

Supraventricular tachycardia (SVT)

Section 1 of 6: The basics

Understand SVT, recognize symptoms, and explore treatment for your heart rhythm.

What should I do now?

Call 911

Call 911 if racing occurs with chest pressure, severe trouble breathing, fainting, or severe weakness or dizziness. Do not drive yourself.

Contact your care team

Contact your care team if episodes are new, more frequent, longer, or interfere with daily life. Follow your personal plan when an episode will not stop.

Keep your care plan

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

01 / UNDERSTAND SVT

What is SVT?

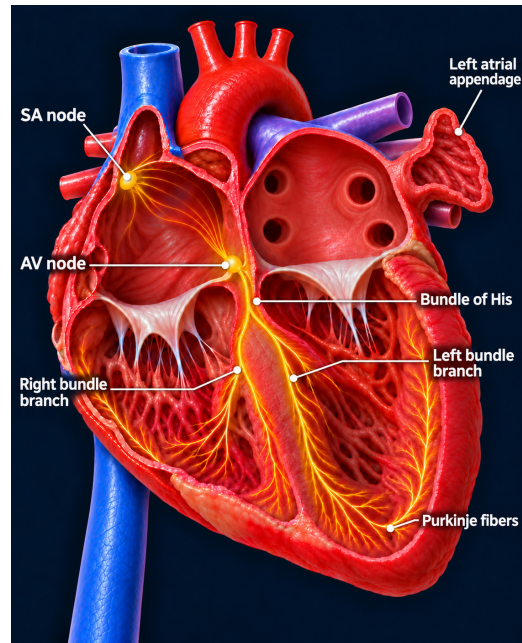
Supraventricular tachycardia, or SVT, is a group of abnormal heart rhythms that make the heart beat faster than it should.

“Supraventricular” means coming from the heart’s upper chambers.

“Tachycardia” means a fast heart rate.

Many common SVTs cause episodes of a rapid, regular heartbeat that start and stop suddenly - almost like flipping a switch. An episode may occur while you are resting or active.

How does the heart normally beat?



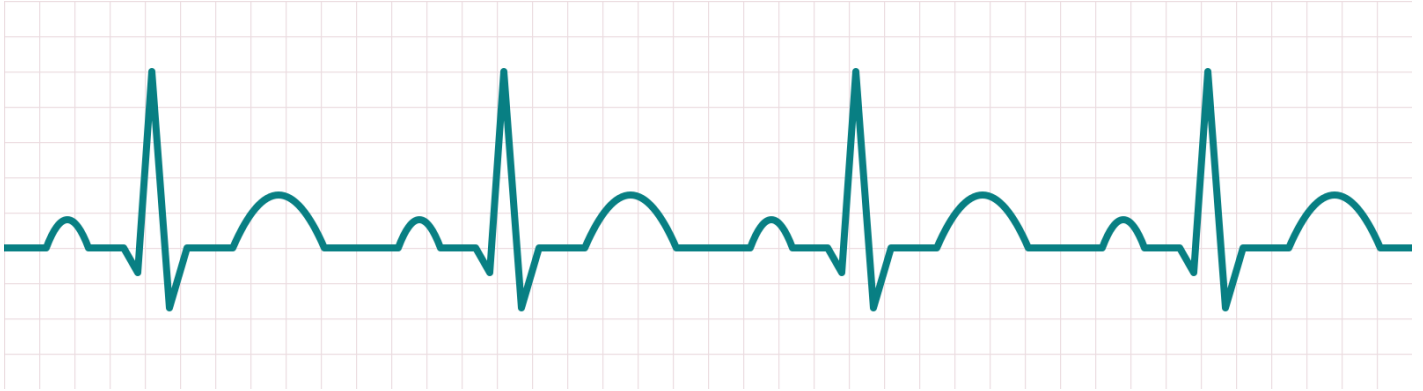
Follow one normal heartbeat

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



Normal sinus rhythm: an organized electrical signal coordinates the heartbeat. The EKG shows one P wave before each QRS complex and regular spacing between beats. Illustrative tracing; timing and voltage are not calibrated.

What changes during SVT?

In common types of SVT, an electrical signal becomes trapped in a repeating loop, or an abnormal electrical source sends signals faster than the sinus node. These signals take over the rhythm and drive the heart too quickly.

SVT is an electrical problem. Having SVT does not necessarily mean you have blocked arteries or a weak heart.

