



Medtronic

Restoring life's rhythm

Cryoballoon ablation

The Medtronic Arctic Front™ family of cryoballoons can be used to treat some types of AFib. Talk to your doctor about your treatment options.

About your AFib

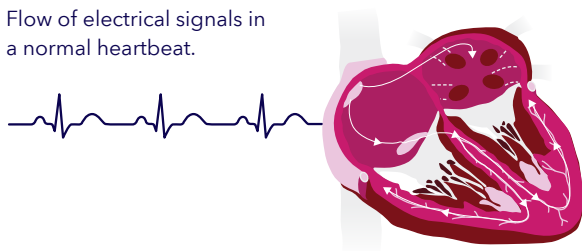
Atrial fibrillation (AFib) is an irregular heart rhythm that affects the upper chambers (atria) of the heart. This arrhythmia prevents blood from being pumped efficiently to the rest of your body.

AFib may impact your ability to perform daily activities, cause you to feel tired, and impact your overall quality of life. If left untreated, it may increase the risk of heart failure, stroke, and death. In fact, AFib increases the likelihood of having a stroke by five times. Even without symptoms, AFib can be a serious medical condition.

It is important to work with your doctor to make sure you get the right treatment for your heart condition.

Normal heartbeat

Flow of electrical signals in a normal heartbeat.



Atrial fibrillation

Atrial fibrillation with abnormal signals originating in the atria.



Your symptoms

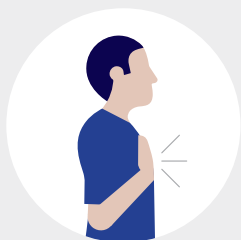
AFib symptoms vary depending on how advanced your AFib is, its cause, and your overall health. You may notice ...



Irregular, rapid, fluttering, or pounding heartbeat



Fatigue, shortness of breath, or weakness



Chest discomfort or pain



Dizziness

Why did I get AFib?

The causes of AFib are often unclear. AFib may be the result of:

- Heart abnormality from birth
- Damage to the heart from a heart attack
- Heart valve problems

People with otherwise normal hearts may also develop AFib.

Risk factors

- High cholesterol
- High blood pressure
- Heart disease
- Smoking
- Excess weight
- Caffeine
- Alcohol abuse
- Lack of physical activity
- Some medications
- Sleep apnea
- Family history
- Advancing age
- Heart disorder




Why now?

There are several reasons your doctor may be recommending ablation:

- Patients with AFib have better results when treated with ablation earlier.
- AFib is a progressive disease and, if left untreated, will continue to get worse.
- Some patients who receive ablation therapy have a lower rate of AFib disease progression compared to treatment with medications alone.
- The FDA has approved Medtronic cryoballoon ablation as a first treatment option to control your heart's rhythm prior to trying antiarrhythmic drugs.

Treating your AFib

The goal of your AFib treatment is to:

- Reduce AFib symptoms and improve your quality of life
 - Prevent blood clots with anticoagulation medication to decrease the risk of stroke
 - Control the heart rate to allow the ventricles (lower heart chambers) enough time to fill with blood
 - Reset the heart rhythm to allow the atria (upper chambers of the heart) and ventricles to work together more efficiently. This is also known as restoring sinus rhythm.
- 



Cryoballoon ablation[†]

If you have talked to your doctor and are considering cryoballoon ablation for your AFib, you've taken an important step.

Why cryoballoon ablation?

Medtronic cryoballoon ablation is a safe and effective treatment before or after medication therapy to control your AFib. It's a minimally invasive procedure, with a short recovery time, that may make a big difference in the way you feel.

The goal of the cryoballoon ablation procedure is to stop unwanted electrical signals in the pulmonary veins, and the Medtronic cryoballoon is the only FDA-approved cardiac ablation device to treat patients prior to trying antiarrhythmic drugs.

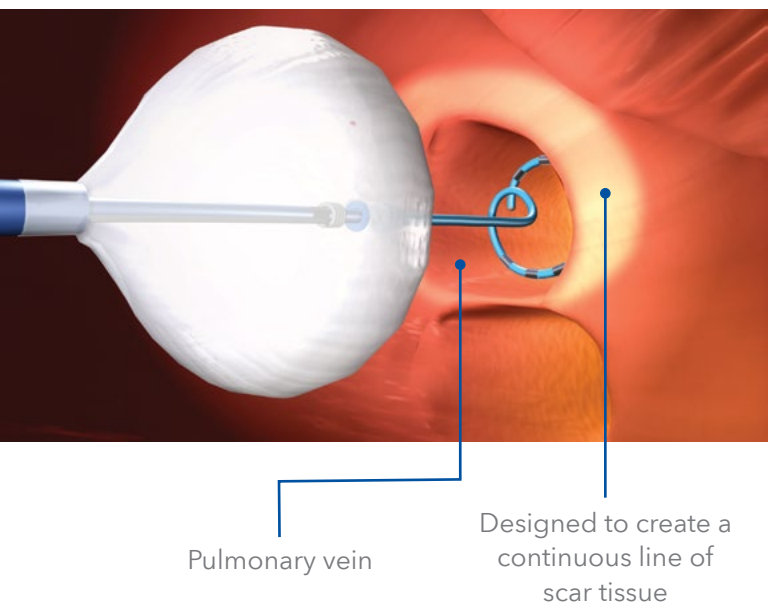
Cryoablation is performed by an electrophysiologist (EP) who specializes in the treatment of irregular heart rhythms. The procedure is relatively short, and patients undergoing cryoablation may be less likely to need a repeat ablation or be rehospitalized after ablation.

