

Atrial Fibrillation



Information for you, and your family,
whānau and friends



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INTRODUCTION

Atrial fibrillation (also called AF or A Fib) is a common abnormal heart rhythm.

Atrial flutter is related to atrial fibrillation and is usually treated in the same way.

This booklet is for people who have been diagnosed with atrial fibrillation or flutter. It has been written to help you to better understand your condition and how it is best managed. Families, whānau and friends of people with atrial fibrillation or flutter may also find this booklet useful.

Being told you have atrial fibrillation can be worrying. For most people, the management of atrial fibrillation is quite straight forward. Even though you have atrial fibrillation, you should still be able to enjoy a normal and active lifestyle.

The main concern with atrial fibrillation is that it increases the risk of a stroke. Treatment can reduce this risk. Your GP or specialist will assess your risk of stroke and decide whether you need treatment.

All people with atrial fibrillation should be assessed for their risk of stroke and other complications. Most people with atrial fibrillation need treatment to reduce their risk of stroke.

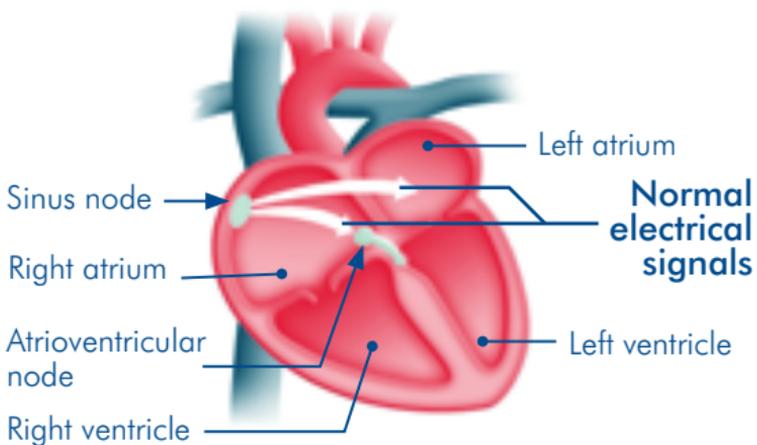
If managed appropriately, atrial fibrillation seldom causes serious or life-threatening problems.

THE HEART

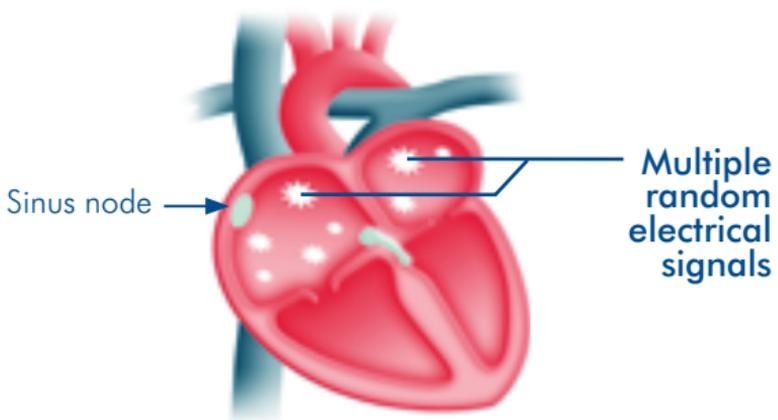
The heart is a pump made up of muscle. It has four chambers: two upper chambers (atria) and two lower chambers (ventricles).

Figure 1: The heart

Normal Heart Function



Atrial Fibrillation



The ventricles are the main pumps that contract to pump blood to the rest of the body. The atria act as 'booster' pumps to fill the ventricles and improve the efficiency of each heartbeat.

The heartbeat is controlled by tiny electrical signals that start at the sinus node (a 'timer') in the right atrium. These signals pass through the atrioventricular node (a 'junction') and travel down into the ventricles, causing the heart muscle to contract.

WHAT IS ATRIAL FIBRILLATION?

Atrial fibrillation is a type of heart rhythm disorder. In atrial fibrillation, the heartbeat is irregular and may be very fast because the normal 'timer' in the heart does not work properly.