There are multiple types of SVT

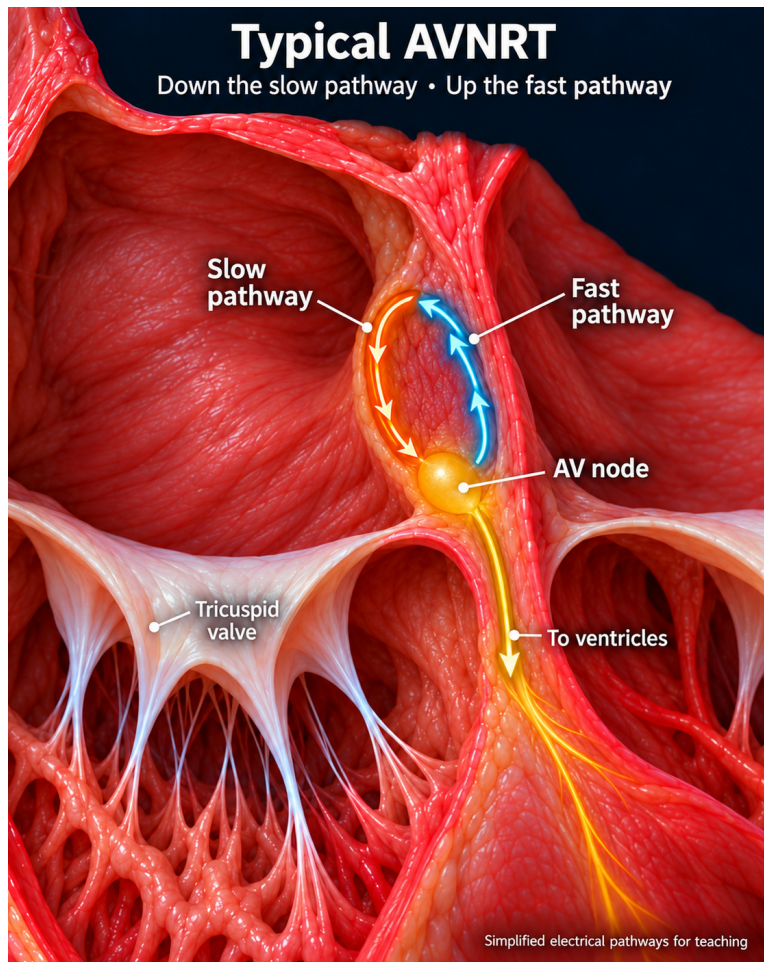
There are several types of SVT. Here, we'll focus on three of the main types: AVNRT, AVRT, and atrial tachycardia. Each involves a different electrical pathway or source. Understanding which type you have helps explain why episodes happen and how they can be treated.

Type 1: AVNRT - a loop near the AV node

AV nodal reentrant tachycardia, or AVNRT, occurs when two electrical pathways in or near the AV node allow a signal to circle repeatedly.

These are often called the fast pathway and the slow pathway. Under the right conditions, a premature heartbeat can start a loop that travels

down one pathway and back up the other. Each trip around the loop triggers another heartbeat.



Typical AVNRT travels down the slow pathway (orange) and back up the fast pathway (blue). These functional pathways are enlarged and simplified for teaching.

AVNRT: example EKG



Fast and regular: The tall, narrow QRS spikes are evenly spaced. In typical AVNRT, the upper and lower chambers activate almost together, so the P waves are often hidden within the QRS complexes. This is an illustrative example, not a patient

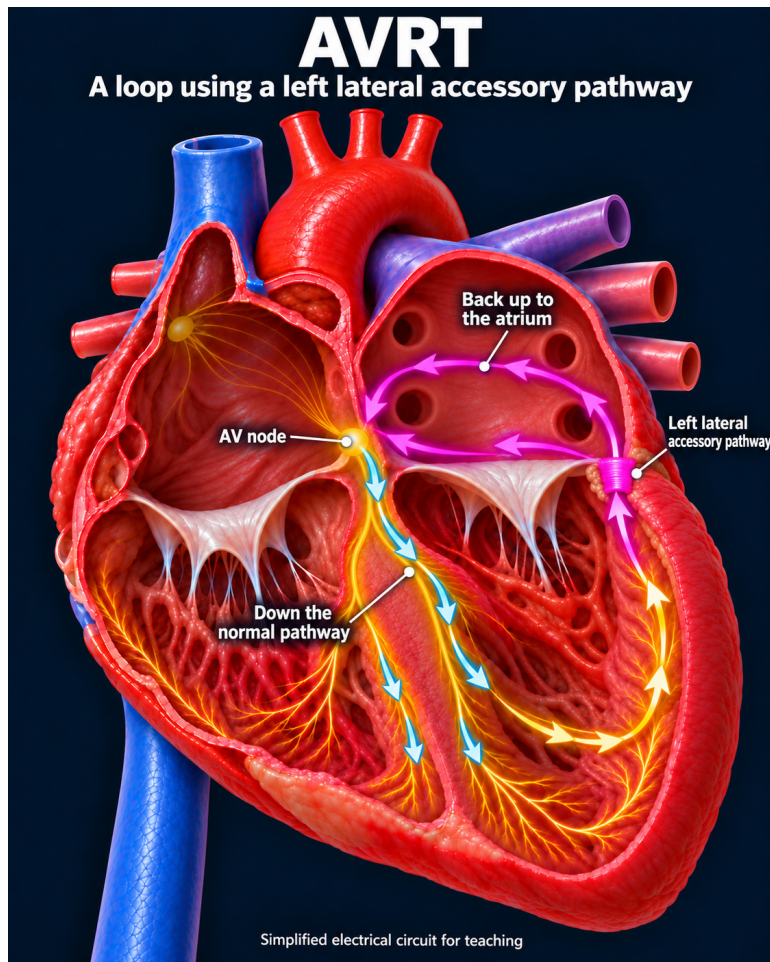
recording; timing and voltage are not calibrated. A clinician reviews the EKG to distinguish AVNRT from other fast rhythms.

