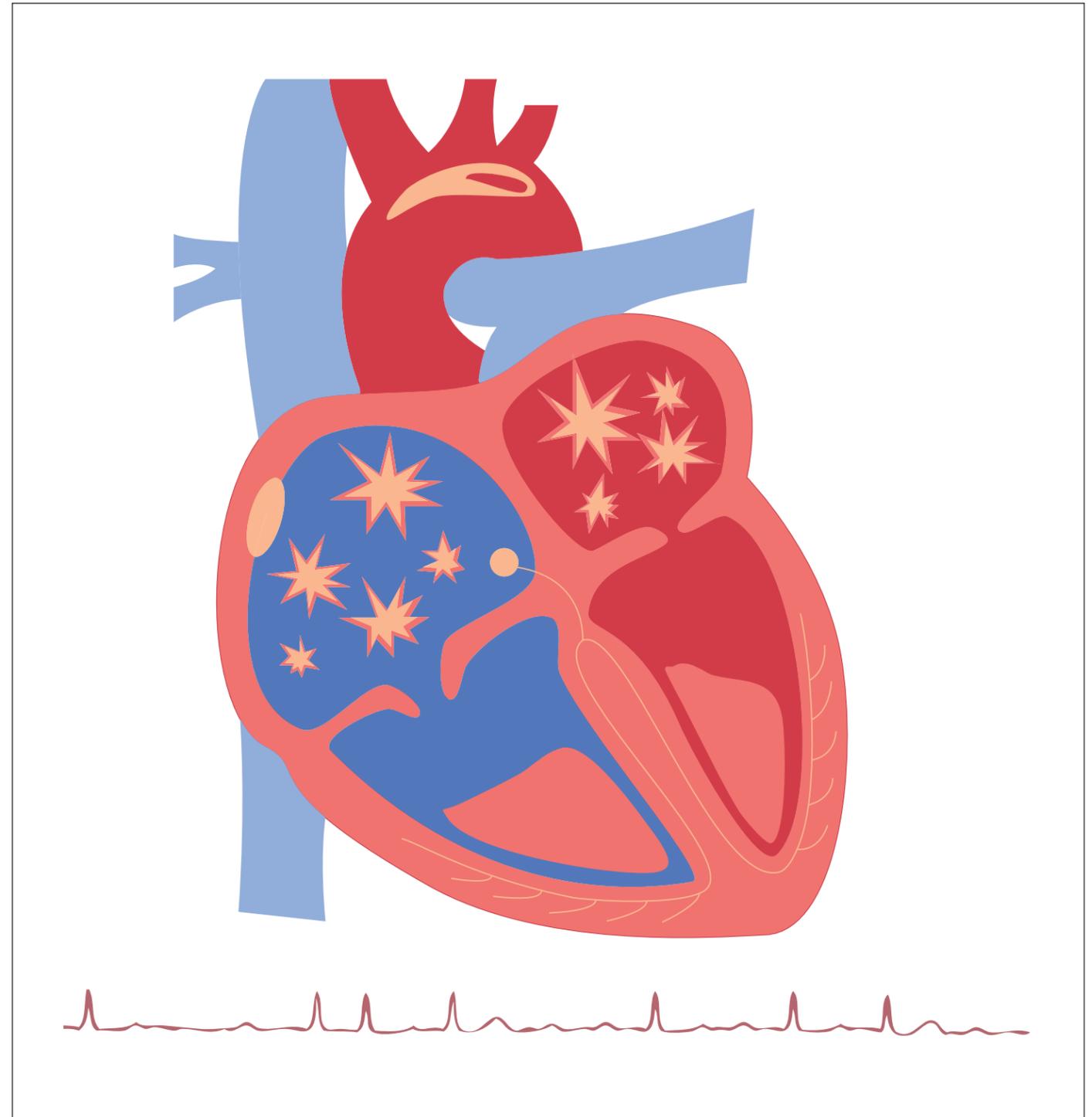


INFORMATION FOR PATIENTS AND FAMILIES

A Patient's Guide to Living with Atrial Fibrillation



GOALS

- To help you manage your atrial fibrillation
- To provide education to patients and other healthcare teams
- To provide access to drugs and other treatment for patients with atrial fibrillation

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USEFUL WEBSITES

American Heart Association Patient Information:

