



UNIVERSITY OF OTTAWA
HEART INSTITUTE
INSTITUT DE CARDIOLOGIE
DE L'UNIVERSITÉ D'OTTAWA

LIVING WITH ATRIAL FIBRILLATION

A Guide for Patients and Families



PLEASE BRING THIS BOOK WITH YOU TO THE HEART INSTITUTE

Patient Name: _____

Please complete the following information:

**Contact Person
(relative, friend)**

Name _____

Phone Number
(Home) _____

Phone Number
(Cell) _____

Family Doctor

Name _____

Phone Number _____

Pharmacy

Name _____

Phone Number _____

Cardiologist

Name _____

Phone Number _____

Other (Specify)

Name _____

Phone Number _____

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Understanding Atrial Fibrillation

You have been diagnosed with a condition called Atrial Fibrillation. The purpose of this guide is to:

- Provide information about atrial fibrillation
- Give you an idea of the treatment options for this condition
- Give you some tips on living *well* with atrial fibrillation

The Normal Heart

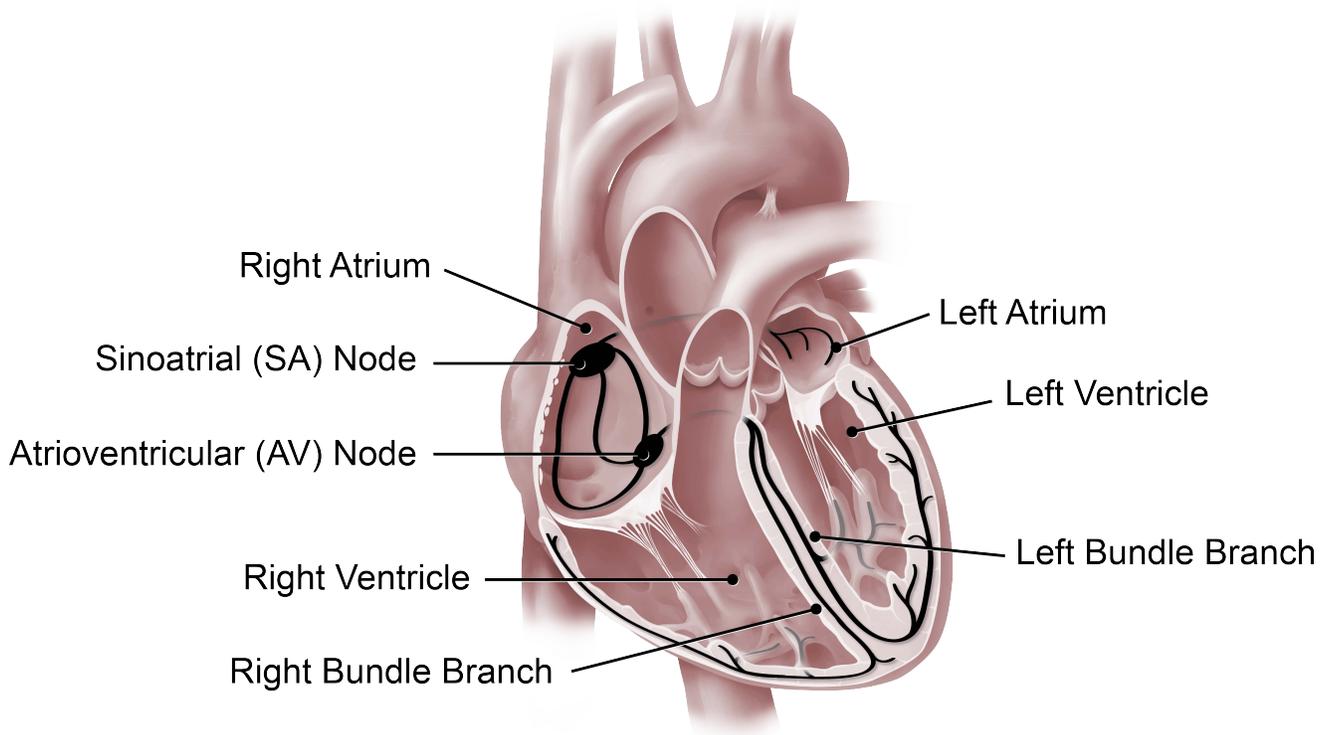
Your heart is a muscle that works like a pump. The main job of your heart is to pump blood throughout your body. There are four chambers; two upper chambers called atria and two lower chambers called ventricles.

