

Atrial flutter

Section 1 of 6: The basics

Understand atrial flutter, protect against stroke, and explore your treatment options.

What should I do now?

Call 911

Call 911 for chest pressure, severe trouble breathing, fainting during a racing heartbeat, or stroke signs. Do not drive yourself.

Contact your care team

Contact your care team for recurrent racing, worsening fatigue, reduced activity, or medication and bleeding concerns.

Keep your care plan

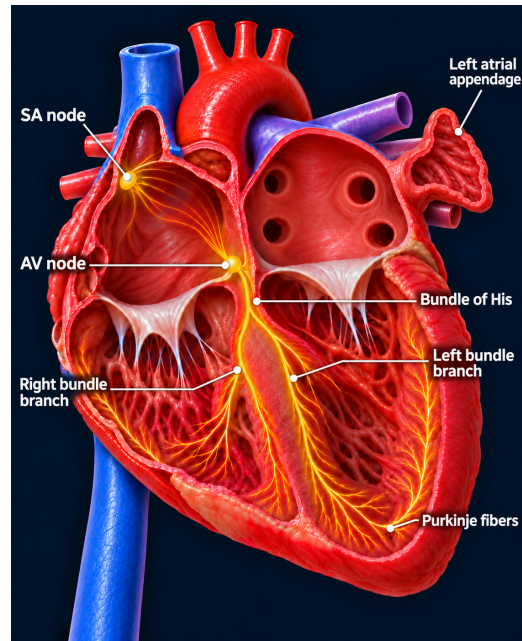
Keep your treatment and follow-up plan. Bring questions, readings, and your medication list.

01 / UNDERSTAND THE RHYTHM

1. Understanding atrial flutter

First, how does a normal heartbeat work?

Your heart has an electrical system that coordinates each heartbeat. A normal rhythm begins in the SA node, the heart's natural pacemaker in the right upper chamber.



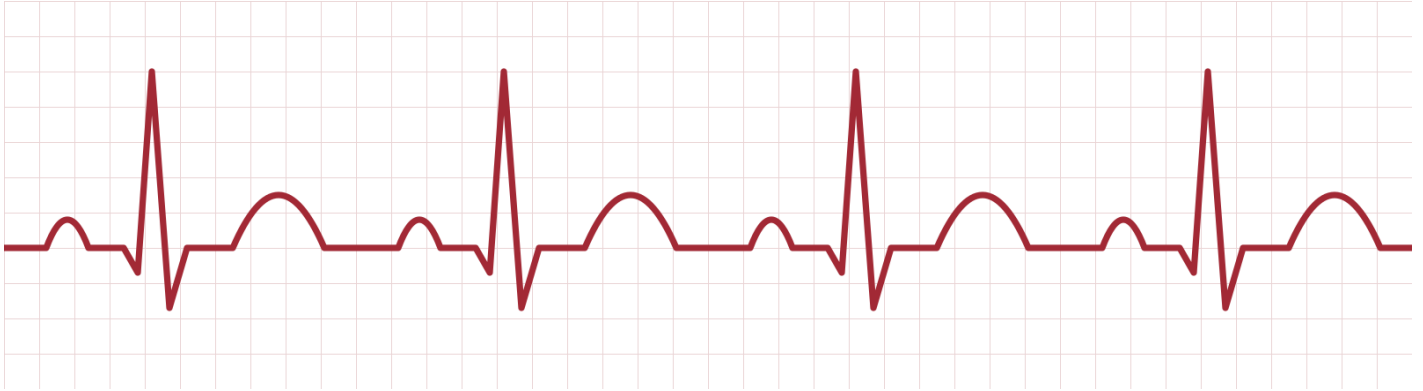
Follow one normal heartbeat

SA node → Atria → AV node → Ventricles

- The SA node starts the signal. The heart's natural pacemaker in the right upper chamber begins each normal sinus beat.
- The signal spreads through both atria. The upper chambers contract, moving blood into the ventricles.
- The AV node briefly delays the signal. This pause gives the ventricles time to finish filling.
- The signal activates the ventricles. It travels through the bundle of His, right and left bundle branches, and Purkinje fibers. The lower chambers contract, pumping blood to the lungs and body.

The atria contract first; the ventricles follow. This organized sequence produces a coordinated heartbeat.

Sinus rhythm



Regular, evenly spaced beats

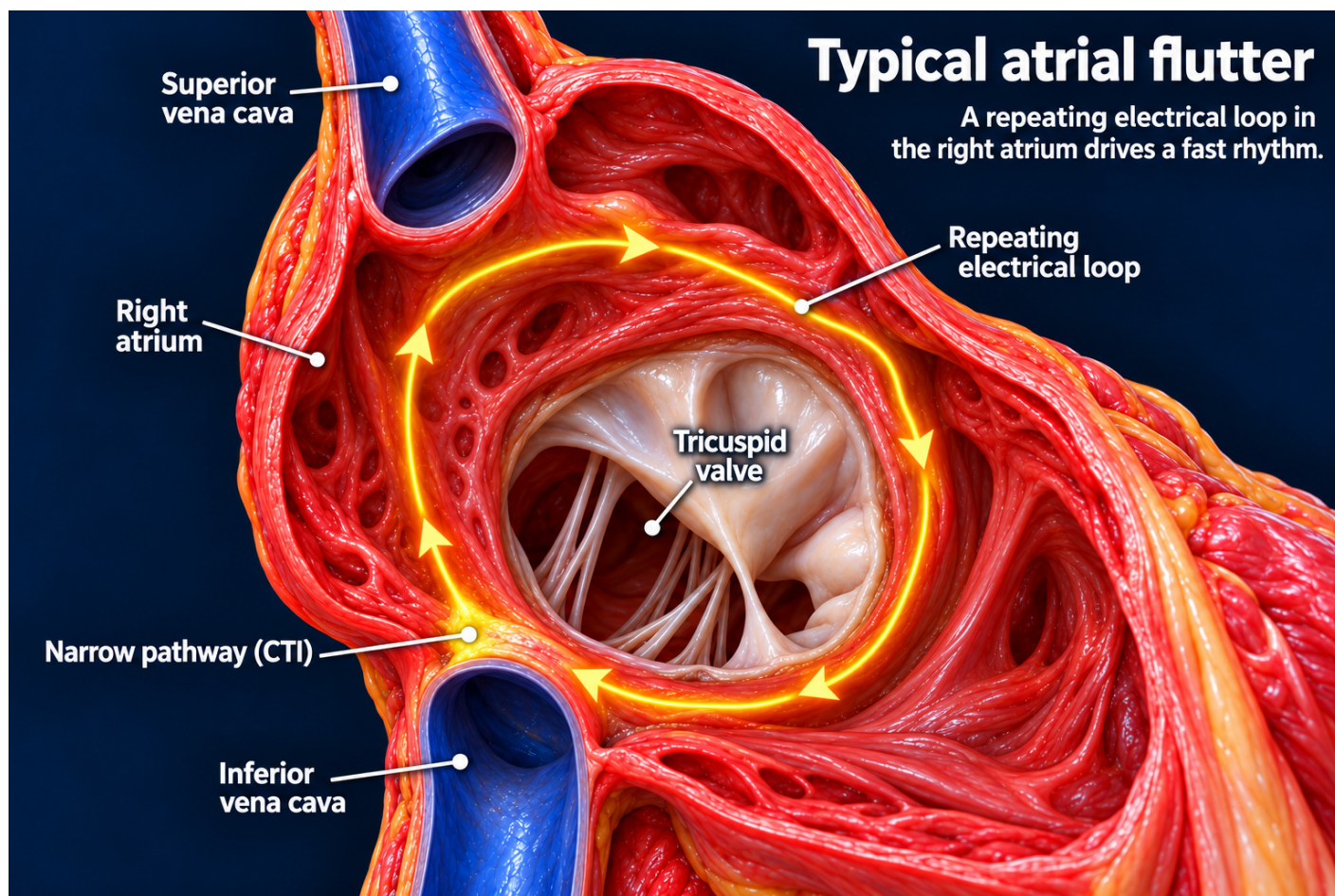
What changes during atrial flutter?

