



Your doctor may recommend other types of surgeries to treat your arrhythmia.

### TAKE CHARGE: MAKE HEART HEALTHY CHOICES

Underlying heart conditions are a common contributor or cause of arrhythmias. Keep your heart healthy with:

- A heart healthy diet
- Regular physical activity (talk with your doctor before beginning any new exercise plan)
- Quitting smoking
- Cutting down on caffeine and alcohol
- Lowering your stress or finding ways to better manage it
- Avoiding stimulant medications/natural health products (eg. decongestants, “energy boosters”)



### WHERE TO FIND MORE INFORMATION

**The Heart and Stroke Foundation of Canada**  
 222 Queen St., Suite 1402  
 Ottawa, Ontario K1P 5V9  
 Phone: 613-569-4361  
*Check your local phone listings for the regional office nearest you or visit their website.*  
[www.heartandstroke.com](http://www.heartandstroke.com)

**Health Canada**  
[www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)

**Public Health Agency of Canada**  
[www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca)

**American Heart Association**  
[www.americanheart.org](http://www.americanheart.org)

**National Institutes of Health**  
[www.health.nih.gov](http://www.health.nih.gov)

The information found in this PROfile health brochure is of a general nature only. It is not intended to replace the advice of your pharmacist, physician, or other healthcare provider. If you have questions relating to your specific health concerns, please contact your personal healthcare provider.



Your PROfile Pharmacist has many resources to help you understand abnormal heart rhythms and is always available to discuss your health concerns!

EXCLUSIVELY AT



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# Abnormal Heart Rhythm





## WHAT CAUSES ABNORMAL HEART RHYTHMS?

Your heart functions as a strong muscular pump with 4 chambers. The upper chambers are called atria and the lower chambers are called ventricles. An electrical impulse or signal causes these chambers to contract and relax, pumping blood throughout your body. This process creates your heartbeat which can be felt as a pulse and normally occurs 60-80 times per minute. An abnormal heart rhythm is caused by a malfunction of the heart's electrical activity and is called an arrhythmia (or dysrhythmia). Arrhythmia can cause your heart to beat too slowly or too quickly. There are many different types of arrhythmias and they range from harmless to life-threatening.

Arrhythmias are more likely to develop in people with pre-existing heart conditions. Other conditions that can lead to arrhythmias and/or heart disease include:

- High blood pressure
- Diabetes
- Stress
- Increased age
- Smoking
- Excessive caffeine/alcohol use
- Drug abuse

## WHAT ARE THE SYMPTOMS OF ARRHYTHMIA?

Symptoms of an arrhythmia can vary from person to person. Some arrhythmias do not cause any symptoms at all and may only be detected by your physician. Some symptoms include:

- Feeling a chest fluttering
- Shortness of breath
- Chest pain or discomfort
- Tiredness
- Dizziness or lightheadedness
- Fainting or near fainting



## TYPES OF ARRHYTHMIAS

“**Bradycardias**” are arrhythmias where the heart beats too slowly to pump an adequate supply of blood to the body. This can occur for different reasons.

- **Sick sinus syndrome** - A malfunction in the heart's pacemaker which makes it fire too slowly. Some drugs can also slow down the heart rate (e.g. beta-blockers).
- **Heart block** - Caused by a slowing down of electrical signals from the upper chambers (atria) to lower chambers (ventricles) of the heart.

“**Tachycardias**” are arrhythmias where the heart beats too quickly to pump blood effectively. Common types include:

- **Atrial fibrillation** - This is one of the most common types of abnormal heart rhythm. It occurs when the electrical pulse in the atria is disorganized and very fast. This prevents the atria from pumping blood effectively into the ventricles. If atrial fibrillation persists it can lead to the development of blood clots in the atria. These clots can travel from the heart to your brain and cause stroke.
- **Atrial flutter** occurs when an extra electrical impulse travels around the atria in a circle, causing the heart to contract at a higher rate than normal.
- **Wolf-Parkinson-White syndrome** is an inherited condition caused by abnormal development of the heart's electrical system. It is usually diagnosed in adolescence or early adulthood and most people with this condition lead a very normal life.

Tachycardias can also occur in the ventricles of the heart. These arrhythmias (**ventricular tachycardia**, **ventricular fibrillation**) tend to have a bigger potential to be life-threatening.



Treatment of arrhythmia is aimed at stabilizing the heart rhythm and lowering the risk of further complications. Not all arrhythmias need treatment.

In some people **Lifestyle changes** such as avoiding stress, decreasing alcohol/caffeine consumption, and increasing physical activity may be useful.

Your doctor may teach you how to safely do vagal maneuvers (like holding your breath and straining) to stop some tachycardias of the upper chambers of the heart. These maneuvers may slow your heart rate by affecting the vagal nerves, part of the nervous system that controls your heartbeat.

Your physician may prescribe **Medications** to control your heart rhythm (e.g. amiodarone, quinidine, propafenone) or to slow your heart rate (e.g. beta-blockers, verapamil, diltiazem). Each medication has its own particular benefits for certain types of arrhythmias and its own profile of side effects. If you have atrial fibrillation, your doctor may recommend anticoagulant medication to lower your risk of stroke. Your PROfile Pharmacist will be happy to help you with any questions or concerns about your medicines.

In some cases lifestyle changes and medication may not be enough and surgery or other procedures may be required. **Cardioversion** resets the heart rhythm by delivering an electrical shock through the chest wall while you are under sedation. **Cardiac ablation** destroys the small part of the heart tissue that has been identified to be causing the abnormal heart rhythm. By creating this “block” on the pathway the arrhythmia is usually stopped. A **Pacemaker** is a device that is implanted under the skin near the collarbone and is connected to the heart with wires. It takes over your natural pacemaker to regulate the heart rate and rhythm. An **Implantable Cardioverter-Defibrillator (ICD)** is similar to a pacemaker but is designed to monitor your heart rhythm and treat any detected arrhythmias. When an arrhythmia is detected it sends an electrical shock to the heart to restore the normal heart rate and rhythm. It is generally used in people at risk of developing dangerous and/or life-threatening arrhythmias.