



**EACVI**

European Association of  
Cardiovascular Imaging

### **What is a transesophageal echocardiogram?**

An echocardiogram is an ultrasound scan without any radiations that creates moving pictures of the heart. A small probe is used to send out high-frequency sound waves. The probe here is a thin tube the size of your index finger. It passes through your mouth, down your throat and into your oesophagus. The oesophagus is very close to the posterior chambers of the heart. This allows clear images of those heart structures and valves than what would be obtained with a standard echocardiogram. These sound waves then bounce or "echo" off of the heart structures to be sent back by the probe to a computer that can create moving images of the heart.

### **What we can see**

A transoesophageal echocardiogram scan uses different types of echocardiography. Heart structures are assessed in real-time. This enables the doctor to assess heart valves structure, pumping, assess how strong it pumps and if the heart muscle, walls cavity and valves look healthy or if there is any abnormality.

Then there is the Doppler echocardiography. It is used to assess and measure blood flow through the heart chambers and valves. The amount of blood pumped out with each beat is an indication of the heart's function.

Doppler uses different colors to detect the direction of blood flow within the heart. When the blood gets closer to the probe, it appears in red, when it goes away, it becomes blue. This and the Doppler echo are useful to assess tight or leaky valves and holes in the heart.

Finally, 3-D echo creates images of three-dimensional views of the heart structures allowing for rotation, visualisation from multiple perspectives and greater depth than 2-D echo.

TOE is particularly useful for assessing infective endocarditis, aortic aneurysm/ dissection blood clots and heart masses.

### **Precautions**

Transoesophageal echocardiograms are an invasive procedure. You will need to stop eating and drinking 6 hours before the exam. Your provider will let you know when to take your medications.

If you have a medical history of problems swallowing, chronic acid reflux, hiatus hernia, oesophageal or stomach cancer, sleep apnea or chronic use of sleeping or pain relief pills, please let your provider know.



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### **What to expect the day of the exam**

The day of the test, a medical practitioner will take you to the room where the exam is carried out. She or he will ask you to confirm your details, then measure your weight and height. Your blood pressure will also be measured.

You will be asked to undress to the waist, and you will be given a gown to wear leaving the front of your chest open. Then you will lie down on a special couch for the test.

The doctor will attach ECG stickers with wires to monitor your ECG during the scan. Before starting the scan, the nurse will turn down the lights to have better visibility of your heart on monitor. The doctor will spray the back of your throat with pain-relieving medication. They'll also give you medicine through the cannula to help you relax. You may feel drowsy.

You will be asked to turn to your left side. Once your medical practitioner is happy with your position, she or he will start the scan by putting a small ultrasound probe with a gel on it on your chest. You might have a sensation of cold from the gel, as it has room temperature and colder than your body, but it will last short, and you will get used to it.

Your heart will be scanned from different angles by careful movements of the probe within the oesophagus. When the probe scans the blood flow in your heart you will hear some noises, so don't be surprised. The scan takes approximately half an hour.

Your throat will be numb for an hour or so. Don't eat or drink anything until these wears off. You might choke if you eat or drink too soon. Someone will need to drive you home from your TOE. You won't be able to drive for 24 hours after your TEE due to the sedation.

After the test, you can be given preliminary results, but usually they go through the pictures again carefully before reporting. It can take a couple of days to receive the report.