HEALTH BASICS

Endoscope

An endoscope is a viewing instrument used to examine or treat areas inside the body.

WHAT IT IS
A lighted viewing instrument for inside the body

WHERE IT COMES UP
Tests, biopsies, screening, surgery, and treatment procedures

WHY IT MATTERS
Allows close examination and treatment without major surgery

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
The clinician or endoscopy service arranging your procedure

HOW IT IS CHECKED
Inspection, leak testing, and function checks before use

Overview

An endoscope is an instrument that lets a clinician see inside your body. It usually has a light and a camera or lens. Images appear on a screen or are viewed through the instrument.

Many endoscopes are long, thin, and flexible. Others are short and rigid. Their size and shape match the body area being examined. A capsule endoscope is different: it is a small camera that you swallow.

The procedure that uses an endoscope is called endoscopy . More specific names describe where the instrument goes. For example, a gastroscope examines the swallowing tube and stomach, a colonoscope examines the large bowel, and a bronchoscope examines the breathing passages.

An endoscope is not a disease or a diagnosis. It is a medical device. Finding something during endoscopy may lead to a diagnosis, but the instrument itself does not tell the whole story. A clinician may also use tissue samples, laboratory tests, scans, and your medical history.

How it works

Most endoscopes send light into the body and carry images back to a monitor. Flexible models can bend around natural curves. Controls at the handle allow the clinician to guide the tip.

Some endoscopes contain narrow channels. Small instruments can pass through these channels to:

The route into the body depends on the procedure. An endoscope may pass through the mouth, nose, anus, urinary opening, or a small surgical cut. Gel, air, carbon dioxide, or water may be used to help the instrument move and improve the view.

Some examinations need no sedation. Others use a sedative, which makes you relaxed or sleepy, or an anaesthetic, which blocks sensation or makes you unconscious. The choice is based on the procedure, your health, and the service providing it.

A capsule endoscope works differently. You swallow the capsule, and it takes pictures while moving through the digestive tract. You wear a recorder or sensor system. The capsule usually leaves the body in a bowel movement. It cannot take biopsies or provide treatment.

Reusable endoscopes must be cleaned and disinfected between patients according to their design and intended use. This involves more than wiping the outside. Staff clean internal channels and carry out the required disinfection or sterilization process. Single-use models or parts are discarded after use.

- Take a biopsy, meaning a small tissue sample
- Remove a polyp or another small growth
- Stop bleeding with clips, heat, injections, or other methods
- Remove certain swallowed objects or stones
- Widen a narrowed area or place a supporting tube called a stent

Why it matters for your health

An endoscope can provide a direct view of tissue that may not be clear on an X-ray or scan. It can help investigate bleeding, narrowing, inflammation, ulcers, growths, or changes in how an organ looks.

Some endoscopies are used for screening or follow-up when you feel well. A colonoscopy, for example, may be offered to look for bowel polyps. Other procedures investigate a specific concern or monitor a condition already found.

A biopsy may be taken even when tissue looks normal. Examining it under a microscope can reveal changes that cannot be seen through the camera. Having a biopsy does not

automatically mean that cancer is suspected.

Endoscopy can also combine diagnosis and treatment in one procedure. A clinician may remove a polyp, treat a bleeding area, or open a narrowing while examining it. This can sometimes avoid a separate operation, although it does not replace surgery in every situation.

The result may be available immediately if it is based on what the clinician sees. Biopsy and laboratory results take longer. Your report should explain what was examined, whether the examination was complete, what was found, and whether samples or treatments were performed.

What can go wrong

The relevant risks come from the endoscopy procedure, sedation, treatment, and equipment handling. The risk is not the same for every type of endoscopy. A simple viewing examination generally has different risks from removing a large growth or working in a bile duct.

Possible complications include bleeding , particularly after a biopsy or treatment. A small amount may be expected after some procedures, but heavier or continuing bleeding needs assessment.

