

Transoesophageal Echocardiogram (TOE)

Information and advice for patients

Cardiology

What is a Transoesophageal Echocardiogram (TOE)?

A TOE is a test that allows us to take detailed images of your heart using high pitched sound waves which you can't hear. A TOE involves placing a probe into your oesophagus (gullet) and stomach. The probe is a narrow tube which gives very clear and accurate moving pictures of the heart, much better than can be produced by using a probe on the skin.

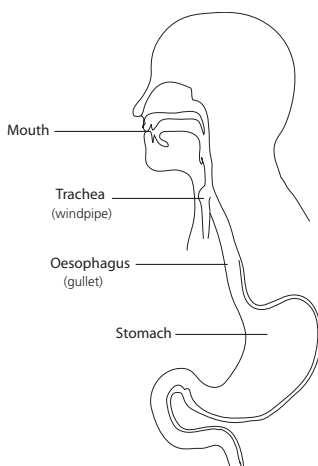


Diagram 1: A diagram of the upper part of the gastrointestinal (GI) tract showing the position of the oesophagus and stomach.

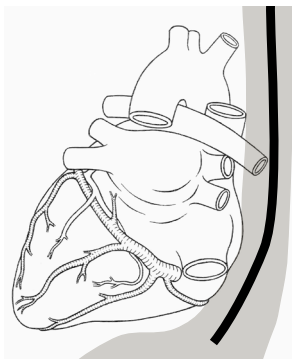


Diagram 2: A diagram of the TOE probe in the oesophagus behind the heart.

What are the benefits of the test?

This test will give us more information on the state of your heart, e.g. heart muscle and heart valve function. This should allow us to decide on whether you need treatment and which treatment options are best for you.

For example, it might tell us why a valve is leaking and whether it can be repaired or needs replacing.

What are the risks?

The procedure is very safe, however:

- There is a small risk of damage to teeth, particularly if they are loose or capped. This is minimised by using a plastic mouthpiece.

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- Some patients may experience some breathing difficulty after the anaesthetic mouth spray, but this is rarely serious.
- Minor bleeding from the mouth and soreness of the throat is common but is rarely serious.
- There is a very small risk of causing damage to the oesophagus (less than 1 in 1000). This is extremely rare but you may require surgery if it occurs.
- It is rare for patients to have an allergic reaction to the drugs used. You must let us know if you have any known allergies.

The risk of major complication is very low indeed. The risk is however, dependant on your general state of health and well-being and any other illnesses that you may have and may be higher in some instances. The doctor will be happy to discuss this further should you wish.

Please ensure that you tell us before the test if you have ever had surgery to the mouth, neck, oesophagus or stomach, have difficulty swallowing, have liver disease, a blood clotting disorder or have coughed up or vomited any blood.

What are the risks of not having treatment?

Not having the procedure may delay the diagnosis and effective treatment of heart disease.

Are there any alternatives to this test?

There are other ways of looking at the heart but your doctor feels that this is the best test for you at this stage of your management. If you would prefer not to proceed with a TOE then please let your consultant's secretary know and he/she will arrange for the consultant to discuss the alternatives with you.

Preparing for the test

- Please continue your normal medication. There is usually no need to stop Warfarin or Aspirin or any other medication prior to the test.
- On the morning of the test please do not eat for 6 hours before the procedure. You may drink small amounts and take any medication, up to 4 hours before the test.
- If you have diabetes, please do not take your insulin or diabetic tablets on the morning of the test, but bring them with you so that you can take them as soon as you are able to eat after the test.
- Please ensure that a responsible adult, ideally a friend or relative accompanies you to the examination, as you may need assistance going home as most patients will have received sedative medication. A responsible person may also need to stay with you overnight.
- If you need NHS transport, please ask your GP's surgery to book this, with a return journey

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booked 2-3 hours after the time of the test. If you experience problems, please ring the consultant's secretary for advice.

- Please inform us beforehand if you may be pregnant or are breastfeeding.
- Do not bring any excess money or valuables with you on the day.
- Please wear loose casual clothing.

How can I help to reduce the spread of infections while in hospital?

Preventing the spread of infections is important to the wellbeing of our patients, and for that reason we have infection control procedures in place.

Keeping your hands clean is an effective way of preventing the spread of infections. It is important that you, and anyone accompanying you, use the hand rub (special gel) available at the main entrance of the hospital and at the entrance to every ward before coming in to and after leaving the ward or hospital.

