

Endoscopic Mucosal Resection (EMR) & Endoscopic Submucosal Dissection (ESD)

Minimally Invasive Polyp Removal





Occasionally, a polyp that infiltrates deeper tissue cannot be removed endoscopically. This will be determined during your procedure and can usually only be detected at that time. It will then be necessary for you and your referring doctor to make a decision about other options.

Possible Complications of EMR and ESD

Conventional endoscopy (or colonoscopy) is a very safe procedure. Complications are rare, but can include the following:

- Negative reaction to the pre-surgery bowel cleansing (if you are undergoing colonoscopy) such as vomiting or headaches.
- Negative reaction to the sedative used (very uncommon, but may be of concern in patients with severe heart or lung disease)
- Perforation in the bowel that might require surgery to repair (the risk is one in every 100 to 200 cases)
- Major bleeding from the bowel as a result of the polyp being removed (can occur up to five days after the procedure)

All of these risks must be balanced against the potential benefits of the procedure and the risks of alternative approaches to your condition.

About the Center for Interventional Endoscopy

The Center for Interventional Endoscopy (CIE) integrates therapeutic endoscopy with minimally invasive surgery to provide the highest quality care for patients with complex digestive issues. We maintain a cutting-edge research program consisting of ongoing, clinical trials that are paving the way for new innovations in treatment. These studies offer you access to some of the most advanced care in the world.

The preceding information is intended only to provide general information and does not serve as a definitive basis for diagnosis or treatment in any case. It is important to consult with your doctor about your specific condition.

**To schedule an appointment, call the
Center for Interventional Endoscopy
at (407) 303-2570.**



**FLORIDA HOSPITAL
SUCCESS RATE FOR
EMR AND ESD
EXCEEDS**

95%

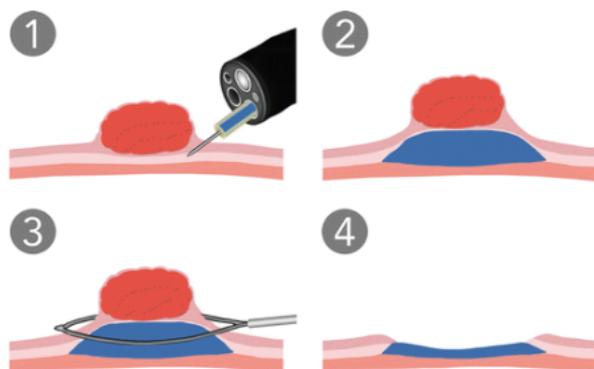
Safe Polyp Removal With Faster Recovery Time

Endoscopic mucosal resection (EMR) and endoscopic submucosal dissection (ESD) are techniques used to remove large, flat polyps or lesions from the surface of the bowel. Most of these types of polyps are located in the colon, but some can be found in the duodenum (first part of the small intestine), stomach and esophagus. EMR and ESD are minimally invasive procedures that offer patients a much faster recovery than traditional methods.

How it Works

The polyp or lesion is removed using a thin, flexible tube called an endoscope — more than 20 millimeters in size. Your endoscopist will pass the endoscope through your mouth or anus to the area of interest.

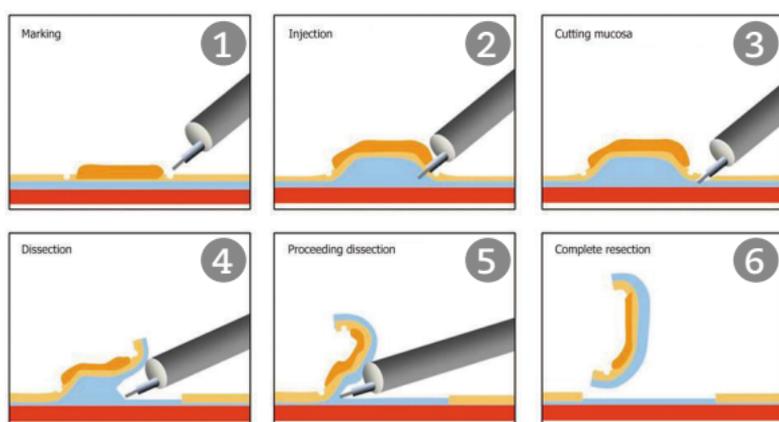
With EMR, a special solution is injected beneath the polyp — lifting the mucosal layer away from deeper tissues — creating a safe cushion. The polyp is then removed using a device called a snare.



EMR

- 1. Injection of solution beneath the polyp*
- 2. A cushion is created below the polyp*
- 3. A loop is placed around the polyp*
- 4. The polyp is removed safely*

ESD is an advanced technique used for removing polyps or lesions that are too big to be removed by EMR. Using ESD, a special solution is injected into the submucosa (deeper tissue layer) to elevate the lesion or polyp. The submucosa is then cut using a device called electrosurgical knife so that the lesion or polyp is removed in one-piece. ESD procedure is longer and technically more complex to perform than an EMR procedure.



