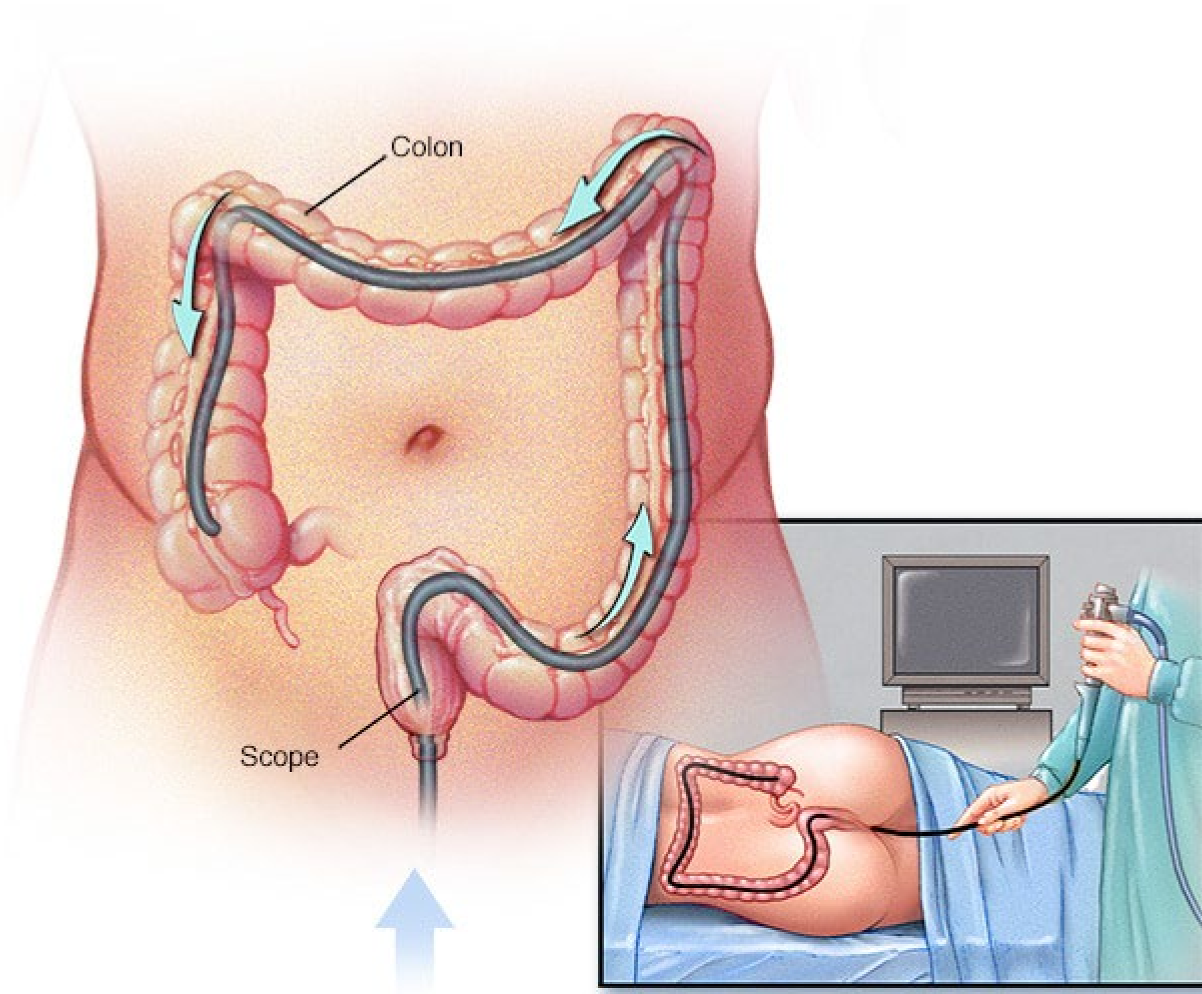
Overview



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Colonoscopy

A colonoscopy is an exam used to look for changes — such as swollen, irritated tissues, polyps or cancer — in the large intestine (colon) and rectum.

During a colonoscopy, a long, flexible tube (colonoscope) is inserted into the rectum. A tiny video camera at the tip of the tube allows the doctor to view the inside of the entire colon.

If necessary, polyps or other types of abnormal tissue can be removed through the scope during a colonoscopy. Tissue samples (biopsies) can be taken during a colonoscopy as well.

