heart.

Extravascular ICD (EV-ICD)
This type of ICD has the generator placed under the skin below the armpit on your left side. The lead that sends the shock is placed **under the breastbone** and is secured in place. This device can provide some temporary types of pacing, when needed.

Day Before Surgery
A nurse will call you the day before surgery (or the Friday before a Monday surgery). The nurse will review your instructions, including medicine holds, and discuss arrival time. If you do not hear from us by 4 pm, please call **(608) 915-0200**.

If you feel sick or have a fever over 101.5°F the day before surgery, call the clinic.

Day of Surgery
In the pre-op area, an IV will be placed in your hand or arm and blood may be drawn for labs. If needed, a small area around the surgical sites will be shaved. Your skin will be cleaned with a special soap. You may receive antibiotics through your IV to help prevent infection.

The procedural team will determine a sedation (anesthesia) plan to make sure you are comfortable. You may receive a nerve block to help reduce pain after surgery.

Sterile drapes will cover you from the top of your head to over your feet, so that only the surgical site(s) are exposed.

The Procedure
A "pocket" is made under the skin on the left side of your chest below the armpit for the generator (which contains the battery). For an S-ICD the lead is tunneled below the skin, but **above the breastbone**. For an EV-ICD the lead is tunneled below the skin and **under the breastbone**. A small incision may be needed near the bottom of the breastbone to help put the lead in place. The lead is then connected to the generator. The site(s) is/are closed with dissolvable sutures.

The whole process takes about 1-3 hours. A clinician (or your care team) will help determine which device is suitable for you.

Going Home
You may go home the same day or stay in the hospital overnight. Your device will be checked before you leave, and you may have an x-ray. We will review discharge instructions with you. If you go home the same day, someone should stay with you overnight.

You cannot drive yourself home. You need to arrange for someone to drive you home. You may resume driving after 1 week. In some cases, it may be more than 1 week depending on what your clinician recommends.

Restrictions

- **Do not** lift more than 10 pounds (i.e., a gallon of milk) for 1 week or until the incision has healed.
- Avoid dental work for 1 month.

Medicines

- Any medicine instructions or changes will be reviewed with you before going home.

Incision Care

It is important that you take care of your incision site to prevent an infection.

- Keep the site clean and dry.
- Leave the current bandage on for 72 hours.
- **Do not** shower for 3 days.
- When you can shower, let the soap and water run down the incision and gently pat dry.
- Leave the "Steri-strips" under the bandage in place until they fall off on their own. The nurse may also remove them at your follow-up visit.
- If surgical glue was used, this will fall off over time (usually 5-7 days). **Do not** pick, scratch, or rub the surgical glue.
- **Do not** use any lotions or ointments on the incision.
- **Do not** scratch or rub the site. As the site heals, you may feel itching. This is normal.
- **Do not** soak in a bathtub, hot tub, or go into a pool, lake or river until your incision is completely healed.

Infection

Look at the site daily for signs of infection.

- Redness
- Swelling
- Fever (101.5°F or higher)
- Drainage
- Tenderness
- Warm to touch

Pain

You may take a mild pain reliever such as acetaminophen (Tylenol®). You may also apply an ice pack. Ibuprofen (Motrin®) or other NSAID medicines increase your risk of bleeding, especially if you are on a blood thinner; please ask your surgical team if these medicines are safe for you to take after the procedure.

Device ID Card

You will receive a temporary ID card and will receive your permanent card in about 2 months. **Carry your card with you all the time.** Tell your health and dental care providers that you have a permanent cardiac device.

Electrical Hazards

You will need to avoid certain types of electrical devices. For more information, call your device company.

Avoid

- Working under the hood of a running car.
- Arc welding.

Cautions

- **Therapeutic radiation machines.**
- **Electrocautery:** Discuss with your physician if you will need electrocautery for a procedure in the operating room or the dentist's office.

- **Cell phones:** Keep cell phones at least 6 inches from your device. Place the phone on the ear opposite your device or use a headset.
- **Theft detection devices:** These are often around the entrances of stores. Walk through them as you normally would. Do not linger near these.
- **Airport security:** Tell security staff you have a device. Show them your Medical Device ID card.
- **Magnets:** Magnetic snap closure (in jackets), magnetic name badges, and any equipment with a magnetic strip. Keep anything with a magnet 6-8 inches from your device.
- **MRI (magnetic resonance imaging):** Discuss with your provider before having an MRI.

Safe Devices

- Microwaves
- Hair dryers
- Electric blankets and heating pads
- Computers
- Radios, TVs, and stereos

Follow-up Visit

Location: _____

Date: _____ Time: _____

After your first visit, your device will be checked every 3-4 months either in clinic or with home remote checks.

When to Call

- If you feel lightheaded, pass out or if your symptoms return that you had before your device.
- You have any signs of infection.
- Receive a shock from your device, are awake and back at your baseline state of health (call as soon as you can).
- Receive more than one shock, lose consciousness, or are not at your baseline, you or someone close to you should **call 911** and go to the nearest emergency room.

Who to Call

You may contact your provider through MyChart or call your provider listed in your After Visit Summary or After Hospital Care Plan. For a list of UW Health Clinics, visit www.uwhealth.org/.

For questions about your device, please call the device company:

- For EV-ICDs – Medtronic: **1-800-633-8766**
- For S-ICDs – Boston Scientific: **1-800-227-3422**

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 3/2025 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#8001.