Type 2: AVRT - a loop using an extra connection

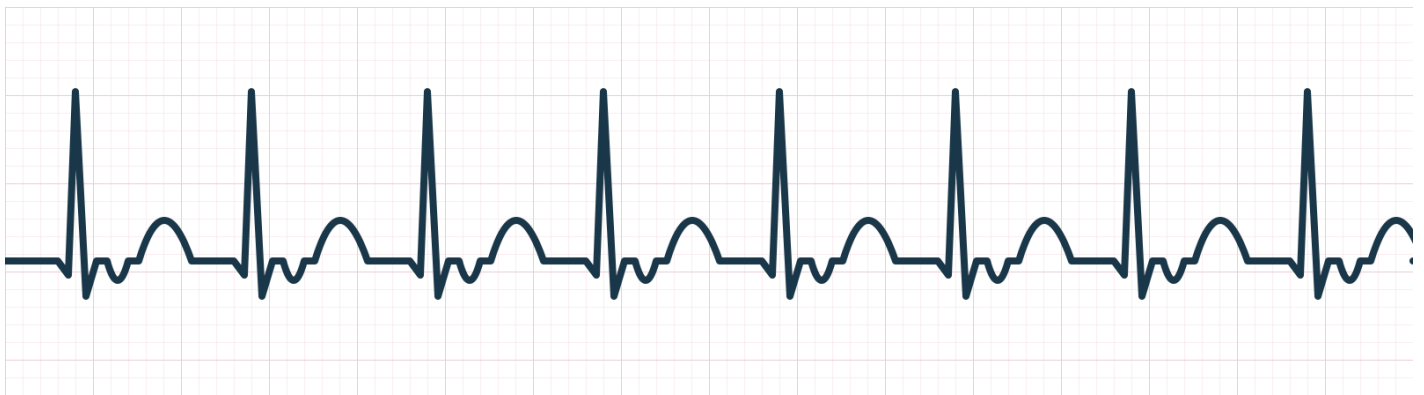
AV reentrant tachycardia, or AVRT, uses an extra electrical connection between the atria and ventricles, called an accessory pathway.

The signal can travel down the normal electrical route and return through the extra connection, creating a repeating loop.

Some accessory pathways are associated with Wolff-Parkinson-White, or WPW. Others do not show up on an EKG taken during normal rhythm.



