

A GUIDE FOR PATIENTS

# Atrial Fibrillation and Flutter

DC Cardioversion



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## What is Atrial Fibrillation (AF)?

AF is the most common form of irregular heartbeat and is caused by abnormal electrical activity of the heart. In AF, the upper chambers of the heart (atria) beat irregularly and very rapidly in an uncoordinated and chaotic fashion. This causes the lower chambers of the heart (ventricles) to beat irregularly and often rapidly.

## What is Atrial Flutter?

In atrial flutter the atria still beat rapidly but in a more coordinated and organized fashion. The ventricles can beat regularly or irregularly and often rapidly.

### Possible Causes:

- Familial
- High blood pressure
- Older age
- Abnormal thyroid function
- Alcohol intake
- Irritable areas or abnormal connections in the heart
- Following heart surgery or other operations
- Any other type of heart disease
- Other illness, eg. pneumonia, diabetes, sleep apnoea.

### Symptoms:

- Dizziness or feeling lightheaded
- Blackouts
- Tiredness or weakness
- Shortness of breath
- Palpitations
- Chest pain or tightness.

Restoration of normal heart rhythm can help reduce these symptoms. NB: Some people have no symptoms and may not realise they have AF.

### Complications:

When blood does not flow normally within the atria a blood clot may form. This could dislodge and travel to the brain causing a stroke. Lowering the risk of stroke is one of the main goals of treatment.

AF can also reduce the efficiency of the heart's function and can lead to heart failure if rapid heart rates are not controlled.



## Treatment

Treatment depends on whether your AF occurs only once, is recurring or is persistent. You may need one or more of the following treatments and your cardiologist will advise what treatment is most appropriate for you.

### *Possible treatment includes:*

- Medication to slow or stop the abnormal rhythm
- Blood thinning medication to prevent stroke ("anticoagulants"). (If you undergo cardioversion, you will probably require anticoagulants for at least 4 weeks after your cardioversion and possibly long term)
- Cardioversion
- Pacemaker
- Catheter ablation.

## What is DC Conversion?

DC Cardioversion involves using electrical current to re-establish your normal heart beat. An electric shock is applied across the chest wall while you are asleep under general anaesthesia.

Restoration of a normal heart rhythm (cardioversion) can reduce symptoms such as palpitations and shortness of breath, and improve heart function. You may require long term anticoagulation as well as other treatment to maintain normal rhythm.

## Risks of Cardioversion

The risk of stroke is not immediately reduced by the return of a normal rhythm and if a clot has formed while you are in AF, it can dislodge within the first few days.

***This is why anticoagulation (stopping your blood from clotting so easily, usually with Warfarin) is essential before cardioversion if you have been in AF longer than 24-48 hours and for at least 3-4 weeks after successful cardioversion.***

If you have not received adequate anticoagulation a trans-oesophageal echocardiogram (TOE) may be done before cardioversion to make sure a clot is not already present.

The risk of stroke at the time of restoration of normal rhythm, provided you are anticoagulated, is very low (less than 1%) and the benefits of cardioversion are considered to outweigh the risks of the procedure.

Other risks of cardioversion are usually not long lasting or severe. They include:

- occasional superficial redness where the electrode pads are applied to the chest
- abnormal heart rhythms induced by the shock
- muscle pains due to muscle contractions at the time of the shock
- transient heart failure.

Rarely complications associated with a general anaesthetic may occur (the anaesthetist will discuss the anaesthetic with you before the procedure).

There is also the possibility that cardioversion may not be successful or your heart may return to AF after a short time. If this is the case your cardiologist will determine the course of further treatment.

## Preparation for the Procedure

- Plan to have a responsible person drive you home and stay with you overnight
- Fast from food and drink for 6 hours before the procedure
- Remove all your jewellery
- Empty your bladder prior to the procedure
- An electrocardiogram (ECG) and blood test may be taken
- A cannula will be inserted for administration of medication and anaesthesia
- You will be connected to an ECG monitor and your vital signs measured.

***Take all medications as instructed by your cardiologist and bring all your medications into hospital with you.***

Important: For patients on **Warfarin**, your INR levels need to be **above 2.0** for the 2 weeks prior to your procedure. You should contact your cardiologist if this is not the case.

Please bring a copy of your blood results (INR) to hospital.

You may be asked to withhold your **Digoxin** for two or three days prior to your DC cardioversion. Your cardiologist will advise you appropriately.

## The Procedure

- Medical staff will be with you throughout the procedure
- Oxygen is administered to you via a facemask
- Your heart rhythm, pulse, blood pressure, oxygen levels and breathing will be checked constantly
- An anaesthetist will administer the anaesthetic and when you are asleep the cardiologist will administer the electrical current.

## After the Procedure

- A nurse will stay with you until you are fully awake.
- Your heart rhythm, pulse, blood pressure, breathing and oxygen levels will be checked regularly for up to 4 hours after the procedure.
- An ECG will be performed.
- Oxygen, via a facemask, will continue until you are fully awake.
- When you are fully awake you will be able to eat and drink.
- Your cardiologist will advise you on your expected time of discharge, medications and follow-up appointment.
- At discharge you will be given written instructions to follow.

***It is important that you remain on any prescribed anticoagulants (ie. Warfarin)***

## Further Information

Atrial Fibrillation Association – Australia.  
[www.atrialfibrillation-au.org](http://www.atrialfibrillation-au.org)

***Please contact Hollywood Private Hospital Coronary Care Unit on (08) 9346 6021, if you have any further questions or concerns.***

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