In atrial flutter, an electrical signal becomes trapped in a repeating loop in the upper chambers. Each trip around the loop activates the atria again, making them beat much faster than normal.

The repeating circuit takes over the rhythm from the SA node. The atria often activate around 250-350 times per minute.

Typical flutter: a circuit in the right atrium

In the most common form, called typical atrial flutter, the signal circles around the tricuspid valve in the right atrium.



Typical flutter uses a repeating circuit in the right atrium. The narrow CTI pathway is a common ablation target.

The circuit passes through a narrow bridge of tissue between the tricuspid valve and the inferior vena cava - the large vein bringing blood back from the lower body. This bridge is called the cavotricuspid isthmus, or CTI.

Normal rhythm: Each heartbeat begins with a new signal from the SA node.

Atrial flutter: A signal keeps circling through the same pathway, activating the atria repeatedly.

This narrow CTI pathway is important because an ablation can interrupt the circuit there.

Why isn't the pulse always 300?

The AV node usually allows only some flutter signals to reach the ventricles.

For example, if the atria activate 300 times per minute and every second signal reaches the ventricles, the pulse is approximately 150 beats per minute. This is called 2:1 conduction.

Other ratios can occur, and conduction can change over time. The pulse may therefore be regular or irregular, fast or relatively controlled.

The rapid atrial rhythm disrupts the normal timing between the upper and lower chambers. A persistently fast ventricular rate can also strain and weaken the heart.

Example EKG: typical flutter



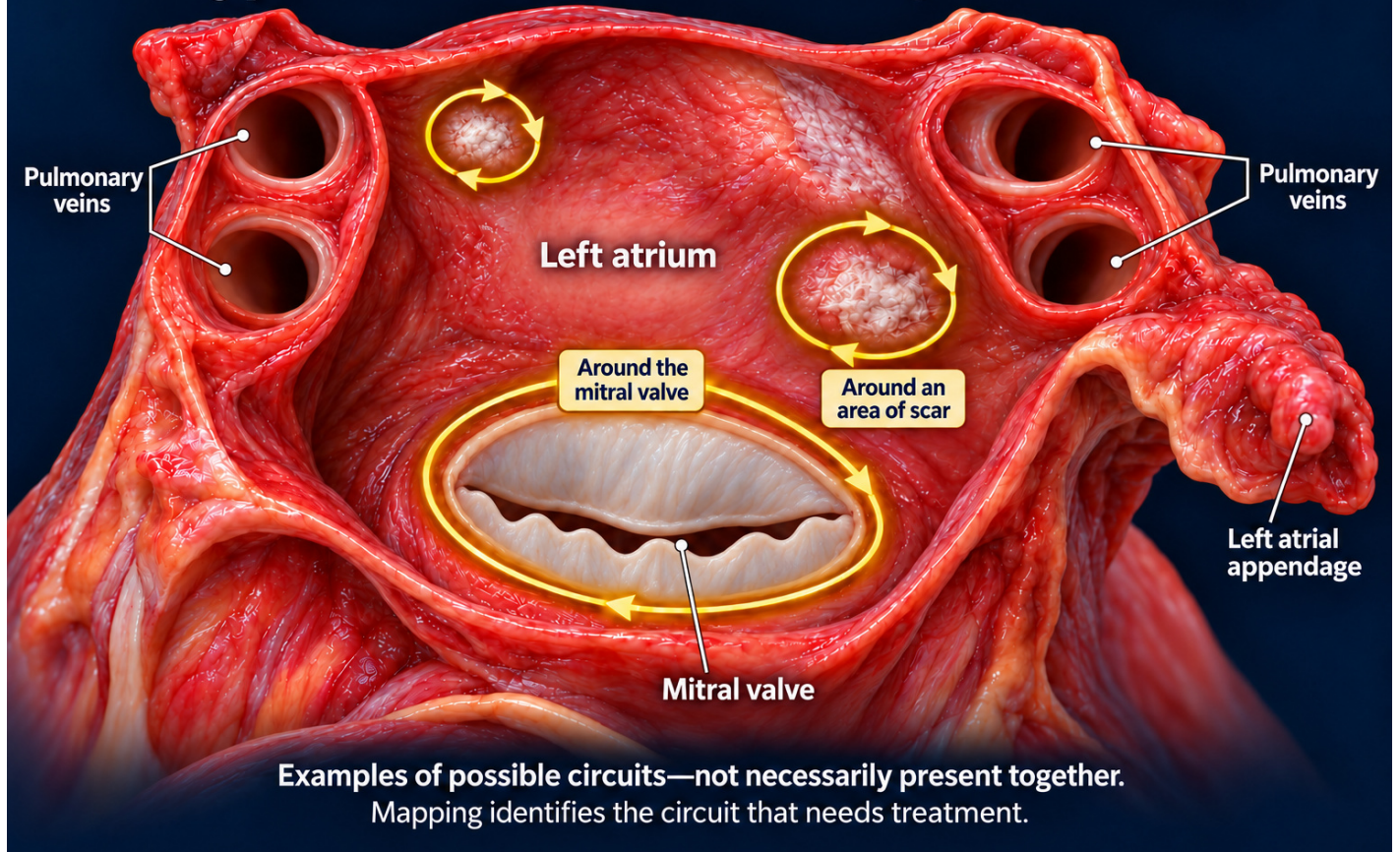
Classic typical flutter can produce small, repeating “sawtooth” flutter waves. The tall QRS spikes represent ventricular beats. This illustrative example shows 2:1 conduction: atrial rate about 300, ventricular rate about 150 beats per minute.

