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### Patient information: Upper endoscopy (Beyond the Basics)

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**ENDOSCOPY OVERVIEW** — An upper endoscopy, often referred to as endoscopy, EGD, or esophago-gastro-duodenoscopy, is a procedure that allows a physician to directly examine the upper part of the gastrointestinal (GI) tract, which includes the esophagus, the stomach, and the duodenum (the first section of the small intestine) ([figure 1](#)).

The physician who performs the procedure, known as an endoscopist, has special training in using an endoscope to examine the upper GI system, looking for inflammation (redness, irritation), bleeding, ulcers, or tumors.

**REASONS FOR UPPER ENDOSCOPY** — The most common reasons for upper endoscopy include:

- Unexplained discomfort in the upper abdomen.
- GERD or gastroesophageal reflux disease (often called heartburn). (See "[Patient information: Acid reflux \(gastroesophageal reflux disease\) in adults \(Beyond the Basics\)](#)".)
- Persistent nausea and vomiting.
- Upper gastrointestinal (GI) bleeding (vomiting blood or blood found in the stool that originated from the upper part of the GI tract). Bleeding can be treated during the endoscopy.
- Difficulty swallowing; food/liquids getting stuck in the esophagus during swallowing. This may be caused by a narrowing (stricture) or tumor or because the esophagus is not contracting properly. If there is a stricture, it can often be dilated with special balloons or dilation tubes during the endoscopy.
- Abnormal or unclear findings on an upper GI x-ray, CT scan, or MRI.
- Removal of a foreign body (a swallowed object).
- To check healing or progress on previously found polyps (growths), tumors, or ulcers.

**ENDOSCOPY PREPARATION** — You will be given specific instructions regarding how to prepare for the examination before the procedure. These instructions are designed to maximize your safety during and after the examination and to minimize possible complications. It is important to read the instructions ahead of time and follow them carefully. Do not hesitate to call the physician's office or the endoscopy facility if there are questions.

You may be asked not to eat or drink anything for up to eight hours before the test. It is important for your stomach to be

empty to allow the endoscopist to visualize the entire area and to decrease the possibility of food or fluid being vomited into the lungs while under sedation (called aspiration).

You may be asked to adjust the dose of your medications (such as insulin) or to stop specific medications (such as blood thinning medications) temporarily before the examination. You should discuss your medications with your physician before your appointment for the endoscopy.

You should arrange for a friend or family member to escort you home after the examination. Although you will be awake by the time you are discharged, the medications used for sedation may cause temporary changes in the reflexes and judgment and interfere with your ability to drive or make decisions (similar to the effects of alcohol).

**WHAT TO EXPECT DURING ENDOSCOPY** — Prior to the endoscopy, the staff will review your medical and surgical history, including current medications. A physician will explain the procedure and ask you to sign consent. Before signing consent, you should understand all the benefits and risks of the procedure, and should have all of your questions answered.

An intravenous line (a needle inserted into a vein in the hand or arm) will be inserted to deliver medications. You may be given a combination of a sedative (to help you relax) and a narcotic (to prevent discomfort), or other medications that are commonly used for sedation.

Although most patients are sedated for the examination, many tolerate the procedure well without any medication.

Your vital signs (blood pressure, heart rate, and blood oxygen level) will be monitored before, during, and after the examination. The monitoring is not painful. Oxygen is often given during the procedure through a small tube that sits under the nose and is fitted around the ears. For safety reasons, dentures should be removed before the procedure.

**THE ENDOSCOPY PROCEDURE** — The procedure typically takes between 10 and 20 minutes to complete. The endoscopy is performed while you lie on your left side. Sometimes the physician will give a medication to numb the throat (either a gargle or a spray). A plastic mouth guard is placed between the teeth to prevent damage to the teeth and endoscope.

The endoscope (also called a gastroscope) is a flexible tube that is about the size of a finger. The endoscope has a lens and a light source that allows the endoscopist to see the inner lining of the upper gastrointestinal (GI) tract, usually on a TV monitor. Most people have no difficulty swallowing the flexible gastroscope as a result of the sedating medications. Many people sleep during the test; others are very relaxed and generally not aware of the examination.

An alternative procedure called transnasal endoscopy may be available in some facilities. This involves passing a very thin scope (about the size of a drinking straw) through the nose. You are not sedated but a medication is applied to the nose to prevent discomfort. A full examination can be performed with this instrument.