Why it's done

Your doctor may recommend a colonoscopy to:

- **Investigate intestinal signs and symptoms.** A colonoscopy can help your doctor explore possible causes of abdominal pain, rectal bleeding, chronic diarrhea and other intestinal problems.
- **Screen for colon cancer.** If you're age 45 or older and at average risk of colon cancer — you have no colon cancer risk factors other than age — your doctor may recommend a colonoscopy every 10 years. If you have other risk factors, your doctor may recommend a screen sooner. Colonoscopy is one of a few options for colon cancer screening. Talk with your doctor about the best options for you.
- **Look for more polyps.** If you have had polyps before, your doctor may recommend a follow-up colonoscopy to look for and remove any additional polyps. This is done to reduce your risk of colon cancer.
- **Treat an issue.** Sometimes, a colonoscopy may be done for treatment purposes, such as placing a stent or removing an object in your colon.

Risks

A colonoscopy poses few risks. Rarely, complications of a colonoscopy may include:

- A reaction to the sedative used during the exam
- Bleeding from the site where a tissue sample (biopsy) was taken or a polyp or other abnormal tissue was removed
- A tear in the colon or rectum wall (perforation)

After discussing the risks of colonoscopy with you, your doctor will ask you to sign a consent form giving permission for the procedure.

How you prepare

Before a colonoscopy, you'll need to clean out (empty) your colon. Any residue in your colon may make it difficult to get a good view of your colon and rectum during the exam.

To empty your colon, your doctor may ask you to:

- **Follow a special diet the day before the exam.** Typically, you won't be able to eat solid food the day before the exam. Drinks may be limited to clear liquids — plain water, tea and coffee without milk or cream, broth, and carbonated beverages. Avoid red liquids, which can be mistaken for blood during the colonoscopy. You may not be able to eat or drink anything after midnight the night before the exam.
- **Take a laxative.** Your doctor will usually recommend taking a prescription laxative, usually in a large volume in either pill form or liquid form. In most instances, you will be instructed to take the laxative the night before your colonoscopy, or you may be asked to use the laxative both the night before and the morning of the procedure.
- **Adjust your medications.** Remind your doctor of your medications at least a week before the exam — especially if you have diabetes, high blood pressure or heart problems or if you take medications or supplements that contain iron.

  Also tell your doctor if you take aspirin or other medications that thin the blood, such as warfarin (Coumadin, Jantoven); newer anticoagulants, such as dabigatran (Pradaxa) or rivaroxaban (Xarelto), used to reduce risk of blot clots or stroke; or heart medications that affect platelets, such as clopidogrel (Plavix).

  You may need to adjust your dosages or stop taking the medications temporarily.

What you can expect

During the procedure

During a colonoscopy, you'll wear a gown, but likely nothing else. Sedation or anesthesia is usually recommended. In most cases, the sedative is combined with pain medication given directly into your blood stream (intravenously) to lessen any discomfort.

You'll begin the exam lying on your side on the exam table, usually with your knees drawn toward your chest. The doctor will insert a colonoscope into your rectum.

The scope — which is long enough to reach the entire length of your colon — contains a light and a tube (channel) that allows the doctor to pump air, carbon dioxide or water into your colon. The air or carbon dioxide inflates the colon, which provides a better view of the lining of the colon.

When the scope is moved or air is introduced, you may feel stomach cramping or the urge to have a bowel movement.

The colonoscope also contains a tiny video camera at its tip. The camera sends images to an external monitor so that the doctor can study the inside of your colon.

The doctor can also insert instruments through the channel to take tissue samples (biopsies) or remove polyps or other areas of abnormal tissue.

A colonoscopy typically takes about 30 to 60 minutes.

After the procedure

After the exam, it takes about an hour to begin to recover from the sedative. You'll need someone to take you home because it can take up to a day for the full effects of the sedative to wear off. Don't drive or make important decisions or go back to work for the rest of the day.

You may feel bloated or pass gas for a few hours after the exam, as you clear the air from your colon. Walking may help relieve any discomfort.

You may also notice a small amount of blood with your first bowel movement after the exam. Usually this isn't cause for alarm. Consult your doctor if you continue to pass blood or blood clots or if you have persistent abdominal pain or a fever. While unlikely, this may occur immediately or in the first few days after the procedure, but may be delayed for up to 1 to 2 weeks.

Results

Your doctor will review the results of the colonoscopy and then share the results with you.

Negative result

A colonoscopy is considered negative if the doctor doesn't find any abnormalities in the colon.