Atypical flutter: a different circuit

Atypical flutter follows a pathway outside the typical CTI circuit. It can occur in either atrium, sometimes around scar tissue from heart disease, previous surgery, or an earlier ablation.

An electrophysiologist uses electrical mapping to identify the circuit and determine how best to treat it.

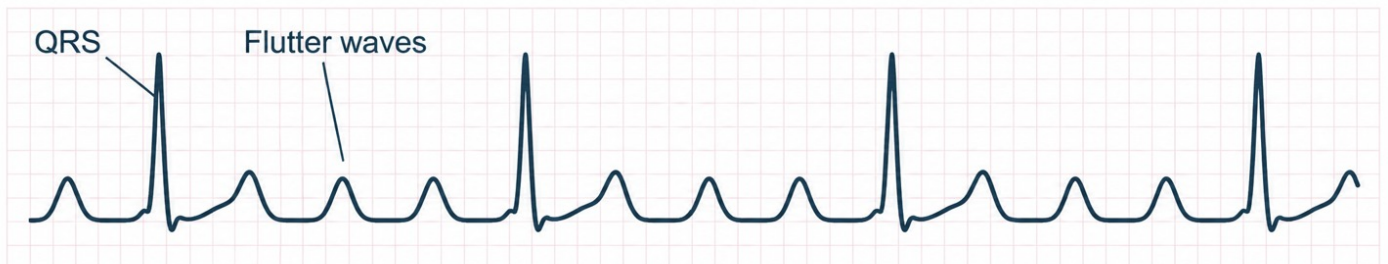
Atypical atrial flutter: different possible circuits



These are examples of possible left atrial flutter circuits. They are not necessarily active together. An EP uses electrical mapping to identify the pathway responsible for a patient's flutter.

Example EKG: atypical flutter

Atypical flutter: example EKG



This example shows several rounded atrial waves between the QRS complexes, without a classic sawtooth pattern. Atypical flutter does not

have one fixed EKG appearance.

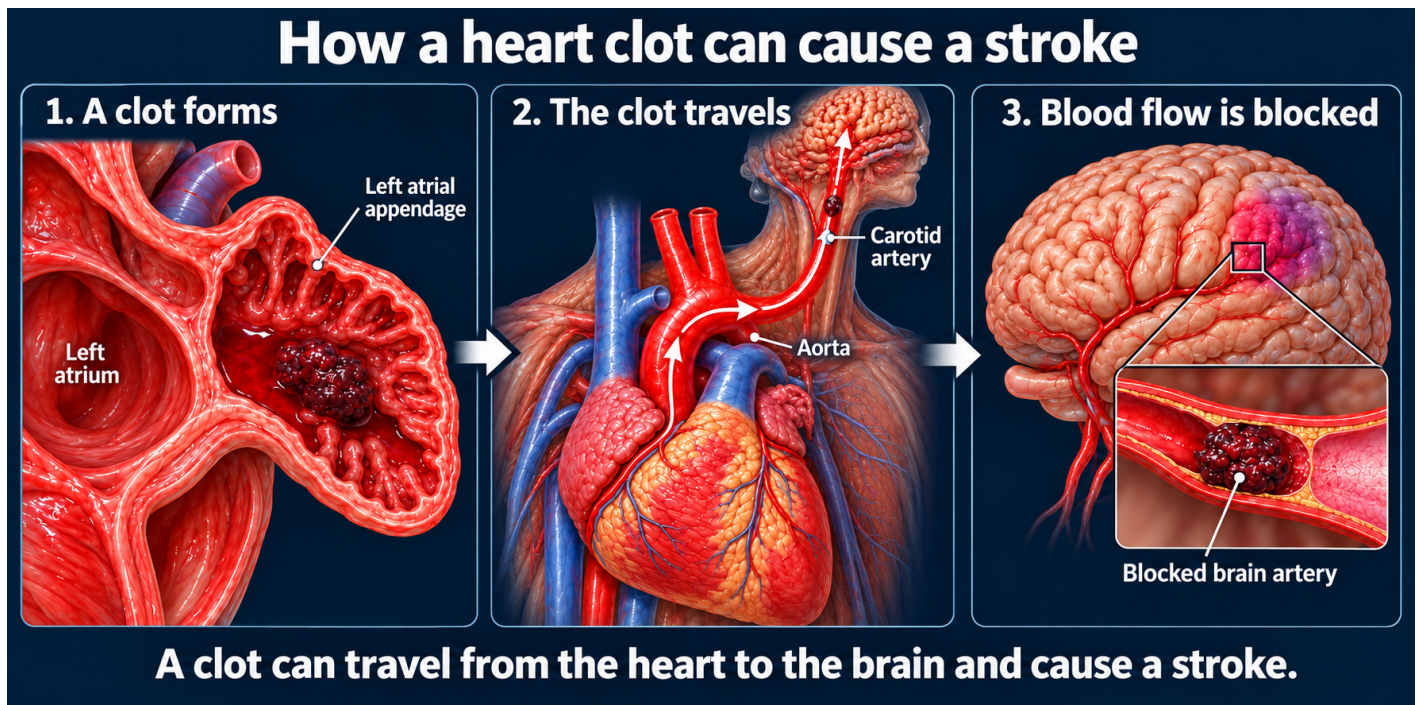
EKG strips are illustrations, not patient recordings. Flutter-wave appearance varies, and the EKG alone may not identify the exact circuit or reliably distinguish typical from atypical flutter.

Flutter and AFib: related, but different

Flutter usually involves an organized, repeating electrical circuit. AFib involves disorganized electrical activity. A person can have both conditions, and treating flutter does not necessarily prevent AFib.

Why can flutter increase stroke risk?

When the atria beat rapidly, they may not empty effectively. Blood can stagnate, particularly in the left atrial appendage, allowing a clot to form. If a clot leaves the heart and blocks an artery in the brain, it can cause a stroke.



Atrial flutter can allow a clot to form in the left atrial appendage. The clot can travel to the brain and block blood flow.

Both rhythms can increase stroke risk. Even when the pulse feels regular or symptoms are mild, your care team needs to assess whether you need a blood thinner.

The goals are to protect against stroke, control the heart rate, and restore a normal rhythm when appropriate.

Heart illustrations use conceptual electrical overlays. EKG strips are illustrative, not patient recordings; timing and voltage are not calibrated.

Atrial flutter

Section 2 of 6: Symptoms

Understand atrial flutter, protect against stroke, and explore your treatment options.

02 / RECOGNIZING SYMPTOMS

What symptoms can atrial flutter cause?

Atrial flutter can make your heart beat faster than normal and reduce how efficiently it pumps blood. Some people notice a sudden racing heartbeat, while others mainly feel tired or short of breath.

