



Fast or Slow Heart Rhythm (Arrhythmia)



arrhythmias

Abnormal heart rhythms are common in people who have congenital heart disease. Some people born with a heart defect have abnormal heart rhythms during childhood. Others develop issues as they age.

There are many different medicines, devices (pacemaker or ICD) and other treatments that can be used to help control heart rhythm problems.

It is important that you follow up with your adult congenital heart team on a regular basis to keep your heart healthy.

The electrical impulses that cause a heart to beat start in the sinoatrial (SA) node at the top of the heart and go down to the atrioventricular (AV) node in the middle of the heart. From there, the impulses spread through the ventricles at the bottom of the heart. This causes the heart to beat between 60 to 100 times per minute.

When something gets in the way, your heart can beat too fast, too slow or irregularly. This is called an arrhythmia. Treatments may include medicine, pacemaker, implantable cardioverter defibrillator, or a combination of these.

Heart Beats Too Fast

Sometimes, your heart can beat too fast, such as during exercise, activity, feeling anxious or during a fever. This is a normal response. An abnormal fast heartbeat or rhythm can happen if you have a heart defect, heart failure, valve problems or from heart surgery.

Fast rhythms coming from the top chambers of your heart are called atrial arrhythmias and those coming from the bottom of your heart are called ventricular arrhythmias. Examples are:

- **atrial fibrillation:** electrical impulses travel through the atria in a random way



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- **atrial flutter:** impulses go from the atria to the ventricles sending too many unorganized signals
- **supraventricular tachycardia:** abnormal beating that starts in your atria
- **ventricular tachycardia:** back-to-back episodes of early ventricular contractions
- **ventricular fibrillation:** electrical impulses travel through the ventricles in a random way.

Heart Beats Too Slow

A slow heartbeat or rhythm can happen if you have problems with your SA or AV node, from heart surgery (such as Fontan, Mustard, Senning or valve surgeries) or side effects from medicine.

Examples are:

- **sinus bradycardia:** a heartbeat that is slower than normal
- **heart block:** electrical impulses are delayed or blocked from the bottom chambers of your heart. There are 3 types:
 - first degree: electric messages from the top chambers of your heart get delayed before getting to the bottom chambers.
 - second degree: some electrical messages don't get to the bottom chambers.
 - third degree: no electrical message get to the bottom chambers; top and bottom chambers beat at separate rates.

Pay Attention to Your Symptoms

Everyone feels palpitations (racing heart or skipped beats) once in a while. Call your doctor if you:

- have palpitations that don't stop
- feel dizzy
- pass out
- feel really tired (fatigued)
- have shortness of breath
- have confusion.



Confirming Your Arrhythmia

You will likely have an EKG and echocardiogram at each scheduled office visit. If you are having symptoms, you may need more testing, such as 24-hour Holter monitoring, longer event monitoring, exercise stress test or special imaging (heart MRI or CT).

Your treatment options depend on your abnormal heart rhythm, if you have symptoms, and how bad your symptoms are.

Heart rhythm problems can happen at any time, at exercise or at rest. Any heart rhythm problems must be checked by your doctor.

