

can vary depending on whether there is any bleeding or not. You may have some discomfort and bruising in your groin

- The nurse will monitor your pulse, blood pressure and check the surgery site for bleeding, swelling, haematoma and pedal pulse (pulse in your foot) ½ hourly for two hours, then hourly for two hours
- Once you are awake enough you will be able to drink and eat something. Normally you will first be given sips of water
- Either the same evening or on the day after your procedure you will have a chest x-ray, ECG, and echocardiogram to confirm that the device is well positioned
- Before discharge the nurse will remove the dressing and check your groin

Discharge:

You will require dual anti-platelet therapy with clopidogrel for six months and Aspirin 75mg for three months. Avoid any pregnancy while on the dual antiplatelet therapy because we do not know the effects of clopidogrel on the unborn foetus. Most patients who have had a stroke will require long-term Clopidrogel so you may be asked to continue this after the six months.

Do not drive for seven days. See Driving & Vehicle Licensing Agency (DVLA) guidelines.

You can usually return to work after three days. If you have a physically active job, you may need longer. The doctor will discuss this with you. You must not do any heavy lifting or play any contact sport but you can do gentle exercise such as

walking. Avoid strenuous exercise until you are seen in clinic for your follow up appointment.

For female patients who have had a stroke, we may ask you to avoid the combined oral contraceptive pill because of the higher risk of developing blood clots with these tablets. If you have had a PFO closed for other reasons (e.g. decompression illness), you can have any form of contraception available. Your doctor will discuss this with you in clinic.

Patients should receive an anti-platelet card on discharge and a device card will be sent to them. It is a good idea to take the device card with you if you fly in case of any issues but the metal parts in the devices are very small and usually do not trigger metal detector alarms. We recommend that you usually wait a week after the procedure before you fly.

You will have an outpatient appointment in six weeks with an ordinary transthoracic echocardiogram on the same day – at this review we will advise about physical activity. You will need long-term follow up.

You should also have regular dental check-ups, at least once every year and clean your teeth twice a day to reduce the risk of endocarditis.

Cardiology

Queen Elizabeth Hospital Birmingham
Mindelsohn Way, Edgbaston
Birmingham, B15 2GW, Tel: 0121 627 2000



University Hospitals Birmingham
NHS Foundation Trust



**Adult Congenital
heart disease
(ACHD) Unit
Queen Elizabeth
Hospital
Birmingham**

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Patent foramen ovale (PFO)

A PFO is a normal variant and occurs in about 25% of the population without any problems. The foramen ovale is an open flap present before birth allowing circulation of blood in the heart. This opening is important before birth to allow oxygenated blood from the mother to circulate throughout the unborn baby's body and should normally close a few hours after birth to form a solid wall (septum) when the right to left blood flow is no longer needed. A PFO is where it has failed to close allowing a small amount of flow between the atria to continue.

Usually in a normal heart, the right to left sides are completely separated by the septum so deoxygenated blood returning from the body flows into the right side of the heart and is then pumped into the lungs. Here the blood is filtered and takes up oxygen and then enters the left side of the heart and is pumped through the aorta out to the body, providing oxygen to all the organs and cells. However if a PFO is present a blood clot from the right side of the heart could cross through the flap into the left side of the heart and then up to the brain, causing a stroke or transient ischaemic accident (TIA). Apart from a stroke, PFO can also cause decompression illness in divers, you should therefore seek further advice before diving from a dive doctor. There is an association between PFO and migraine symptoms. A PFO is generally not large enough to create cardiovascular symptoms or cause heart problems.

Prior to the procedure, a very small device is

inserted through the oesophagus to confirm the presence of a PFO. This is known as a transoesophageal echo (TOE). You may be offered a device closure to reduce your risk of having a further stroke or TIA. Even if you have had a TOE at a referring hospital we may need to do a further one here if those images are not sufficient.

Closing the PFO

The PFO is closed through a long tube (catheter) placed in the vein at the top of your leg. The device is passed through the catheter, which is inserted at the top of the leg through the femoral vein, up into the heart. The procedure is often carried out under a general anaesthetic in a cardiac catheterisation theatre, using imaging guidance (a TOE) and x-ray screening. It can also be done under local anaesthetic with sedation. Your doctor will discuss this with you in clinic. Heart tissue will grow over the device once it is in place and it will become part of the heart wall. You cannot feel the device when it is in place.

Medication before the procedure

If you have had a TIA/stroke you may already be on Clopidogrel and/or Aspirin to help protect you from having a further event. You will be told if there is any medicine you should not take.

Pre admission for procedure: You will be seen in a pre-admission clinic where you will have an ECG, bloods and MRSA swabs taken.

You should see your dentist before coming into hospital to ensure your teeth and gums are in good condition.

Please shave both groins before the procedure.

On admission:

- You will be admitted the day of the procedure and will usually stay in overnight
- You will be told in your admission letter when to stop eating and drinking. You are usually nil by mouth for about six hours before the procedure
- You will be admitted by the ward nursing staff - your blood pressure, pulse and temperature will be taken
- If you have not signed a consent form in clinic this will be completed on the morning of admission by the doctor when they come to see you. They will explain the benefits and potential risks of the procedure before you sign the consent form. Possible complications are bleeding, bruising, palpitations (noticeable heart beats) or a sore throat after the procedure
- A significant risk of complication is around 2%. On the whole PFO device closure is considered a safe and low risk procedure
- The anaesthetist will also come and see you that morning
- Do not stop taking your Clopidogrel prior to the procedure

Post procedure:

- You will be quite sleepy after the procedure due to the anaesthetic
- Usually you will need two hours flat bed rest, then two hours sitting. After this you can move around if there is no bleeding. The nursing staff will guide you and the timings