Common symptoms include:

- A racing or pounding heartbeat: Your heart may feel fast, even while resting.
- Fluttering in your chest: You may feel repeated thumping or unusual movement in your chest.
- Shortness of breath: Everyday activities may leave you more winded than usual.
- Fatigue or reduced stamina: Walking, exercising, or doing household activities may become harder.
- Dizziness or lightheadedness: You may feel unsteady or as though you might pass out.
- Chest discomfort: Some people experience pressure, tightness, or discomfort.
- Fainting: Occasionally, the rhythm can cause a person to pass out.

Can I have flutter without feeling it?

Yes. Some patients have no noticeable symptoms. Atrial flutter may be discovered during a routine EKG or while wearing a heart monitor.

The pulse can be regular or irregular during flutter. A steady pulse - or feeling well - does not necessarily mean the heart is in a normal rhythm.

When should I seek emergency care?

Call 911 for chest pain or pressure, severe shortness of breath, fainting, or signs of a stroke. Stroke symptoms include sudden facial drooping, weakness on one side, or trouble speaking. Do not drive yourself.

Atrial flutter

Section 3 of 6: Diagnosis

Understand atrial flutter, protect against stroke, and explore your treatment options.

03 / FINDING THE RHYTHM

How is atrial flutter diagnosed?

Atrial flutter is diagnosed by recording the heart's electrical activity. The most common test is an electrocardiogram, also called an ECG or EKG. Small stickers placed on your chest and limbs record the electrical signals and help your care team identify the rhythm.

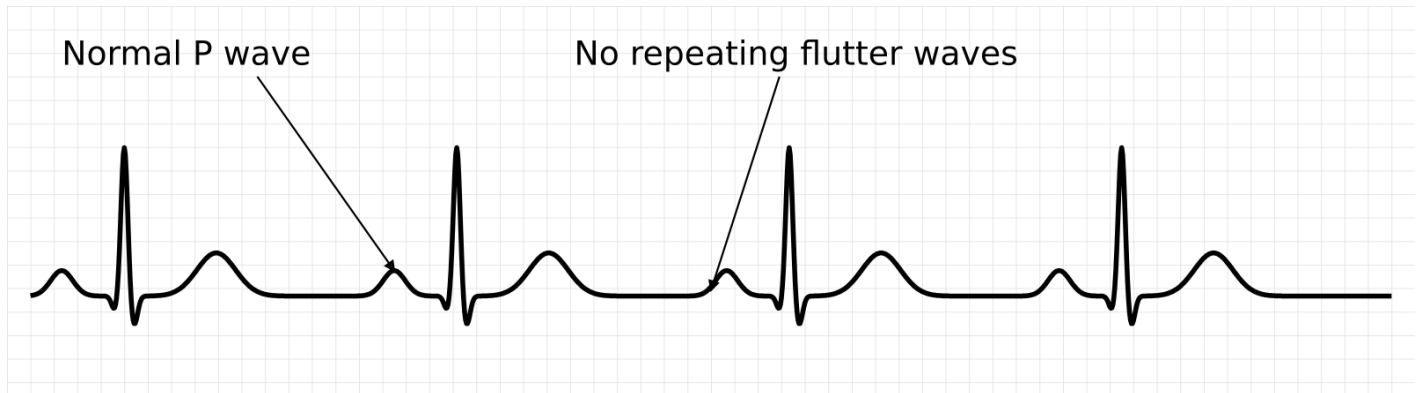


During an EKG, adhesive electrodes connected to wires record the heart's electrical activity. The test is painless and does not send electricity into your body. This is an illustrative image.

An EKG can show the repeating atrial signals called flutter waves. Typical flutter often has a sawtooth appearance, while atypical flutter may look different. Your clinician reviews the recording to distinguish flutter from AFib and other heart rhythms.

Normal rhythm compared with atrial flutter

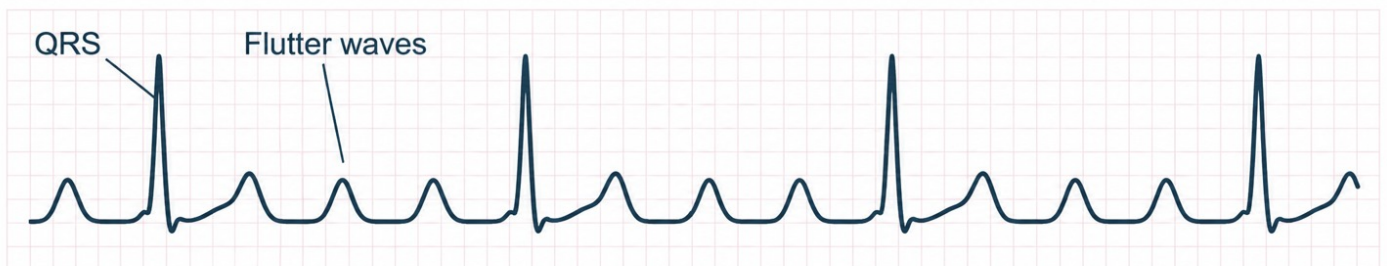
Normal sinus rhythm



In normal sinus rhythm, one small P wave appears before each tall QRS complex. There are no rapid, repeating flutter waves between beats.

Atypical atrial flutter: our earlier example

Atypical flutter: example EKG



The arrow labeled “Flutter waves” points to the repeating atrial activity. Several atrial signals occur for each ventricular beat, represented by a tall QRS complex.

These are illustrations, not patient recordings. Flutter-wave appearance varies. Atypical flutter does not have one fixed EKG pattern, and the EKG alone may not identify the exact circuit.

What if the flutter comes and goes?

An office EKG is a brief snapshot. If flutter is not happening during the appointment, your clinician may recommend a monitor that records your rhythm for longer.

- A Holter monitor: Records continuously during normal daily activities.
- A patch monitor: Worn on the chest to record the rhythm over several days or longer.
- An event monitor: Helps capture episodes that happen less often.

Can a smartwatch detect flutter?

Some watches and handheld devices can record a short EKG that provides useful information. Save the recording and share it with your care team.

However, watches may miss atrial flutter or label it as AFib, a normal rhythm, or an inconclusive result. Flutter can produce a regular pulse, so an irregular-pulse alert may never occur. A watch's automatic interpretation should not be used by itself to confirm or rule out flutter.

What about a blood pressure cuff or finger oxygen monitor?

A standard blood pressure cuff or finger pulse oximeter may show a fast pulse or flag an irregular heartbeat, but it cannot diagnose atrial flutter. These devices measure the pulse rather than recording the electrical signals needed to identify the rhythm.

Will I need other tests?

Your clinician may recommend a heart ultrasound or blood tests to assess heart function and look for contributing conditions. These tests help guide treatment, but they do not replace an EKG or rhythm recording.

If ablation is being considered, an electrophysiologist may use detailed electrical mapping during the procedure to identify the flutter circuit.

Takeaway:

Symptoms and pulse readings offer clues. An electrical recording reviewed by your care team establishes the diagnosis.

Atrial flutter

Section 4 of 6: Treatment options

Understand atrial flutter, protect against stroke, and explore your treatment options.

