

# Having a trans-catheter closure of your atrial septal defect

This leaflet aims to answer your questions about having the hole in your heart (known as an atrial septal defect or ASD) closed. It explains the benefits, risks and alternatives to the procedure, as well as what you can expect when you come to hospital.

If you have any further questions or concerns, please speak to a doctor or nurse caring for you.

## What is an ASD?

You have been diagnosed with an atrial septal defect (ASD), which is a hole between the upper two chambers in the heart. These chambers are known as the atria and collect the blood returning from the body. If you have an ASD the blood doesn't flow correctly, which can lead to problems such as shortness of breath, migraines and strokes.

## What happens during an ASD closure?

A small device made up of two umbrellas joined at the centre is put into the hole to close it up. The procedure normally takes about an hour and is performed under general anaesthetic, which means you will be unconscious (asleep) when it takes place. Please ask for a copy of our leaflet **Having an anaesthetic**, if you would like one.

Before the surgeon starts to repair the hole, the doctors will assess it using a small ultrasound probe that is put down your throat. This probe is known as a 'transoesophageal echocardiogram'.

Once the team is happy that they can close the hole, they will insert a catheter (fine tube) into a vein in your groin. The catheter is then passed to your heart. Inside the catheter there is a tiny balloon that the team will use to measure the exact size of the hole so that they can choose the best device to close it.

The device is folded so it can fit through a long tube called a 'sheath'. It is then put through the catheter in your groin and passed to your heart. We use x-rays and the probe in your throat to make sure the device is in the correct position. Once in place, the two umbrellas open on either side of the hole in the heart to close it.

Occasionally the hole may not be closed completely by the device, leaving a small leak. This may close on its own in the future.

## Why should I have an ASD closure?

The treatment aims to close the hole in your heart to prevent you from having problems with blood clotting or a stroke. If you have already had such problems, the aim is to prevent them from happening again.

## What are the risks?

We may be unable to repair the hole in the way described above. If the ultrasound probe we put down your throat at the start of the procedure shows that the hole is not suitable for device closure because of its size, position and the surrounding tissue/rim, we will not be able to repair the hole at this time. We will tell you immediately and you should be able to go home on the same day. We will then put you on the waiting list for surgery.

The device may not hold in place. When the device is opened and released, there is a small chance it may dislodge because the tissue/rim around the hole is floppy. This happens in less than 2 in 100 cases. If this happens we will try to retrieve the device, but it may be difficult to withdraw it fully back into the sheath. If we cannot retrieve the device, you may need to have an open heart operation to remove the device from the heart, and the hole would be closed at the same time by the normal surgical method.

During any procedure of this kind, there is the risk of a stroke caused by a blood clot or air passing from the sheath, through the bloodstream and to the brain. This occurs in less than 1 in 100 cases. We minimise this risk by giving heparin during the procedure to keep the blood thin. Other precautions are also taken to reduce the likelihood of air passing through the heart.

You may get some bruising after the procedure, which could extend down your thigh. Some bruising is normal but if you are concerned you should seek medical advice.

## What are the alternatives?

In the past, the only way of closing these holes was by an open heart operation. During an open heart operation the function of the heart and lungs is taken over by a bypass machine and the surgeon closes the hole directly with stitches or patch material.

Surgery is a very successful and safe method, but it does leave a scar on the chest. In women, the surgeon may perform the operation through a cut across the lower chest, producing a better cosmetic result in the longer term.

In the last few years, the method described in this leaflet (operating through a catheter placed in your groin) has become available as an alternative to surgery.

You are free to choose between the surgical and the non-surgical methods to close the hole. Your decision will in no way affect the care you receive in our hospitals.

## How can I prepare for my ASD closure?

You will be contacted by a member of the cardiac team to arrange your admission.

Information about what you need to do and what you should bring with you can be found in the information sheet that will be sent to you before your admission. Your admission letter should give you instructions for taking your medicines before you come into hospital.

## Will I feel any pain?

The procedure takes place under a general anaesthetic, so you will not feel any pain during the operation. After the procedure, you may experience some very mild discomfort in your groin (where the catheters were inserted) but this should quickly pass.

## What happens after the procedure?

For the first few hours after your procedure you will be attached to a cardiac monitor. This is a machine that is mounted on the wall behind your bed. You will have stickers on your chest that will be wired up to the monitor. This allows us to see your heart rate and rhythm. Likewise we monitor the oxygen level in your blood using a small electrical sensor attached to your finger.

After we have closed the hole using the device, you will need to stay a further night in hospital. The day after your procedure, you will have two heart scans known as an 'echo' and an 'ECG'. If all is well you can then go home.

## What do I need to do after I go home?

We recommend that you are accompanied by a friend or relative on your journey home.

You will be given a letter to give to your GP. This will detail what has happened to you in hospital and which tablets you are on. You will need to take aspirin and clopidogrel to thin your blood and stop large clots forming on the device. How long you need to take these for will vary. Please make sure you know how long you should continue taking these medicines for before leaving hospital. You will be given a card explaining why you are taking this combination of medicines, and for how long you should take them.

When you go home you should be back to full activity, including driving, within the week. If you have a physical job we will advise you on when you can go back to work.

## Will I have a follow-up appointment?

We will invite you back to the clinic three months after the procedure. Providing all is well, you will then need to come back for yearly check-ups (which will include placing an ultrasound probe in your throat).

### Contact us

If you have any questions or concerns about your ASD closure, please contact the following staff / wards (Monday to Friday, 9am to 5pm):

**Secretary to consultant cardiologist** t: 020 7188 1049

**Becket Ward**, 5<sup>th</sup> floor, East Wing t: 020 7188 8839

**Stephen Ward**, 7th floor, East Wing t: 020 7188 8843

If you have any queries outside of these hours please contact your GP or NHS 111 (see below).

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets)

## Useful sources of information

### Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

**t:** 020 7188 8748 9am to 5pm, Monday to Friday

### Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

**t:** 020 7188 8801 (PALS)      **e:** [pals@gstt.nhs.uk](mailto:pals@gstt.nhs.uk)

**t:** 020 7188 3514 (complaints)      **e:** [complaints2@gstt.nhs.uk](mailto:complaints2@gstt.nhs.uk)

### Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch.

**t:** 020 7188 8815      **e:** [languagesupport@gstt.nhs.uk](mailto:languagesupport@gstt.nhs.uk)

### NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

**t:** 111

### NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

**w:** [www.nhs.uk](http://www.nhs.uk)

### Get involved and have your say: become a member of the Trust

Members of Guy's and St Thomas' NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, please get in touch.

**t:** 0800 731 0319      **e:** [members@gstt.nhs.uk](mailto:members@gstt.nhs.uk)      **w:** [www.guysandstthomas.nhs.uk/membership](http://www.guysandstthomas.nhs.uk/membership)

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