The atria collect blood returning to the heart and transfer it to the ventricles.

The ventricles squeeze the blood out to the rest of your body.

The different chambers in your heart work together. The right atria and ventricle pump blood to your lungs to pick up oxygen. The left atria and ventricle pump the oxygen-rich blood to the rest of your body.

The pumping of your heart is regulated by an electrical current or impulse—much like a spark plug in a car. The electrical impulse starts in the sinoatrial (SA) node and then spreads throughout both atria like ripples in a pond. This causes both atria to contract, squeezing blood into the ventricles.



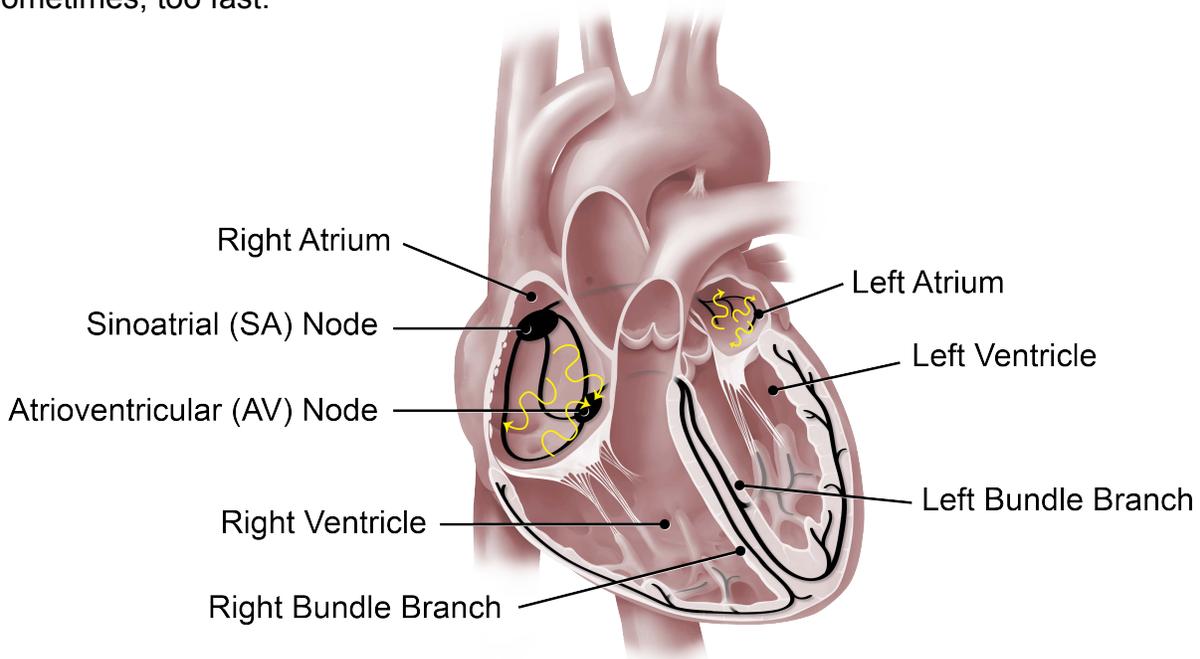
The impulse then travels down to the atrioventricular (AV) node which is like a wire that connects it to the ventricles. The AV node splits into two branches, the left bundle branch and the right bundle branch. From the AV node, the impulse spreads through the bundle branches allowing the even spread of the electrical signal to both ventricles at the same time.

Both ventricles then contract to squeeze the blood out to your body.

When the heart is working properly, this cycle repeats 50 to 150 times per minute.

Atrial Fibrillation

In atrial fibrillation, the electrical impulses start firing from all over both atria in an irregular pattern. With too many random triggers firing, your heart beats irregularly and, sometimes, too fast.



In atrial fibrillation, the electrical impulses are generated *outside* of the SA node. This causes the heart to beat irregularly, interrupting the smooth flow of blood through the atria.

