

What Is Capsule Endoscopy?

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Capsule endoscopy is a procedure that allows your doctor to look inside your gastrointestinal tract. It's a type of endoscopy done using a wireless camera that fits inside a tiny, disposable capsule.

This capsule can be easily swallowed. As it enters your body, the camera inside clicks several thousand pictures along its journey through your bowels. These images are recorded on an external device. Through these images, your doctor can view your digestive tract to detect and diagnose gastrointestinal conditions.

Capsule endoscopy is also called wireless or video capsule endoscopy. It's done using a video endoscopy capsule, which contains the camera. This pill-sized device is used to view your entire gastrointestinal tract. But it's commonly used to view the small intestine, which is difficult to access using a traditional endoscope.

Why Is Capsule Endoscopy Done?

Capsule endoscopy is used to diagnose problems in your digestive system. Capsule endoscopy can help your doctor:

- Diagnose gastrointestinal conditions, like Crohn's disease, celiac disease, and ulcerative colitis
- Identify the cause of unexplained gastrointestinal bleeding
- Diagnose gastrointestinal cancer
- Detect polyps or tumors in your digestive tract
- Examine your esophagus for conditions like Barrett's esophagus
- Identify the cause of unexplained abdominal pain
- Conduct follow-up testing

Preparing for a Capsule Endoscopy

If you need a capsule endoscopy, here's how you can prepare for the procedure:

1. Stick to a clear liquid diet a day before your procedure — one that consists of juices and soups.
2. Clear your gastrointestinal tract by taking a laxative. This can improve your camera's view inside your gut.
3. Avoid eating or drinking 10 to 12 hours before your procedure.
4. Consult with your doctor about your allergies or any medications you're taking.

Your doctor will give you all of the instructions you need ahead of the procedure. Make sure you follow your doctor's guidelines for a smooth procedure.

Capsule Endoscopy Procedure

A typical capsule endoscopy procedure involves these steps:

1. When you visit your doctor, they will inform you about the procedure, along with what to expect.
2. You'll be asked to wear a recording device on your waist throughout the procedure. This device will record and store pictures taken by the capsule camera as it moves through your gut. Some recording devices even have electrode patches that must be applied onto the skin of your chest or abdomen.
3. Your doctor will then ask you to swallow the pill-sized wireless video endoscopy capsule with some water.
4. Once you swallow the capsule, you can get back to daily life for the next 8 hours.
5. As the capsule journeys through your digestive system, your doctor will instruct you to:
 - Wait at least two hours before drinking clear liquids.
 - Wait at least four hours before having a snack.
 - Avoid strenuous activities that involve bending or sudden movements.
 - Ensure that you keep the recording device safe and dry by avoiding bathing or swimming.

What to Expect After a Capsule Endoscopy

A capsule endoscopy procedure is complete after eight hours or when the capsule passes out of your body when you poop. After this, you'll have to go back to your doctor to return the recording device or remove the electrodes. Ensure that you don't disconnect the system before time as it can affect the images being taken.

Depending on your bowel movement, the capsule can remain in your system from a few hours to days. But you will eventually notice it in your toilet. The capsules are disposable and can be easily flushed down the toilet.

If you notice that you haven’t passed the capsule after several days, you must contact your doctor. They may use imaging technology such as an X-ray to find the capsule in your system.

After the procedure, your doctor will transfer stored images from the recording device onto a computer. Using specialized software, they will combine these images into a video.

Your doctor will then review the video. This will help them identify any gastrointestinal problems by observing and examining the capsule’s movement through your system.

Risks of Capsule Endoscopy

Capsule endoscopy is a safe and simple procedure. But you may be at risk if the capsule gets stuck in your gastrointestinal tract.

A stuck capsule usually passes on its own. But the following conditions can make your gastrointestinal tract narrow and prevent a capsule from passing through it:

- Inflammatory bowel disease
- Crohn’s disease
- Ulcerative colitis
- Polyp or tumor
- Previous surgery or injury

If a capsule is stuck in your system, you may experience abdominal pain, bloating, and nausea or vomiting. You may even develop fever, chest pain, or experience difficulty swallowing. Contact your doctor immediately as they may have to surgically remove the capsule.

If you have the above mentioned conditions, your doctor may use imaging techniques or medications to prevent the capsule from getting stuck.

Some doctors may use a patency capsule, which is used to test the risk of the capsule getting stuck. If your system allows a patency capsule to pass through, it can pass a video endoscopy capsule, too.

Your doctor will recommend you avoid capsule endoscopy if you have a swallowing disorder. If you are pregnant or have implantable medical devices like pacemakers, you should avoid capsule endoscopy.

Capsule Endoscopy Cost

The cost of capsule endoscopy can vary based on your location, healthcare provider, and medical insurance. The procedure can be expensive because the capsule is disposable. But it can be safer and better than a colonoscopy for some people.

Cost of the capsule. A video endoscopy capsule itself costs approximately \$580.

Cost of the capsule endoscopy procedure. The entire procedure can cost anywhere between \$750 and \$2,500. It can vary based on the part of your gastrointestinal tract being examined.

Insurance coverage. Before getting an appointment for the procedure, check if your insurance company covers capsule endoscopy.

Medicare. Medicare may cover capsule endoscopy for certain gastrointestinal conditions. So check if the type of Medicare you have covers capsule endoscopy.

Sources

SOURCES:

ASGE: “Understanding Capsule Endoscopy.”
BILL OF HEALTH: “Capsule Endoscopy Instead of Colonoscopy? The FDA Approves the PillCam COLON.”
Clinical Gastroenterology and Hepatology: “Cost-Benefit Analysis of Capsule Endoscopy Compared With Standard Upper Endoscopy for the Detection of Barrett’s Esophagus.”
Digestive and Liver Disease: “Cost estimation of small bowel capsule endoscopy based on "real world" data: Inpatient or outpatient procedure?”
MAYO CLINIC: “Capsule endoscopy.”
MICHIGAN MEDICINE: “Capsule Endoscopy.”
Robertson, K., Singh, R. *StatPearls*, StatPearls Publishing, 2020.
World Journal of Gastroenterology: “Contraindications for video capsule endoscopy."