

Atrial Fibrillation (AF) Explained

A guide for people living
with an irregular heartbeat



4
hearts heart

What is atrial fibrillation?

If you have atrial fibrillation, you are not alone. This heart condition affects almost half a million Australians.

Atrial fibrillation is the medical name for a type of irregular heartbeat. Your doctor may call it 'AF' or 'AFib' for short or refer to it as a heart rhythm disturbance or an arrhythmia.

Atrial fibrillation occurs when there is a disturbance in the heart's electrical system. This causes the upper chambers of the heart (the atria) to quiver or wobble and beat out of rhythm with the rest of the heart.

Many people with atrial fibrillation have no symptoms, but others experience a racing heart, thumping or butterfly sensations in the heart and chest, chest pain or discomfort, fatigue, tiredness, loss of breath, or dizziness.

This means that the heart does not work as well as it should, and blood is not pumped properly through the body. This can strain and weaken the heart and, over time, cause heart failure.

In people with atrial fibrillation, blood may become trapped in the heart chambers and cause a clot. This blood clot can then travel and block the blood supply to the brain, causing a stroke. This can result in weakness, vision loss or speech problems because the brain cells are damaged by lack of oxygen.

People with atrial fibrillation are up to seven times more likely to suffer a stroke, and three times more likely to develop heart failure. For this reason, early diagnosis and treatment are essential. There are a number of treatment options to help manage symptoms and lower your risk of heart failure and stroke.



What causes atrial fibrillation?

Atrial fibrillation is very common in older people – around 10 per cent of Australians over the age of 65 are affected.

Older age is a risk factor for atrial fibrillation, but the condition can affect younger people as well. Genetics may also play a role in some cases.

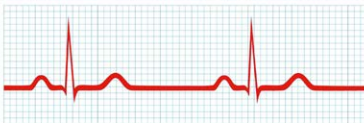
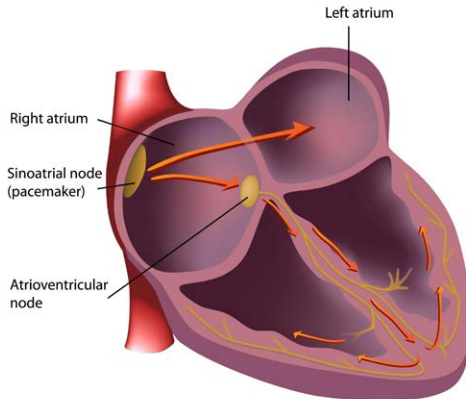
The most common causes of atrial fibrillation are abnormal changes or damage to the structure of the heart over time because of a heart attack or long-term high blood pressure, heart disease, diabetes, sleep apnoea or obesity.

In some people, an episode of atrial fibrillation or occasional symptoms can be triggered by viral illness, high thyroid hormone levels, high stress levels or even too much caffeine or alcohol.

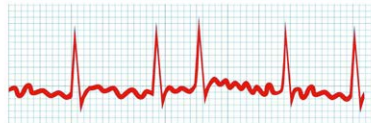
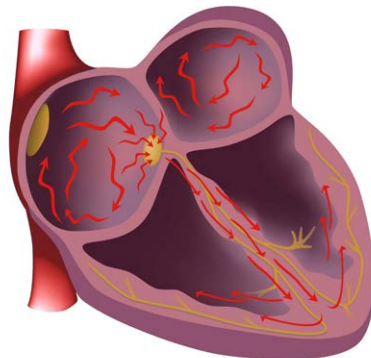
Atrial fibrillation typically starts as short episodes that occur every now and again (known as paroxysmal AF, where episodes usually stop within 48 hours). These episodes can become longer attacks over time (known as persistent AF, where episodes last more than one week). Many people eventually develop permanent atrial fibrillation, which further increases their risk of hospitalisation, heart failure and stroke.

The symptoms of atrial fibrillation can affect an individual's overall health and quality of life. Helping people to lead a normal daily life and avoid hospitalisation are key goals of treatment.

Normal heart



Heart with atrial fibrillation



What does treatment involve?

Once diagnosed, atrial fibrillation usually needs long-term management. Treatment is tailored to each individual and the treatment plan may be to restore and maintain a normal heart rhythm or heart rate, control symptoms and/or prevent serious complications such as stroke or heart failure.