There are different types of atrial fibrillation:

Paroxysmal: You have bouts of atrial fibrillation that come and go. They may last from a few seconds up to a few days, but usually, they start and stop on their own.

Persistent: Your episodes of atrial fibrillation last longer than a week and usually will not stop without some kind of treatment.

Permanent : Your heart is always in atrial fibrillation. Your doctor may have tried several different types of treatments, but nothing has been able to keep your heart in a normal rhythm. It is unlikely that your heart will ever go back to a normal rhythm.

In many cases, patients who have atrial fibrillation lead perfectly normal lives.

Causes of Atrial Fibrillation

Atrial fibrillation is a common condition in older adults. According to the Heart and Stroke Foundation, about 1 out of every 10 people over the age of 80 has atrial fibrillation.

Different types of heart conditions such as heart valve disease, heart attacks or heart failure can cause atrial fibrillation. Any type of infection that causes inflammation of the heart muscle or the outer layer of the heart may lead to atrial fibrillation. Some people who are born with heart problems may develop atrial fibrillation later on in life.

Other health conditions such as high blood pressure, diabetes, sleep apnea, or lung disease may also increase the risk of developing atrial fibrillation.

In many cases, people develop atrial fibrillation for reasons that cannot be figured out.

Atrial Flutter

- Atrial Flutter is similar to atrial fibrillation but less common.
- Many patients have both atrial flutter and fibrillation.
- They are very closely related; in fact the treatments for both are similar and the risk of stroke from both is the same.

Atrial Flutter is different

In Atrial flutter, the electrical impulses are more regular but still rapid and inefficient. Some people with atrial flutter feel quite fine and don't have any symptoms. Other people may have symptoms similar to atrial fibrillation.

Common Symptoms of Atrial Fibrillation

Atrial fibrillation can cause you to feel any of the following symptoms:

- A rapid heartbeat or feeling "skipped" heart beats
- Breathing problems (shortness of breath)
- Dizziness or feeling faint
- Tiredness or lack of energy
- Chest pain, tightness or pressure
- Anxiety, feeling like something is not quite right

These are the most common symptoms. You may feel only one or two or you may have different symptoms.

Many people have no symptoms at all.

In fact, many people with atrial fibrillation are able to keep their symptoms at a minimum and have an excellent quality of life.

Diagnosing Atrial Fibrillation

Often, atrial fibrillation is diagnosed when people develop symptoms and go to their doctor or to the emergency department. Other times, it is picked up during routine examinations.

In order to diagnose atrial fibrillation, your doctor will review your medical history, conduct a full physical exam and order some tests.

Some of the more common tests that your doctor may order include:

- **Electrocardiogram (ECG):** This test records the electrical activity of your heart and is important for confirming if your heart rhythm is in atrial fibrillation
- **Holter Monitor:** This test is like an ECG except that it records your heart's electrical activity for up to 48 hours. It requires you to be connected to a small portable device which you carry with you in a pouch or on a shoulder strap for two days. The Holter Monitor is helpful if you have only occasional bouts of atrial fibrillation that did not show up on an ECG.
- **Event Recorder:** Similar to a Holter Monitor, you wear this device for up to two weeks. You press the "record" button whenever you experience anything you think is abnormal, such as rapid heartbeats, dizziness or chest pain. These recorders may also pick up episodes automatically.
- **Echocardiogram:** This is a special ultrasound test for the heart that lets your doctor have a closer look at the chambers and valves in your heart.

Possible Complications of Atrial Fibrillation

Left untreated, atrial fibrillation puts you at risk for serious problems such as stroke or heart failure.

Stroke

Because your atria cannot move blood properly, it starts to pool and get stuck in the small corners and grooves of the heart. Once stuck, the blood can start to clot. With all the irregular contractions in your atria, these clots can break free and get pumped into the circulation.

If a clot reaches the brain, it can get lodged in one of the blood vessels and cut off the blood supply to that part of the brain. This is a stroke.

Rarely, these clots can also go to other parts of your body and cause other complications.

Heart Failure

If atrial fibrillation is not controlled, your heart can become weaker and you may develop heart failure.

Heart failure occurs when your heart has to work too hard to keep blood flowing throughout your body. As a result, extra fluid builds up. This fluid retention can cause swelling of your ankles and lower legs, or it can build up in your lungs resulting in breathing difficulties and extreme fatigue.

