FRANKEL CARDIOVASCULAR CENTER
MICHIGAN MEDICINE

Cardiac Ablation

What is cardiac ablation?

Cardiac ablation (also called heart ablation) is a procedure used to treat abnormal heart rhythms (**arrhythmias**). During this procedure, 1 or more thin, flexible tubes (**catheters**) are inserted into a blood vessel through a small needle hole (**puncture site**) in your groin. The catheter is then guided into your heart. Sensors on the tips of the catheters deliver heat or cold to treat (**ablate**) very small areas of heart tissue that cause the arrhythmias. An **electrophysiologist,** a heart doctor who is expert in diagnosing and treating abnormal heart rhythms, will do your procedure.

There are 2 types of cardiac ablation:

- **Radiofrequency ablation** uses heat energy
- **Cryoablation** uses very cold temperatures

The type of procedure you have will depend on what kind of abnormal heart rhythm you have.

Visit upbeat.org/common-treatments/catheter-ablation or scan the QR code below to watch a short video from the Heart Rhythm Society to learn more about catheter ablation.

Follow these simple steps to watch the video:

1. Open your camera application on your smart phone.
2. For 2-3 seconds, point your phone at the QR code to scan it.
3. To view video, click on the notification that appears.

What conditions does cardiac ablation treat?

Some conditions treated by cardiac ablation may include:

- Atrial fibrillation (AFib)
- Atrial flutter (Aflutter)
- Paroxysmal supraventricular tachycardia (PSVT)
- Wolff-Parkinson-White syndrome (WPW)
- Premature ventricular contractions (PVC)
- Ventricular tachycardia (VT)

Why is cardiac ablation done?

Your provider may recommend an ablation if:

- Your arrhythmia can't be controlled with lifestyle changes or medication.
- You are having challenges with the medication used to treat your arrhythmia.
- You have supraventricular tachycardia (SVT), which is a fast heartbeat that starts in the upper areas (called **chambers**) of the heart.
- You have ventricular tachycardia (VT), which is a fast heartbeat that starts in the lower chambers of the heart. For VT, ablation is sometimes used along with an Implantable Cardioverter-Defibrillator (ICD).

What are the risks of cardiac ablation?

All procedures have risks. The most common risks with an ablation include:

- Bleeding, infection, or pain where the catheter is inserted
- Damage to the heart tissue or blood vessels
- Slow heart rate that might need to be corrected with a pacemaker
- Blood clots, which could lead to a stroke or heart attack

There may be other risks depending on your specific medical condition. Make sure to talk with your provider about any concerns you have before the procedure.

What can I expect before my procedure?

Your cardiac ablation will be done in the Cardiac Procedures Unit (CPU) in the Cardiovascular Center (CVC). Once you have checked in to the CPU, you will be directed to the pre-procedure area. In this area, you will change into a hospital gown, and then the CPU staff will do the following:

- Check your blood pressure, pulse, oxygen levels, and possibly draw blood for testing
- Put small patches on your chest, arms, and legs. These patches have small electrodes that measure your heart rate and rhythm during the procedure.
- Shave your groin.
- Put an intravenous (IV) catheter in your veins to give you fluids and medications before, during, and after your procedure
- Ask you questions to check on your current health, medications, and allergies
- Explain the procedure to you. After this, you will sign a consent form.

What will happen during my procedure?

After your preparation in the pre-procedure area, you will then be brought into the procedure room. The following describes the ablation procedure:

1. Depending on your plan of care, you will have 1 or more of the following types of **anesthesia** (medication that prevents you from feeling pain):
    - **Monitored anesthesia care**: This medication is a **sedative**, which helps you feel calm and sleepy. CPU staff will give you this anesthesia before your procedure to help you relax. You may feel sleepy and drowsy, but you will not be totally unconscious.
    - **General anesthesia**: This medication will make you sleep deeply, and you will be temporarily unconscious. You will feel no pain and remember nothing about the procedure after it is finished.

2. The CPU staff will clean your groin area with an antiseptic solution and put a sterile drape (clean piece of fabric) over your body.
3. The CPU staff will inject a local anesthetic into your groin to numb the area. You may feel a quick, stinging pain before the area goes numb.
4. The CPU staff will use a needle to make a puncture through the skin in your groin, and place small hollow tubes (called **sheaths**) into your blood vessels.
5. The CPU staff will insert 1 or more small, flexible tubes (catheters) through these sheaths.
6. Your doctor will use a special type of X-ray called **fluoroscopy** to carefully guide the catheters through your blood vessels up to your heart.
7. Once the catheters are in place, your doctor will move them around in different areas of your heart. Small sensors on the tip of the catheters test and record your heart's activity. These catheters are connected to monitors that help your doctor figure out what area in your heart is causing problems with your heart rhythm.
8. Once your doctor finds the source(s) of the problem, they will use one of the catheters to send heat or cold energy to the problem area. This creates a small scar on the heart tissue that causes the heart rhythm problem to stop.

The entire procedure usually takes 3-4 hours, and you typically will spend 1 night in the hospital.

What will happen after my procedure?

1. After the procedure, you will be moved to a recovery area.
2. The CPU staff will remove the sheaths and catheters in your groin when the blood thinning medication used during your procedure wears off. Your nurse will check on this with a blood test.