Instead of a regular electrical signal starting from the sinus node, multiple random signals 'fire off' from the heart muscle in the atria. This causes the atria to quiver (fibrillate) in a muddled way, so that they no longer effectively pump blood into the ventricles. This loss of the 'booster' pump may reduce the flow of blood to the body, especially if the heart rate is very fast.

Atrial fibrillation may occur on and off (paroxysmal atrial fibrillation) or it may continue indefinitely (persistent or permanent atrial fibrillation).

HOW COMMON IS ATRIAL FIBRILLATION?

Atrial fibrillation is one of the most common heart rhythm disorders in adults, especially in older people.

It occurs:

- in about 1 in every 100 people in the general population
- in nearly 10 in every 100 people over 80 years of age
- more commonly at a younger age in Māori and Pacific peoples than in other New Zealanders.



WHAT CAUSES ATRIAL FIBRILLATION?

Common causes of atrial fibrillation include:

- high blood pressure
- damaged heart muscle
- damaged heart valve
- overactive thyroid gland (hyperthyroidism)
- heart or other major surgery
- excessive alcohol intake
- severe current infection, such as pneumonia
- serious lung disease, such as a blood clot (pulmonary embolus).

Sometimes, there is no obvious cause and the heart is otherwise fine. This is known as 'lone atrial fibrillation' and these people are at much lower risk of stroke.

WHAT ARE THE SYMPTOMS OF ATRIAL FIBRILLATION?

Symptoms that could mean atrial fibrillation include:

- palpitations (noticing your heart beating in a fast and irregular way)
- feeling out of breath or having difficulty breathing
- tiredness
- feeling light-headed or dizzy
- chest pain or tightness.

These symptoms may be mild or severe. Sometimes, you may have no symptoms but your doctor may detect atrial fibrillation during a physical examination or a heart-tracing test (electrocardiogram or ECG).

WHAT TESTS MAY BE NEEDED?

ECG

A heart-tracing test known as an electrocardiogram or ECG can confirm whether you have atrial fibrillation by recording your heart's electrical signals.

Figure 2: ECG showing normal heart rhythm (A) and atrial fibrillation (B)



If the ECG is normal, but your doctor suspects that you might be having atrial fibrillation on and off (paroxysmal atrial fibrillation), it may be necessary to record a heart tracing over 24 hours. This is known as holter monitoring.

Echocardiogram

An echocardiogram is a type of ultrasound scan. It can provide important information about your heart structure and how it is functioning.

Most people diagnosed with atrial fibrillation should have an echocardiogram.

Blood tests

Once diagnosed with atrial fibrillation, blood tests may be done to look for possible causes of your atrial fibrillation and to decide on the best management. Regular blood tests may also be needed to monitor your treatment.

CAN ATRIAL FIBRILLATION CAUSE PROBLEMS?

Atrial fibrillation itself is not generally life threatening, but it can cause serious problems, such as stroke and heart failure, if it is not managed well.

Stroke can happen because blood clots may form in the atria of the heart (due to sluggish blood flow). These blood clots can then break off and block the blood supply to part of the brain.

In New Zealand, over 7000 people have a stroke every year. Atrial fibrillation is thought to cause about 1 in every 5 strokes in people aged over 60 years.

Heart failure is usually due to inadequate heart-rate control. The heart struggles to pump enough blood through the body, and fluid builds up in the lower legs or the lungs.

WHAT IS THE RISK OF STROKE?

The risk of stroke in people with atrial fibrillation can vary widely.

Your individual risk of stroke depends on the cause of atrial fibrillation, your age and any other medical conditions you may have.

The overall risk of stroke in people with atrial fibrillation, which is not due to heart valve disease, is about 5% per year. This risk is about 5 times higher than in people without atrial fibrillation.

The risk of stroke in people with atrial fibrillation is also higher for women, Māori and Pacific peoples.

Your risk of stroke is greatest if you have ANY of the following:

- damaged heart valve
- previous stroke or mini-stroke
- heart failure
- high blood pressure
- age over 65, and especially over 75 years
- diabetes.

Your risk of stroke is lowest if you have ALL of the following:

- age below 65 years, and
- an otherwise normal heart, and
- no other medical conditions.

