Transcatheter aortic valve implantation (TAVI) assessment

If you have aortic stenosis, a TAVI might be a treatment option for you. TAVI stands for transcatheter aortic valve implantation and is when a new valve is inserted inside the narrowed valve in your heart.

You will need to have some tests and investigations to check that TAVI is the most appropriate treatment for you. They may be carried out in one day, during a hospital admission over several days, or may be completed over a series of outpatient appointments.

If the tests confirm that your heart and blood vessels are suitable and that TAVI is the most appropriate treatment for you, a member of your heart team will contact you with the details of when you should come to the hospital for the TAVI procedure.

What is aortic stenosis and how can a TAVI help?
Your heart is a muscle that pumps blood around your body. There are four valves in your heart. They open to let blood flow in through the heart, and close to stop the blood flowing backwards. One of these valves is called the aortic valve. When open, oxygenated blood flows from the heart into your aorta, the major artery that supplies the rest of your body.

Aortic stenosis is when the aortic valve struggles to open well. The heart cannot easily pump blood through the narrowed valve. This causes symptoms including breathlessness and chest pain. You may have dizzy spells when exercising, which can cause fainting. The restriction and extra force needed to pump blood also causes strain on the heart muscle, which may lead to fluid on the lungs, swollen ankles and eventually heart muscle weakness. If untreated, aortic stenosis will usually get worse over time.

We need to check that your heart and blood vessels are suitable and that TAVI is the best treatment for you. We call this stage the TAVI assessment.

How should I prepare for the TAVI assessment?

- Continue to take your regular medications as usual, but please let your heart team know if you are taking antibiotics, blood thinning medication or any other medications in the days before your assessment.
- Bring all your medicines, including anything you get from your doctor on prescription, ‘over the counter’ medicines, and any alternative medicines, such as herbal remedies.
- If you are on blood thinning medication (such as warfarin, apixaban, rivaroxaban, edoxaban, dabigatran) or metformin, we may need to adjust or stop these medications if you are going to have a coronary angiogram. Your heart team will direct you on this.
What tests will I have for the TAVI assessment?
You will need some or all of the following tests or investigations:

- a review by your heart team consultant
- routine blood tests
- electrocardiogram (ECG), which measures your heart rhythm
- echocardiogram, a cardiac ultrasound
- computerised tomography (CT) scan, a specialist X-ray where you lie in a doughnut shaped scanner, using contrast dye given through a small tube in your arm vein
- coronary angiogram, where a catheter is passed into an artery in your groin or wrist and a special dye is injected to provide a series of X-ray pictures of the arteries surrounding your heart
- trans-oesophageal echocardiogram (TOE), a special cardiac ultrasound that takes detailed pictures of your heart from your throat.

Depending on what the above tests indicate, additional tests may be required, such as chest X-rays or breathing tests. The team will explain these to you if they are required.

Will I feel any pain?
It is possible that you may feel some discomfort during the coronary angiogram. You will receive local anaesthetic at the site where the catheter is inserted, which may sting initially and then numb the area to make it less uncomfortable.

It is also possible that you may feel some discomfort during the trans-oesophageal echocardiogram (TOE) if one is required. The procedure can feel uncomfortable but should not be painful. You may experience a sore throat or hoarse voice afterwards, but these side effects should pass within a couple of days.

Speak with your heart team if you have any questions or concerns about the tests.

What are the risks of the TAVI assessment?
The assessment tests carry some risk, though these are relatively small. The majority of patients (about 99 out of 100) will have no major problems. It is important to be aware of the potential complications before you sign your consent form, giving us your permission to perform the tests. The potential complications include:

- **Bruising** (at the top of the leg where the tube was inserted) following an angiogram – this occurs in about one in every 20 patients. This can be uncomfortable and may take a few weeks to disappear.
- **Damage to the artery in the groin or wrist** following an angiogram – this causes a swelling known as a ‘false aneurysm’. This happens to less than one patient in every 100, but it could increase your length of stay in hospital because you may need extra monitoring or minor surgery.
- **Allergic reaction to the X-ray dye** – This occurs in less than one in every 500 patients. It is important to tell us if you have had any previous allergic reactions before your angiogram or CT scan. If you do have an allergic reaction, we will treat it with medicines.
How do I give my consent (permission)?
We want to involve you in decisions about your care and treatment. If you decide to go ahead with the assessment, you will be asked to sign a consent form. Staff will explain all the risks, benefits and alternatives before they ask you to sign a consent form. This states that you agree to have the assessment and understand what it involves.

