

Let's Talk About...

Transesophageal Echocardiogram (TEE) for Children

What is a TEE?

A **transesophageal** [tranz-eh-soff-uh-JEE-uhl] **echocardiogram** [ek-oh-CAR-dee-oh-gram] (**TEE**) uses an ultrasound **transducer** [tranz-DOO-sur] to send high-frequency sound waves through your child's chest.

During a TEE, the transducer is guided into your child's **esophagus** [eh-SOFF-eh-gus] until it rests directly behind their heart. As the waves bounce (or "echo") off structures in the heart, the sound waves are turned into images on a computer. Because the sound waves do not have to pass through skin, muscle, or bone the TEE can provide better images than a standard echocardiogram.

A TEE can show detailed information about your heart, including the:

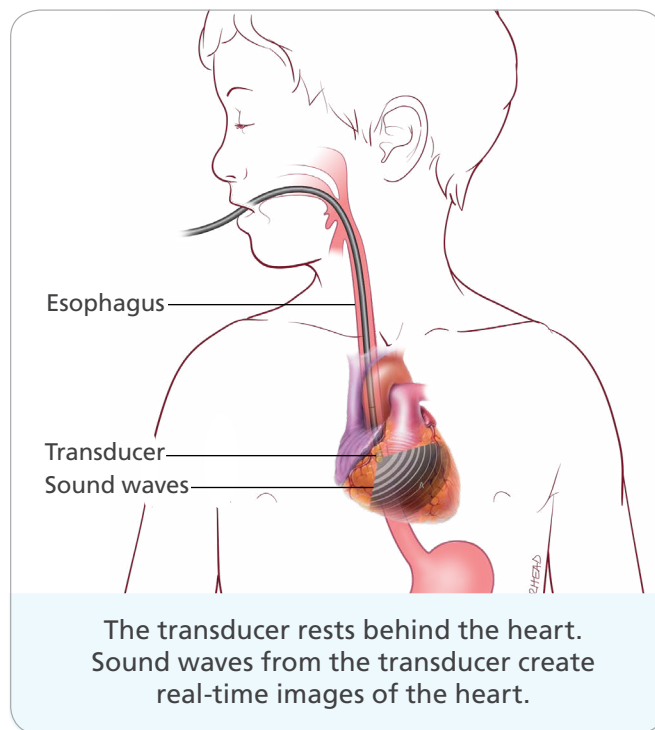
- Size and structure of the heart chambers, and any problems, such as an opening in a chamber wall
- Amount of blood the heart can pump
- Structure and movement of heart valves, or the condition of an implanted artificial valve
- Condition of the blood vessels close to the heart
- Presence of blood clots or infected tissue in the heart

Why does my child need a TEE?

Your child's doctor may recommend a TEE if:

- A standard echocardiogram is not possible
- Highly detailed information is needed
- The standard test produced poor images

A TEE is also sometimes used during open heart surgery or a cardiac catheterization [kath-eh-ter-ize-AY-shun].



What happens during a TEE?

During TEE, your child:

- Will be given medication (sedation or anesthesia) to help them relax or sleep during the procedure.
- May be given a throat spray, gel, or liquid to numb their throat. Older children will be given a block to place between their teeth. This will protect their teeth during the test.
- Will have a breathing tube placed to give them oxygen during the procedure.

After your child is comfortable and the breathing tube is in place, the provider will pass a thin, flexible tube into your child's mouth, down their throat, and into their esophagus.

The provider will use the transducer to take ultrasound images of the heart. This usually takes 10 to 45 minutes.

What happens after a TEE?

When the test is complete, the transducer will be carefully taken out. Here's what you can expect:

- Your child may have a numb or sore throat for a short period of time. **Do not let them eat or drink anything until the feeling comes back, usually within 1 to 4 hours.** Start with liquids and soft foods such as gelatin, pudding, or soup.
- Your child may feel weak or tired for the rest of the day. This is from the sedation or anesthesia.
- Your child's doctor will talk with you about the results.

What are the risks and benefits of TEE?

The table below lists the most common benefits, possible risks, alternative and contraindications for TEE. Other benefits and risks may apply in your child's unique medical situation. Talk with your child's healthcare provider to learn more about the risks and benefits. Be sure to ask any questions you might have.

Possible benefits	Possible risks and complications	Alternatives
<ul style="list-style-type: none">• TEE can show structures in the heart that may not show up on other tests or on a regular echocardiogram.• Postoperative surgical results while the chest is still open.• Guidance for procedures inside the heart	<p>TEE is considered a partially invasive procedure because medical instruments are put into your child's body. Potential risks include:</p> <ul style="list-style-type: none">• Short term discomfort in the mouth or difficulty swallowing• Your child's breathing tube may come loose• Injury your child's throat (oropharynx) esophagus, or stomach, which may cause bleeding or perforation (very rare).	<p>Alternative tests include:</p> <ul style="list-style-type: none">• Transthoracic (standard, non-invasive) echocardiogram• Epicardial echocardiogram (requires surgery)• CT or MRI imaging of the heart <p>TEE offers a more detailed view of certain heart problems in certain settings.</p>

Things to consider before your child has a TEE (contraindications)

- **Absolute contraindications:** Your child should not have a TEE if they have an unrepaired tracheoesophageal [tray-kee-oh-eh-soff-uh-GEE-uhl] fistula, esophageal obstruction or stricture (narrowing), perforation (hole) in the stomach or bowel, active gastric (stomach) or esophageal bleeding
- **Relative contraindications:** You and your doctor should consider whether the benefits of TEE outweigh the risks if your child has any of the following:
 - History of esophageal or gastric surgery
 - Enlarged veins in the esophagus (esophageal varices)
 - Pouch protruding out of the wall of the esophagus (esophageal diverticulum)
 - Recent gastrointestinal bleed
 - Active inflammation in the esophagus (esophagitis) or peptic ulcer disease
 - Vascular ring (abnormal formation of the aorta)
 - Current injury or disease of the mouth or throat
 - Bleeding disorders (blood does not clot normally, or low platelet count)
 - Cervical spine injury or anomaly
 - Current G-tube or G-button or fundoplication (limit imaging to esophageal windows)

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