<http://www.americanheart.org/presenter.jhtml?identifier=4451>

Heart and Stroke Foundation:

http://www.heartandstroke.com/site/c.iklQLcMWJtE/b.5052135/k.2C86/Heart_disease_Atrial_fibrillation.htm

Heart Rhythm Society Patient Information:

<http://www.hrsonline.org/PatientInfo/HeartRhythmDisorders/AFib/index.cfm>

“Up to Date” Patient Information:

http://www.uptodate.com/patients/content/topic.do?topicKey=~Q66zKoLyIHUjI&selectedTitle=1~150&source=search_result

WedMD Patient Education Centre:

<http://www.webmd.com/heart-disease/atrial-fibrillation/atrial-fibrillation-overview>

- **Eat well**

Choose foods that are low in fat. The daily amount of fat in what you eat should be no more than 65 grams for women and 90 grams for men. A low fat diet helps lower blood cholesterol levels. Your doctor may also ask you to take drugs that lower cholesterol. Use Canada's Food guide to Healthy Eating can help you to plan healthy meals.

Tips for healthy eating can be:

- Eat more whole grains, fruits and vegetables
- Use very little salt (If your blood pressure is high, you may need to stop eating foods with salt).

Warfarin gets in the way of how vitamin K works in your body. If you are taking warfarin (coumadin), foods such as green leafy vegetables are high in vitamin K and can change your INR (International Normalized Ratio) levels. A change in your INR level can change the amount of coumadin you may need. If you are not sure about what you can or cannot eat, ask your healthcare team. We want to ensure you maintain a balanced diet and a steady intake of vitamin K. This will help control your INR level and warfarin dose.

- **Exercise regularly**

Exercise helps you lose weight, control cholesterol, reduce blood pressure and reduce stress. Exercise is also good for the health of your heart, even if you have atrial fibrillation. Before you start any exercise program talk to your healthcare team. They will tell you what type of exercise are safe for you. If you take drugs for AF your heart rate may not increase as much during exercise. This means that the drugs are doing a good job of slowing your heart rate.

- **Take caution with certain drugs**

Some over-the-counter (OTC) drugs such as nasal sprays, cold and herbal pills may worsen AF. Ask your healthcare team before taking them.

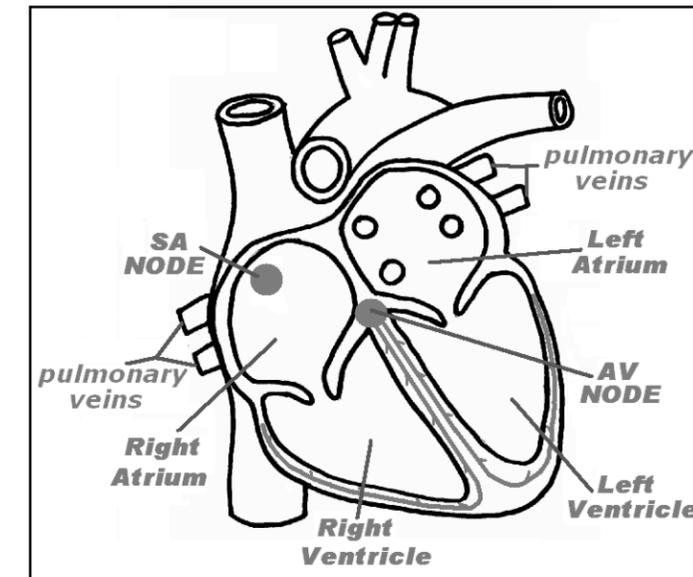
FOLLOW-UP

If your AF is monitored and treated regularly, the risks and/or symptoms can be reduced. The key is for you and your healthcare teams to decide on and use the treatment that works best for you.

WHAT MAKES A HEART BEAT?

The heart is a large muscle with four chambers. There are two top chambers (left and right) called the atria and two bottom chambers (left and right) called the ventricles. The right-sided chambers collect “used” blood and then pump the blood to the lungs. In the lungs, blood gets oxygen. The left sided chambers receive oxygen rich or “fresh” blood and then pumps the blood out to the rest of the body (tissues, organs, muscles, etc.).