Your doctor may recommend that you have another colonoscopy:

- **In 10 years,** if you're at average risk of colon cancer and you have no colon cancer risk factors other than age or if you have benign small polyps.
- **In 1 to 7 years,** depending on a variety of factors: The number, size and type of polyps removed; if you have a history of polyps in previous colonoscopy procedures; if you have certain genetic syndromes; or if you have a family history of colon cancer.

If there was residual stool in the colon that prevented complete examination of your colon, your doctor may recommend a repeat colonoscopy. How soon will depend on the amount of stool and how much of your colon was able to be seen. Your doctor may recommend a different bowel preparation to ensure that your bowel is completely emptied before the next colonoscopy.

Positive result

A colonoscopy is considered positive if the doctor finds any polyps or abnormal tissue in the colon.

Most polyps aren't cancerous, but some can be precancerous. Polyps removed during colonoscopy are sent to a laboratory for analysis to determine whether they are cancerous, precancerous or noncancerous.

Depending on the size and number of polyps, you may need to follow a more rigorous surveillance schedule in the future to look for more polyps.

If your doctor finds one or two polyps less than 0.4 inch (1 centimeter) in diameter, he or she may recommend a repeat colonoscopy in 7 to 10 years, depending on your other risk factors for colon cancer.

Your doctor will recommend another colonoscopy sooner if you have:

- More than two polyps
- A large polyp — larger than 0.4 inch (1 centimeter)
- Polyps and also residual stool in the colon that prevents complete examination of the colon
- Polyps with certain cell characteristics that indicate a higher risk of future cancer
- Cancerous polyps

If you have a polyp or other abnormal tissue that couldn't be removed during the colonoscopy, your doctor may recommend a repeat exam with a gastroenterologist who has special expertise in removing large polyps, or surgery.

Problems with your exam

If your doctor is concerned about the quality of the view through the scope, he or she may recommend a repeat colonoscopy or a shorter time until your next colonoscopy. If your doctor was unable to advance the scope through your entire colon, a virtual colonoscopy may be recommended to examine the rest of your colon.

What is my risk of developing colon cancer if I live in the United States?

Your lifetime risk (defined as life to 85 years old) is approximately 6% (male or female). Your risk is roughly doubled if one (1) first degree relative (parent, sibling or child) had colon cancer or polyps after age 50, and is higher if the cancer or polyps were diagnosed at a younger age or if more members of your family are affected. Certain inherited disorders, for example, polyposis syndromes and hereditary non-polyposis colorectal cancer, can increase your risk of developing colon cancer, but those are rare. Other important risk factors include obesity, cigarette smoking, inflammatory conditions in the colon such as Crohn’s, colitis and ulcerative colitis, and excessive alcohol consumption. Your doctor is in the best position to discuss whether your personal or family history suggests one of those conditions.

Has colonoscopy been shown to be effective in preventing cancer of the colon and saving lives?

Yes. Colonoscopy accomplishes this by detecting and removing polyps, and detecting early cancers. Recent data show that both the number of new cases of colon cancer (incidence) and deaths from the disease are decreased when colonoscopy is performed according to established guidelines (see Question 11).

If colonoscopy is so effective at detecting polyps, colon cancer and saving lives, why aren’t more people having it?

The most common reason patients cite for not getting a colonoscopy is that their doctor did not discuss it with them. The next most common reason is fear or avoidance of the preparation (“prep”), which involves taking a laxative which causes temporary diarrhea for several hours. In addition, many people are simply unaware that they need colon cancer screening.

Are there other methods to examine my colon besides colonoscopy?

Yes, there are alternative methods to examine the colon, but none are considered more accurate at colon cancer and polyp detection than colonoscopy. They include:

- A flexible sigmoidoscopy and a barium enema (an x-ray examination of the colon after it has been distended by barium, a contrast agent, following a preparation with a Fleet® Enema or Fleet® Phospho-soda).
- Computerized tomography (CT), a test that takes pictures of the inside of the colon, can also be done. This is called CT colography or "virtual colonoscopy". Like conventional colonoscopy, this test requires a full preparation the day before the exam (liquids and possibly enemas). This test, however, involves radiation exposure which may increase your long term risk of development of cancer. If any of the above tests suggest the presence of polyps or cancer, a conventional colonoscopy (and a second preparation) will be required.
- Fecal Occult Blood Testing (FOBT), is a test whereby stool is examined for minute amounts of blood loss (possibly from polyps or cancer) by way of a chemical reaction resulting in a color change. While FOBT is not a test to examine the colon, it is recommended annually to individuals over age 50. If occult blood is found in the stool, a follow up colonoscopy will be necessary.
  For colon cancer screening, it should be noted that colonoscopy has the highest sensitivity and is the only test that is both diagnostic and therapeutic.