The endoscopist may take tissue samples called biopsies. Obtaining biopsies is not painful. The endoscopist may also perform specific treatments (such as dilation, removal of polyps, treatment of bleeding), depending upon what is found during the examination. Air is gently introduced through the endoscope to open the esophagus, stomach, and intestine, allowing the endoscope to be passed through these areas and improving the endoscopist's ability to see completely. You may experience mild discomfort as air is pushed into the stomach and intestinal tract. This is not harmful; belching may relieve the sensation. The endoscope does not interfere with breathing. Taking slow, deep breaths during the procedure may help you to relax.

**RECOVERY FROM ENDOSCOPY** — After the endoscopy, you will be observed for a period of time, generally less than one hour, while the sedative medication wears off. Some of the medicines commonly used cause some people to temporarily feel tired or have difficulty concentrating. You typically will be instructed not to drive and not to return to work for the balance of the day of the procedure.

The most common discomfort after the examination is a feeling of bloating as a result of the air introduced during the examination. This usually resolves quickly. Some patients also have a mild sore throat. Most patients are able to eat shortly after the examination.

**ENDOSCOPY COMPLICATIONS** — Upper endoscopy is a safe procedure and complications are rare. The following is a list of some possible complications:

- Aspiration (inhaling) of food or fluids into the lungs, the risk of which can be minimized by not eating or drinking for the recommended period of time before the examination.
- Reactions to the sedative medications are possible; the endoscopy team (doctors and nurses) will ask about previous medication allergies or reactions and about health problems such as heart, lung, kidney, or liver disease. Providing this information to the team ensures a safer examination.
- The medications may produce irritation in the vein at the site of the intravenous catheter. If redness, swelling, or discomfort occurs, you should call your endoscopist or primary care provider, or the number given to you at discharge.
- Bleeding can occur from biopsies or the removal of polyps, although if bleeding occurs, it is usually minimal and stops quickly on its own or can be easily controlled.
- The endoscope can cause a tear or hole in the area being examined. This is a serious complication but fortunately occurs extremely rarely.

The following signs and symptoms should be reported immediately:

- Severe abdominal pain (more than gas cramps)
- A firm, distended abdomen
- Vomiting
- Any temperature elevation
- Difficulty swallowing or severe throat pain
- A crunching feeling under the skin of the neck

**AFTER UPPER ENDOSCOPY** — Most patients tolerate endoscopy very well and feel fine afterwards. Some fatigue is common after the examination, and you should plan to take it easy and relax the rest of the day.

The endoscopist can describe the result of the examination before you leave the endoscopy facility. If biopsies have been taken or polyps removed, you should call for results at a time specified by the endoscopist, typically within one to two weeks.

**WHERE TO GET MORE INFORMATION** — Your healthcare provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site ([www.uptodate.com/patients](http://www.uptodate.com/patients)). Related topics for patients, as well as selected articles written for healthcare professionals, are also available. Some of the most relevant are listed below.

**Patient level information** — UpToDate offers two types of patient education materials.

**The Basics** — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

[Patient information: Upper endoscopy \(The Basics\)](#)

[Patient information: Peptic ulcers \(The Basics\)](#)  
[Patient information: Barrett's esophagus \(The Basics\)](#)  
[Patient information: Achalasia \(The Basics\)](#)  
[Patient information: GI bleed \(The Basics\)](#)  
[Patient information: Gastroparesis \(delayed gastric emptying\) \(The Basics\)](#)  
[Patient information: Esophageal cancer \(The Basics\)](#)  
[Patient information: Gastritis \(The Basics\)](#)  
[Patient information: Angiodysplasia of the GI tract \(The Basics\)](#)  
[Patient information: Esophageal stricture \(The Basics\)](#)  
[Patient information: Stomach cancer \(The Basics\)](#)

**Beyond the Basics** — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

[Patient information: Acid reflux \(gastroesophageal reflux disease\) in adults \(Beyond the Basics\)](#)

**Professional level information** — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

[Antibiotic prophylaxis for gastrointestinal endoscopic procedures](#)  
[Autofluorescence endoscopy for Barrett's esophagus](#)  
[Endoscope disinfection](#)  
[Endoscopic diagnosis of inflammatory bowel disease](#)  
[Endoscopic management of walled-off pancreatic fluid collections: Efficacy and complications](#)  
[Endoscopic management of walled-off pancreatic fluid collections: Techniques](#)  
[Endoscopic procedures in patients with disorders of hemostasis](#)  
[Magnification endoscopy](#)  
[Overview of deep small bowel enteroscopy](#)  
[Overview of procedural sedation for gastrointestinal endoscopy](#)  
[Alternatives and adjuncts to moderate procedural sedation for gastrointestinal endoscopy](#)  
[Sedation-free gastrointestinal endoscopy](#)

The following organizations also provide reliable health information.

