

# Upper GI Endoscopy

*National Digestive Diseases Information Clearinghouse*



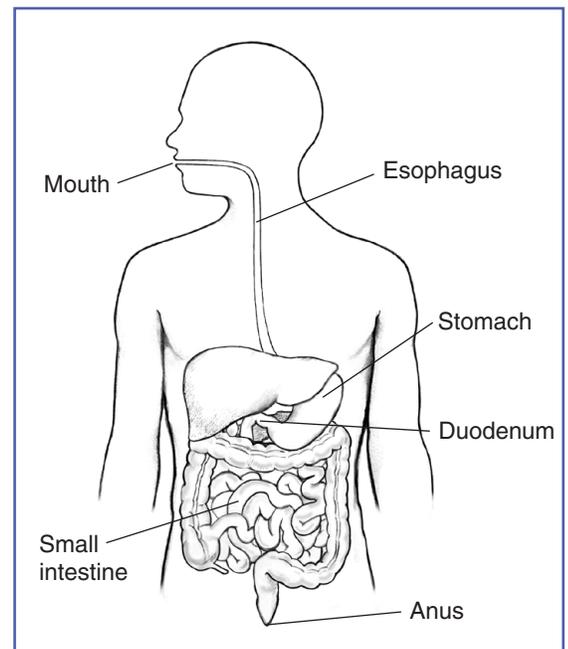
## What is an upper gastrointestinal (GI) endoscopy?

An upper GI endoscopy is a procedure that uses an endoscope—a small, flexible tube with a light—to see the lining of the upper GI tract. A gastroenterologist, surgeon, or other trained health care provider performs the procedure. A gastroenterologist is a doctor who specializes in digestive diseases. A health care provider may refer to the procedure as an EGD or esophagogastroduodenoscopy.

## What is the upper gastrointestinal tract?

The upper GI tract is the first part of the GI tract, which includes a series of hollow organs joined in a long, twisting tube from the mouth to the anus—the 1-inch-long opening through which stool leaves the body. The upper GI tract includes the mouth, esophagus, stomach, duodenum, and small intestine. The duodenum is the first part of the small intestine.

The esophagus carries food and liquids from the mouth to the stomach. The muscular layers of the esophagus are normally pinched together at both the upper and lower ends by muscles called sphincters. When a person swallows, the sphincters relax to let food or drink pass from the mouth into the stomach. The muscles then close rapidly to prevent the



The upper GI tract

food or drink from leaking out of the stomach and back into the esophagus. This process is automatic and people are usually not aware of it, though people sometimes feel food in their esophagus when they swallow something too large, try to eat too quickly, or drink very hot or cold liquids.

The stomach slowly pumps the food and liquids into the small intestine, which absorbs needed nutrients. The body digests food using the movement of the muscles in the GI tract, along with the release of hormones and enzymes.

## Why is an upper gastrointestinal endoscopy performed?

An upper GI endoscopy can help diagnose the cause of

- abdominal pain
- anemia—a condition in which the number of red blood cells is less than normal, resulting in less oxygen carried to the body's cells
- bleeding in the upper GI tract
- nausea and vomiting
- problems swallowing
- unexplained weight loss

Upper GI endoscopy can also show

- abnormal growths.
- bowel obstruction—partial or complete blockage of the small or large intestine.
- gastroesophageal reflux—occurs when stomach contents flow back up into the esophagus.
- a hiatal hernia—when the upper part of the stomach slips through the diaphragm and moves up into the chest. The diaphragm is the muscle wall that separates the stomach from the chest.
- inflammation, or swelling, of the GI tract lining.
- precancerous cells.
- ulcers—sores on the stomach or duodenal lining.

Health care providers also use upper GI endoscopy to

- obtain a biopsy—a procedure that involves taking a small piece of tissue for examination with a microscope
- remove objects, including food, that may be stuck in the upper GI tract
- treat conditions such as bleeding ulcers

## How does a person prepare for an upper gastrointestinal endoscopy?

A person prepares for an upper GI endoscopy by

- talking with a health care provider
- arranging for a ride home after the procedure
- clearing the upper GI tract

**Talking with a health care provider.** A person should talk with his or her health care provider about medical conditions he or she has and all prescribed and over-the-counter medications, vitamins, and supplements he or she takes, including

- aspirin, or medications that contain aspirin
- arthritis medications
- nonsteroidal anti-inflammatory drugs such as ibuprofen and naproxen
- blood thinners
- blood pressure medications
- diabetes medications

**Arranging for a ride home.** For safety reasons, people can't drive for 24 hours after the procedure to allow time for the medications used during the procedure to wear off. Health care providers will ask people to make advance arrangements for getting home after the procedure.