- 1. The polyp margins are first marked*
- 2. A solution is injected to elevate the polyp*
- 3. The mucosa is then cut using a surgical knife*
- 4. The polyp is gently dissected by cutting the deeper layer*
- 5. Dissection is then continued until the polyp is removed completely*
- 6. The specimen is retrieved and sent to the pathology lab for evaluation*

How to Prepare for an EMR or ESD Procedure

For EMR or ESD of the upper gastrointestinal (GI) tract, you should have nothing to eat or drink (not even water) for approximately six hours before the procedure. Your doctor will tell you when to begin fasting.

For EMR or ESD of the lower GI tract, your doctor will instruct you to either consume a large volume of a special cleansing solution or to follow a clear liquid diet combined with laxatives or enemas

prior to the procedure. The examination might have to be rescheduled if you don't follow your doctor's instructions carefully.

Current Medications

You can take most medications as usual until the day of your procedure. Tell your doctor about all of the medications that you are taking and any medication allergies you have. Anticoagulant medications (blood thinners such as Coumadin and Plavix) might need to be adjusted before your procedure. Warfarin must be discontinued for five doses and usually started again one night after the procedure. Clopidogrel (Plavix) must be discontinued for seven days before and five days after the procedure. Please contact the scheduling office staff for details on other types of blood thinners that you may be taking. Sometimes we may have to get written permission from your doctor (cardiologist) before stopping blood thinners.

If you have an allergy to latex, inform your doctor prior to the test.

What to Expect During EMR or ESD

For a procedure in the upper GI tract, your endoscopist might spray your throat with a local anesthetic before the test begins. Usually, you will receive sedatives intravenously to help you relax. You will most likely begin by lying on your left side. After receiving sedation, your endoscopist will pass the scope through your mouth to the esophagus, stomach or duodenum. The instrument does not interfere with your ability to breathe. Most patients consider it only slightly uncomfortable, and many fall asleep during the procedure.

What to Expect After the Procedure

Because you receive sedation, you will be monitored in the recovery area until most of the medication's effects have worn off. If you had an upper EMR or ESD, your throat might be a little sore. You might feel bloated because of the air and water that were introduced during the procedure. Occasionally, there is a small amount of abdominal pain, which usually settles with medication. You will remain on clear fluids the night after the procedure and can resume a normal diet the following day, unless you are instructed otherwise.

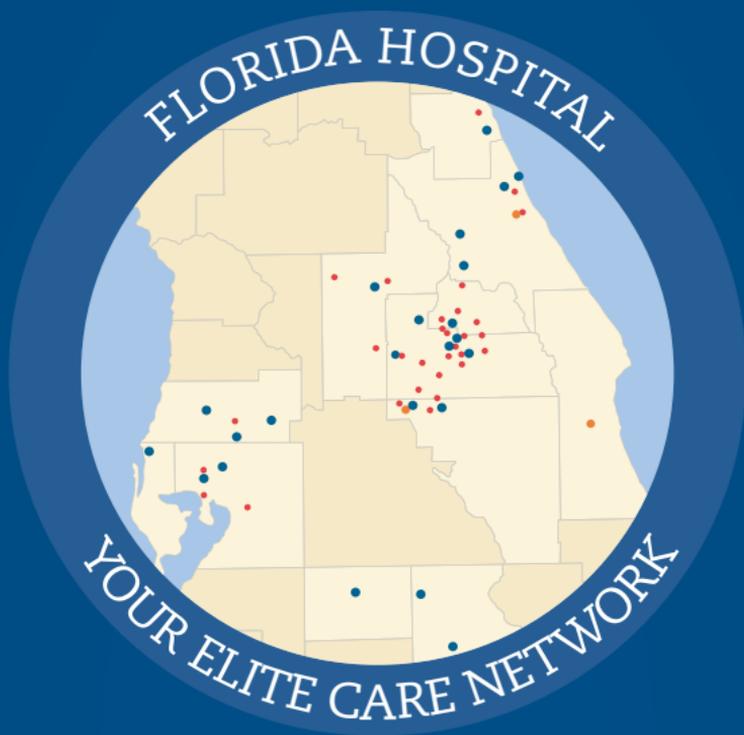
If you are not being admitted to the hospital overnight, you won't be allowed to drive immediately after the procedure — even if you don't feel tired. You should arrange for a ride home. You should also plan to have someone stay with you at home after the examination, because the sedatives could affect your judgment and reflexes for the remainder of the day.

Getting the Results of Your Procedure

Your doctor will usually inform you of the results of the exam on the same day.

The biopsy results (microscopic assessment of the polyp or lesion) will be available in approximately five to seven days and will be forwarded to your referring doctor. Depending on the biopsy results, you will need follow-up with us or with your referring doctor until the polyp is completely removed.





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