Orthodromic AVRT: example EKG

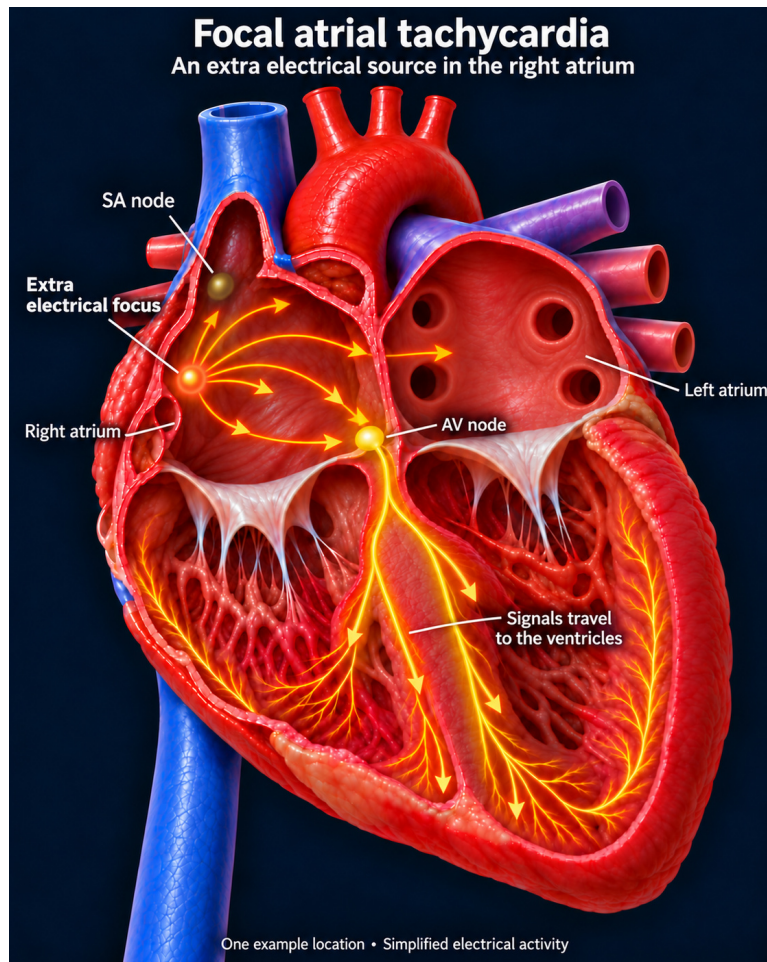


Fast and regular: The narrow QRS spikes are evenly spaced. The small downward waves just after them represent retrograde P waves - the atria being activated as the signal returns up the accessory pathway. These P waves are not always easy to see. This is an illustrative example, not a patient recording; timing and voltage are not calibrated. The strip alone does not identify where the accessory pathway is located.

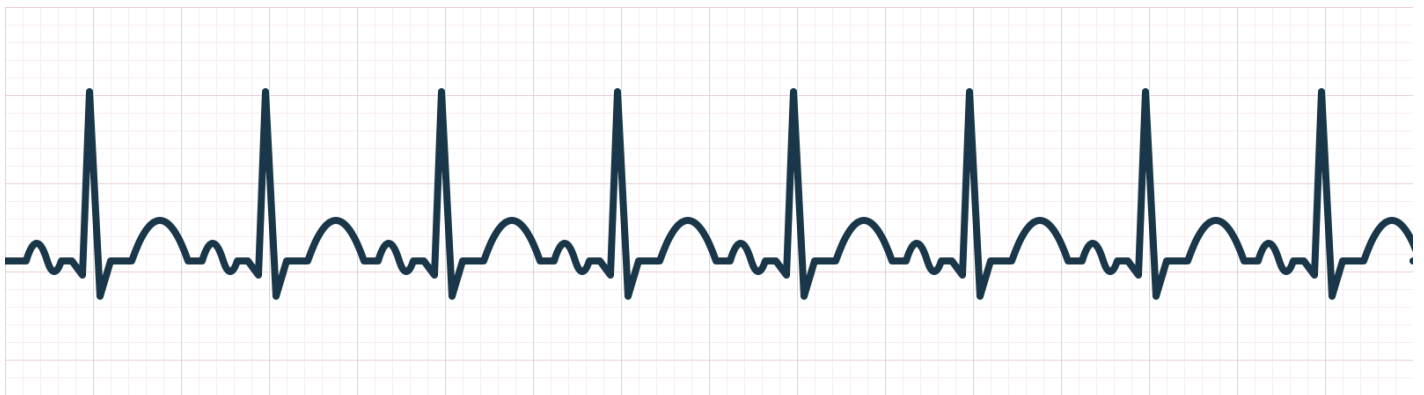
Type 3: Atrial tachycardia - an abnormal electrical source

In focal atrial tachycardia, a small area in an atrium sends electrical signals faster than the sinus node. This area temporarily takes over as the rhythm's driver.

Unlike AVNRT or AVRT, this rhythm does not require a loop through the AV node to keep going.



Atrial tachycardia: example EKG



An atrial signal before each beat: This example shows distinct P waves before the narrow QRS spikes. The P waves come from the extra atrial source and can look different from those in normal sinus rhythm. Here, each atrial signal reaches the ventricles; other conduction patterns can occur. This is an illustrative example, not a patient recording; timing and voltage are not calibrated. P-wave appearance varies with the source location.

Why does the type matter?

Different SVTs require different treatment targets. An electrophysiologist, or EP, identifies the electrical pathway or source responsible for your rhythm and discusses the best treatment options.

Many common SVTs can be treated very effectively with catheter ablation, which targets the tissue sustaining the abnormal rhythm.

The key idea: SVT describes several fast electrical rhythms.

Understanding which type you have helps explain why it happens - and how we can treat it.

Do I need a blood thinner for SVT?

AVNRT, AVRT, and focal atrial tachycardia do not routinely require blood thinners for stroke prevention. They do not carry the same established clot-related stroke risk as AFib or atrial flutter.

You may still need a blood thinner for another condition. Do not stop a prescribed blood thinner without discussing it with your care team.

Supraventricular tachycardia (SVT)

Section 2 of 6: Symptoms

Understand SVT, recognize symptoms, and explore treatment for your heart rhythm.

SECTION 2

What symptoms can SVT cause?

SVT often feels like your heartbeat suddenly switches to a much faster speed. It can happen while you are resting or being active.