In some situations hands may need to be washed at a sink using soap and water rather than using the hand rub. Staff will inform you about all the infection control procedures that you need to follow.

During the test

The procedure usually involves coming to the hospital for a few hours. It is performed by a specialist doctor and a cardiac physiologist and takes about 15-30 minutes. A nurse will be also present and assist the procedure.

Please note that other healthcare professionals and trainees may observe the procedure. If you do not wish them to be present during the procedure, please inform a doctor or nurse.

The doctor will talk to you about the procedure beforehand and make sure that you understand why you are having the procedure, what it involves and the benefits and risks to you. Please do not hesitate to ask any questions. The doctor will then ask you to sign a consent form for the test.

1. You will be asked to lie on a bed and will be attached to a heart monitor and oxygen supply. Your heart rate and oxygen level will be monitored through a clip attached to your fingertip or earlobe.
2. A small drip needle (cannula) will be placed in your arm through which we can give sedation if necessary. Most patients receive sedation.
3. You will be asked to remove any spectacles, contact lenses, dentures or plates.
4. Your mouth and throat will be numbed with a local anaesthetic spray and a plastic mouthpiece placed in your mouth. The mouthpiece is to prevent damage to your teeth and to protect the probe from your teeth.

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5. You will be asked to lie on your left side, and the tube will then be passed gently through your mouth into the oesophagus and stomach.
6. You will be asked to swallow initially to help the tube along. The tube is small and will not interfere with your breathing although it would be better for you to breathe through your nose.
7. The doctor will adjust the probe position in the oesophagus and record pictures.

We may need to inject some fluid (usually salty water) through the drip needle for some examinations. Some patients produce excessive saliva during the test and we can easily remove this for you using a suction device, like at the dentist.

Will it hurt?

The initial procedure is slightly uncomfortable, but not painful. Once the probe is passed into the gullet, it is much more comfortable.

After the test

If you had sedation, we will move you to another recovery room and a member of staff will watch you until you have woken up fully. Most patients will feel minor mouth and throat discomfort after the test and have mild discomfort and bruising at the site of the drip needle.

Due to the local anaesthetic spray to your throat, you will not be able to eat or drink safely for at least an hour after the test. You must wait until your throat and mouth are no longer numb and then take a small amount of clear water first. If this is swallowed easily without coughing and you feel a normal sensation on swallowing, you may then eat and drink normally. Do not eat or drink anything hot for at least 2 hours. Your throat may feel mildly sore for 1-2 days after the test.

After sedation you must not drive, operate machinery (including a kettle or oven), drink alcohol or sign any documents for at least 24 hours. A responsible adult must accompany you home and stay with you overnight. Do not be alarmed if you do not remember the procedure as the sedating medication can also affect your memory of the procedure.

The drip needle site in your arm is unlikely to cause any problems, but if you notice any excessive swelling, redness, soreness or heat at the site, please seek help from a doctor or nurse as this may indicate an infection which may require antibiotics.

Getting the results

The doctor may wish to talk to you about the findings of the examination after you have recovered from the test. Alternatively, if another consultant referred you for the TOE, the doctor doing the test will inform your consultant of the results so that they can arrange to see you again to discuss the findings. A copy of the report will be sent to your doctor.

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Symptoms to report

Complications related to this procedure are very rare. However be sure to report unusual symptoms such as difficulty in swallowing, shortness of breath, chest pain, bleeding or fever.

It is important to remember that each person's individual condition is unique. This leaflet contains general information and is not a substitute for discussion with the doctor or nurse. If you have any questions, please contact either the consultant's secretary or the cardiac departments/wards.

Contact details

Sandwell Hospital day case unit

0121 507 3714 (9am-5pm)

Sandwell Hospital Cardiac Ward (CCU)

0121 507 3499 (out of working hours)

City Hospital day case unit (D7B)

0121 507 5141 (9am-5pm)

City Hospital Cardiac Ward (CCU/D5)

0121 507 4305 Or 5552 (out of working hours)

Sources used for the information in this leaflet

- Daniel WG, et al, 'Safety of transesophageal echocardiography. A multicenter survey of 10,419 examinations', 1991
- Grubb. N, Newby. David, 'Cardiology' Churchill publications, 2006
- Journal of Cardiothoracic and Vascular Anaesthesia, vol 23, no.1, 'Major complications related to the use of Transoesophageal Echocardiography in cardiac surgery', 2009

If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5495 or email: swb-tr.swbh-gm-patient-information@nhs.net



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