The heart muscle contracts (or pumps) because of signals it gets from your body's natural pacemaker. The body's natural pacemaker is called the sinoatrial node (SA node). The brain and the SA node work with each other to tell the heart how fast to beat (for example: beat

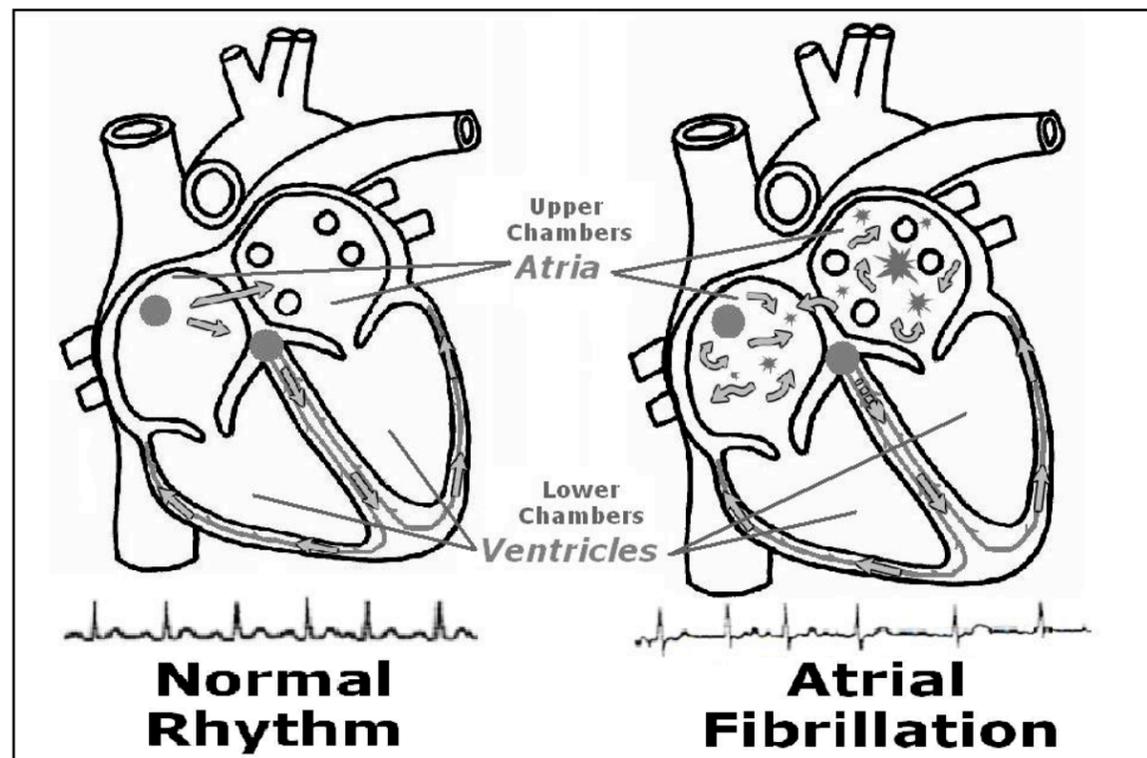


slower when resting and faster during exercise). A normal resting heart rate is about 50 to 90 beats per minute. A regular heart beat makes the sound “lub-dub”. The SA node sends electrical signals to the upper chambers. When electrical signals from the SA node reach the upper chambers, the upper chambers beat (“lub”). Signals make their way to the lower chambers via the atrioventricular node (AV node). This causes the lower chambers to beat (“dub”).

WHAT IS A TRIAL FIBRILLATION?

Atrial fibrillation (AF) is a common rhythm problem of the upper chambers of the heart (atria). The rhythm problem in the upper chambers of the heart may cause irregular and fast movement to the lower chambers of the heart (ventricles). The picture below shows the difference between a normal heart rhythm and an AF rhythm.

AF patients have fast and disorganized electrical activity which causes abnormal heart beats. The atria “fibrillate” or quiver at about 300 to 500 beats per minute. The ventricles beat at about 80 to 200 beats per minute. As mentioned before, in a normal resting heart the ventricles beat at 50 to 90 per minute. This irregular heartbeat may reduce how well the heart pumps blood to the body. This happens because the ventricles may not have enough time to fill properly between beats.



During AF, the upper chambers of the heart do not fully contract in the normal way. This increases the risk that blood clots may form. If a blood clot forms, it could break free and travel through a blood vessel to the brain. A blood clot in the brain can cause a stroke (brain attack).