Common symptoms

- A racing heartbeat: Your pulse suddenly becomes much faster than usual.
- Pounding in your chest or neck.
- Lightheadedness: Feeling dizzy, unsteady, or close to passing out.
- Shortness of breath: Including difficulty keeping up with your usual activities.
- Weakness or fatigue: During an episode or afterward.
- Chest pressure or tightness.
- Fainting.

Can it feel like anxiety?

A sudden racing heartbeat can feel frightening or similar to a panic attack. Symptoms alone cannot reliably distinguish anxiety from an abnormal heart rhythm. Recording the rhythm during an episode helps identify what is happening.

When should I seek emergency care?

Call 911 if a racing heartbeat occurs with chest pain or pressure, severe shortness of breath, fainting, or severe weakness or a feeling that you may pass out. Do not drive yourself.

For other episodes, follow the action plan you develop with your care team.

Supraventricular tachycardia (SVT)

Section 3 of 6: Diagnosis

Understand SVT, recognize symptoms, and explore treatment for your heart rhythm.

03 / DIAGNOSIS

How is SVT diagnosed?

The key is to record your heart's electrical activity - ideally while the fast rhythm is happening.

An EKG during an episode

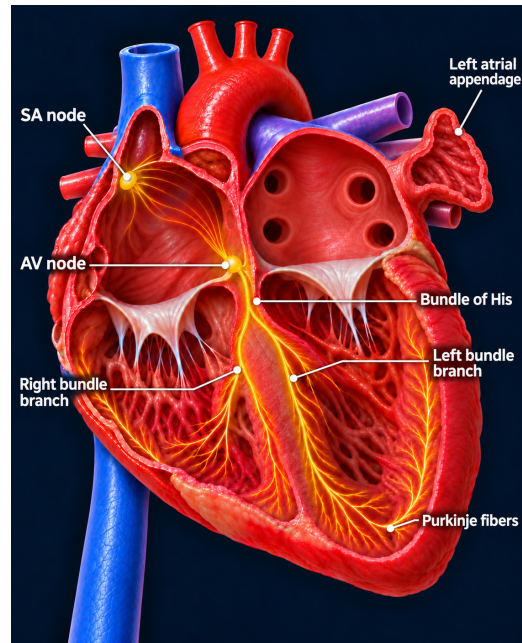
An electrocardiogram, also called an ECG or EKG, uses small electrodes on your chest and limbs to record electrical signals.

The recording helps your clinician distinguish SVT from other causes of a fast heartbeat. It may also provide clues about which type of SVT you have.



Electrodes record the heart's electrical activity. An EKG is painless and does not send electricity into your body. This is an illustrative image.

Normal rhythm compared with SVT



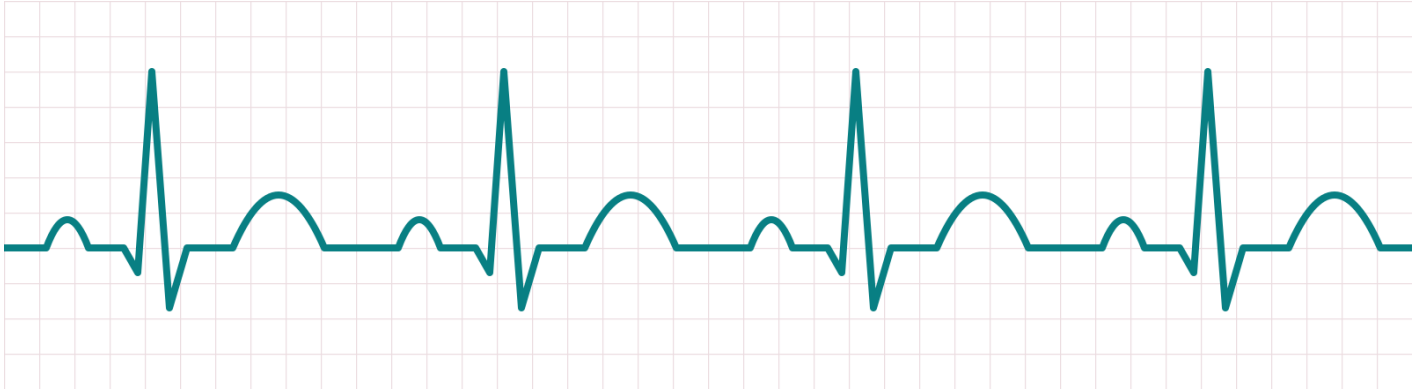
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The atria contract first; the ventricles follow. This organized sequence produces a coordinated heartbeat.

Normal sinus rhythm



One P wave before each QRS complex, with regular spacing between beats.

SVT example: AVNRT



This AVNRT example shows faster, regularly spaced narrow QRS complexes. P waves are hidden within them. Other SVTs may have visible P waves, as shown in section 1. These strips are illustrations, not patient recordings; timing and voltage are not calibrated.

Why can my office EKG look normal?

SVT may stop before your appointment. A normal EKG between episodes does not rule it out.

