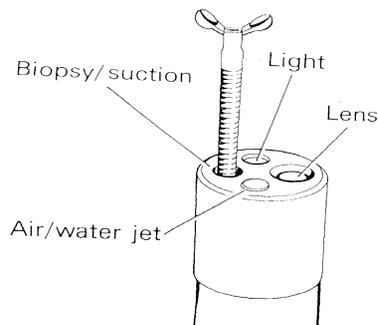


## Introduction

Colonoscopy is a diagnostic test used in the evaluation of disorders of the large intestine. It involves the use of a flexible instrument that allows visual inspection of the colonic lining while the patient is under light sedation. It is a highly sensitive test with an estimated accuracy of 97% and has the potential for both diagnosis and treatment of colonic diseases.

## Video colonoscopy

The technology used in diagnostic medicine continues to improve at a rapid pace. The vast majority of colonoscopies are performed with the use of videoendoscopes. These instruments are flexible tubes with internal video cameras that can be guided through the entire colon and part of the small intestine. There are channels within the endoscope that provide the ability to suction fluid, flush water, cauterize bleeding areas, and biopsy and remove small lesions. Photographs can also be taken during the procedure to document any abnormalities.



## Indications

The reasons for performing a colonoscopy are listed in the table.

Indications for colonoscopy
Rectal bleeding
Microscopic blood in the stool
Inflammatory bowel disease
History of colon cancer/polyps
Family history of colon cancer/polyps
Chronic diarrhea
Chronic constipation
Abdominal pain/mass on exam
Abnormal barium enema
Change in bowel habits
Weight loss
Screening in patients over age 50

## Preparation

Several different methods are available to cleanse the bowel and allow adequate visualization of the lining of the colon. Patients are instructed by their physician as to which preparation is most suitable for them. These preparations will enhance the evacuation of all stool from the colon. If there is any residual stool, the procedure will need to be rescheduled; therefore, it is very important that the instructions are followed precisely.

## The examination

Colonoscopy is usually performed as a same day or outpatient procedure. Dedicated endoscopy suites have been developed throughout the country under strict federal guidelines in order to provide the safest, comfortable, and convenient care possible. Individual insurance requirements will dictate whether the procedure is performed in a hospital setting or an outpatient setting. Prior to the colonoscopy, a

small IV catheter is placed in the vein of the patient and monitors are attached to the patient to continuously measure the heart rate, blood pressure, and oxygen levels. A mild sedative is administered through the IV and then the colonoscope is placed in the rectum and advanced slowly throughout the colon. If any abnormality is visualized, the lesion can either be removed or a biopsy can be taken during the procedure. The duration of the procedure is usually between 30- 60 minutes. After the procedure the patient is monitored in a recovery room for approximately 30 minutes prior to discharge.

## Risks of colonoscopy

While colonoscopy is generally considered a safe and relatively comfortable diagnostic test, it is not without risks or side effects. The most serious risk is a perforation or tear in the colon, which would require an operation and possibly a temporary colostomy. Fortunately, this complication only occurs in 1 out of every 1,000 procedures. Bleeding can occur after removal of a lesion either immediately or up to one week after the procedure. The estimated rate of bleeding is 3 out of every 1,000 procedures. Cautery is used in most cases in order to diminish this risk and frequently the bleeding will stop spontaneously without transfusions or operations. However, all bleeding must be reported to the physician. Medication reactions are uncommon and the use of multiple monitors alerts the physician to any of the cardiac problems with sedation. Colonoscopy is the most accurate imaging study and diagnostic errors are estimated to occur in only 3% of procedures. Side effects such as cramping, bloating, abdominal distention and nausea may occur but rarely last more than 24 hours.

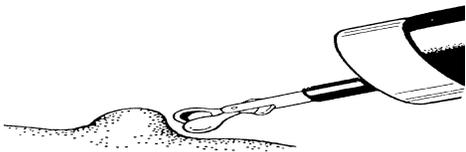
## Risks of sedation

The sedation used during the procedure is IV Conscious Sedation a combination of drugs that makes the patient relaxed and comfortable. While the patient is responsive during the procedure, he may have little or no recollection afterwards. A deeper sedation where the patient remains asleep throughout the procedure is referred to as Monitored Anesthesia Care (MAC). This form of sedation is administered by an Anesthesiologist and allows for rapid awakening and recovery after the procedure. Possible side effects include nausea, vomiting, headache and redness or swelling at the IV site. If either should persist greater than 24 hrs. the physician should be notified. The choice of sedation is based on clinical information as well as each patients health insurance plans guidelines.

Because the sedation will affect judgment, perception, and reaction time for up to 24 hrs. Someone must drive the patient home.

## Alternative testing

Certain patients may be unwilling to accept the potential risks of colonoscopy. Other imaging studies such as barium enema and virtual colonoscopy can be used. The accuracy of barium enema is much less than colonoscopy and if a lesion is found then colonoscopy is necessary to biopsy or remove the abnormality. Virtual colonoscopy involves the use of computer-generated images from a CAT scan. Again lesions can't be removed or biopsied and the laxative preparation is the same as a barium enema or colonoscopy. The capsule camera currently only evaluates the small intestine not the colon.



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## COLONOSCOPY PROCEDURE

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