

# Insights on Atrial Fibrillation

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## Editorial

Atrial fibrillation (A-fib) is an arrhythmia (an irregular and often very rapid heart rhythm) that can result in blood clots in the heart. Stroke, heart failure, and other heart-related complications are all increased by A-fib. During atrial fibrillation, the upper chambers of the heart (the atria) beat chaotically and irregularly, out of sync with the lower chambers (the ventricles). Many people with A-fib have no symptoms. A-fib, on the other hand, can cause a fast, pounding heartbeat (palpitations), shortness of breath, or weakness. Atrial fibrillation (AFib) [1-3] is the most common problem with the rate or rhythm of your heartbeat. AFib is caused by disorganized signals that cause your heart's two upper chambers (the atria) to squeeze very quickly and out of sync. They contract at such a rapid rate that the heart walls quiver, or fibrillate.

Occasional (paroxysmal atrial fibrillation), A-fib symptoms come and go, lasting anywhere from a few minutes to several hours. Symptoms can last up to a week at times, and episodes can occur repeatedly. Symptoms may resolve on their own. Some people with sporadic A-fib require treatment. Persistent the heart rhythm does not return to normal with this type of atrial fibrillation. If a person experiences A-fib symptoms, cardio version or medication treatment may be used to restore and maintain a normal heart rhythm. Long-term persistent atrial fibrillation is continuous and lasts more than 12 months. The irregular heart rhythm cannot be restored in this type of atrial fibrillation. Medications are required to regulate the heart rate and prevent blood clots.

Understanding the causes of A-fib may require knowledge of how the heart normally beats. A typical heart has four chambers: two upper chambers (atria) and two lower chambers (ventricles) (ventricles). The sinus node is a collection of cells located in the upper right chamber of the heart (right atrium). The sinus node regulates the heart's natural rhythm. It generates the signal that causes each heartbeat to begin. The signal from the sinus node travels through the two upper heart chambers in a normal heart rhythm (atria). The signal travels via the atrioventricular (AV) node, which connects the upper and lower chambers. The signal's movement causes your heart to squeeze (contract), causing blood to flow to your heart and body.

The signals in the upper chambers of the heart are chaotic in atrial fibrillation. As a result, the upper chambers begin to shake (quiver). The AV node is then bombarded with signals attempting to reach the lower heart chambers (ventricles). This results in a rapid and irregular heartbeat [4,5]. In atrial fibrillation, the heart rate can range from 100 to 175 beats per minute. A normal heart rate is 60 to 100 beats per minute. Blood clots are a potentially fatal complication of atrial fibrillation. The chaotic heart rhythm of atrial fibrillation can cause blood to collect in the upper chambers of the heart (atria) and form clots. If a blood clot in the left upper chamber (left atrium) of the heart escapes and travels to the brain, it can cause a stroke.

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According to research, people who take high doses of steroids possibly for asthma or other conditions – are more likely to develop AFib. This treatment may cause an episode if your chances are already higher. Over-the-counter cold medications containing caffeine or other ingredients that increase your heart rate can also be harmful. Sometimes doctors are unable to identify a clear cause of AFib. When this occurs in people under the age of 65 who do not have AFib-related health conditions, there is an advantage. When compared to people who are older or have clear causes for their AFib, their chances of getting blood clots and strokes are much lower. The most common condition associated with AFib is high blood pressure. It can cause the atria, or upper chambers of your heart, to expand, making it work harder.

Chronic obstructive pulmonary disease (COPD), emphysema, or a blood clot in your lung are all examples of lung disease (pulmonary embolism). COPD, in particular, is frequently associated with high blood pressure, heart disease, ventricle problems, and other issues that contribute to AFib. As you get older, your chances improve, especially after the age of 60. That's partly because you're more likely to develop heart disease and other conditions that can lead to AFib. AFib is an inherited condition. That means that a portion of the cause is contained in the genes you inherit from your parents at birth. If someone in your immediate family had or has it, you are at a higher risk.

## Conflict of Interest

None.

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