If you need more time to think about the assessment, or there is anything you don’t understand, please tell your heart team – even if this is after signing the consent form. We will only arrange tests that are necessary, but it is your decision whether you have them, and your wishes will be respected at all times. Please ask a member of staff if you would like to read our consent policy.

How do I look after myself after the angiogram?
Going home – If you go home on the same day as your angiogram, you must have a responsible adult to help you home. You can travel by car as a passenger only. If you are thinking of travelling home by public transport (with assistance), please discuss with your heart team/specialist nurses before coming for your assessment in order to plan safely. Please talk to your heart team if you have any concerns about your journey home.

Caring for the wound to my groin or wrist – It is normal for your wound to be tender for a few days after the angiogram. It is also normal for a bruise to develop. You can shower when you get home but avoid rubbing the wound site. Do not have a bath for 48 hours. Do not put creams, talcum powder or soap directly onto the wound site for a week after the angiogram in order to avoid irritation and reduce the likelihood of infection.

Eating and drinking – You can eat and drink as usual but you should avoid alcohol for 24 hours after your procedure. You should also drink plenty of non-alcoholic fluids to help remove the dye from your body.

Driving – Do not drive on the day of your angiogram or for two days afterwards. This will allow time for your wound to heal. You can start driving two days after the procedure, as long as you feel comfortable and have not had any problems with your groin or wrist.

Normal activity – Your return to normal activities will depend on the results of the angiogram, and how strenuous those activities are. Speak to your heart team before starting any exercise.

Contact your GP if you notice any of the following –
- a hard, tender lump under the skin around the area of incision (pea-sized lump is normal)
- any increase in pain, swelling, redness and/or discharge at the site
- cold foot on the same side as the angiogram
- raised temperature or fever
- new chest pain.

In the unlikely event that your groin or wrist starts to bleed you should lie down flat and apply pressure to the area keeping your arm or leg as straight as possible and your head down.

If the bleeding does not stop after 10 minutes, dial 999. Do not drive yourself to A&E. If the bleeding stops within 10 minutes, keep your arm or leg as still as possible for the following hour. If bleeding restarts, go to your A&E department. Do not drive yourself to A&E.
When will I know if I should have the TAVI procedure?

Your results will be discussed at the TAVI multi-disciplinary team (MDT) meeting. These meetings include an experienced team of cardiologists, cardiac surgeons and specialist nurses who will discuss your individual case and decide on the best treatment plan for you. Whilst these meetings happen on a regular basis, please be aware it can take a little while to gather the required information before your case can be discussed.

After the meeting, your heart team will let you know about your proposed plan of care by telephone or letter. Please be reassured that you will be contacted – you do not need to follow up with us to make sure it’s done.

When we contact you, it may be to recommend TAVI, or possibly medical management. The assessment tests may reveal the need for further referrals such as for a surgical assessment. If this is the case, your heart team will inform you and explain any further investigations or procedures needed.

What happens if I am approved for the TAVI procedure?

You will be advised of the heart team’s decision for your care after they discuss your case. If you are approved for the TAVI procedure, a member of your heart team will contact you with the details of when you should come to the hospital.

If your symptoms change whilst you are waiting for the TAVI procedure, please contact your GP or 999 in the first instance. You should also let us know promptly.

Useful sources of information

British Heart Foundation (BHF)
BHF funds research into all heart and circulatory diseases and the things that cause them. The website contains a lot of helpful information about tests for heart conditions, heart valve disease, caring for someone with a heart condition and cardiac rehabilitation.

www.bhf.org.uk

British Heart Valve Society
A professional specialty group affiliated to the British Cardiovascular Society. It includes people of all disciplines interested in heart valve disease with representation from patients as well. It aims to improve the care of patients with valve disease via educational and training programmes, information and by defining standards of care for individuals, services and hospitals. It has produced an endocarditis information and warning card you can carry.

www.bhvs.org.uk

Heart Valve Voice
A collection of people with real experiences of heart valve disease, including a multi-disciplinary group of experts in the field (cardiologists, cardiac surgeons, GPs), cardiac patient societies, and patients themselves.

www.heartvalvevoice.com
Contact us
If you have any questions or concerns about your TAVI assessment, please contact your heart team in the first instance t: 020 7188 1093

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

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, Monday to Friday, 9am-5pm

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
t: 020 7188 3514 (complaints) e: 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

NHS 111
This service 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 w: www.111.nhs.uk

NHS website
This website gives information and guidance on all aspects of health and healthcare, to help you take control of your health and wellbeing.
w: 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 w: www.guysandstthomas.nhs.uk/membership

This information has been developed by the South London Cardiac Operational Delivery Network, in conjunction with NHS trust clinicians across the region for a consistent approach to patient information for TAVI assessment and procedure.