3. The CPU staff will put firm pressure on the puncture site in your groin to stop any bleeding. This might be done by a technician or with something called a **closure device**.
4. A nurse will check your pulse and blood pressure, groin puncture site, and the blood circulation and feeling in the leg by your puncture site (your "affected leg").
5. You will need to lie flat on your back with your affected leg straight for 2-6 hours. This helps to decrease the risk of bleeding from your groin puncture site. Talk to your doctor before your procedure if it is hard for you to lie flat.

How do I care for myself after my cardiac ablation?

Read below to learn how to best care for yourself after your procedure.

When do I need to seek emergency care?

Call 911 immediately if you have any of the following **symptoms of stroke:**

- Sudden confusion or trouble speaking or understanding speech
- Sudden trouble seeing in 1 or both eyes
- Sudden numbness or weakness of face, arm, or leg, usually on one side of the body
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Sudden or severe headache with no known cause

Call 911 immediately if you have any of these symptoms:

- Sudden chest pain
- Shortness of breath or trouble breathing
- Feeling light-headed, dizzy, or breaking out in a cold sweat
- A sudden increase in heart rate (130 beats per minute) or a sudden decrease in heart rate (less than 45 beats per minute).
- Severe bleeding
- Nausea

Call 911 immediately if you have symptoms of **changes at your groin puncture site:**

- Sudden or large amount of bleeding or swelling
    - If this happens, put firm pressure on the site, lie down, and call 911
- Sudden numbness or tingling in your leg
- Your foot or leg suddenly feels cold
- Tightness, a large amount of swelling, or a lump at your procedure site
- Unusual pain in your leg or arm

Do not try to drive yourself to the hospital. An ambulance will arrive as soon as possible.

When should I call my provider?

Call us if you develop any of the following symptoms:

- Temperature of 100.5˚F or higher for more than 24 hours
- Groin site bleeding that does not stop or increases
- Bruising that increases or becomes more painful
- Redness, swelling, heat, or bad-smelling **drainage** (leaking fluid) near the procedure site
- Discomfort at the procedure site that increases or is not relieved by over-the-counter pain medications such as acetaminophen (Tylenol®)
- Dizziness
- Irregular heartbeats (heart palpitations) that last for more than 24 hours
- A fluttering feeling in your chest, or a feeling of palpitations that gets worse
- Not being able to urinate (pee)
- Anything unusual that makes you feel concerned

What is the number to call?

Call us at (**734) 647-5499** on Monday through Friday from 8:00 am – 5:00 pm.

- If your call is urgent, and it is after 5:00 pm on a weekday or it's a weekend or holiday, call **(734) 936-6267** and ask to speak with the electrophysiology (EP) fellow on call.
- If you cannot reach medical help at those numbers, call **911**.

How do I care for my groin puncture site?

- Check your groin puncture site every day for signs of bleeding, oozing, redness, or swelling.
- Keep the site clean and dry for the first 24 hours after your procedure.
- Remove the dressing over your groin site 24 hours after your procedure, and then wash the site every day with soap and water.
    - Do not scrub your groin site.
    - Pat the groin site dry. You may leave the bandage off.
    - Use a freshly laundered wash cloth and towel each time you shower.
- Do not put any creams, lotions, powders, or ointments on your groin site until it is healed.
- Do not soak in a bathtub or hot tub or swim in pool or lake for the next 7 days after your procedure.

What are my activity instructions?

Activities to avoid after your procedure:

- Do not lift, push, or pull any objects that weigh more than 10 pounds for the next 7 days. As a reference, a gallon of milk weighs about 8 pounds.
- Do not participate in activity that takes a lot of effort for the next 7 days. This includes activities such as: bowling, golfing, jogging, playing tennis, and sexual intercourse.

- Do not drive for 24 hours after your procedure.
    - You can ride as a passenger in a car at any time. Make sure to wear your seatbelt.
- Do not drive if you are taking narcotic pain medication (opioids).
- Talk to your doctor about a date for your return to work.

Activities you should do after your procedure:

- Start walking the evening of your procedure. Walk at a slow, comfortable pace.
- Slowly increase your activities until you reach your normal activity level within 1 week after your procedure.
- Put pressure on your groin site with your hand when you cough, sneeze, or have a bowel movement for 48 hours after your procedure.

What can I expect after my procedure?

It is normal to experience the following at your groin site:

- Bruising (this may take 2-3 weeks to go away)
- A small lump or knot (about the size of a quarter) that should go away after 7-10 days
- Tenderness, discomfort, or pain at the procedure site which should improve over a few days

How long will it take for me to feel better?

You may experience some periods of irregular heartbeats during the first 3 months after your ablation. These first 3 months are called the "healing phase." This is about how much time your heart needs for the ablation scars to develop and the procedure to take full effect. During this time, you may need to continue taking heart medication. For most people, these arrhythmias you experience after your procedure will eventually go away.

When will I know if the procedure worked? And when can I stop my medications?

After 3 months, you will have a follow-up appointment in the Arrhythmia Clinic, either virtually or in-person. During this appointment, we will talk about how well the procedure has worked for you. At this time, your doctor will give you instructions about your medications. Some patients may need to continue taking blood thinners and heart rhythm-controlling medications.

Will I have to have more than one ablation procedure?

Some patients will need to come back for another procedure. However, we won't know if you need to have another procedure until we see how your heart responds to the treatment at your 3-month follow-up appointment.

What type of follow up care will I receive?

- You will get a phone call 24 hours after your procedure from a CPU nurse to see how you are doing.
- You will have a visit with the Arrhythmia Clinic about 3 months after your procedure.

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