What is the "prep" for colonoscopy like? How many different preps are out there?

This is an important obstacle in the eyes of many patients to getting a colonoscopy, but it need not be!

There are a variety of preparation methods for colonoscopy ranging from liquids (of varying quantity) with or without enemas, to pills, which rid your colon of feces. A clean colon is essential to allow for a careful examination for polyps or other abnormalities. Your doctor can discuss and prescribe the most appropriate preparation method for you, taking into account various factors such as your age, personal preferences, kidney function and physical stamina.

- The most popular preparation used for colonoscopy involves drinking a volume of solution of polyethylene glycol (PEG). This solution causes a diarrhea that effectively rids the colon of its contents. Various fruit flavors are available and patients have several hours to drink it. Usually a patient will have clear liquids the day of the preparation (day before the colonoscopy) and then take half of the prep in the late afternoon or that evening. The other half is done approximately 5 hours before coming in for the test the following day. Patients are encouraged to drink a lot of fluids and to continue clear liquids up until 2 hours before their scheduled procedure. Before going to bed, many

doctors also prescribe a laxative pill (e.g. Dulcolax®) that helps with the evacuation process.

- Smaller volumes of solution (e.g. MoviPrep®, HalfLytely®) or pill preparations (e.g. OsmoPrep®) have also recently become available with similarly good outcomes to PEG for people who dread the thought of large volumes of liquid.
- Another preparation involves a phosphate solution (called Fleet® Phospho-soda) which consists of two (2) rounds of phosphate rich liquid of 45ml each the night before and day of the exam. It is essential to drink at least 2 quarts of water with these preps to replace losses.
- Alternatively, a phosphate tablet preparation of about 30 pills is available and is also very effective for colon cleansing and is preferred by some patients. This preparation also requires that you drink at least 2 quarts of water to replace losses. Phospho-soda® prep should be avoided in patients with significant heart or kidney problems, in elderly patients who have difficulty maintaining hydration and with caution in patients with significant liver problems

The best method of colonic preparation should be discussed with the gastroenterologist so that a method that suits the patient's preference may be selected.

Is colonoscopy painful? Will I be sedated?

No, colonoscopy is usually not painful! Almost all colonoscopies can be performed using "intravenous sedation" or "twilight sedation" in which you are very drowsy, but comfortable and still breathing on your own. The most common type of sedation also has a mild amnesiac effect, so most patients do not even remember the procedure! Your doctor can discuss with you the best form of sedation to suit your needs.

Will my insurance pay for this procedure?

Medicare (and most third party payers) will pay for colonoscopy for colon cancer screening, thanks to the hard work of advocacy groups and the efforts of national organizations such as the American College of Gastroenterology (ACG). Regrettably, a recent study showed a low compliance rate for screening (less than 30%) among Medicare patients.

Are there any complications from colonoscopy?

Yes, but potential complications are associated with virtually every form of testing done in medicine. Clearly, colonoscopy has been found to be extremely safe when performed by a well trained physician such as a gastroenterologist. Although quite rare, most complications are related to sedation administration (cardiac and respiratory problems); the colon may also become partially torn (perforated) and this may require surgery. Rarely, bleeding from polyp removal or from the procedure itself may require additional treatment such as hospitalization and/or blood transfusions. As one reads about these procedures, the reader should weigh these low risks against the far more frequent complication of developing colon cancer if appropriate testing is NOT done.

When should I have a colonoscopy?

If you have no colorectal symptoms, family history of colon cancer, polyps or inflammatory bowel disease you should have your first exam at age 50 whether you are a man or a woman since colon cancer affects both EQUALLY! Recent evidence suggests that African Americans should begin screening earlier at the age of 45.

If one or more first degree relative (parent, sibling or child) has had a precancerous polyp or colon cancer, the general guideline is to begin colon cancer screening 10 years younger than the youngest age of the family member with colon cancer, or age 40, whichever is younger. There are additional guidelines for suspected or confirmed rare syndromes, and you should discuss these options with your doctor.

For patients with ulcerative colitis involving the entire colon and patients with Crohn's disease, screening for colon cancer should begin 8 – 10 years after the initial diagnosis is made.