04 / TREATMENT

How is atrial flutter treated?

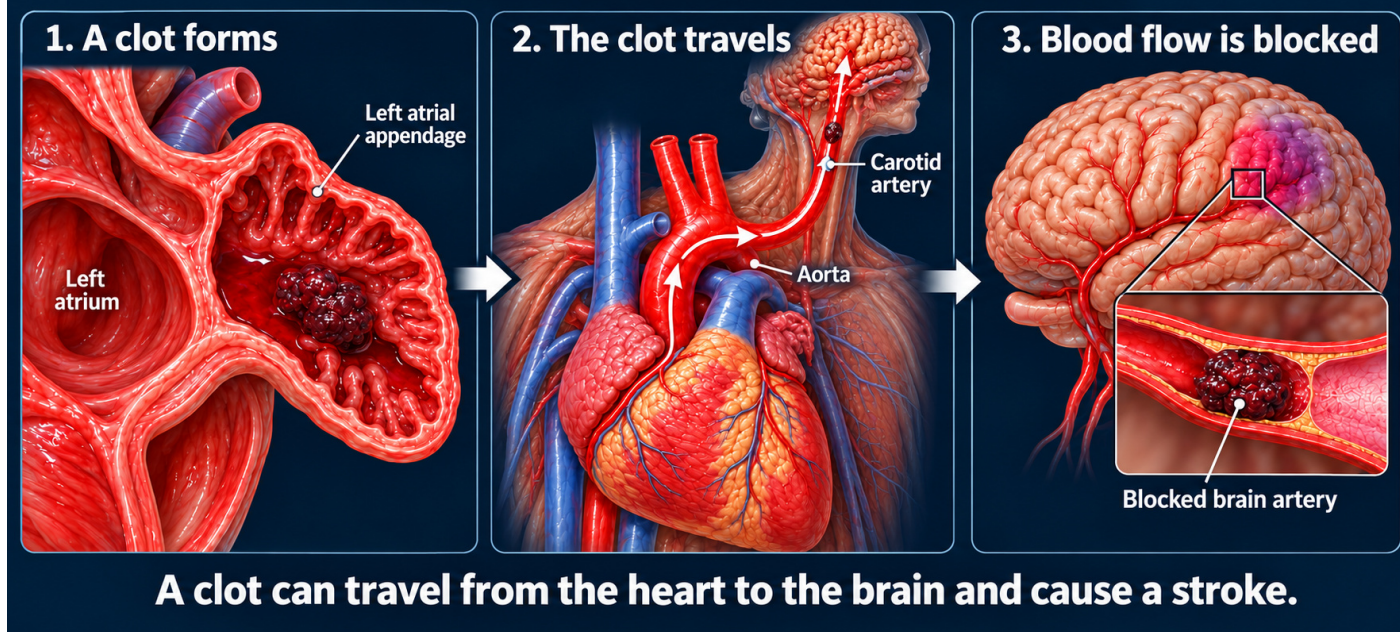
Treatment has three pillars: reduce stroke risk, control the heart rate, and restore and maintain normal rhythm. Your care team builds a plan around your symptoms, heart function, and individual risks.

04 / TREATMENT · PILLAR 1

Reduce the risk of stroke

Atrial flutter can allow blood clots to form in the heart. A clot may form in the left atrial appendage (LAA), travel out of the heart, and block an artery supplying the brain, causing a stroke.

How a heart clot can cause a stroke



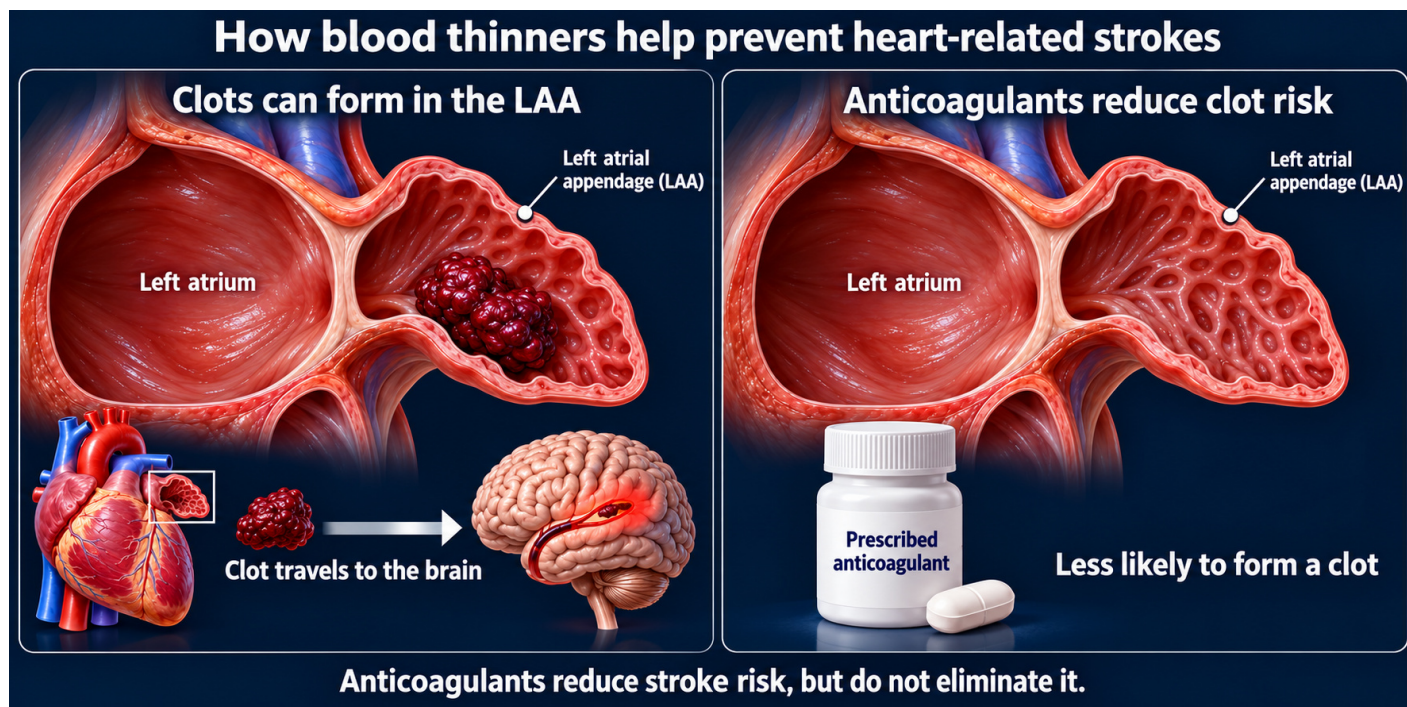
A clot can form in the LAA, leave the heart, and travel to the brain. A blocked brain artery can cause an ischemic stroke.

How do we decide whether you need a blood thinner?