Other Complications

For some people, atrial fibrillation can cause great tiredness, weakness, or breathing problems. Uncontrolled atrial fibrillation can also cause chest pain, dizziness, and extreme fatigue. In the elderly, it can also cause bouts of confusion.

Although not life threatening, these symptoms can limit your everyday activities and lower your quality of life.

Treating Atrial Fibrillation

By itself, atrial fibrillation is usually not a life threatening condition, but it still must be treated because:

1. Atrial fibrillation can impact your quality of life and prevent you from doing the things that you normally do.
2. Atrial fibrillation slows down the regular flow of blood through the heart, increasing the chances that the blood will pool and clots will form. If a clot is pumped out of the heart, it can lead to a stroke.

Your plan for managing atrial fibrillation will include:

- Firstly, treatment to **reduce your symptoms** and improve how you feel
- Secondly, treatment to reduce your risk of having a stroke or other complications

Reducing Symptoms with Medications

There are two main approaches to treating your symptoms: **rate control** to slow your heart to a more normal rate and **rhythm control** to a more regular heart rhythm.

The choice of treatment plan will depend on a number of factors, including:

- The type of atrial fibrillation you have
- Your other heart conditions or health issues
- Your symptoms
- Your preferences

If my atrial fibrillation is under control, am I still at risk for having a stroke?

As of yet, there is no proof that either the rate or rhythm control treatment will reduce your risk of having a stroke – this remains the job of anti-coagulant medications.

Many patients start with one treatment but may need to change it as their condition progresses.

Rate Control Medications

The goal of rate control medications is to slow your heart to a more normal rate by reducing the number of abnormal electrical impulses. Some examples of rate control medications include:

- Beta blockers such as Metoprolol (Lopressor[®]) or Bisoprolol (Monacor[®])
- Calcium channel blockers such as Diltiazem (Cardizem[®])
- Cardiac glycosides such as Digitalis (Toloxin[®])

Rhythm Control Medications

The goal of rhythm control medications is to restore a more regular heart rhythm. The most common rhythm control medications are:

- Amiodarone (Cordarone[®])
- Dronedarone (Multaq[®])
- Flecainide (Tambocor[®])
- Propafenone (Rythmol[®])
- Sotalol (Sotacor[®])

Procedures for Rhythm Control

The most common procedures for treating atrial fibrillation are electrical cardioversion and catheter ablation.

Electrical Cardioversion

This procedure involves delivering a shock to your heart much like a defibrillator would only with a smaller amount of electricity. If you are scheduled to have a cardioversion, you will come in to the Heart Institute for the day. You will be given a medication to help you sleep and relax. Once this medication has taken effect, the defibrillator pads will be placed on your chest and a small shock will be delivered. You will not remember the shock and you will not feel any pain. After the procedure, your doctor may start you on a rhythm control medication to help your heart to stay in normal rhythm.

Cardioversion is only a short term solution. In most patients, the atrial fibrillation comes back.

Catheter Ablation

This procedure involves inserting thin wires through the veins in your groin or neck. The tip of the wire is directed towards the areas in your heart that are firing off the irregular impulses. Once properly positioned, it delivers a small jolt of radiofrequency electrical current to burn out the tiny areas.

Before you are scheduled for any of these procedures, your doctor will provide you with more detailed information and the opportunity to ask questions.

Other Treatments to Manage Symptoms

In some situations, your doctor may recommend that you have a pacemaker implant or surgery called a maze procedure to treat your atrial fibrillation. If this is the case, your doctor will provide you with more detailed information.

Reducing Your Risk of Stroke or Other Complications

Estimating the Risk of Stroke and Bleeding

Medications that prevent blood clots from forming are used to reduce your risk of having a blood-clot related stroke. The type of medication used depends on your risk of having a stroke as well as your risk of bleeding.

People who have heart failure, high blood pressure, or diabetes are at higher risk of stroke. Also, if you are 65 years or older or if you have already had a stroke or mini-strokes in the past, you are also at higher risk.

Your *risk of bleeding* also has to be considered because the medications can cause bleeding.