Atrial flutter is a condition related to AF, but the rhythm is more organized. Atrial flutter usually causes a rapid, regular heart rhythm. During atrial flutter, the upper chambers contract at a very fast rate (250 to 300 beats per minute), and the lower chambers contract at 75-150 beats per minute. It is possible that patients can have both AF and atrial flutter. But, that is rare. When a person has both of these heart rhythms, one may be causing the other. For example, atrial flutter may be causing AF.

Some of the information in this booklet on treatment of AF also applies to atrial flutter.

WHAT CAUSES ATRIAL FIBRILLATION?

AF is the most common type of heart rhythm problem (arrhythmia). More than 200,000 Canadians have AF. About 4% of the population over 65 years of age has AF. But, people under age 65 can have AF as well. The risk of getting AF increases with age. About 10% of people over 80 years old live with AF. Some people develop AF without any known cause and without heart disease (known as 'lone AF').

4. Catheter Ablation Therapy:

If the other treatments do not work, or they cause too many side effects, a catheter ablation therapy may be needed. If catheter ablation therapy is needed, your healthcare provider will tell you more about it.

5. Anticoagulation:

Anticoagulation refers to thinning of the blood. Since AF increases your risk for stroke almost everyone with AF needs anticoagulation. The exact type of anticoagulation or "blood thinner" depends on your risk factors for stroke. Examples of such risk factors are heart failure, high blood pressure, age (over 75 years), diabetes, and prior stroke or stroke warning (transient ischemic attack or TIA). Some patients only need to take aspirin every day to reduce the risk of stroke. Others require a stronger blood thinner such as warfarin (also called coumadin). Patients taking warfarin need the dose changed based on the results of a blood test called INR (International Normalized Ratio).

Patients going for a cardioversion or catheter ablation therapy need to be on blood thinners before and after the procedure. Warfarin (coumadin) is taken for about 1 month before and 3 to 6 months after the procedure. The need for blood thinners is different for every patient. Speak with your doctor to find out which blood thinner is right for you.

HEALTHY LIFESTYLE CHOICES

- **Check your blood pressure regularly**

High blood pressure can increase your risk for AF. See your family doctor regularly to check your blood pressure. High blood pressure (hypertension) is often controlled by diet, healthy lifestyle changes (like exercise) and medicines. By checking your blood pressure regularly you can help your healthcare team know how to treat you.

- **Stop smoking**

Smoking increases your risk for heart disease and atrial fibrillation. There are community programs to help you stop smoking. A nicotine replacement therapy is one way to help deliver nicotine to the body without smoking. Products like this can help deal with the cravings and withdrawal symptoms. If you are thinking of stopping, ask your healthcare team for help.

- Anti-arrhythmic drugs (AAD) are used to restore or keep a normal heart rhythm. These are also known as “rhythm control” drugs.
 - Examples of AADs are rythmodan, flecainaide, propafenone, dronedarone, sotalol and amiodarone.

For some patients RCD and AAD may need to be taken together. But some patients only need one kind of medicine.

2. When you need it treatment - **“Pill in the Pocket” Approach:**

This choice is used if you only have AF once in a while, for example once every few months. Only having AF sometimes is called “Paroxysmal AF.” When you are having AF symptoms, both AAD and RCD medicines can be taken together. Examples of symptoms are:

- fast heart rate
- feeling of “skipped” heart beats
- problems breathing (shortness of breath)
- dizziness or feeling faint
- feeling tired or not able to do daily activities
- chest pain, tightness or pressure

Taking both AAD and RCD medicines when feeling any of the above-listed symptoms, can help bring your heart beat back to normal. You may go to the Emergency Room (ER) less as you are better able to control your abnormal heart beats. If “Pill in a Pocket” works for you, you may not need to take pills every day for AF. You may still need to take blood thinners.

3. **Electrical Cardioversion:**

If AF does not stop or if symptoms do not improve with AAD and/or RCD medicines, an electrical shock (or cardioversion) can be given. You will be given a drug (sedation) that will keep you relaxed during the electrical cardioversion. After you are given drugs to help you relax, a shock is given across the chest. The shock helps restore your heart to a normal rhythm. After the electrical cardioversion, AADs may be given. The AAD will help your heart stay in normal rhythm and prevent further AF.