Your care team uses a stroke-risk scoring system, commonly called CHA₂DS₂-VASc, to help decide whether you need a blood thinner. It considers factors such as age, high blood pressure, diabetes, heart failure, and a previous stroke.

How do blood thinners help?

Blood thinners reduce the blood's ability to form clots. These medicines are called anticoagulants. Those taken by mouth are called oral anticoagulants, or OACs.



The clear appendage illustrates the goal of prescribed anticoagulant treatment: making clots less likely to form. OACs reduce stroke risk, but they do not eliminate it or guarantee that no clot is present.

Blood thinners help protect against a clot-related stroke, but they do not stop flutter or control the heart rate.

Will I still need a blood thinner after treatment?

Blood thinners may also be needed before and after cardioversion or ablation. Whether you need them longer depends on your individual stroke risk, any history of AFib, and your follow-up findings.

Do not stop a prescribed blood thinner simply because your pulse feels normal or your flutter has been treated.

Discuss any changes with your care team.

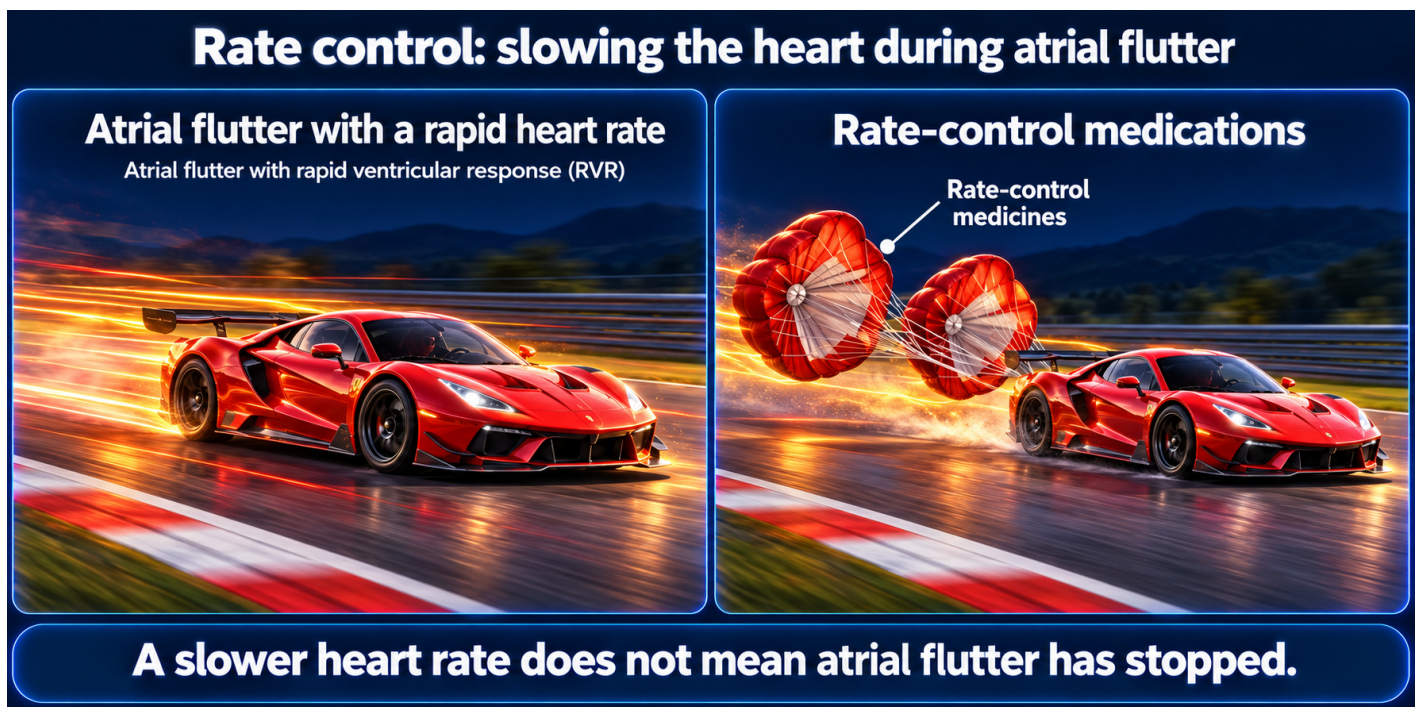
04 / TREATMENT · PILLAR 2

Control the heart rate

Rate-control medications slow the number of electrical signals that pass through the AV node to the ventricles - the heart's lower chambers.

Examples include beta blockers, such as metoprolol, and certain calcium channel blockers, such as diltiazem or verapamil. Your clinician selects a medication based on your heart function, blood pressure, and other health conditions.

These medicines can improve symptoms and help protect the heart from weakening because of a persistently rapid pulse. They usually do not stop the flutter circuit itself. The atria may remain in flutter even when your pulse slows.



Rate-control medicines act like parachutes slowing a fast car: they slow the ventricular heart rate. A slower pulse does not mean the atrial flutter circuit has stopped.

Why are medications often not enough?

Atrial flutter is often difficult to control with rate-control medications. In some patients, the pulse remains too fast despite appropriate treatment - even when more than one medication is used. These medicines slow conduction through the AV node, but they do not eliminate the electrical loop that keeps flutter going.

Catheter ablation treats the flutter circuit directly by creating an electrical barrier that prevents the signal from completing its loop. It is often the preferred definitive treatment for typical atrial flutter, particularly when symptoms persist or medications cannot adequately control the rate. Atypical flutter can also be treated with ablation, although it is more complex and may recur.

The goal of rate control:

Improve symptoms and protect heart function by slowing the pulse. Treating the flutter circuit is a separate part of rhythm management.

04 / TREATMENT · PILLAR 3

Restore and maintain a normal rhythm

Rhythm control treats the abnormal rhythm itself. The goal is to stop atrial flutter and help the heart return to normal sinus rhythm, improving symptoms and allowing the upper and lower chambers to work together with their normal timing.