A perforation is a tear or hole in the wall of the organ being examined. It is uncommon but may require hospital treatment or surgery. Infection can occur after some procedures. Endoscopes that are not processed correctly can transmit infection, which is why cleaning, disinfection, storage, and equipment checks are tightly controlled.

Sedatives and anaesthetics can affect breathing, blood pressure, heart rate, or alertness. Aspiration means fluid or stomach contents enter the lungs. Following the food and drink instructions before the procedure helps the team manage this risk.

Other procedure-specific problems include pancreatitis after certain bile-duct procedures and capsule retention, where a capsule camera becomes stuck in a narrowed bowel. Your consent discussion should focus on the risks that apply to the exact procedure planned.

Temporary effects such as bloating, wind, a mild sore throat, or sleepiness can occur after some examinations. Your discharge instructions should state what is expected.

Seek urgent advice from the endoscopy service or another healthcare service if you develop worsening pain, fever, repeated vomiting, increasing bleeding, or difficulty swallowing after a procedure.

Call emergency services for severe trouble breathing, fainting, vomiting a large amount of blood, heavy bleeding, or severe chest or abdominal pain. Follow the specific emergency

instructions provided by your endoscopy service.

What you can do

Before agreeing to endoscopy, ask for the full name of the procedure and which part of your body it will examine. Useful questions include:

Give the service an up-to-date list of medicines, allergies, implanted devices, and important health conditions. Ask specifically what to do with medicines that affect bleeding, diabetes medicines, or iron tablets. Do not stop prescribed medicine unless the clinician responsible for the procedure tells you to do so.

If sedation is planned, ask whether you need someone to take you home and stay with you. Follow the service's restrictions on driving, work, alcohol, legal decisions, and operating machinery.

Keep the procedure report and any pathology result. Record what type of endoscopy you had, the date, what was found, and whether samples or treatments were taken. If follow-up is recommended, confirm who will arrange it and when.

You do not need to test or inspect an endoscope yourself. The healthcare service is responsible for checking, processing, maintaining, and tracking its equipment.

- Why is this examination being recommended?
- Will tissue samples or treatment be possible?
- What preparation, fasting, or bowel cleansing is required?
- Will I have sedation or anaesthesia?
- Are there alternatives, and what could they show?
- When and how will I receive the report and biopsy results?

Common questions

Is an endoscope the same as a colonoscope?

A colonoscope is one type of endoscope. It is designed to examine the rectum and large bowel. Other endoscopes are made for the stomach, lungs, bladder, joints, or other areas.

Does an endoscope always go through the mouth?

No. The route depends on the body area being examined. It may pass through a natural opening or a small surgical cut.

Will I be awake?

You may be fully awake, relaxed with sedation, or unconscious under anaesthesia. The plan depends on the procedure and your clinical needs. Ask the service what level of awareness to expect.

Can an endoscope detect cancer?

It can show an abnormal area and allow a biopsy. A tissue sample examined in a laboratory is often needed to identify whether cancer is present. Not every abnormal-looking area is cancer.

Are all endoscopes reusable?

No. Some are reusable, some are single-use, and some combine a reusable device with disposable parts. Reusable equipment must undergo the required cleaning and disinfection or sterilization process.

Is capsule endoscopy the same as ordinary endoscopy?

No. A capsule takes pictures as it travels through the digestive tract, but it cannot be steered, take a biopsy, or provide treatment. It may not be suitable if a narrowed bowel could trap the capsule.

Sources

- National Institute of Diabetes and Digestive and Kidney Diseases - Upper GI Endoscopy
- National Institute of Diabetes and Digestive and Kidney Diseases - Colonoscopy
- National Institute of Diabetes and Digestive and Kidney Diseases - Capsule Endoscopy
- Centers for Disease Control and Prevention - Guideline for Disinfection and Sterilization in Healthcare Facilities
- U.S. Food and Drug Administration - Infections Associated with Reprocessed Duodenoscopes
- NHS - Endoscopy