What are the potential risks/complications with this test?

Ultrasound is extremely safe, and no known adverse effects have been reported. Most complications with TEE are minor and due to the sedative medication and the introduction of the probe in the oesophagus. Too much sedation can cause inadequate breathing and low blood pressure. However, this can be reversed by injection of an antidote. During insertion of the probe, injury may be sustained to the throat and oesophagus. Most often, the injury is minor, causing some bleeding and sore throat. Vomiting may be a problem, especially if the patient is inadequately fasted. Major complications occur in less than 1% of patients undergoing TEE. Overall, this procedure is very safe and tolerable.

When will I know the results?

The echocardiogram images and data will require some time to be analysed. The cardiologist performing the TEE can usually tell you some preliminary results after the procedure. Your doctor will usually inform you of the complete findings at your next visit.

Location

National University Hospital
5 Lower Kent Ridge Road, Singapore 119074
Tel: 6779 5555 Fax: 6779 5678 Website: www.nuh.com.sg

Contact Information

National University Heart Centre, Singapore
1 Main Building of NUH, Diagnostic Cardiac Laboratory, Level 3.
Opening Hours: 8.30 am - 5.30 pm (Monday - Friday)
Closed on Weekend & Public Holidays
Website: www.nuhcs.com.sg

Getting to NUH

Circle Line Kent Ridge MRT Station
Commuters can transit at the Buona Vista MRT Interchange and alight two stops after at the Kent Ridge Station. The station is served by three exit-entry points.
Exit A: Right at the doorstep of National University Heart Centre, Singapore.
Exit B: Along South Buona Vista Road, which links to Singapore Science Park 1.
Exit C: Leads to NUH Medical Centre.

National University Heart Centre, Singapore
A member of the NUHS

Transoesophageal Echocardiography

View patient education videos on NUHCS YouTube page!

STEP 01

Download a FREE QR Reader on your smartphone and scan the QR code.

STEP 02

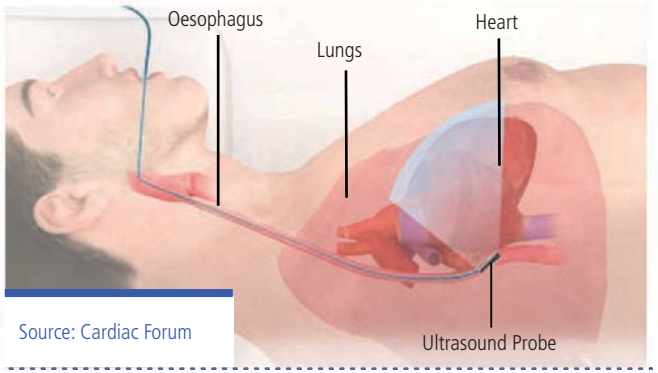
The QR code will decode instantly. You'll be brought to **www.youtube.com/user/NUHCS**

Scan the QR code

What is transoesophageal echocardiography (TEE)?

Echocardiography uses ultrasound (high-frequency sound) waves to visualise the heart and its blood vessels. The usual way of performing echocardiography is by using a transducer (or "probe") placed on the chest wall. The transducer produces sound waves that penetrate the chest and are reflected from the heart and blood vessels. The reflected waves (echoes) are received by the same transducer and processed to produce images of the heart. This test is called transthoracic echocardiography (TTE) as it is performed through the chest (thorax). TTE may not produce clear pictures of the heart because the chest wall (skin, muscles, bones) interferes with and can even block the ultrasound waves.

Another technique of acquiring echocardiographic pictures is by way of the oesophagus. This is the gullet or food passage through which food and drink pass to reach the stomach. The oesophagus is in intimate contact with the heart, with no intervening tissue. A small transducer mounted on a flexible tube is passed through the mouth down the oesophagus and positioned behind the heart. Pictures of superb clarity can be obtained this way. This technique is called transoesophageal echocardiography (TEE).



Source: Cardiac Forum

What is the purpose of this test?

TEE allows detailed visualization of the structures of the heart and the great vessels in the chest. It is also used to examine the flow of blood through the heart and vessels. It is especially useful in patients whose transthoracic images are not good and also when abnormalities of certain parts of the heart (which are not well-visualized on transthoracic echocardiography) are suspected.

Before the procedure

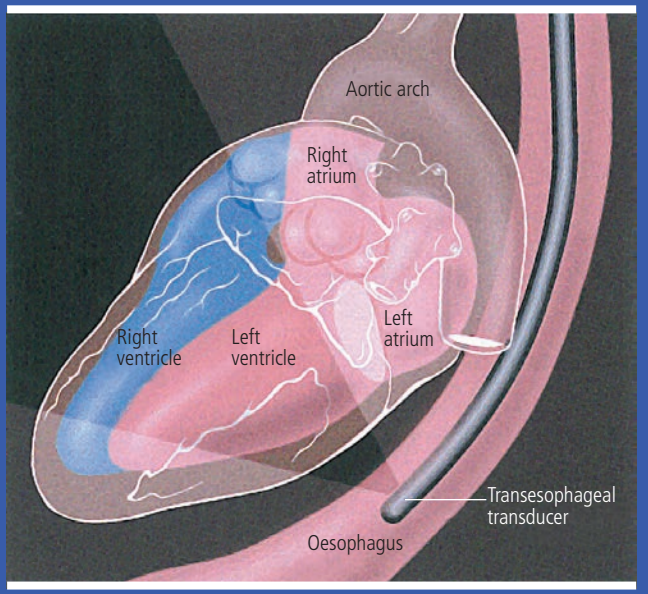
- You need to fast for about 6 hours before the test, and to avoid fizzy drinks a day before.
- You will need to sign a consent form before the procedure.

During the procedure

- A small needle will be inserted in one of the veins on your right hand to facilitate injection of medication. You will be given a mild sedating medication to help you relax, and a local anaesthetic spray in the throat.
- When your throat feels numb, you will be asked to bite on a plastic guard.
- The TEE probe will be inserted through this guard and into the throat. You will be asked to swallow when the probe is being pushed down the oesophagus. This step is usually painless and easily tolerated, even by elderly patients.
- The probe will then be advanced, rotated and retracted in the oesophagus so that the best views of the heart can be obtained. It will also be pushed into your stomach. These manoeuvres should not cause any pain. You can cough if you feel the urge to, and you should let your saliva flow out – the attending nurse will help to suck it away.

After the procedure

- The intravenous needle will be removed. You should rest for at least half an hour before leaving the laboratory.
- As you will be given a sedative, you should not drive after the procedure.
- It is advisable that a family member accompanies you when you come for the test.
- You should also avoid eating and drinking for at least 2 hours to allow the numbness in the throat to wear off.



Reflected waves (echoes) are received by the transducer mounted on a flexible tube, and are processed to produce images of the heart.