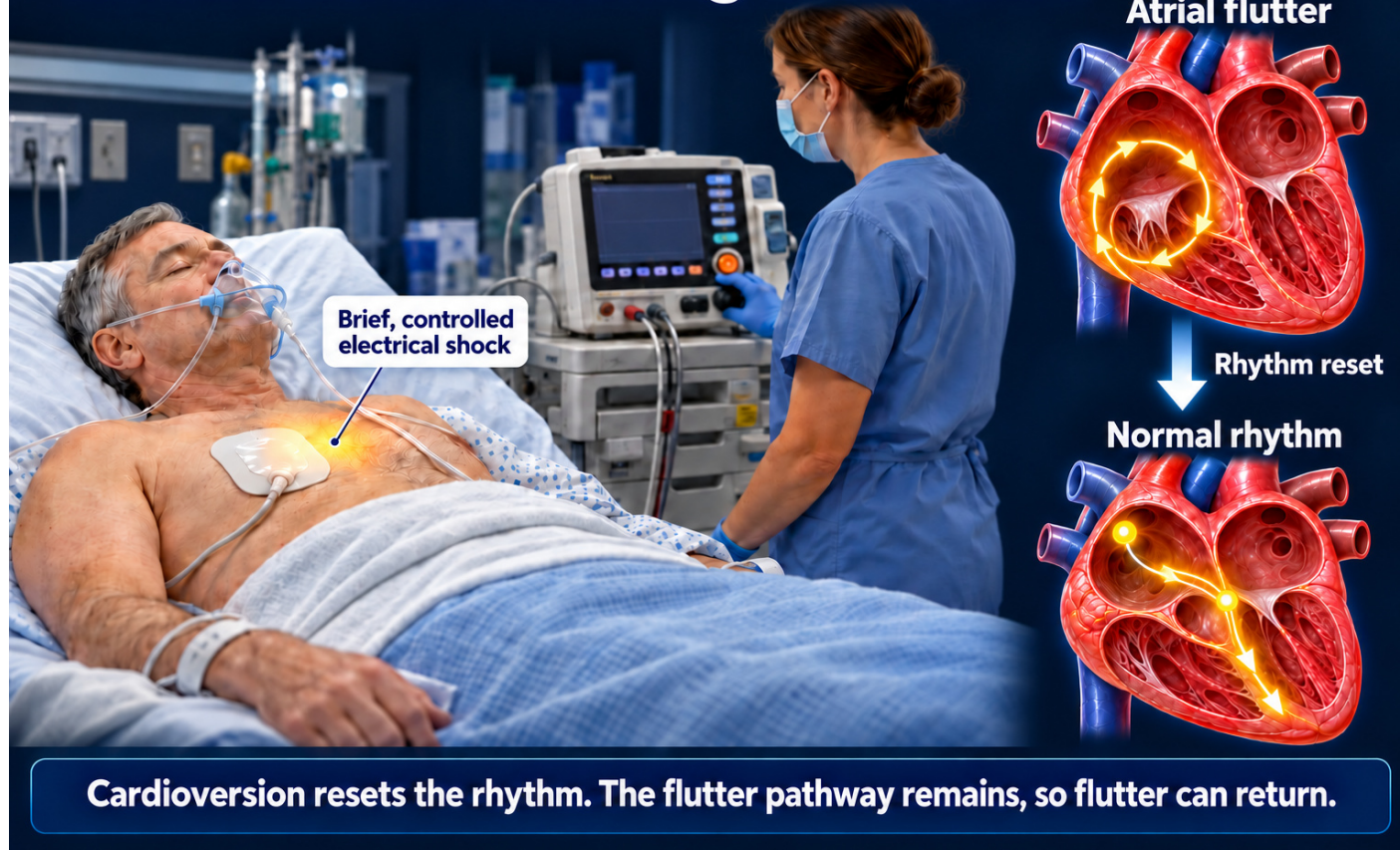
The main options are electrical cardioversion, rhythm-control medications, and catheter ablation.

Option 1: Electrical cardioversion - reset the rhythm

Electrical cardioversion uses a controlled electrical shock delivered through pads on the chest to restore a normal rhythm. For a planned procedure, medication keeps you asleep and comfortable.

The shock interrupts the circulating electrical signal, allowing the heart's normal pacemaker to take over. It stops the current episode, but it does not remove the pathway that caused flutter. Atrial flutter can return.

Cardioversion: resetting atrial flutter



Cardioversion resets the rhythm. The flutter pathway remains, so flutter can return.

Your care team arranges appropriate blood-thinner treatment and, when needed, imaging to check for a clot before cardioversion.

Option 2: Rhythm-control medications - help maintain normal rhythm

These medicines, also called antiarrhythmics, change how electrical signals travel through the heart. Some can help stop an abnormal rhythm; others help maintain normal rhythm after cardioversion.

Unlike rate-control medications, they treat the rhythm itself. However, they do not permanently remove the flutter circuit, and flutter may return. They must be taken as prescribed to provide their intended benefit.

Each medication has its own side effects and monitoring needs. Some require EKG checks or blood tests, and some must be started in a monitored hospital setting. Your clinician considers your heart function, kidney function, other medicines, and medical history when selecting treatment.

Option 3: Catheter ablation - interrupt the electrical loop

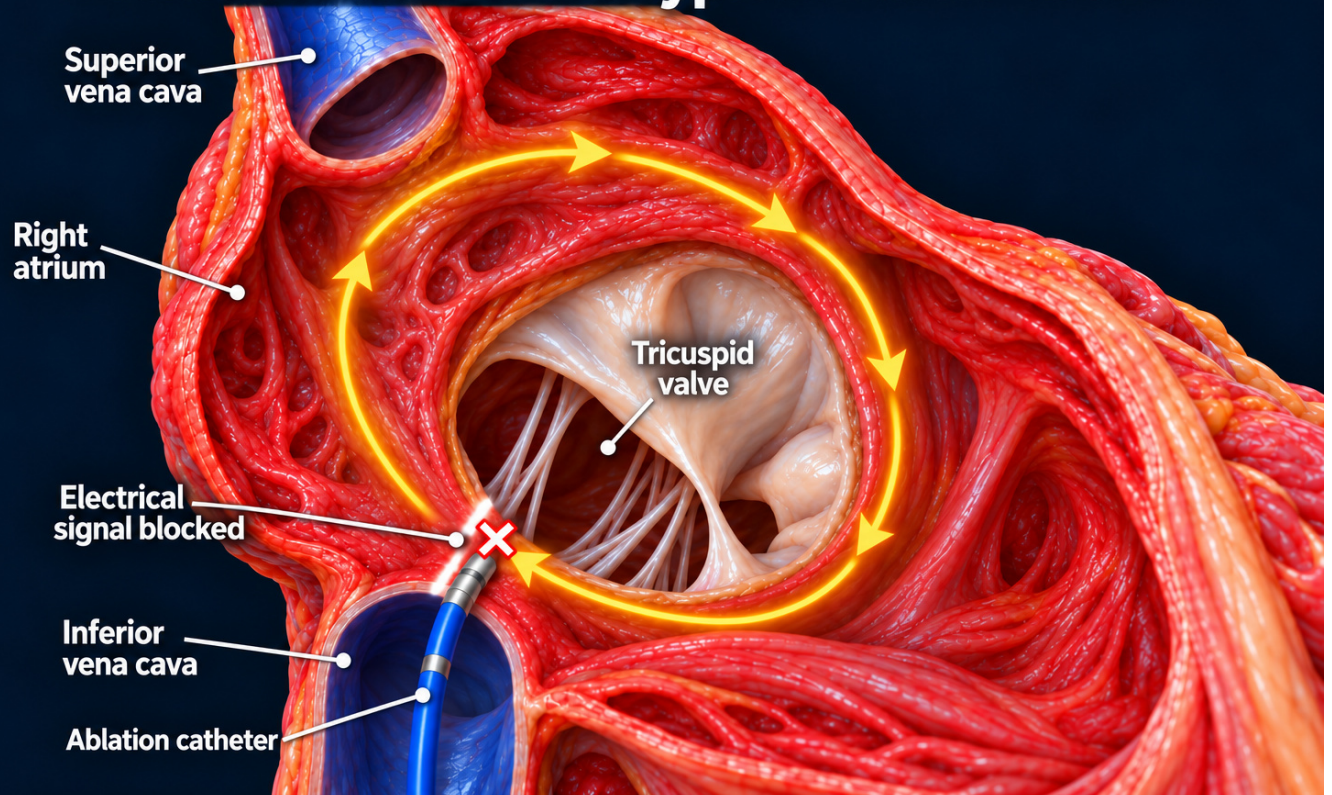
An electrophysiologist, or EP, guides thin catheters through blood vessels into the heart to identify and treat the flutter pathway. Ablation creates an electrical barrier. If the signal cannot complete its loop, that flutter circuit cannot continue.

