

Supraventricular tachycardia (SVT)

What is supraventricular tachycardia (SVT)?

SVT is a type of arrhythmia (abnormal heartbeat). It is the most common type of fast heart rate in children. Heart rates of 200 to 300 beats a minute are common. Even though it can be scary, it does not usually cause long term problems.

What causes SVT?

SVT is caused by a problem in the heart's electrical system. This may include:

- Primary electrical problem that causes abnormal heartbeats
- Heart disease and problems present at birth
- Problems after heart surgery
- Dehydration (too little fluid in the body)
- Shock or severe injury

What are the possible symptoms?

The onset of SVT is often sudden. How long it lasts can vary. Your child may have no symptoms, or they may have 1 or more of these:

In babies:

- Sweating without exercise
- Skin color changes
- Hard to wake up
- Poor feeding
- Very cranky and irritable
- Fast breathing

In children and teens:

- Heart rate too fast to count
- Child saying, "My heart is beeping, feels funny or is racing."
- Sweating without exercise
- Skin color changes
- Hard to wake up
- Fainting or passing out
- Shortness of breath

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

Supraventricular tachycardia (SVT), continued

What tests could my child have?

Your child may have 1 or more of these:

- 12 lead electrocardiogram (EKG)
- Echocardiogram (echo or ultrasound of heart)
- Chest X-ray
- Blood tests
- Electrophysiology study (EPS)
- 24-hour Holter monitor
- Event monitor
- Exercise stress test

How do I check my child's heart rate?

Know what your child's normal heart rate sounds like. Once you learn what is normal for your child, you will be able to tell what is not normal.

Use a stethoscope to listen to your child's heart 2 to 3 times a day when your child is resting. To use a stethoscope:

- Make sure the ear tips fit snugly in your ears. The tips should point forward toward your nose.
- Place the round end on the upper part of the left chest. Be sure to place it on your child's skin, not on clothes or sheets. (You may warm the end with your hands ahead of time if needed.)
- Listen for the heart rate. Count the number of beats in 15 seconds and multiply by 4 to get the number of beats per minute. **If the heart rate is too fast to count, it is probably SVT.**

How can I tell if my child is having SVT?

Your baby or child may be having SVT if their heart rate is too fast to count. An older child may also say something like, "My heart is beeping, feels funny or is racing."

- If your child is having SVT and looks and feels well, call their cardiologist (heart doctor). They may advise you to use vagal maneuvers or to take your child to the emergency department (ED).
- **If your child is having SVT and does not look or feel well, call 911 or go to the ED right away.**

What are vagal maneuvers for SVT?

Your child's doctor will talk with you about specific care for your child. They may advise you to try slowing down the heart rate. You can do this by using vagal maneuvers. Some options include:

In babies:

- Quickly put ice and water in a plastic, zipped bag. Put it gently over the skin on your baby's forehead and cheeks for 20 seconds. Do not cover your baby's nose or mouth.
- Hold your baby upside down over a bed for 5 seconds. Then, bring them back to an upright position. Do this 2 times.

In children and teens – ask them to:

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

Supraventricular tachycardia (SVT), continued

- Blow up a balloon or blow through a straw.
- Blow on their thumb as if blowing up a balloon.
- Do a headstand or cartwheel.
- Bear down as if having a bowel movement (BM).

If vagal maneuvers do not help, go to the nearest ED right away. Your child may need medicine to help decrease their heart rate.

Call 911 right away if your child:

- Does not look or feel well.
- Is so weak and tired that they hardly respond to you.
- Is so fussy that you cannot calm them.
- Is working very hard to breathe or finds it hard to take a breath.
- Has any breathing problem that needs care **right away**.

What is the treatment for SVT?

If vagal maneuvers do not work, your child will need medicine to stop the episode of SVT while it is happening. If your child's SVT comes and goes, they may need medicine every day or a special procedure. Talk with your child's care team for more details.

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.