Stroke Prevention

People with atrial fibrillation are at higher risk of stroke, especially if they are 65 years or older, and/or have high blood pressure, type 2 diabetes, heart failure or a previous stroke (including a mini-stroke known as a TIA). The more of these risk factors a person has, the greater their chance of having a stroke.

Anticoagulants (anti-clotting medicines):

Anticoagulants are prescription medications that help stop the formation of blood clots that cause strokes. These medicines are sometimes called 'blood thinners', but they do not actually 'thin' the blood – they simply make blood cells less 'sticky' so that they cannot clump together to form a clot. Anticoagulants lower the risk of stroke in people with atrial fibrillation by up to 70 per cent.

Most people with atrial fibrillation will need anticoagulant medication. Starting treatment with an anticoagulant should be a joint decision between the individual and their doctor, based on a balance between:

- The stroke risk
- Medication side-effects (a small potential for bleeding)
- Differences in the treatment options (effectiveness, safety, need for regular monitoring, and ability to be 'reversed' in an emergency).

Anticoagulant medicines available in Australia include:

- Eliquis™ (also known as apixaban)
- Pradaxa™ (also known as dabigatran)
- Xarelto™ (also known as rivaroxaban)
- Coumadin™ or Marevan™ (also known as warfarin).

Warfarin is the oldest of these medications and has been used for decades in millions of people. Nowadays, we have other options too, which do not need the same level of blood testing as warfarin. Some people like the regular blood testing, but others do not.

Also, people who take warfarin often need to balance their diet to ensure that certain foods do not affect how the medicine works. Some of these medications will be better suited to different people.

All of the medications work very well to help stop blood clots (as long as you remember to take the medication).

Watchman™ device:

In people who are unable to take anticoagulants, a small device can be permanently inserted into the heart using a catheter (a tube) which is temporarily inserted in the groin. The device – a tiny parachute-like implant – is moved through the blood vessel to seal off an area of the heart where blood clots may form.

Additional risk factors for stroke

In addition to stroke prevention therapy for atrial fibrillation, doctors may recommend lifestyle changes and other treatment to further reduce the risk of stroke. This may include:

- Controlling blood pressure
- Managing diabetes and controlling blood sugar levels
- Lowering cholesterol
- Increasing physical activity
- Reducing excess weight
- Stopping smoking
- Reducing alcohol intake
- Treating sleep apnoea

Heartbeat Control

Rhythm or Rate Control Medication:

Depending on a range of factors, including a patient's symptoms, the type of atrial fibrillation, its cause, other medical conditions, age and lifestyle, doctors will often prescribe medication to control the heartbeat. There are two types of medicines that can be used to control the heartbeat:

- Medicines that slow the rate at which the heart beats (rate control medicines such as beta blockers, calcium channel blockers and digoxin)
- Medicines to restore the normal electrical rhythm of the heart (rhythm control medicines such as flecainide, sotalol and amiodarone).

These medicines control the heartbeat, helping to relieve symptoms, reduce pressure on the heart and prevent long-term complications. But, these medicines do not prevent clots and therefore cannot alone reduce stroke risk. As such, doctors will also recommend appropriate stroke prevention therapy.

Rate control medicines are generally taken by people with milder symptoms. Rhythm control therapies are commonly used to manage more severe symptoms, often in people who are younger, physically active, or have had atrial fibrillation for a short period of time. Decisions about treatment are made jointly by the patient and their treating doctor based on symptoms, quality of life, possibility of serious side-effects, and personal preferences.

Procedures:

For some people with atrial fibrillation, a procedure may help to fix the heart's electrical signals and return the heart to normal rhythm. Procedures performed by specialists, known as electrophysiologists, include:

- **Electrical Cardioversion** – this involves delivering a controlled high energy electrical shock to the heart through paddles on the chest. This helps reset the heart and restore a normal rhythm. The procedure is performed under anaesthetic and is a solution for some patients if they are suffering an episode of atrial fibrillation with severe symptoms.
- **Catheter Ablation** – this procedure involves placing a long, thin tube (called a catheter) into a vein in the leg and pushing it up to the heart. When the tube reaches the heart, it scars a special area in the heart chamber that causes the abnormal electrical impulses. This procedure is performed under general anaesthetic.

Ablation is most suitable for people with occasional episodes of atrial fibrillation, especially younger people who have not had the condition for long, but who suffer from severe symptoms or people with a weakened heart (which doctors may call heart failure).