**Clearing the upper GI tract.** The health care provider needs to examine the lining of the upper GI tract during the procedure. If food or drink is present inside the upper GI tract at the time of the procedure, the health care provider will not be able to see this lining clearly. To ensure that the upper GI tract is clear, health care providers usually advise people not to eat, drink, smoke, or chew gum during the 8 hours before the procedure.

## How is an upper gastrointestinal endoscopy performed?

A health care provider performs an upper GI endoscopy at a hospital or an outpatient center. A nurse or technician will give the person a liquid anesthetic to gargle or will spray the anesthetic on the back of the person's throat. The anesthetic numbs the throat and calms the gag reflex. The nurse or technician will then place an intravenous (IV) needle in the person's arm to provide a sedative. The medical staff will monitor the person's vital signs and try to make sure he or she is as comfortable as possible.

The person lies on his or her side on an examination table. The health care provider carefully feeds the endoscope down the person's esophagus and into the stomach and duodenum. A small camera mounted on the endoscope sends a video image to a monitor, allowing close examination of the intestinal lining. The health care provider will pump air through the endoscope to inflate the stomach and duodenum, making them easier to see.

During the upper GI endoscopy, the health care provider may pass tiny tools through the endoscope to

- remove polyps. Polyps are common in adults and are usually harmless. However, some polyps can become cancer, so removing polyps early is an effective way to prevent cancer.
- perform a biopsy of tissue in the upper GI tract. A biopsy is a procedure that involves taking a small piece of intestinal lining for examination with a microscope. The person will not feel the biopsy. A pathologist—a doctor who specializes in diagnosing diseases—will examine the tissue to help confirm a diagnosis.
- stop any bleeding with an electrical probe or special medications.

The procedure usually takes between 15 and 60 minutes. The endoscope does not interfere with the person's breathing and many people fall asleep during the procedure.

## What can a person expect after an upper gastrointestinal endoscopy?

After an upper GI endoscopy, a person can expect the following:

- bloating or nausea for a short time after the procedure
- a sore throat for 1 to 2 days
- to stay at the hospital or outpatient center for 1 to 2 hours after the procedure so the sedation can wear off
- to resume a normal diet once his or her gag reflex has returned
- to rest at home for the remainder of the day

A health care provider will advise on when the person can begin driving again. A member of the health care team will review the discharge instructions with the person—or with an accompanying friend or family member if the person is still groggy—and provide a written copy. The person should follow all instructions given.

Some results from an upper GI endoscopy are available immediately after the procedure. After the sedative has worn off, the health care provider will share results with the person or a designee. Biopsy results take a few days to come back.

## What are the risks of an upper gastrointestinal endoscopy?

The risks of an upper GI endoscopy include

- reaction to the medications used for sedation
- bleeding from the biopsy site or where the health care provider removed a polyp
- perforation—a small tear in the lining of the upper GI tract

A health care provider can treat an abnormal reaction to the sedatives with medications during or after the procedure. Bleeding and perforation are more common in endoscopies used for treatment rather than diagnosis. Bleeding often stops without treatment. Research has shown that complications occur in one out of every 1,000 procedures and may need to be treated with surgery.<sup>1</sup>

### Seek Immediate Care

People who have any of the following symptoms after an upper GI endoscopy should seek immediate medical attention:

- chest pain
- difficulty breathing
- problems swallowing or throat pain that worsens
- vomiting—particularly vomit that is bloody or looks like coffee grounds
- abdominal pain that worsens
- bloody or black, tar-colored stool
- fever

<sup>1</sup>Yusuf TE, Bhutani MS. Esophagogastroduodenoscopy. Medscape website. <http://emedicine.medscape.com/article/1851864-overview#a17>. Updated June 3, 2013. Accessed March 26, 2014.

