



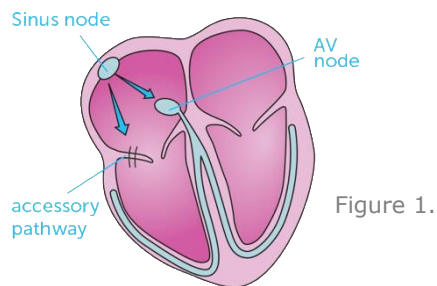
This sheet explains Wolff-Parkinson-White syndrome and the options for treatment.

Key points

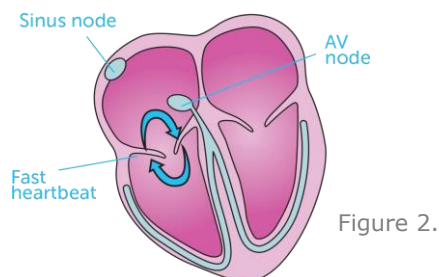
- Wolff-Parkinson-White (WPW) is an extra electrical pathway in the heart that can cause a rapid heartbeat.
- Your child may take medications to treat WPW.
- Some children need an electrophysiology (EP) study with catheter ablation to treat WPW.

What is Wolff-Parkinson-White?

- WPW is an extra, abnormal electrical connection (called an "accessory pathway") in the heart. Most of the time, someone is born with the condition (see Figure 1.)



Accessory pathways can allow electricity to travel backward from the bottom to the top chamber of the heart. This can cause a fast heart rhythm called supraventricular tachycardia (SVT) (see Figure 2.)



- SVT is the most common rhythm problem caused by WPW, but some people with WPW are at risk for more dangerous rhythm problems.
- In rare cases, a child with WPW can develop a dangerous rhythm called "pre-excited atrial fibrillation." This causes the heart to go extremely fast and can lead to fainting or cardiac arrest (when the heart stops beating and pumping).

How is it diagnosed?

- We usually diagnose WPW using an electrocardiogram (ECG or EKG). This test records the electrical signals in your child's heart to check for WPW and other heart conditions.
- Your child may have an exercise test to help doctors understand more about their WPW.
- They may have an echocardiogram (ultrasound of the heart) to rule out other types of heart disease.

What causes Wolff-Parkinson-White?

- The cause is unknown in most cases. It is not usually passed from parent to child but can be in rare cases.
- WPW is more common in children with congenital heart disease (CHD) but can also occur in normal hearts.
- Children with thick heart muscle (called hypertrophic cardiomyopathy) have a higher risk of WPW.

What are the symptoms of WPW?

- Some people with WPW never have any symptoms.
- Others show signs of supraventricular tachycardia (SVT), when the heart beats faster than normal. Your child may also have chest pain, trouble breathing or dizziness.
- If your child has WPW and is fainting, it can be a sign of a more serious heart rhythm problem. Your child should be seen by their doctor right away.

How is WPW treated?

The treatment depends on your child's age and symptoms.

- **Electrophysiology (EP) study with catheter ablation:** This is when we put thin, bendable tubes (called catheters) into large blood vessels, often in the groin. These tubes go into the heart to find and treat the rhythm that's not normal. Most people spend a night in the hospital after this procedure.
- **Medications:** We may give your child medications to reduce their episodes of fast heart rhythm. We may recommend this if your child is too young for catheter ablation or if it's not the best choice for them.
- **Watch and wait:** If your child doesn't have any symptoms (or just a few), we'll keep a close watch on them during regular check-ins.
 - Even if your child doesn't have symptoms, we may still suggest an EP study due to the risk of dangerous rhythm problems in the future.

What problems should I watch for?

- Palpitations (fast heartbeats)
- Trouble breathing
- Chest pain
- Dizziness
- Fainting or passing out - If this happens, call your child's doctor right away.

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

- Vagal maneuvers - These are different things you can do to try to stop the fast heart rhythm at home.

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
- **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 does it having Wolff-Parkinson-White mean for the future?

- WPW can often be treated either with medication or catheter ablation.
- Bring your child to the Emergency Department if these episodes continue.
- Children with WPW may need to limit participation in competitive sports while they are being evaluated. Talk to your child's doctor about sports participation.

Contact us

- **For routine questions Monday-Friday, 8:30 a.m. – 5:00 p.m.:** Please call the Cardiology clinic at 617-355-2079.
- **For urgent questions after hours and on weekends and holidays:** Call Boston Children's page operator at 617-355-6369 and ask to page the Electrophysiology-doctor-on-call at pager #3737.