People with liver or kidney problems, or who have high blood pressure may have a higher bleeding risk. Also, some medications that you are already taking or if you drink alcohol regularly may also increase the bleeding risk.

When deciding the best way to reduce your risk of stroke, your doctor will consider all of these facts before recommending which strategy is best for you.

Signs of a Stroke

People with atrial fibrillation are ***up to five times more likely to have a stroke***. It is important to know the signs:

- **Weakness** – Sudden loss of strength or sudden numbness in the face, arm, or leg (even if temporary)
- **Trouble speaking** – Sudden difficulty speaking or understanding, or sudden confusion, even if temporary.
- **Vision problems** – Sudden trouble with vision, even if temporary.
- **Headache** – Sudden severe and unusual headache
- **Dizziness** – Sudden loss of balance, especially with any of the above signs.

If, at any time, you think you may be having a stroke, call 911

Anticoagulant Medications – Most Commonly Recommended

To prevent blood from clotting inside your heart, your doctor may put you on a medication called an anticoagulant—sometimes called a blood thinner.

Anticoagulants don't actually thin your blood. Rather they increase the time that it takes to form a blood clot. The type of anticoagulant that your doctor recommends for you will depend on other medical conditions that you may have along with your overall risk of having a stroke.

Anticoagulants are very effective at reducing your risk of stroke and are recommended for almost all people who have atrial fibrillation.

Some anticoagulants require regular blood tests when first taking them until the best dose for you is determined.

Antiplatelet Medications – Less Commonly Used

Other medications also prevent blood clots but work in a different way.

Platelets normally float around in your blood stream. Their job is to form blood clots in the case of a bleeding injury. Antiplatelet medications reduce the ability of platelets to stick together and form clots.

Antiplatelet medications are used less commonly because they are not as effective as anticoagulants in reducing your risk of having a stroke.

The following table lists some of the most common types of anticoagulant and antiplatelet medications. Once your doctor determines the best medication, you will be able to get more details and ask questions. Your pharmacist is also a good source of information about your medications.

Type of Medication	Examples	
Anticoagulants	Dabigatran (Pradaxa [®])	Apixaban (Eliquis [®])
	Rivaroxaban (Xarelto [®])	Warfarin (Coumadin [®])
Antiplatelets	ASA (Aspirin [®])	
	Clopidogrel (Plavix [®])	

Cautions

When you are taking anticoagulant or antiplatelet medications, your risk of bleeding is higher. See the Heart Institute *Anticoagulation Medication Patient Information* booklet for more information.

Here are a few tips to prevent bleeding problems:

- Use a soft toothbrush
- Avoid contact sports or activities in which injuries are common
- If you have a minor cut or bruise, treat it as you normally would but if the bleeding does not stop, seek medical help immediately

Make sure your dentist knows that you are taking anticoagulant or antiplatelet medications before you have any dental work done.

Carry a list of all of your medications so that any doctor or other health care professional (nurse, physiotherapist, etc) knows that you take this type of medication.

Seek immediate medical attention for the following:

- Large amounts of noticeable bleeding
- Red, dark, coffee, or cola coloured urine
- Bowel movements that are red or look like tar.
- Bleeding from the gums or nose that does not stop quickly
- Vomit that is coffee coloured or bright red
- Anything red in colour that you cough up.
- A cut that will not stop bleeding within 10 minutes
- A serious fall or hit on the head.
- Any unexplained dizziness or weakness.

Living with Atrial Fibrillation

Atrial fibrillation is a chronic disease that cannot be cured. However, modern treatments can give most people living with atrial fibrillation an excellent quality of life.

Like any health problem, living with atrial fibrillation can be disruptive and frustrating because it can make you feel unwell, limit your everyday activities, and take up a lot of your time and energy.

As you learn to live with atrial fibrillation, expect to go through many different feelings and emotions.

The following pages cover some of the things you can do to live well with atrial fibrillation.