Even if you have no symptoms or your heartbeat has returned to a normal rhythm, you may still have an increased risk of stroke and need treatment to reduce this risk.

HOW IS ATRIAL FIBRILLATION MANAGED?

The aims of management are to:

- prevent serious complications, such as stroke
- relieve symptoms, such as palpitations, dizziness, tiredness and breathlessness
- control the heart rate
- deal with the cause of atrial fibrillation, where possible.

Preventing stroke

To reduce your risk of stroke, you may need treatment with blood-thinning medication.

The two main types of blood-thinning medication are warfarin and aspirin.

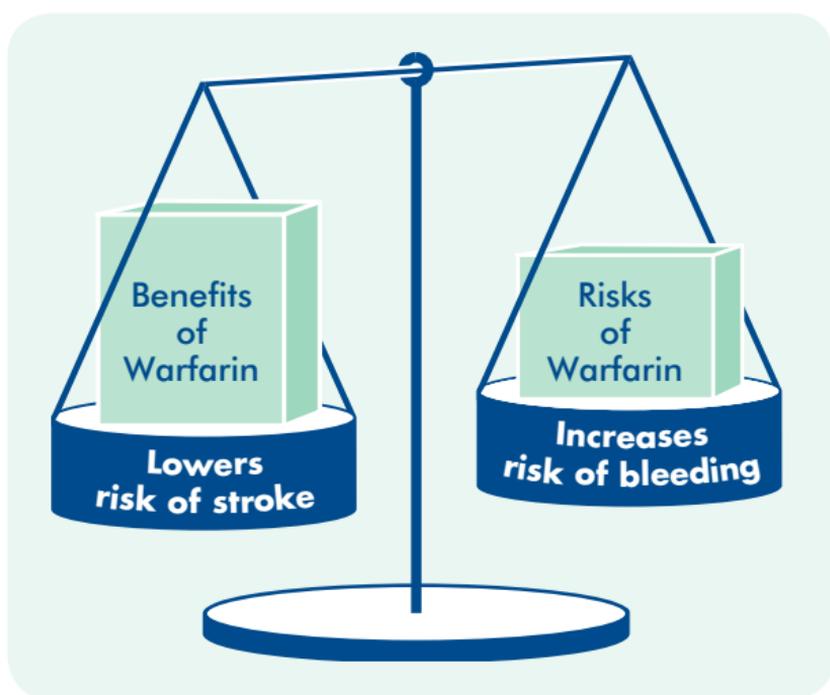
Warfarin is more effective than aspirin and is used when there is a high or moderate risk of stroke. It reduces the risk, whatever it is, by about two thirds. However, if blood is thinned too much, abnormal bleeding may occur from any area of the body. Sometimes, this might be serious enough to cause admission to hospital.

Aspirin also helps reduce your risk of stroke, by about one fifth. It is not as effective as warfarin, but may be used if you have only a low risk of stroke or cannot take warfarin.

It is important to balance the benefits and risks of blood-thinning treatment. These vary between individuals and are a matter of judgement. Your GP or specialist will help you to decide which treatment is best in your case.

For most people, the benefits of warfarin treatment outweigh the risks. Warfarin lowers the risk of stroke, but increases the risk of abnormal bleeding.

Figure 3: Balancing the benefits and risks of treatment with warfarin



Relieving symptoms

One of the decisions your GP or specialist will make with you is whether to try and return your heartbeat to a normal rhythm (known as 'rhythm control') or whether to accept the abnormal rhythm, but slow your heart rate (known as 'rate control').

This will depend on many factors, such as:

- your age
- how often symptoms occur
- severity of symptoms
- the type of atrial fibrillation
- presence of other diseases
- the risks of side effects from medications.

Deciding between rate-control or rhythm-control is a matter of judgement. The best strategy will vary between individuals. Your doctor will discuss this with you.

Factors favouring rate control	Factors favouring rhythm control
• Brief symptoms	• Ongoing symptoms
• Infrequent symptoms	• Frequent symptoms
• No (or mild) symptoms	• Severe symptoms

For most people with atrial fibrillation, rate control is the best option.