## Points to Remember

- An upper gastrointestinal (GI) endoscopy is a procedure that uses an endoscope—a small, flexible tube with a light—to see the lining of the upper GI tract.
- An upper GI endoscopy can help diagnose the cause of
  - abdominal pain
  - anemia—a condition in which the number of red blood cells is less than normal, resulting in less oxygen carried to the body’s cells
  - bleeding in the upper GI tract
  - nausea and vomiting
  - problems swallowing
  - unexplained weight loss
- To ensure that the upper GI tract is clear, health care providers usually advise people not to eat, drink, smoke, or chew gum during the 8 hours before the procedure.
- The health care provider carefully feeds the endoscope down the person’s esophagus and into the stomach and duodenum. A small camera mounted on the endoscope sends a video image to a monitor, allowing close examination of the intestinal lining.
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## Hope through Research

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) conducts and supports basic and clinical research into many digestive disorders.

Clinical trials are research studies involving people. Clinical trials look at safe and effective new ways to prevent, detect, or treat disease. Researchers also use clinical trials to look at other aspects of care, such as improving the quality of life for people with chronic illnesses. To learn more about clinical trials, why they matter, and how to participate, visit the NIH Clinical Research Trials and You website at [www.nih.gov/health/clinicaltrials](http://www.nih.gov/health/clinicaltrials). For information about current studies, visit [www.ClinicalTrials.gov](http://www.ClinicalTrials.gov).

## For More Information

Read more about other diagnostic tests in these publications at [www.digestive.niddk.nih.gov](http://www.digestive.niddk.nih.gov):

- *Colonoscopy*
- *ERCP (Endoscopic Retrograde Cholangiopancreatography)*
- *Flexible Sigmoidoscopy*
- *Liver Biopsy*
- *Lower GI Series*
- *Upper GI Series*
- *Virtual Colonoscopy*

### **American College of Gastroenterology**

6400 Goldsboro Road, Suite 200  
Bethesda, MD 20817  
Phone: 301-263-9000  
Fax: 301-263-9025  
Email: [info@acg.gi.org](mailto:info@acg.gi.org)  
Internet: [www.gi.org](http://www.gi.org)

### **American Gastroenterological Association**

4930 Del Ray Avenue  
Bethesda, MD 20814  
Phone: 301-654-2055  
Fax: 301-654-5920  
Email: [member@gastro.org](mailto:member@gastro.org)  
Internet: [www.gastro.org](http://www.gastro.org)

**American Society for  
Gastrointestinal Endoscopy**  
3300 Woodcreek Drive  
Downers Grove, IL 60515  
Phone: 1-866-353-ASGE  
(1-866-353-2743) or 630-573-0600  
Fax: 630-963-8332  
Email: [info@asge.org](mailto:info@asge.org)  
Internet: [www.asge.org](http://www.asge.org)

**International Foundation for Functional  
Gastrointestinal Disorders**  
700 West Virginia Street, Suite 201  
Milwaukee, WI 53204  
Phone: 1-888-964-2001 or 414-964-1799  
Fax: 414-964-7176  
Email: [iffgd@iffgd.org](mailto:iffgd@iffgd.org)  
Internet: [www.iffgd.org](http://www.iffgd.org)

**National Cancer Institute**  
BG 9609 MCS 9760  
9609 Medical Center Drive  
Bethesda, MD 20892  
Phone: 1-800-4-CANCER  
(1-800-422-6237)  
Internet: [www.cancer.gov](http://www.cancer.gov)

**Society of American Gastrointestinal  
and Endoscopic Surgeons**  
11300 West Olympic Boulevard, Suite 600  
Los Angeles, CA 90064  
Phone: 310-437-0544  
Email: [webmaster@sages.org](mailto:webmaster@sages.org)  
Internet: [www.sages.org](http://www.sages.org)

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You may also find additional information about this topic by visiting MedlinePlus at [www.medlineplus.gov](http://www.medlineplus.gov).

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## National Digestive Diseases Information Clearinghouse

2 Information Way  
Bethesda, MD 20892-3570  
Phone: 1-800-891-5389  
TTY: 1-866-569-1162  
Fax: 703-738-4929  
Email: [nddic@info.niddk.nih.gov](mailto:nddic@info.niddk.nih.gov)  
Internet: [www.digestive.niddk.nih.gov](http://www.digestive.niddk.nih.gov)

The National Digestive Diseases Information Clearinghouse (NDDIC) is a service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The NIDDK is part of the National Institutes of Health of the U.S. Department of Health and Human Services. Established in 1980, the Clearinghouse provides information about digestive diseases to people with digestive disorders and to their families, health care professionals, and the public. The NDDIC answers inquiries, develops and distributes publications, and works closely with professional and patient organizations and Government agencies to coordinate resources about digestive diseases.

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