Your clinician may recommend a Holter, patch, or event monitor to capture your rhythm during daily activities. For very infrequent episodes, an implanted loop recorder may sometimes be considered.

Can my smartwatch help?

A device that records an actual EKG may provide useful information. Save the tracing and share it with your care team.

A heart-rate number alone cannot identify the rhythm. A standard blood pressure cuff or finger pulse oximeter can show a fast pulse, but it cannot establish an SVT diagnosis.

How do we determine the exact type?

Sometimes an electrophysiology study, or EP study, is needed. An EP guides thin catheters into the heart to record signals and test the electrical pathways.

This can distinguish AVNRT, AVRT, and atrial tachycardia. When appropriate and agreed upon beforehand, ablation can be performed during the same procedure.

The key idea: Symptoms suggest a rhythm problem. Electrical recordings help diagnose it, and an EP study can identify its precise mechanism.

Supraventricular tachycardia (SVT)

Section 4 of 6: Treatment options

Understand SVT, recognize symptoms, and explore treatment for your heart rhythm.

HEART MADE CLEAR · SVT · SECTION 4

How is SVT treated?

Treatment has two goals: stop SVT when it happens and prevent it from returning. The best approach depends on your type of SVT, your symptoms, and your preferences.

Stopping an episode

Vagal maneuvers: Your care team may teach you a specific bearing-down technique called the Valsalva maneuver. It temporarily slows electrical signals through the AV node and can interrupt AVNRT or AVRT. Do not massage your neck yourself or delay emergency care for severe symptoms.

Medication during an episode: In a monitored medical setting, adenosine can briefly block signals through the AV node and stop many episodes of AVNRT or AVRT. It works quickly and wears off quickly. Atrial tachycardia may require a different approach because its electrical source can continue firing independently of the AV node.

Electrical cardioversion: A controlled electrical shock may be needed if SVT causes severe symptoms or appropriate medications do not stop it. Cardioversion resets the rhythm, but the underlying pathway or source remains, so episodes can return.

Preventing future episodes

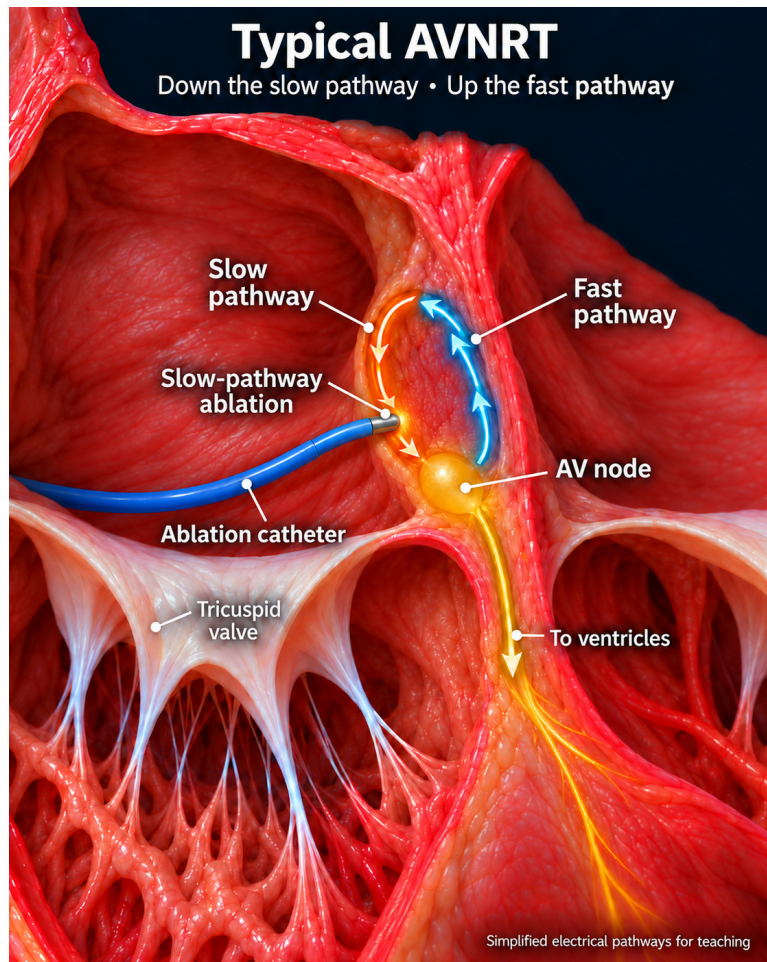
Medications: Beta blockers, certain calcium channel blockers, or selected rhythm medications may help reduce episodes. They generally do not remove the electrical pathway or source. Each medication has potential side effects and must be taken as prescribed.

Catheter ablation: An electrophysiologist identifies and treats the small area of tissue responsible for SVT. Ablation can provide a lasting cure for many common types.

