



This sheet explains supraventricular tachycardia (SVT) and how it's treated.

Key points

- Supraventricular tachycardia (SVT) is a faster-than-normal heartbeat.
- Babies younger than age 1 might outgrow SVT. Older children usually do not.
- Treatment may be medication or a procedure.

What is SVT?

- Supraventricular tachycardia (SVT) is a rapid (faster than normal) heartbeat (see figure 1).

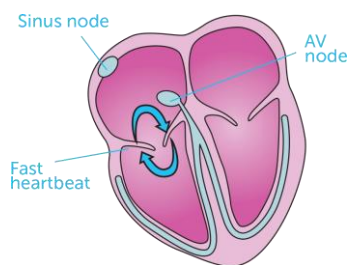


Figure 1.

- It's a fairly common abnormal heart rhythm (arrhythmia) seen in infants, children and adults.
- SVT isn't usually a life-threatening condition. Children with other heart problems (like congenital heart disease or CHD) or babies who have SVT for many hours or days may get very sick from it.

What causes SVT?

- SVT is caused by an extra electrical connection between the top and bottom chambers of the heart.
- It's not clear why some children develop SVT. It's not passed from a parent to a child.
- SVT is sometimes connected with other kinds of congenital heart disease (CHD). It's also seen in otherwise healthy and normal hearts.

How is SVT diagnosed?

- We diagnose SVT using an electrocardiogram, which records the electrical signals in your child's heart.
- Other tests may or may not be needed. Your child may need an exercise test or an echocardiogram (an ultrasound of the heart). Your doctor will talk with you about other tests if they are needed.

What are the symptoms of SVT?

- Older children will usually say that their heart is beating fast or "funny." They may call this pain.
- Infants can't tell you how they feel. This means it's important to look for signs that they may have SVT. These signs include:
 - Fussiness or irritability
 - Pale skin color
 - Poor feeding
 - Tiring with feeding
 - Poor weight gain
 - Fast breathing
- You can also check to see if your child is in SVT. **Listen to your child's heart rate** (pulse) with a stethoscope or **take their pulse** as you were instructed. It's helpful to listen often (try doing it with every diaper change) to get used to normal variation.
 - **If their heart rate is more than 200 beats per minute (or too fast to count):** Make sure your child is calm and quiet and re-check it within a few minutes. **If the heart rate does not slow down, you can try vagal maneuvers (described below).**

How is an episode of SVT treated?

If your child is in SVT but appears well, you can try vagal maneuvers:

If you have an infant under the age of 1:

- Take their rectal temperature
- **Place a bag of ice over your child's eyes and the bridge of their nose for 10 seconds.** Do not block your child's mouth or nostrils. It's normal if your child cries while you're doing this.

If you have an older child:

- Your child can also blow into a blocked straw to give the same effect. Do this for 10-15 seconds.
- Have them do a headstand or handstand with help from an adult, for up to 10 seconds if they feel steady and safe

- **Medication may be required for longer episodes.**
- **Bring your child to the hospital if doing these activities doesn't lower their heart rate within 30 minutes.** Call 911 or your local emergency number if your child looks too sick to travel by car with you.

What are the long-term treatment options for SVT?

As SVT is not life-threatening, the treatment options include:

- **Electrophysiology (EP) study with catheter ablation** as a permanent cure for SVT. This is usually done in older children who weigh more than 50 pounds.
- **Some episodes of SVT are so rare and brief that careful monitoring by your healthcare team may be all that is needed.**

What does having SVT mean for the future?

Babies sometimes outgrow SVT around age 1. Your provider will tell you if your child can stop their SVT medication around age 1. **Do not stop it on your own.** Older children don't usually outgrow SVT.

What should I do if my child has a problem or emergency?

- It's rare for otherwise healthy children to get very sick from short episodes of SVT.
- **Call 911 or your local emergency number** if your child:
 - Has trouble breathing
 - Is very pale or blue
 - Is unresponsive (doesn't answer you or seem to hear you)
 - Is lethargic (very sleepy)

Contact us

- **For routine questions during normal business hours:** Call the Cardiology clinic at 617-355-2079, Monday through Friday 8:30am-5pm.
- **After hours, on weekends and holidays:** Call Boston Children's page operator at 617-355-6369 and ask to page the Electrophysiology (EP)-doctor-on-call at pager #3737.