Various medications can be used to slow the heart rate. Commonly used medications include beta-blockers (such as atenolol or metoprolol), calcium channel blockers (such as verapamil or diltiazem) and digoxin.

If the atrial fibrillation is recent or causing distressing symptoms, your doctor may recommend **cardioversion** to restore your normal heart rhythm. This involves the use of a small electric shock to your chest under a brief general anaesthetic or the use of special medication. Cardioversion will usually need to be done in hospital. Once your heart rhythm returns to normal, you may still need to continue treatment with rhythm control medications. Your specialist should discuss the possible side effects of these medications with you.

Sometimes, other treatments may be considered, especially if you don't respond well to medication. These include having a procedure known as ablation (which prevents the abnormal electrical signals travelling into the ventricle), and the surgical insertion of a pacemaker (which provides regular electrical signals to make the heart pump at a controlled rate).

WHAT IF I NEED TO BE ON WARFARIN?

If you are taking warfarin, you will need regular blood tests to make sure that your blood is thin enough to protect against stroke, but not so thin as to cause bleeding problems.

A simple blood test will check how thin your blood is and calculate your International Normalized Ratio or INR. Your doctor will advise you what your target INR range is. A common target INR is 2.5 with an acceptable range of 2.0–3.0.

My target INR is: (fill in with your doctor)

Value _____ Range _____

If you are below the target INR, your blood is not thin enough and there is an increased risk of a stroke. If you are above the target INR, your blood is too thin and there is an increased risk of bleeding.

At first, you will need frequent blood tests to check your INR. These can be done less often once you reach the desired range and are on a stable dose of warfarin. Your doctor will adjust the dose of warfarin according to the INR results.

It is important to let your doctor know if you might have trouble getting to the laboratory or clinic for your blood tests.

Home monitoring of INR using a personal monitoring device is easier for some people than getting to a hospital or clinic, but the device and testing strips will cost money. Even with home monitoring, you will still need to have your warfarin dose managed by your doctor. For more information about home monitoring of INR, ask your specialist.



WARFARIN DOSING

It is very important to take warfarin just the way your doctor advises. If you miss a dose, call your doctor for advice. Do not change the dose of warfarin on your own and do not make up for a missed dose by taking more than the prescribed dose.

See your doctor immediately if you have:

- bleeding from your gums
- blood in your urine
- bloody or dark bowel motions
- a nose bleed
- vomiting of blood.

It is also important to tell your dentist, doctor or podiatrist that you are taking warfarin before any procedures.

Some foods, dietary supplements and other medications, including herbal products, may interfere with the effectiveness of warfarin and cause your INR to vary. Foods that have a high Vitamin K content, such as alfalfa, parsley, broccoli, lettuce, coriander, spinach, mint and green tea, may reduce your INR. However, if your intake of these foods is constant, they will usually not affect your treatment with warfarin.

Drinking too much alcohol affects your body's ability to handle warfarin. You should avoid alcohol or consume it only in very limited amounts.

If you are prescribed warfarin, it is important to:

- ✓ take your warfarin exactly as your doctor advises
- ✓ monitor your INR regularly
- ✓ check with your doctor before starting any other medication (including herbal or over-the-counter medications)
- ✓ tell your dentist or doctor that you are on warfarin before any type of procedure
- ✓ avoid dietary changes
- ✓ minimise your alcohol consumption
- ✓ consider wearing a Medic-Alert® bracelet

FURTHER INFORMATION

More information on atrial fibrillation and stroke can be obtained from:

- your GP or specialist
- the Heart Foundation website (www.heartfoundation.org.nz)
- the Stroke Foundation of New Zealand website (www.stroke.org.nz).

The Waitemata District Health Board website (www.waitematadhb.govt.nz) has some useful information on warfarin – click on ‘Resources’, then ‘Patient Information’, then ‘Warfarin’.

The New Zealand Guidelines Group wishes to thank all those individuals and groups who contributed to and advised on the development of this material.

Copies are available free from:

- Wickcliffe 04 496 2277 Order No. HP: 4286
- www.nzgg.org.nz – click on ‘Consumer Information’ then ‘Topics’ then ‘Atrial Fibrillation’
- info@nzgg.org.nz



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