What to Do If You Have Symptoms

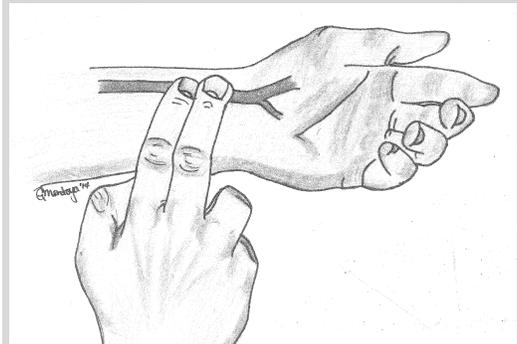
If you feel an irregular or fast heartbeat or if you feel faint or dizzy:

- Sit or lie down immediately.
- Call your family, caregiver, or neighbours for help.
- Take your pulse to find out if it is fast, regular, or irregular.

In most cases, the symptoms will settle by themselves after a short time and you will be able to carry on as normal. In fact, many patients tell us that they rarely have to do anything more than rest for short periods when they have symptoms.

If you continue to feel faint or dizzy for a prolonged period of time or you become short of breath or feeling chest pain, call 911 for an ambulance to take you to the nearest Emergency Department.

How to Check Your Pulse



Place two fingers on the inside of your wrist below your thumb. Count the beats for 30 seconds. Double the result to get the number of beats per minute. At the same time, check how regular the beats are.

If you have questions, the Nursing Coordinator is available any time day or night at: 613-761-4708

Medication Management

Over-the-Counter Medications

If you are unsure about taking any over-the-counter medications, vitamins or herbal supplements, do not hesitate to talk to your doctor or pharmacist.

New Medications

You may be taking new medications to treat your atrial fibrillation. Make sure your doctor knows all the medications and supplements that you were taking before to be sure you are getting the right prescription.

When you receive your prescription, make sure you ask your doctor:

- The name of the medication
- Why it is being prescribed
- When and how to take it
- How long you will need to take it
- What side effects you should expect
- What to do about any side effects

Use the same pharmacy for all of your prescriptions. Your pharmacist can keep a complete and updated list of your medications and make sure that your medications can be safely taken together. When you pick up your prescription, ask your pharmacist:

- The best way to take the medication
- To explain what is written on the labels
- To provide written information about the medication

Make a list of your medications and carry it with you always. Make sure the list includes all of your medications, as well as any vitamins, supplements, and herbals. Also list your allergies, immunizations, and your pharmacy phone number.

Review the list regularly with your doctor or pharmacist.

Take the medication as it is prescribed by your doctor. If you have concerns about taking medications, discuss them openly and honestly with your doctor.

Discuss troublesome side effects with your doctor. You may be able to take a different kind of medication.

If you have trouble remembering to take your medications, the following tips are “tried and true”:

- Take your medications at regular times each day.
- Associate your medications with daily activities like brushing your teeth, eating a meal or bedtime.
- Use a pill organizer (dosette) with different compartments for different times of the day, or ask your pharmacy if they can organize your pills in blister packs.
- Keep a one-day supply of your medications in your handbag or at the office.
- If your medications are too complicated, ask your doctor if something simpler can be prescribed.
- Put a note on your calendar to remind you to pick up your prescription refills.

If you are worried about the cost of your medication, ask your doctor if a less expensive medication can be substituted, or check with the Ontario Trillium Program for possible assistance:

- 1-800-575-5386
- www.health.gov.on.ca/english/public/pub/drugs/trillium.html

Getting the Most Out of Your Doctor's Appointments

- Bring your updated medication list and plan to review it with your doctor
- Make a list of your questions and concerns
- Bring a family member or friend with you and ask them to take notes
- Ask questions if you are not sure you understand the information

When thinking about questions to ask your doctor, consider:

- Your return to work or driving
- Unusual symptoms you have had
- Changes in medication or side effects
- Recommended limitations to your activity
- Follow-up appointment plans

Questions for the doctor about your recovery/progress:

1. _____
2. _____
3. _____
4. _____
5. _____

Returning to Work

Most people with atrial fibrillation are able to work as usual.

If you have concerns about working, speak to your doctor or ask to see the vocational counsellor at the Heart Institute Cardiac Rehabilitation program.

Sexual Health and Atrial Fibrillation

Sexual activity is an important part of your quality of life and is often a great concern for both patients and their partners. Fears and concerns may temporarily interfere with sexual spontaneity and response. The good news is that atrial fibrillation is almost never a reason to stop having sex.

