

Atrial Septal Defect - percutaneous (keyhole) closure

Information for
patients

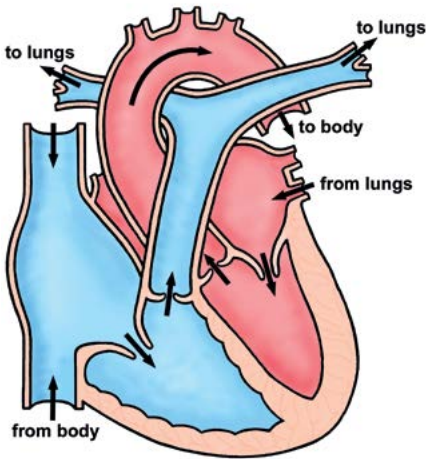


This leaflet aims to give you an overview of Atrial Septal Defect keyhole closure and treatment options.

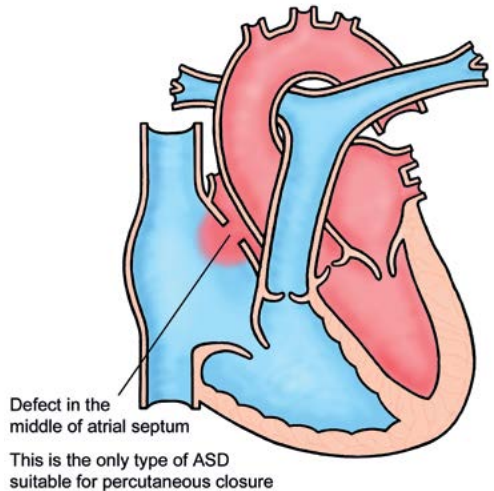
Atrial Septal Defect - percutaneous (keyhole) closure

An atrial septal defect (ASD) is a hole between the two smaller collecting chambers of the heart. It allows blood to cross from the left chamber to the right leading to extra flow through the lung artery. Usually patients with ASD's have very few symptoms but eventually, during later adult life breathlessness and electrical instability (irregular heart rhythms) of the heart can develop.

Normal Heart



Atrial Septal Defect



There are three types of ASD's

Secundum ASD

This is the most common ASD, affecting around 90% of people with ASD's. It is caused when part of the atrial septum does not close whilst the heart is developing. This results in a hole in the middle of the wall separating the two atria.

Will my defect need closing?

We would generally recommend closure of all but the smallest of ASD's, unless other problems are present that would make this unwise (for example damage to the lungs, which can occur in some patients with ASD's). Your cardiologist will make an assessment of the hole in your heart and any other problems you have and discuss treatment with you.

“Keyhole” treatment

Closure of ASD's using a “keyhole” technique has been performed in large numbers of patients (over 100,000) since the mid 1990's. There are a number of devices available and they are usually made from a mixture of fine wire and synthetic cloth.



ACKNOWLEDGMENT

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The devices fold into a thin tube (catheter) which is inserted into the vein in the groin under general anaesthetic. The device is then unfolded into the hole and released. The device stays in the heart and eventually becomes covered by your own tissue during the healing process.

Potential advantages of keyhole treatment over surgery are that it avoids the scar on the chest and the discomfort of an operation. The stay in hospital is usually one night.

What are the risks of the procedure?

There have now been sufficient implants worldwide for us to compare keyhole closure with surgery. Keyhole treatment is not suitable for all ASD's. Although your cardiologist will make a careful assessment of your suitability for keyhole treatment it is not until you are asleep under anaesthetic and a detailed scan (trans-oesophageal echo or "TOE") is done that we can be absolutely sure. There is a small chance that you may go for the keyhole procedure and be woken from the anaesthetic with the hole still present if the cardiologist is unable to close it (overall this happens in about 1 in 10 cases).

The risk of death with keyhole treatment is around 1 in 1000. There is a small risk of brain damage (less than for the surgical alternative). The device can fall out at the time of implant or shortly after (in Leeds, about 1 in 100 cases). Sometimes, in this situation the device can be "lassoed" with a special catheter (tube) and retrieved but often an open heart operation is required to get the device back and close the hole. Occasionally a residual hole can be left after closure with a device and if this is large then surgery may be needed to close it.

There is a very small risk (around 1 per 1000 or 0.1%) of cardiac erosion. This is when the device damages the walls of the heart in the longer term. This is a very rare but serious complication and in most cases, happens within the first year but can sometimes be a later complication.

There is nothing you can do to reduce this risk. Symptoms of erosion may include chest pain, numbness, sudden weakness, dizziness, fainting, shortness of breath or a rapid heartbeat. If you experience those symptoms after a device closure you should contact your doctor.

Will I get any side effects?

Groin tenderness and bruising is the most common side effect and is completely normal. You will be given specific discharge advice from hospital about what to look out for in regards to your groin wound.

Sometimes, people experience headaches or migraine following keyhole closure of their ASD. If you experienced migraine before the procedure it can sometimes get better after the ASD is closed.

No one knows why this is the case for sure, but headaches rarely remain a problem beyond a few months after implant once the device has sealed in the heart. If you do get headaches, paracetamol or ibuprofen are fine to take. Sometimes people need specific migraine medication from their pharmacy or GP.

Sometimes people experience palpitations after their procedure. Again, these should settle down with time but if you have any palpitations that make you feel unwell and do not go away you should seek advice from the specialist nursing team during the week (8am-4pm) or 111 out of hours. If you have palpitations that make you feel very unwell you should call **999** or go to **A&E**.

Occasionally people develop irregular heart rhythms. This can usually be treated and does not return. Sometimes the irregular heart rhythm does not go away and it is managed with medication long-term. This is more likely to happen if you have had an irregular heart rhythm before the procedure.

ASD and Keyhole Treatment - YouTube

<https://www.youtube.com/watch?v=tJ9ek02ZvCw&list=PLoTRklWm7TS-s-mHjgQuZhit77SPNGG89&index=10>



Other advice

For those patients undergoing keyhole treatment, we advise treatment with aspirin (and sometimes another similar drug called Clopidogrel) for around 6 months after closure.

Most people do not need longer than a week off work. You should avoid any heavy lifting/strenuous exercise and driving for 3-4 days until your leg is no longer sore. Most people will remain well and lead a completely normal life after ASD closure. No restrictions to physical activity are required.

Most people who are attending for keyhole ASD closure **do not** need to attend a pre-assessment clinic.

If you are taking an anticoagulant drug (blood thinner) this should be stopped in advance (usually around 3 days). You will receive a telephone preassessment call approximately 2 weeks prior to the date of the procedure

Please make sure you have had a recent dental check-up and all outstanding dental treatment has been completed before the procedure due to the small risk of endocarditis (infection in the heart). **If you need invasive dental treatment within 6 months of having your ASD closed, you need antibiotic cover for the treatment.** Please ask your doctor or nurse for more information.

You will receive a date for your procedure through the post. We try to give you around **4 weeks** notice but it's often not possible for us to give you more than a week or two notice of the date. Please contact the secretary as soon as you receive your letter to confirm on telephone number: **0113 392 8184** or via email on: **leedsth-tr.paedcardcathlist@nhs.net**.

This is very important, if you do not confirm in good time your slot will be offered to someone else.

If you receive the date for your procedure and become unwell, or something has changed since your clinic appointment, please contact the specialist nursing team who will advise whether any further tests are necessary.

We appreciate it can be quite a wait between your clinic appointment and your procedure so, if in the time waiting for your procedure you have any questions or concerns, then please contact the specialist nursing team who will be happy to assist you.

Contact details

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