

## **GASTROINTESTINAL ENDOSCOPY**

It has been recommended that your pet be scheduled for an endoscopic examination. The purpose of this procedure is to make a diagnosis of the disease that has been causing your pet's clinical signs of vomiting, diarrhea or other GI problems. An endoscopy requires specialized equipment, and the veterinarian performing it must have training and expertise in the procedure.

An endoscope is a tube with fiberoptics that carry images from a camera at the end of the scope, to a video screen where the images are viewed. Flexible endoscopes are most often used to examine the gastrointestinal tract, made up of stomach, small intestine, and colon. Both rigid and flexible endoscopes can be used to examine the esophagus or descending colon.

### ***What is an endoscope and how is it used?***

An endoscope is a flexible tube that is inserted into either the stomach or the colon or both, which permits viewing of the inside of these organs. If the stomach is being examined, the esophagus can be inspected en route.

### ***What diseases are diagnosed with an endoscopic examination?***

The endoscope allows full color viewing of the esophagus, stomach, the upper and lower part of the small intestine, or the colon. Only the middle part of the small intestine cannot be examined using the endoscope, and of course the deep layers and outer surface. Areas of inflammation or ulceration and even parasites can be seen. Masses and strictures are also visible. Foreign bodies (bones, toys, rocks, coins, hairballs, etc.) may also be identified and sometimes retrieved without doing surgery. Strictures can sometimes be corrected with a series of endoscopic dilations over several weeks. The endoscope can be used to place a feeding tube into the stomach, without the need for surgery.



### ***Can the diagnosis be made just by viewing any abnormalities?***

While seeing an abnormal lesion or suspicious area gives us valuable information, most cases will require that the suspicious area be biopsied to determine the diagnosis. The endoscope has a tiny channel through which a biopsy instrument can be passed. Precise biopsies can be taken of any abnormal areas.

### ***What do you do if there are no abnormal areas?***

Many diseases cause changes that can only be detected by microscopic inspection of the cells. Therefore, even if the organ appears normal, biopsies are taken. In many cases, biopsy of the gut of the pet with gastrointestinal symptoms will be very helpful in determining if disease is present.

### ***What if the problem is in the middle of the small intestine?***

The endoscope can be passed through the valve at the lower end of the stomach (pylorus) and into a short segment of the top of the small intestine (duodenum), and from the colon into the bottom part of the small intestines (ileum) in most dogs. Very small dogs and cats will require a smaller endoscope for this procedure. Large dogs will require a longer endoscope. However, the vast majority of the small intestine (jejunum and often part of the duodenum) is not accessible to endoscopy. If your pet has disease in the jejunum, other diagnostic tests will need to be performed, that may include ultrasound and/or diagnostic surgery.

### ***Can cancer be diagnosed with endoscopy?***

In many cases, yes. However, some tumors do not affect the lining of the stomach or colon. The biopsy procedure only samples the lining or *mucosa*, so it is possible that a tumor that involves the deeper parts of the stomach or intestinal tract will not be detected. Surgery or ultrasound guided biopsy might be required to diagnose deeper tumors.

### ***What steps need to be taken to prepare for endoscopy?***

It is vital that the stomach and intestinal tract be empty of food and fecal matter, in order for the endoscopic exam to be successful. If the esophagus, stomach and duodenum are to be examined, withholding food for twenty-four hours and water for a few hours is generally sufficient. If the colon is to be examined, oral medication is begun twelve to eighteen hours before the procedure to remove fecal material from the entire intestinal tract. Fasting for 48 hours is required for a



lower GI endoscopy (examination of the colon and ileum). On the day before and the morning of the procedure, enemas are given to remove any remaining stool from the lower intestinal tract. Laxatives might also be given the day before. If your dog is taking sucralfate, it should not be given for 48 hours prior to an upper GI scoping. It may be difficult to do a thorough examination if there is an excessive amount of fecal material in the colon at the time of the procedure, despite normal preparation.

### ***Is anesthesia required?***

Yes. Passing an endoscope into a dog's stomach or colon is not possible or safe in a conscious dog. Most patients will require only a short-acting anesthesia to perform endoscopy, and they can usually go home the same day. Complications due to endoscopy are very rare, but could include perforation of the gastrointestinal tract which would require immediate surgical repair. Very rarely when a stricture in the esophagus is being corrected using the endoscope, the esophagus could rupture. If the portion in the chest is ruptured, it could cause collapsed lung which would need to be corrected by immediate placement of a chest tube.

Small amounts of food and water can be offered the evening after the procedure and normal amounts may be given the following day. Patients that are ill enough to require hospitalization, or those that recover slowly from anesthesia, are managed by the veterinarian in the hospital.

until their condition is adequate for release. There is no healing time associated with endoscopy, which is one of the advantages it has over surgery.

***When will I know the results of the examination?***

Since the organs are viewed in real time, the result of what is seen is known immediately. However, the final diagnosis is not available in many cases until the results of the pathologist's study of the biopsies are reported. This will take anywhere from a few days to a week or more, depending on the location of the pathologist and whether or not special tests are required on the tissue.

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***References:***

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