Talking about sex can be difficult, but remember; your doctor is used to talking about these things and would welcome the chance to help you get the information and advice that you need. If you don't feel confident about having sex, please take a minute to talk about this with your doctor.

Living a Healthy Lifestyle

Diet and Atrial Fibrillation

Some of the medications that you take for atrial fibrillation may be affected by certain types of foods. If you are taking warfarin (Coumadin®), talk to your doctor and pharmacist about which foods you need to be careful about.

In some people, alcohol and caffeine can cause atrial fibrillation to act up. If you find this is the case for you, then it is best to limit your intake.

If you are taking Coumadin, refer to the **Anti-coagulation Booklet** for more information about diet and anti-coagulation medications.

Hypertension (High Blood Pressure)

It is especially important to treat and control high blood pressure when you have atrial fibrillation. Ensure that you keep to a low salt diet. Ask the dietitian or check out our Prevention & Wellness Centre website (pwc.ottawaheart.ca) for information about low salt and heart healthy eating.

Take your medication for high blood pressure regularly as prescribed by your doctor.

Diabetes and Prediabetes

There is now a lot of research and evidence telling us that people with atrial fibrillation *and* diabetes or prediabetes are at an even higher risk of stroke. It is especially important to keep your blood glucose (sugar) levels stable and within target range. Ensure that you have your Hemoglobin A1c (HgA1c) checked every 3 to 6 months and discuss the results with your doctor. Aim for a target HgA1c of 7% or less. If you are having trouble reaching this target with lifestyle change, your doctor may recommend that you start diabetes medication.

For more information about diabetes and healthy blood glucose management, contact:

- Diabetes Central – Intake and Referral Ottawa
Phone: 613 238 3722
Website: www.champlaindrcc.ca

Physical Activity and Atrial Fibrillation

You may feel uncertain about exercising, but we now know that regular exercise is good for people who have atrial fibrillation. In fact, regular exercise is very important for all aspects of your heart health.

For help with planning your exercise program, ask for a copy of our **Physical Activity Guide**

Before getting back to regular exercise, talk to your doctor. Depending on your overall health and on which medications you are taking, you may need to take certain precautions.

Once you have the OK from your doctor, plan to build up gradually. Aim to reach 30 minutes of exercise, four to seven days per week.

If you are worried that exercising may trigger an episode of atrial fibrillation, ask your doctor about our Cardiac Rehabilitation program. You may feel more comfortable starting to exercise in a supervised setting where you can get advice from our cardiac rehab specialists.

Smoking

Nicotine stimulates the heart and can cause episodes of atrial fibrillation. If you smoke, quit.

Quitting smoking is the single most important thing you can do to affect your heart health. The Heart Institute's Quit Smoking Program is available to all smokers who want to quit:

- 613-761-5464 or 1-866-399-4432
quitsmoking@ottawaheart.ca

Stress

For some people, stressful events can trigger an episode of atrial fibrillation. Although you cannot prevent stress from ever entering your life, you can control how you think about the stressful event and this can impact how it affects your health.

Be physically active. Regular low-impact, moderate exercise reduces both anxiety and depression.

Identify and use your support networks. Talk to friends and family.

Attend a stress management program (see below) and learn how to identify what causes your stress and how it affects you.

The Heart Institute Stress Management Program provides a skills-oriented Stress Management program that teaches a variety of techniques to better manage stress.

There are five 90-minute sessions in a group format covering topics including:

- Breathing and muscle relaxation techniques
- Improving assertive communication
- Uncovering and changing negative thoughts
- Using humour as a coping strategy

The courses take place at the University of Ottawa Heart Institute, 40 Ruskin St., Ottawa. To register, call 613-761- 4558. (There is a materials cost of \$30.)

Where to Get More Information

The following websites have lot of information about atrial fibrillation along with other information about living a healthy lifestyle.

- Heart & Stroke Foundation: www.heartandstroke.com
- The Heart & Stroke Foundation recently developed an excellent and very detailed resource called *Your Complete Guide to Atrial Fibrillation*. You can find it on their website.
- Canadian Heart Rhythm Society: www.chrsonline.ca/
- Heart Rhythm Society: www.hrsonline.org
- Medic Alert: www.medicalert.ca

