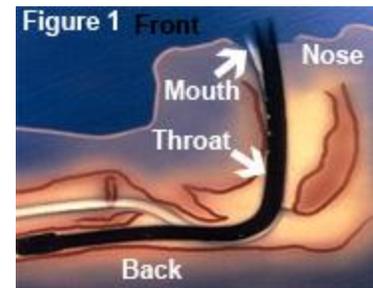
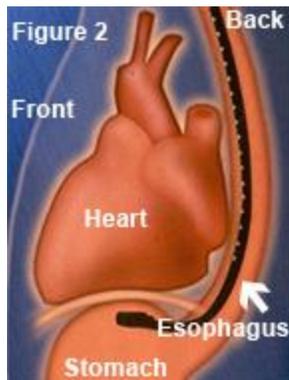


Transesophageal Echocardiogram (TEE)

A transesophageal echocardiogram is a special type of echocardiogram (ultrasound of the heart). This test uses a special echocardiography transducer (ultrasound camera) that is inserted through your child's mouth, through the back of the throat, and into the esophagus (Figure 1) or feeding tube between mouth and stomach. It is very similar to the scope used for upper endoscopy by gastroenterologists.



A TEE is performed when the standard echocardiogram isn't clear enough to make the suspected diagnosis. It's also performed in patients who are having heart surgery to give the surgeon and anesthesia team more information to guide treatment after surgery and confirm that the surgical procedure has been successful or if additional repair is needed prior to leaving the operating room. The risk of a TEE is minimal and your cardiologist will discuss with you the reasons you need a TEE as well as standard echocardiography.



There are two main advantages of this type of echocardiogram. First, it allows your cardiologist to get a much better look at some of the heart structures, including the wall between the two top chambers of the heart (atrial septum) and heart valves. This is because the esophagus and stomach are very close to the heart (Figure 2) and may allow the cardiologist to obtain more detailed pictures of the heart compared to routine echocardiograms performed from the chest wall. Secondly, it allows the cardiologist to obtain images of the heart during heart procedures (surgery and cardiac catheterization) without having the echo camera get in the way of the procedure.

This procedure may cause discomfort and gagging if done without sedation. For this reason, transesophageal echocardiograms in children are always performed with some type of anesthesia. Your child will either undergo general anesthesia or be heavily sedated with intravenous medication. A member of the anesthesia team may spray medicine in the back of your child's throat to make it feel somewhat numb. During the procedure your child's breathing and vital signs will be monitored very closely. The type of anesthesia will depend on the age of your child, reason for having the study performed, your child's overall health status, and preferences of the medical team.

Your doctor may recommend a transesophageal echocardiogram for several reasons. The most common is to provide additional information during heart surgery or cardiac catheterization. In

these cases, your child will already be under anesthesia or heavy sedation for the procedure itself. Other indications include trying to find a possible reason for a stroke, trying to find a small hole between the upper chambers of the heart that a regular echocardiogram could not see, making sure there are no blood clots in the heart in children with abnormally fast heart rhythms, looking for infections in the heart, checking that artificial valves are working properly, and making sure that the wall of the aorta (main blood vessel to the body) is not damaged). Some conditions would lead to your cardiologist recommending against transesophageal echocardiography such as severe narrowing of the esophagus or stomach.

The procedure usually takes 20 to 40 minutes, but the total time with sedation is usually 60 to 90 minutes. If your child is an outpatient, he or she should be able to go home two to three hours after the procedure. The procedure is very safe. Your doctor will go over the risks of the procedure with you and give you an opportunity to ask questions prior to the test. Some children complain of a sore throat for a few hours and may have an upset stomach from the anesthesia. Almost everyone can return to normal activity within 24 hours.