- National Library of Medicine  
([www.nlm.nih.gov/medlineplus/healthtopics.html](http://www.nlm.nih.gov/medlineplus/healthtopics.html))
- The American Society of Gastrointestinal Endoscopy  
(<http://www.asge.org/patients/patients.aspx?id=1022>)
- National Institute of Diabetes and Digestive and Kidney Diseases  
(<http://digestive.niddk.nih.gov/ddiseases/pubs/upperendoscopy/index.htm>)

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[1-8]

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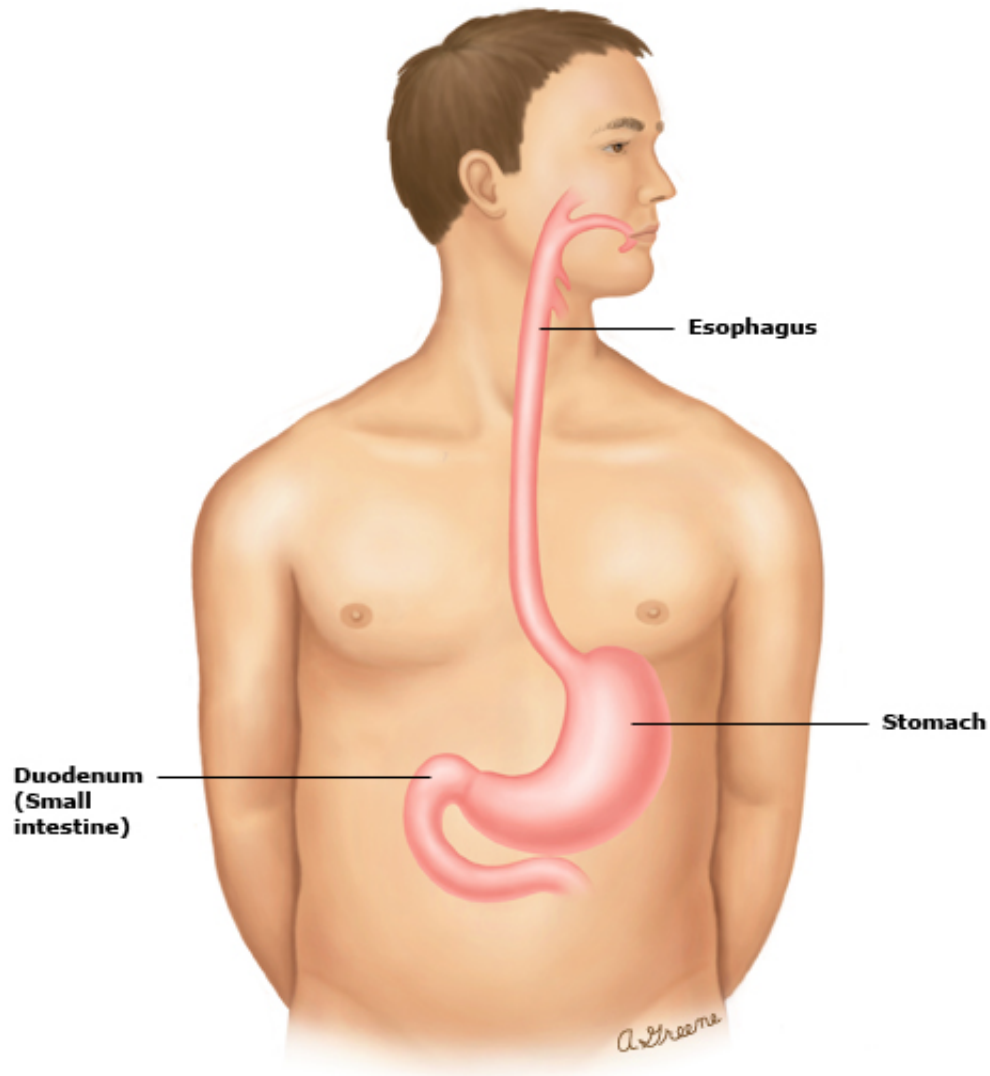
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## GRAPHICS

### Upper digestive tract

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## Disclosures

**Disclosures:** **David A Greenwald, MD, FASGE, FACG** Nothing to disclose. **Mark Feldman, MD, MACP, AGAF, FACG** Nothing to disclose. **Anne C Travis, MD, MSc, FACG, AGAF** Employee of UpToDate, Inc. Equity Ownership/Stock Options: Proctor & Gamble.

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