

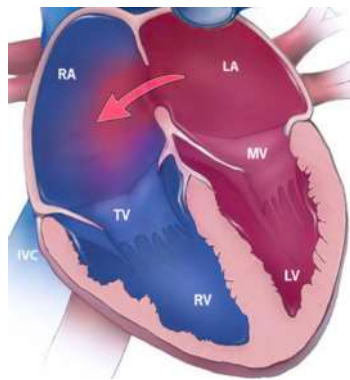
Transcatheter Closure of atrial septal defect (ASD) or patent foramen ovale (PFO)

A Guide for Patients and Families

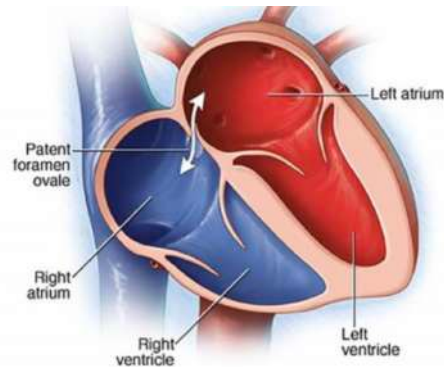
For further information please talk to your Cardiologist.

YOUR HEART AND THE INTERATRIAL SEPTUM

Your heart is a muscle that pumps blood around the rest of your body. There are four chambers of the heart, each with a valve with two or three leaflets. The top two chambers are called atria and are separated by a wall called the interatrial septum. Sometimes you can be born with a large hole in the interatrial septum (ASD). Frequently, there is a small gap between the chambers that can open and close like a door opens and closes (PFO).



Atrial septal defect



Patent foramen ovale

A PFO CLOSURE IS DONE IF YOU HAVE THE FOLLOWING:

- A patent foramen ovale **WITH**
- A stroke that is suspected to have occurred due to a clot passing through the hole in the heart

Less common reasons for closure include:

- A drop in oxygen levels that is thought to be due to blood with low oxygen passing through the hole in the heart **OR**
- Severe decompression illness with diving that is thought to have been attributed to the hole in the heart

AN ASD CLOSURE IS DONE IF YOU HAVE ONE OF THE FOLLOWING:

- A type of ASD that is suitable for closure with a device **WITH**
- Enlargement of the right side of the heart due to extra blood flow through the hole in the heart **OR**
- A stroke that is suspected to have occurred due to a clot passing through the hole

WHAT ARE THE RISKS?

Your doctor has recommended that you have a transcatheter ASD or PFO closure as they believe the benefits (to you) outweigh the risk of not going ahead with the procedure. There are risks and complications related to this procedure. They include but are not limited to the following.

Common risks and complications (more than 5%) include:

- Minor swelling or bruising at the puncture site.
- Sore throat if general anaesthetic with transoesophageal echocardiogram

Uncommon risks and complications (1-5%) include;

- Irregular heart rhythm called atrial fibrillation. This is usually short-lived and occurs in the first few weeks after the procedure. You may need you to be on additional medications for a couple of months.
- Major bruising or swelling at the groin puncture site. This may need surgery to drain the blood from the bruise.

Rare risks and complications (less than 1 in 1000) include:

- Accidental damage to the heart muscle which may need emergency major surgery.
- The device moves from its position, this may need to be removed with a special catheter or open heart surgery.
- Stroke
- Infection or an allergy to the nickel device
- Death as a result of this procedure is very rare.



BEFORE YOUR PROCEDURE

- Do not eat anything 6 hours before your procedure, you may drink only clear fluids up until 2 hours before your procedure.
- If you take Metformin (Diabex[®], Diaformin[®]) stop taking 2 days before and 2 days after your procedure.
- If you take Empagliflozin (Glyxambi[®], Jardiamet[®], Jardiance[®]) or Dapagliflozin (Forxiga[®], Xigduo XR[®], Qtern[®]) stop taking 3 days before.
- Your Cardiologist may stop your Warfarin, Dabigatran (Pradaxa[®]), Rivaroxaban (Xarelto[®]) & Apixaban (Eliquis[®]) 2-3 days before the procedure.
- Please let us know if you are allergic to Iodine Contrast or any other medications.
- Ask any questions that you or your family may have and sign a form consenting to the procedure.
- Please arrange a friend or family member to take you home from hospital and stay with you for your first night at home. You cannot go home alone or in a taxi.
- You will change into a hospital gown, an ID band applied
- Your procedure site (groin) clipped of any hair. The healthcare team will take your blood pressure and pulse and insert an IV (intravenous) line into a vein in your arm.