This procedure can restore normal heart rhythm in some patients and is a highly effective treatment, but not a cure.

Some patients may need more than one ablation procedure to restore normal heart rhythm and it is important that patients discuss the risks of this procedure with their doctor.

- **Surgical Ablation** – a surgical procedure which can fix electric impulses in the heart. It can be performed at the same time as other open-heart surgeries (e.g. a bypass or valve replacement) or as a standalone procedure.
- **Pacemaker** – a small battery-powered device is implanted in the chest. It sends electrical signals to help control the heartbeat. The pacemaker fixes a slow heart rate (called bradycardia) that occurs in some people who have atrial fibrillation.

The procedure to implant a pacemaker is considered minor surgery, using local anaesthetic, and can usually be performed within an hour.

Even after undergoing a cardioversion, ablation or pacemaker procedure, many people continue to require long-term medication to prevent stroke and control symptoms.

Lifestyle Management

As with any heart condition, it is important that people with atrial fibrillation see their doctor regularly and make lifestyle changes that lower the chance of complications. A healthy diet, limiting coffee intake, restricting alcohol to no more than three standard drinks per week, regular physical activity, losing weight if overweight, not smoking and maintaining healthy blood pressure and cholesterol levels are important to reducing the risk of stroke, as well as heart disease.

Commonly Asked Questions

How is atrial fibrillation diagnosed?

An irregular heartbeat may not always cause symptoms, which is why a routine pulse test is so important. People aged over 65 years and those with a family history of atrial fibrillation, heart disease, or other risk factors for heart problems, should have their pulse tested at least every 12 months.

Healthcare professionals can test pulse rate by holding a person's wrist, or by placing a stethoscope on the wrist, or by using an electronic blood pressure machine that also records pulse and/or heart rhythm.

If an abnormal pulse or heart rate is identified, further tests may be required. This often involves an electrocardiogram (ECG), where small sensors are attached to the chest and arms to sense and record electrical signals as they travel through the heart. This examination takes no more than 30 minutes and is safe and painless.

Some people with atrial fibrillation will need to wear a Holter Monitor – a battery-operated mobile device that measures and records the heart's activity continuously for 24 to 48 hours while at home. The Holter Monitor records the heart's activity as daily activities are undertaken and is used by doctors to guide treatment decisions.

A cardiologist may also recommend the insertion of an Implantable Loop Recorder under the skin on the left side of the chest for people who have few symptoms but cannot be diagnosed by traditional ECG or Holter Monitor. This small device allows for symptoms and heart rate to be recorded for a period of up to six years.

Some smart phone applications and fitness trackers can detect an irregular heartbeat. If your device detects an irregular heartbeat it is important to see your doctor for an ECG and further evaluation.



You can check your own pulse

A normal pulse rate is between 60 to 100 strong and regular beats per minute.

- Run your index and middle fingers along your thumb until you reach the joint to your wrist.
- Gently press down until you feel your pulse.
- Begin counting pulsations and continue to count for 60 seconds.
- If your pulse is not strong and steady, or feels too fast or too slow, notify your doctor.

Are atrial flutter and atrial fibrillation the same thing?

No, they are different conditions and require different treatment approaches. Both conditions affect the same part of the heart (the atria). But atrial flutter involves a very fast (but regular) heartbeat, whereas atrial fibrillation involves an irregular heartbeat (which can also be fast). While some symptoms of the two conditions may be similar, treatment approaches vary a lot.

Is atrial fibrillation terminal?

Atrial fibrillation can be well-managed with medicines and procedures, leading to a long and active life. However, this condition can be very dangerous if not properly managed, increasing the risk of heart failure or a life-threatening stroke or heart attack.

Am I still at risk of stroke if I don't have symptoms?

Yes, you may or may not feel any symptoms, but atrial fibrillation still raises a person's risk of stroke. Depending on other underlying conditions, an individual with atrial fibrillation who has never noticed a symptom may face the same risk of stroke – or even higher – as someone suffering chest-pounding symptoms.

Can I take aspirin to reduce the risk of stroke?

In the past, aspirin was used in some patients. Nowadays, aspirin is not considered a useful option for most people with atrial fibrillation. But, in special cases, some people may need to take aspirin for other conditions plus an anticoagulant for their atrial fibrillation. This type of treatment will require specialist care.

Is it true that blood thinners can cause bleeding inside the body?