How does ablation treat each type?

AVNRT: treating the slow pathway

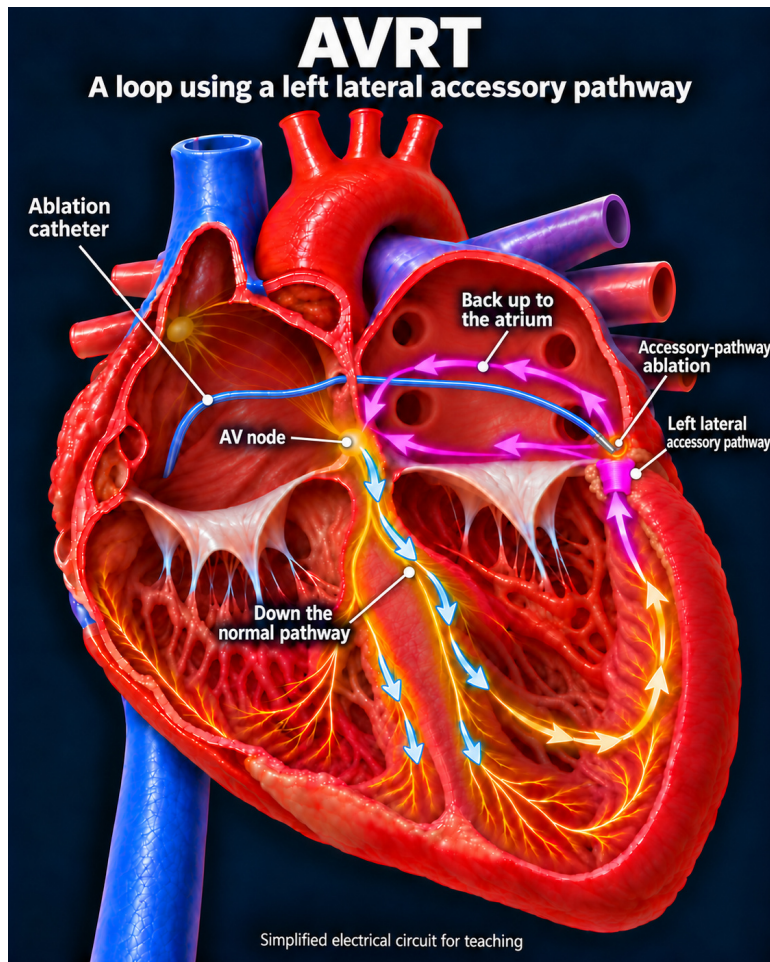
Ablation usually modifies the slow pathway, preventing the signal from completing its loop while aiming to preserve normal AV node conduction.



The catheter tip treats the slow-pathway region to interrupt the AVNRT circuit while aiming to preserve normal AV node conduction. The pathway overlay and catheter position are simplified for teaching.

AVRT: blocking the accessory pathway

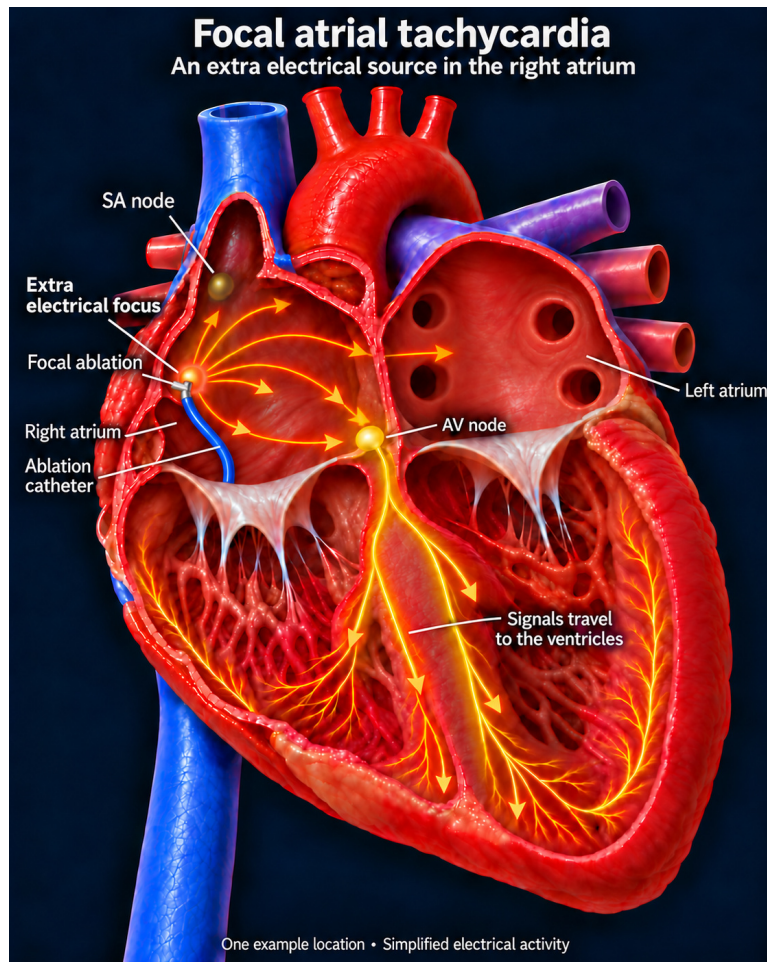
Ablation blocks the accessory pathway, removing the extra connection needed to sustain the circuit.