"Getting rid of the AFib is more than just getting activity back and being off meds. It's regaining my total being – freedom of life and lifestyle."

- Richard, AFib patient

This reflects one person's experience, not all will receive similar results. Only your doctor can determine if this treatment is right for you.

The Medtronic cryoballoon is an inflatable balloon that uses cold energy to remove heat from the tissue and disable unwanted electrical signals by creating a circle of scar tissue (also known as a lesion) around the pulmonary veins.



†The Medtronic Arctic Front family of cryoballoons can be used to treat some types of AFib. Talk to your doctor about treatment options. Not every person will receive the same results.

Your cryoballoon ablation procedure

Your doctor will discuss the procedure with you in detail, but here is a general overview of what you can expect.

Before

Your doctor will probably tell you not to eat or drink after midnight the night before your procedure. You may be under general anesthesia for the procedure. You may need to stop certain medications. You will also want to tell your doctor immediately about any changes in your health.

After

You will need to limit your activities for a couple of days. Minor soreness in the chest or bruising at the insertion site (groin) is normal. As your heart heals, it is common to have some AFib symptoms. Your doctor may prescribe medication to help and arrange follow-up visits to monitor your healing and heart rhythm. Let your doctor know if you experience any symptoms that are bothering you.

During the procedure



Access

The doctor makes a small incision in the groin area to insert the catheter (small tube) to reach the heart. The doctor then must go through thin tissue that separates the left and right side of the heart to reach the pulmonary veins with the cryoballoon.



Inflate

The doctor inflates the balloon and moves it to the opening of the pulmonary vein. The goal is to maintain contact with the opening of the pulmonary vein (this is called occlusion) so the balloon is able to reach a cold enough temperature.



Freeze (ablate)

When the cryoballoon is in position the doctor freezes the tissue, creating a scar where the balloon touches the opening of the pulmonary vein. This line of scar tissue stops the transmission of electrical signals that cause AFib.

You may be wondering ...

Is cryoballoon ablation safe?

Cryoballoon ablation with the Medtronic cryoballoon is generally considered to be a safe and effective treatment for AFib. It has been used to treat nearly one million patients worldwide and it is a minimally invasive procedure, meaning there is no need to open the chest or make large incisions. The most common problem is local irritation or bleeding at the site of the incision. The risk of more serious complications is small, but you should talk to your doctor about whether the procedure is right for you.

How effective is ablation?

Cardiac ablation has been shown to effectively treat AFib, improving symptoms and quality of life for many patients. Generally, the earlier your AFib is treated with ablation, the more successful it may be. Of course, every patient's experience is different. Sometimes after the procedure you will continue to have AFib episodes and may need a repeat procedure. It's also possible that you may need to continue with some type of medication. Be sure to discuss this and any other concerns you might have with your doctor.

My symptoms come and go.

Do I need to have a procedure?

AFib can be a serious medical condition that should be treated no matter what level of symptoms you experience. Without effective treatment, AFib may lead to a stroke, heart failure, or other health complications. Regardless of whether you have tried medications, speak to your doctor about whether or not an ablation is the next step for you.

Risks and complications

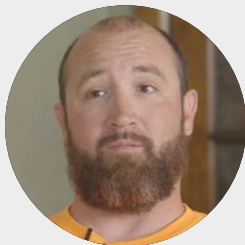
Cryoballoon ablation is generally a safe procedure. Complications are rare, but can be serious. They include, but are not limited to, irritation, bleeding, or infection at the incision site, damage to blood vessels, narrowing of the pulmonary veins, and in extremely rare cases, death. Be sure to talk to your doctor about the benefits and risks of cryoballoon ablation for you.

What patients say[†]



"I could feel my heart beating in a normal rhythm right away, and I was thrilled."

- Dawn



"My emotional state is back to normal because I'm not having to constantly worry about how I'm going to take care of my family."

- Nathan



"After the cryoablation, the quality of my life improved tremendously."

- Norma

Where can I get more information?

For more information about AFib or to read more stories of people who have had a cryoablation procedure, visit [medtronic.com/Afib](https://www.medtronic.com/Afib), or call the toll-free Medtronic Patient Services line: 1-800-551-5544.

[†]Not every person will receive the same results. Talk to your doctor about your treatment options.

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