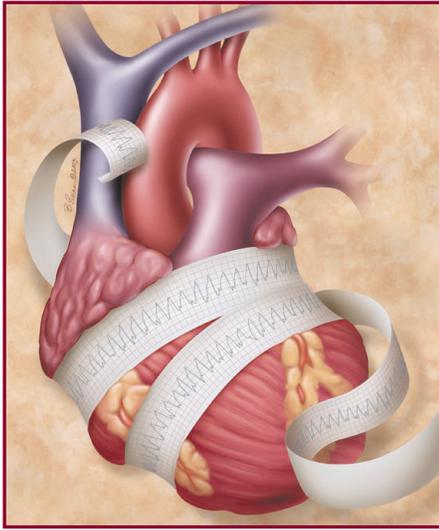


## Rapid Heartbeat



*An abnormally fast heart rhythm, or tachycardia can prove dangerous because the racing interferes with the heart's ability to contract properly. As a result, a victim may suffer a range of symptoms, from lightheadedness to sudden cardiac death.*

Each heart has its own normal rhythm brought about by the seamless flow of electrical impulses that begins in the heart's natural "pacemaker" (sinus node). The electricity flows through the upper chambers (atria), crosses the bridge between upper and lower chambers (atrioventricular node) and travels to the lower chambers (ventricles). This passage of electricity culminates in a carefully coordinated contraction of heart muscle that pushes blood throughout the human body.

Each day, a normal heart contracts about 100,000 times, at a rate anywhere from 60 to 100 times a minute. Changes in rate brought about by

variations in activity, diet, medication and age are normal and common. During intense exercise, a heart may speed up to 160 to 180 or more beats a minute. Running up a flight of stairs or being startled by a noise account for normal increases in heart rates as well. The rapid-fire contractions in all these situations are faster than the "normal" resting range, yet they pose no danger.

When a heart begins to race for no apparent reason, however, it can be a sign of an abnormality in the electrical pathway and is cause for evaluation. Abnormal rapid heart rates can range from 100 beats a minute up to 400 beats a minute and can be relatively harmless or life threatening.

### Symptoms

When the heart beats too quickly, the ventricles do not have enough time to fill with blood and cannot effectively pump blood to the rest of the body. The lack of oxygen can prove deadly and gives rise to the following symptoms:

- Heart skipping a beat
- Beating out of rhythm

- Palpitations
- Rapid heart action
- Shortness of breath
- Chest pain
- Dizziness
- Lightheadedness
- Blackouts
- Temporary blind spots
- Fainting or near fainting
- Chaotic, quivering or irregular rhythm
- Death

### Types of Arrhythmias

Understanding some common terms in the language of cardiac arrhythmias helps sort through the types of rhythm problems. An arrhythmia is any abnormality in heart rhythm. Arrhythmias are categorized in three main ways:

#### Rate

If the heart rate is rapid, or greater than 100 beats a minute, it is considered a tachycardia. Alternatively, a slow heart rate, below 60 beats a minute, is known as a bradycardia. **over** ➔

### MOST DANGEROUS RAPID HEART RHYTHMS

Sudden rapid heartbeats originating in the ventricles are the most dangerous arrhythmias. Ventricular tachycardia, a rapid yet steady beat is dangerous in its own right. Worse, it can turn into ventricular fibrillation, or VF, which is characterized by irregular and chaotic rapid heartbeats. Because the fibrillating ventricular muscle cannot contract and pump blood to the brain and vital organs, VF is the number one cause of sudden cardiac death. Without immediate emergency treatment of an electric shock to restore normal rhythm, an individual loses consciousness within seconds and dies within minutes.

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## Rapid Heartbeat continued

### Location

The location of the problematic electrical circuit helps define the arrhythmia. For instance a rhythm is called supraventricular if it originates above the ventricles (lower chambers). So, the problem is most likely in the upper chambers (atria). It follows that a ventricular arrhythmia is the result of a problem in the lower chambers (ventricles).

### Irregular

The nature of the heartbeat, whether it is steady or chaotic, is another key to categorizing an arrhythmia. A rapid beat that is irregular and chaotic may be a type of fibrillation, or quivering beat.

### MOST COMMON RAPID HEARTBEAT

More than 2 million people in the United States experience atrial fibrillation, making it the most common heart rhythm disorder. In AF, or A Fib, the heartbeat is irregular and rapid. The upper chambers, or atria, may beat as often as 400 times a minute, about four times faster than normal. Although it isn't life threatening, A Fib can lead to other rhythm problems, chronic fatigue and congestive heart failure. Chances of having a stroke are five times higher for those with A Fib than for those without A Fib.

### Who develops rapid heartbeats?

Anyone can develop a rapid heartbeat, even someone young without a previous heart problem. However, problems are more common in those:

- With previous heart trouble
- Over 65 years of age
- Who have suffered damage caused by a heart attack, cardiac surgery or other conditions
- With rare, inherited heart defects