The risk of getting AF is higher if any of the bullet points in the box below apply to you:

- High blood pressure
- Diabetes
- Coronary heart disease
- Mitral valve disease
- Thyroid disease
- Lung disease
- Sleep Apnea
- Recent open-heart surgery
- Over 60 years old
- Drinking more than 2 regular sized glasses of alcohol a day

Certain factors that may prompt AF episodes are still being studied. It is possible that too much caffeine may cause an AF episode as well any of the risks listed above. Stress may be another factor that can prompt an AF episode. It is important for people living with AF to try to avoid stress. Stress can prompt AF symptoms. Everyone should think about the types of things that cause you stress and try to find ways to manage them. Some examples of how to calm yourself when feeling very stressed are:

- close your eyes and breathe, try to relax
- be aware of the factors that prompt your AF episodes
- look for personal and professional support
- speak to your healthcare team about ways of managing stress

WHAT ARE THE SYMPTOMS OF ATRIAL FIBRILLATION?

Many people live with AF. If your AF is managed well with treatment, you can live a normal life. AF does not cause a heart attack or sudden cardiac arrest. Some people feel fine during AF, but others have one or more symptoms of:

- Feeling of a rapid heart rate or feeling of “skipped” heart beats
- Problems breathing (shortness of breath)
- Dizziness or feeling faint
- Feeling tired or not able to do daily activities
- Chest pain, tightness or pressure

WHAT ARE THE TYPES OF ATRIAL FIBRILLATION?

1. **Paroxysmal AF** – these are episodes of AF that come and go. The AF usually stops on its own within 48 hours. Depending on the symptoms, these episodes can be reduced with treatment.
2. **Persistent AF** – these are episodes that last longer than 7 days. Usually, treatment is needed to help the heart return to a normal rhythm.
3. **Permanent AF** – this type of AF is chronic. Chronic means your AF will usually last longer than 1 year. With permanent AF it may be hard to restore the heart back to a normal rhythm.

HOW CAN WE TELL (DIAGNOSE) YOU HAVE AF?

Your healthcare team will look over your health history; do a physical exam and some tests. The tests will help us tell if you have AF. An **electrocardiogram** (ECG) records your heart beat and confirms if you have AF. Other tests that may be used for seeing if you have AF are:

- A **Holter monitor** is a special device that monitors your heart rhythm. You might be asked to wear the Holter for 24 to 48 hours.
- **Event recorder** is like a Holter monitor but is worn for 2 weeks. This device records the heart rhythm when you press the button during symptoms.

Other useful tests that can help in the diagnosis of AF are:

- **Echocardiogram** (echo - ultrasound) creates a video picture of the heart beating, using sound. The picture shows the size and function of the heart chambers, heart valves and blood flow.
- **Blood tests** show how well the thyroid, kidney and liver are functioning. Blood test for electrolytes and hemoglobin levels may also be done. These test results can show possible causes of your AF.
- **Chest x-ray** to see basic heart and lung structures.
- **Nuclear stress test** to tell if the blood flow to the heart muscle is normal.
- **Heart CT (or CAT) Scan** is used to see the heart chambers and vessels of the heart.
- **Electrophysiology study (EPS)** to tell if you have other heart rhythm problems. EPS shows the exact area of the rhythm problem.

WHAT ARE YOUR TREATMENT OPTIONS?

Treatment for AF is different from patient to patient. It depends on your symptoms and how AF is affecting you. Most patients will need treatment to prevent blood clots from forming and causing a stroke. It is important to keep your heart beating at a normal rate. There is treatment for slowing down the heart rate, “rate control”. If your heart rate is too fast and is not treated for a long time, the heart muscle can become weak. Some patients may also need “rhythm control.” For rhythm control, a pill or a procedure can help your heart return to its normal rhythm.

There are many ways to treat AF. Treatment is different for every patient. The results of your tests will help show which choice of treatment is best for you. Ways of treating AF could be as follows:

1. **Everyday Treatment with Drugs /Medicines:**

- Rate control drugs (RCDs) are used to help control the heart rate. There are several types of RCDs: beta-blockers, calcium channel blockers and digoxin.
 - Examples of beta blockers are metoprolol and bisoprolol.
 - Examples of calcium channel blockers are diltiazem and verapamil.