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## **ESOPHAGEAL MANOMETRY**

The esophagus is the tube that carries food and liquid from the throat to the stomach. Although it seems like a simple organ, the esophagus is much more than a rigid tube. The wall of the esophagus contains a muscle that automatically contracts whenever a person swallows. This contraction occurs as a sweeping wave down the esophagus (peristalsis). It literally strips the food or liquid from the throat to the stomach.

Another important part of the esophagus is the lower valve muscle (lower esophageal sphincter, LES). This is a specialized muscle that remains closed most of the time, only opening when swallowed food is moved down the esophagus or when a person burps or even vomits. This specialized muscle protects the lower esophagus from caustic stomach acid and bile. These substances, of course, cause the discomfort of heartburn, and in time, can lead to damage and scarring in the esophagus. Everyone has heartburn at times, especially after a large or fatty meal.

Manometry means the recording of muscle pressures within an organ. Esophageal manometry measures the pressure within the esophagus. As such, it can evaluate the action of the stripping muscle waves in the main portion of the esophagus, as well as the muscle valve at the end of it.

### **Equipment**

The equipment consists of thin tubing with openings at various locations. When this tube is positioned in the esophagus, these openings sense the pressure in various parts of the esophagus. As the esophagus squeezes on the tube, these pressures are transmitted to a computer analyzer that records the pressures on moving graph paper. It is very much like an echocardiogram. The physician can evaluate these wave patterns to determine if they are normal, or if they are abnormally high or low.

### **Preparation**

The preparation for esophageal manometry is very simple. The patient should take no food or liquids for about 8 hours before the exam. The physician will usually (although not always) want to study the esophagus in its natural state. In other words, there should not be any medicine in the body that can affect the function of the esophagus. The physician informs the patient on what medications should and should not be taken.

Disclaimer: This document contains information and/or instructional materials developed by Blair Gastroenterology Associates for the typical patient with your condition. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your health care provider if you have any questions about this document, your condition, or your treatment plan.

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## The Procedure

The procedure takes about one hour from start to finish. While seated in a chair or lying on the side, thin, soft tubing is gently passed through the nose or the mouth. Upon swallowing, the tip of the tube enters the esophagus and the physician or specially trained nurse then quickly passes it down to the desired level. There is usually some slight gagging at this point, but it is easily controlled by following the physicians' instructions. During the exam, the patient is asked to swallow saliva (called a wet swallow). Pressure recordings are made and the tubing is withdrawn. Patients can usually resume regular activity, eating and medicines immediately after the exam.