Cardioversion
Patient Information Booklet

Department of Cardiovascular Medicine
Sir Charles Gairdner Hospital
# Cardioversion Patient Information Booklet

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BACKGROUND

The heart consists of two upper chambers (atria) and two lower chambers (ventricles) and is responsible for pumping blood around the body. To ensure the heart pumps in an orderly sequence there is a group of cells that form a pathway through the heart. An electrical impulse is sent down this pathway each time the heart beats. In between each heart beat the heart relaxes, blood flows in, to be ready for the next heart beat.

A normal heart beat is frequent and regular, this is called sinus rhythm. Depending on your fitness the average resting heart rate in adults is usually 60-90 beats per minute.

1. The electrical impulse begins at the sinus node.
2. The electrical impulse travels to the AV node.
3. The electrical impulse is delayed to allow time for the blood to flow from the atria to the ventricles.
4. The electrical impulse continues down through the ventricles.

THE ATRIA CONTRACT (BEAT)

THE VENTRICLES CONTRACT (BEAT)
ATRIAL FIBRILLATION

In some people, the heart may beat in an abnormal manner (i.e. too slow or too fast). The electrical impulse may be interrupted and cause this abnormal heart beat. What is felt when the heartbeat is abnormal varies depending on the heart rate, type of rhythm and how the heart’s pumping action is affected.

Symptoms of an abnormal heart rhythm may include:
- Palpitations
- Pain or pressure in the chest
- Light-headedness
- Faintness
- Feeling tired
- Short of breath

A common abnormal heart rhythm is called Atrial Fibrillation (AF). Fibrillation means ‘quivering’. AF occurs when the electrical impulse in the atria has competition from other areas in the atria. AF results in the top of the heart (atria) beating faster than the bottom of the heart (ventricles). The heart does not fill with blood properly and symptoms may occur (see above). Your heart rhythm may be Atrial Flutter, which is similar to Atrial Fibrillation and is generally treated the same way.

Atria (top chambers)  
Ventricles (bottom chambers)

1. The electrical impulse begins at the sinus node with competition from other sites in the atria.

2. The electrical impulses travel to the AV node.

THE ATRIA ‘FIBRILLATE’ irregularly in response to the amount of electrical impulses occurring in the atria.

3. The electrical impulse is delayed to allow time for the blood to flow from the atria to the ventricles.

4. The electrical impulse continues down through the ventricles.

THE VENTRICLES CONTRACT (BEAT)
What is a Cardioversion?

The cardioversion is a procedure where two sticky pads or two paddles are placed on the chest and a timed electrical impulse is delivered to the heart. The shock interrupts the abnormal electrical rhythm to restore the heart’s normal electrical rhythm (sinus rhythm).

A cardioversion is performed in the coronary care unit (CCU or G42) under a light general anaesthetic in the presence of an anaesthetist, a doctor and a nurse.

The Cardioversion Procedure

Upon arrival to the coronary care unit the following things will take place:

- A tracing of your heart (ECG) will be taken.
- The cardioversion procedure will be explained and any of your questions will be answered.
- You will then be asked to sign a consent form.
- An intravenous line (IV line) will be inserted into your arm.
- The cardioversion will be performed and this will take about 10-20 minutes.
- You will be required to remain in hospital for at least two hours after the cardioversion in order for the team to monitor your heart beat. You will be discharged sometime following this.
- It is important to arrange for someone to drive you home after this procedure.
- Unless you are told otherwise continue ALL your usual medications until advised by your doctor.
- Ensure you know when you are to have followup with your GP or Cardiologist.
Preparing for a Cardioversion

You will need to arrange for a blood test to be taken two days prior to the cardioversion. The blood test checks your INR, electrolytes and digoxin level (if you are on the medication called digoxin). It is important to ask the lab where the blood is being taken to FAX A COPY of the results to:

Coronary Care Unit
ATTENTION: Ward Clerk
Fax number 08 9346 3457

If the results are not passed onto the Coronary Care Unit the cardioversion CANNOT take place.

On the day of the cardioversion you need to:

1. Fast from midnight (not food or anything to drink).
2. Arrange to have someone to drive you to and from the hospital - you will not be allowed to drive following your cardioversion as you are given a light anaesthetic.
3. Take all medications as usual with a small amount of water.
4. Telephone on the morning of the procedure at 9am on 9346 1642 and ask to speak with the ward clerk regarding the availability of beds for your procedure.
5. Bring all medications into hospital.
6. Do not bring any valuables into hospital (i.e. money or jewellery).
7. Present to G block reception are to complete admission paperwork. Please bring your Medicare card and if applicable your private health fund card.
8. Proceed to G42, 4th floor, G block.
9. The cardioversion procedure will be explained and any questions answered.
10. An intravenous (IV) line will be inserted into your arm or hand.
11. You will then be asked to sign a consent form.
12. The cardioversion will be performed.
13. You will be discharged 2 to 4 hours after your cardioversion.
Common Questions

If I have a pacemaker can I have a cardioversion?
Yes, you can have a cardioversion if you have a pacemaker. It will need to be checked by the cardiac scientist after the cardioversion. A small percentage of pacemakers may re-program themselves; however that is easily rectified by the cardiac scientist.

Will I feel the electric shock?
No, you will not feel the electric shock because the anaesthetist will give you an anaesthetic that will ensure you are asleep during the cardioversion.

Will the abnormal heart rhythm occur again?
There are no guarantees that your heart rhythm will remain normal. Your doctor will discuss this with you, therefore it is important to ensure you have a followup appointment with them some time following your procedure.

Will I need to continue warfarin?
Warfarin is usually continued for at least one month following cardioversion. You can discuss this with your doctor during your followup appointment.
What are the Risks of a Cardioversion?

All procedures carry some risks, but for cardioversion these are small and are often less than the risks of continuing in atrial fibrillation or AF.

The risks will be discussed in more detail with you prior to signing your consent form and are:

- Those associated with receiving a general anaesthetic.

- A very small chance of a clot dislodging from the atria and causing a stroke or heart attack. This risk is very small (less than 0.5%) and is less than the risk of a clot being dislodged if a person remains in atrial fibrillation for a long period of time. This risk is reduced by continuing warfarin following the cardioversion.

- The development of an abnormal heart rhythm which can be treated promptly at the same time of the procedure.

- Skin irritation or burns to the chest area where the paddles are placed.