Blocking the extra pathway prevents the signal from completing its loop.

Focal atrial tachycardia: treating the source

Ablation targets the extra electrical source, preventing that area from driving the heartbeat.



Ablation targets the small area sending the extra electrical signals. Its location varies from patient to patient.

Illustrations simplify the anatomy and catheter positions to explain the treatment target.

Is ablation right for me?

You do not always need to try long-term medication before discussing ablation. It can be an initial treatment choice for appropriate patients.

Success and risks depend on the type and location of the SVT. Your EP will explain the benefits and risks, including bleeding, damage to nearby structures, and possible heart block requiring a pacemaker when treatment is close to the normal conduction system.

Some patients with infrequent, brief, minimally bothersome episodes choose observation with a clear action plan.

The goal: Choose a treatment that controls your SVT and fits your life.

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](#)

Supraventricular tachycardia (SVT)

Section 5 of 6: Living well with SVT

Understand SVT, recognize symptoms, and explore treatment for your heart rhythm.

05 / LIVING WELL WITH SVT

Living well with SVT

SVT can be disruptive, but it does not have to control your life. Many patients return to their usual activities with an appropriate treatment plan. Some common types of SVT can be cured with catheter ablation.

Know your triggers

Some people notice episodes after poor sleep, dehydration, stress, or excessive caffeine or alcohol. Others have no clear trigger. Keep track of patterns and discuss them with your care team.

Reducing triggers may reduce episodes, but it does not remove an extra electrical pathway or abnormal electrical source.

Have a plan for an episode

Work with your care team to create a personal action plan:

- Stop your activity and sit or lie down somewhere safe.
- If your clinician has taught you a vagal maneuver, use it as instructed. Do not massage your neck yourself.
- Take an episode medication only if it has been prescribed for that purpose, following the exact instructions.
- If you can safely capture a watch or handheld EKG recording, save it for your care team. Do not delay medical care to obtain a recording.

- Know when to call the office and when to seek urgent care if the episode does not stop.

Call 911 for chest pain, severe shortness of breath, fainting, or severe weakness or dizziness during a racing heartbeat. Do not drive yourself.

Stay active and keep follow-up appointments

Discuss exercise and any needed activity restrictions with your clinician. Contact your care team if episodes become longer or more frequent, symptoms worsen, or SVT interferes with daily life.

Take medications as prescribed and report side effects. If you have an ablation, follow your procedure-specific recovery instructions and attend follow-up visits.

The goal is to help you feel confident, stay active, and spend less time worrying about your heartbeat.

Supraventricular tachycardia (SVT)

Section 6 of 6: Your next steps

Understand SVT, recognize symptoms, and explore treatment for your heart rhythm.

06 / YOUR NEXT STEPS

Your next steps

If you have been diagnosed with SVT - or have unexplained episodes of a racing heartbeat - schedule a visit with a cardiologist. An electrophysiologist, or EP, is a cardiologist who specializes in the heart's electrical system and can help identify your SVT and discuss treatment options.

What should I bring?

- Rhythm recordings: EKGs from an emergency visit, heart monitor reports, and saved watch or handheld EKG strips.
- An episode log: When episodes occur, how long they last, associated symptoms, and what helped them stop.
- Your medication list: Include doses, supplements, and over-the-counter medications.
- Your priorities: Explain how episodes affect work, exercise, sleep, driving, or your confidence in daily activities.

Questions to ask

- Which type of SVT do I have?
- Do we need a monitor or an EP study to identify it?
- What should I do when an episode starts?
- When should I call the office or seek emergency care?

- What are the benefits and side effects of medication?
- Could ablation provide a lasting cure for my type of SVT?
- What are the expected success rate and risks for my particular ablation?
- Do I need any activity restrictions?

Choose a plan that fits your life

Your treatment decision should reflect your symptoms, the type of SVT, and your preferences. Options may include observation with an episode plan, medication, or catheter ablation.

You do not have to wait until episodes become frequent or disabling to discuss your options with an EP.

[Make an appointment](#)

For severe symptoms during an episode, call 911 rather than using the appointment link.

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: Fast heart rate and SVT](#)

[ACC/AHA/HRS guideline: SVT management](#)

[ACC CardioSmart: Living with SVT](#)

[ACC CardioSmart: Questions to ask](#)

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