Typical flutter: block the CTI pathway

Typical flutter travels around the tricuspid valve in the right atrium. The circuit passes through the narrow strip of tissue between the valve and the inferior vena cava, called the cavotricuspid isthmus (CTI).

The EP creates a line of ablation across this pathway, from the tricuspid valve to the inferior vena cava. The line blocks electrical travel across the CTI. The EP checks that signals cannot cross the line in either direction.

Ablation blocks the typical flutter circuit



The ablation line prevents the electrical signal from completing its loop.

The ablation line closes a pathway the circuit needs to complete its loop. The red X marks where the electrical signal is blocked.

Ablation is highly effective for typical flutter and can permanently eliminate that particular circuit. It is often the preferred definitive treatment, especially when flutter causes symptoms or medications cannot adequately control the heart rate.

Atypical flutter: map and treat a different pathway

Atypical flutter may circle an area of scar, the mitral valve, or another pathway in either atrium. The EP uses detailed electrical mapping to find the active circuit and identify the critical tissue keeping it going.

Ablation then creates a targeted barrier to interrupt that pathway. Atypical flutter is more complex to treat. Results depend on the circuit and the surrounding tissue; signals may reconnect or another circuit may develop, so additional treatment is sometimes needed.

What happens after ablation?

Treating a flutter circuit does not necessarily prevent AFib or a different flutter circuit. Follow-up visits and rhythm monitoring help your care team assess the result and adjust your treatment.

Do not stop blood thinners or other prescribed medicines on your own. Your care team decides which medicines are still needed based on your individual risks and follow-up findings.

Three approaches:

Cardioversion resets the rhythm. Rhythm-control medications help suppress recurrence. Ablation interrupts the pathway sustaining flutter.

Preparing for your ablation?

Learn about procedure day, recovery, and caring for your groin puncture sites at home.

What to expect on my procedure date

Atrial flutter

Section 5 of 6: Long-term care

Understand atrial flutter, protect against stroke, and explore your treatment options.

05 / LONG-TERM CARE

Living well after atrial flutter

Atrial flutter deserves a treatment plan - even when symptoms are mild. Your cardiologist helps manage your heart health, medications, and stroke risk. An electrophysiologist, or EP, specializes in electrical heart problems and can determine whether ablation or another rhythm treatment is appropriate.

Should I see an EP?

An EP consultation helps identify the type of flutter you have and discuss how to treat it. This is especially important if flutter keeps returning, causes symptoms, or remains fast despite medications.

For many patients with typical flutter, ablation offers a highly effective way to eliminate the circuit. Atypical flutter requires a more individualized approach because its electrical pathway can be more complex.

Will I still need follow-up after successful treatment?

Yes. Treating flutter does not necessarily prevent AFib or a different flutter circuit. Some abnormal rhythms cause few or no symptoms, so feeling better does not always tell the whole story.

Your care team may recommend follow-up EKGs or rhythm monitoring. These visits help assess your rhythm, review medications, and decide

whether you still need a blood thinner.

Do not stop prescribed medications simply because your pulse feels normal.

What can I do to support my heart health?

Alongside treatment of the flutter circuit, work with your care team to manage conditions that affect your heart:

- Control high blood pressure and diabetes.
- Address other heart conditions and thyroid problems.
- Avoid excessive alcohol.
- Take medications as prescribed and keep follow-up appointments.

These steps support your heart health, but they do not replace treatment of an established flutter circuit.

What if my symptoms return?

Contact your care team if you notice a returning racing heartbeat, reduced stamina, dizziness, or shortness of breath. Save any watch EKG recordings and note when symptoms began.

Call 911 for chest pain or pressure, severe shortness of breath, fainting, or stroke symptoms, such as sudden facial drooping, one-sided weakness, or trouble speaking.

The goal: Treat the flutter, protect against stroke, and maintain your heart health through ongoing care.

Atrial flutter

Section 6 of 6: Your next visit

Understand atrial flutter, protect against stroke, and explore your treatment options.

06 / YOUR NEXT VISIT

Preparing for your appointment

Your visit is an opportunity to understand your atrial flutter and choose a treatment plan together. A little preparation helps your care team understand how the rhythm affects you.

What should I bring?

- Your medication list: Include doses, supplements, and any medicines you have stopped. Mention side effects, missed doses, or difficulty paying for medications.
- Heart rhythm recordings: Bring available EKGs, heart-monitor reports, or saved smartwatch EKG recordings.
- Previous treatment information: Include details of cardioversions, ablations, heart surgery, or implanted heart devices.
- A symptom history: Note when episodes occur, how long they last, and whether they affect your breathing, energy, or daily activities.

If you take a blood thinner, tell your care team about any missed doses or bleeding.

What questions should I ask?

- Do I have typical or atypical atrial flutter?
- Have my recordings also shown AFib?
- Do I need a blood thinner, and why?

- Are my medications controlling my heart rate adequately?
- Would ablation be a good option for me?
- What benefits and risks should I expect from the recommended treatment?
- Which medicines might I still need afterward?
- How will we monitor my rhythm after treatment?

Tell us what matters to you

Whether your goal is walking without becoming winded, returning to exercise, avoiding repeated hospital visits, or reducing medication side effects, share it with your care team. Your priorities help guide treatment decisions.

You do not need to know all the answers before your visit. We will help you understand your rhythm and your options.

[Make an appointment](#)

Preparing for your ablation?

Learn about procedure day, recovery, and caring for your groin puncture sites at home.

[What to expect on my procedure date](#)

Sources & further reading

[NHLBI: How the heart beats](#)

[MedlinePlus: Cardiac conduction system](#)

[AHA: Atrial flutter](#)

[AHA: Ablation for arrhythmias](#)

[2023 ACC/AHA/ACCP/HRS guideline: atrial flutter and stroke prevention](#)

Updated October 2026. Educational information; your own care plan may differ.