DURING THE PROCEDURE

- The procedure is done in a Cardiac Catheterisation Laboratory (Cath Lab) that looks like an operating theatre. You will lie on a narrow x-ray table flat on your back. It is a sterile lab and the staff will be wearing gowns, masks and caps. A heart tracing (ECG) is put on your chest, a blood pressure sleeve on your arm and monitored during the procedure.
- If having the procedure performed with a transoesophageal echocardiogram (TOE), the Anaesthetist will give you medications to make you fall asleep. You may have an oxygen mask on your face. Once you are asleep, a breathing tube will be put into your trachea (wind pipe) and you will be connected to a ventilator (breathing machine) for the procedure. If you are not having a TOE, your cardiologist will give you sedation and local anaesthetic at the groin. Sometimes, the procedure is performed using intracardiac echocardiography (ICE). This is where an ultrasound tube is passed through the vein in the groin to the heart.

- Your groin will be cleaned with antiseptic solution and you will be covered with a drape.
- The PFO/ASD device is implanted through a very small cut in your groin (transfemoral)
- A catheter (thin flexible tube) is inserted through the cut and passed up to your heart across the interatrial septum. The PFO/ ASD device is then passed up the tube attached to a cable.
- X-ray and ultrasound is then used to see where the catheters are and check the position of PFO/ASD device.
- The PFO/ASD device is then released from the cable and the cable and tube are removed from the body.
- During the procedure, you will be asleep or sedated. If asleep, you should not feel any discomfort. If sedated, local anaesthetic and the sedative given should lead to minimal or no pain.
- When the procedure is over, the incision is closed by pressing firmly on the site and also by internal stitches.
- The PFO/ASD device chosen will be based on the type and size of hole in the heart you have along with other anatomical features.



AFTER THE PROCEDURE

- You will be woken up and taken to the recovery unit. You will return to the ward. For an ASD closure, you will stay overnight.
- You will need to lie flat for 3-4 hours after your procedure, we will remind you to keep your legs straight. This is to stop the cuts in your legs from bleeding. The cuts in your groin will be checked by the nurse frequently.
- As soon as it is safe the nurses will get you out of bed to sit in the chair and walk around the ward. It is important to start moving and getting back to normal activity as soon as it is safe to do so.
- Once you are awake enough you will be allowed to eat and drink.
- A Transthoracic Echocardiogram (TTE) to check your device and heart may be performed prior to discharge.

ACTIVITY AFTER THE PROCEDURE & AT HOME

- Rest on the day of your procedure in a bed or recliner chair.
- Gentle walking and do not lift objects more than 5kg for 5 days afterwards and 10 kg for the next week.
- Limit stair climbing as much as possible for the first 3 days after your procedure.
- Gentle walking for the first week. You can then gradually increase your aerobic activities over the next few weeks. No contact sports for up to 6 months.

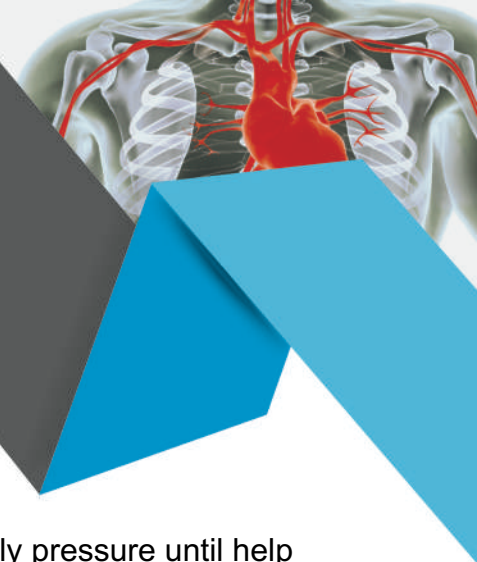
MEDICATIONS

- You will be placed on aspirin after the procedure. For PFO closures, you will also be placed on clopidogrel for 2-3 months.
- You will need to take antibiotics prior to dental procedures for the first 6 months after your procedure. Your dentist or cardiologist can prescribe these.

WOUND SITE CARE

- The dressing on your groin can be removed the day after your procedure.
- You may take a shower the day after your procedure, do not take a bath or go swimming for 1 week after your procedure. Do not scrub the wound site for a week, lightly wash and pat dry. Avoid creams, lotions or ointments to the wound site
- Notify your nurse or doctor if you notice any of the following at the procedure site:
 - A lump that is getting bigger or any swelling
 - Constant redness or warmth
 - Yellow ooze/pus from the wound site
 - Worsening numbness or discomfort (mild discomfort is normal)





IF THERE IS BLEEDING OR A LUMP GETTING BIGGER AT THE WOUND SITE

- 1) Lie down straight away and apply firm pressure (enough to feel the heart beat under your fingers) to the site for 15 minutes.
- 2) If the bleeding continues or is a large uncontrolled amount or you feel faint or dizzy **immediately call a nurse (if you are in hospital) or ‘000’ (if at home). Do not drive yourself to the hospital.** Continue to apply pressure until help arrives.

DRIVING ONCE YOU ARE HOME

- Do not drive for at least 2 days after your procedure.
- More information can be obtained from your Cardiologist

FOLLOW UP

Please see your local doctor in 3-5 days. An appointment will usually be made 1-2 months after the procedure to see your cardiologist. This will usually also include you having an echocardiogram.

QUESTIONS FOR YOUR CARDIOLOGIST