All medicines have side-effects. With anticoagulants (anti-clotting medicines), there is a small risk of bleeding. Some individuals may experience an annoying bruise or nose bleed. Rarely, a patient may experience a serious internal bleed. Your doctor, pharmacist or nurse can explain more about anticoagulant side-effects. It is important to remember that the benefits of these anti-clotting medicines for stroke prevention are much greater than the small risk of bleeding.

Can the anticoagulant effect be stopped if bleeding becomes a problem or urgent surgery is required?

Your doctor, pharmacist or nurse can give specific instructions on how to treat any problem bleeding and how to stop anti-clotting medication if urgent surgery is needed. Each anti-clotting medication has different instructions and processes.

Currently, two anticoagulants (Pradaxa™ [dabigatran] and warfarin) have specific “reversal” therapies that can quickly stop their effects. This allows for the blood thinning effect of these medicines to be stopped very quickly, which is important if urgent surgery is required or in the event of serious bleeding. Xarelto™ (rivaroxaban) and Eliquis™ (apixaban) do not have specific reversal agents, however doctors can use other techniques to stop their effects if bleeding occurs.

It is important to remember that serious bleeding is rare with anticoagulant therapies and that the benefit usually outweighs the risk.

Do I still need to take an anticoagulant if my symptoms are under control?

Yes, anticoagulant medicines do not treat symptoms of atrial fibrillation. These medicines lower the risk of stroke and should be taken life-long, regardless of whether symptoms are present or not. The risk of stroke does not change if symptoms are mild or well controlled.

Does atrial fibrillation lead to other heart problems?

Over time, an irregular or fast heartbeat can cause damage to the heart muscle and cause heart failure, a condition where the heart is too weak or stiff to pump blood through the body properly. Treatment (medicine and/or a procedure) to control the heart rhythm is important to lower the risk of further heart complications.

Is a rhythm or rate control medication better for atrial fibrillation?

Each individual will require a unique treatment plan to best manage their symptoms and risk of complications. Generally speaking, medicines to control the heart's rhythm are more commonly used in patients with severe symptoms, or in younger patients with new atrial fibrillation. Rate control medicines are mainly given to people who have had atrial fibrillation for some time, are elderly and do not have major symptoms.

What should I do if my rhythm control medicine is not working?

If you have taken the medicine for several weeks and still have symptoms, you should discuss this with your doctor. Some therapies can take time to start working, and your doctor may advise that

you keep taking the medicine. However, your doctor may decide to try a different medicine instead. If you are suffering severe symptoms and require immediate medical support, please go to the hospital or call emergency services on 000.

Can I stop taking medicine if I have a procedure to correct my heartbeat?

Some people will need ongoing medicine, others will need medicine for only a short period of time. Your doctor will advise what is best for you. **Never stop taking your medication without consulting your doctor.**

How do I find out more about medication?

Your doctor, pharmacist or nurse can give you more information about your medications and answer any questions you have. It is important that you ask about anything that you are unsure of. Your healthcare professionals can also give you written information for you to read at home or direct you to where you can find further information on the internet.

When do the symptoms of atrial fibrillation require urgent medical assistance?

Symptoms should never be ignored. If you have mild symptoms which you have experienced before, you should contact your doctor. If you experience new symptoms, more severe symptoms, or symptoms that might signal a stroke (e.g. droopy face, weak arm or leg, or speech problem) or heart attack, you should seek urgent medical attention. Please call 000 without delay.

Managing Atrial Fibrillation

A Checklist to Guide Discussions with Your Healthcare Professional

It is important to be actively involved in the ongoing treatment of your atrial fibrillation. This involves you and your doctor, pharmacist or nurse discussing treatment goals and options, and you asking questions, raising any concerns, and explaining your preferences.

This checklist has been developed with input from medical experts to help patients discuss the ongoing management of atrial fibrillation with healthcare professionals.

When reviewing the management of atrial fibrillation, you may like to ask about:

Treatment Goals for your specific situation

Lifestyle Factors and Modification

Exercise Recommendations

Treatment Options and Considerations

Control of Symptoms

Medication Side-Effects

Stroke Risk and Stroke Prevention

Anticoagulation Bleeding Risk and Reversal

Potential Impact of other Medical Conditions

Hearts4heart supports, educates and advocates for Australians living with atrial fibrillation and other heart conditions. Join our community and the conversation:

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