

Colorectal Cancer Screening for life

“Colorectal cancer is the third most common type of non-skin cancer in men (after prostate cancer and lung cancer) and in women (after breast cancer and lung cancer).”¹ It is the second leading cancer killer (after lung cancer¹) in the United States, **but it doesn’t have to be.**²

About 1 in 15 people develop colorectal cancer.³ Colorectal cancer can be a life-threatening condition that affects the large intestine, but if it is found early, it is a highly curable form of cancer.³

“If everyone 50 years or older had regular screening tests, at least 60 percent of deaths from this cancer could be avoided.” Individuals at [higher risk](#) for colorectal cancer may need to begin screening at an earlier age.⁴ “The best time to get screened is before any symptoms appear.”⁴ Screening for colorectal cancer can save lives.^{2,5}



What Is Colorectal Cancer?

The digestive system and cancer cells

Colorectal cancer occurs in the colon or rectum (sometimes just called colon cancer²). “The colon and rectum are parts of the body’s digestive system. The digestive system removes and processes nutrients (vitamins, minerals, carbohydrates, fats, proteins, and water) from foods and helps pass waste material out of the body. The digestive system is made up of the mouth, throat, esophagus, stomach, and the small and large intestines.⁶ The first 6 feet of the large intestine are called the large bowel or colon. The last 6 inches are the rectum and the anal canal. The anal canal ends at the anus (the opening of the large intestine to the outside of the body).”⁶

“The body is made up of many types of cells. Normally, cells grow, divide, and then die. Sometimes, cells mutate (change) and begin to grow and divide more quickly than normal cells. Rather than dying, these abnormal cells clump together to form tumors. If these tumors are cancerous (also called malignant tumors), they can invade and kill your body’s healthy tissues. From these tumors, cancer cells can metastasize (spread) and form new tumors in other parts of the body. By contrast, noncancerous tumors (also called benign tumors) do not spread to

“The best time to get screened is before any symptoms appear.”⁴

other parts of the body.”⁷ “Most cases of colon cancer begin as small, noncancerous (benign) clumps of cells called adenomatous polyps. Over time, some of these polyps become colon cancers. Polyps may be small and produce few, if any, symptoms. For this reason, doctors recommend regular screening tests to help prevent colon cancer by identifying polyps before they become colon cancer.”⁸

Symptoms of Colorectal Cancer

No symptoms in early stages

“Many people with colon cancer experience no symptoms in the early stages of the disease. When symptoms appear, they’ll likely vary, depending on the cancer’s size and location in your large intestine.”⁸ Signs and symptoms of colorectal cancer may include:

- a change in your bowel habits, including diarrhea or constipation or a change in the shape (i.e., narrow stools) or

consistency of your stool for more than a couple of weeks;

- rectal bleeding or blood in your stool or in the toilet after you have a bowel movement;
- persistent abdominal discomfort (pain or tenderness), such as cramps, gas, or pain in your lower stomach;
- a feeling of discomfort or urge to have a bowel movement when there is no need to have one or a feeling that your bowel doesn't empty completely;
- weakness or fatigue;
- unexplained/unintended weight loss;
- unexplained anemia.^{7, 8, 9}

"If you notice any symptoms of colon cancer, such as blood in your stool or a persistent change in bowel habits, make an appointment with your doctor.

Talk to your doctor about when you should begin screening for colon cancer. [Guidelines](#) generally recommend colon cancer screenings begin at age 50. Your doctor may recommend more frequent or earlier screening if you have other risk factors, such as a family history of the disease."⁸

"Screening is the process of looking for cancer in people who have no symptoms."¹³

Screening Tests

Who?

Colon cancer is more common in older people, with 93 percent of cases occurring in persons 50 years of age or older.¹⁰ Men and women at average risk for colorectal cancer should begin colorectal cancer screening at age 50. There are some

other factors, however, that put an individual at higher risk for developing colorectal cancer. These individuals may need earlier or more frequent screening.¹¹



Factors that increase your risk for developing colorectal cancer include:

- being of African American or eastern European descent;⁹
- having inflammatory bowel disease (Crohn's disease or ulcerative colitis [ulcers in the lining of the large intestine]);
- having a personal history of colorectal cancer or polyps;
- having a personal history of cancer of the ovary, endometrium, or breast;
- having a family history of colon cancer or polyps;
- having hereditary conditions known as [familial adenomatous polyposis](#) (FAP) or [hereditary nonpolyposis colon cancer](#) (HNPCC, also called Lynch Syndrome).¹²

Screening Tests

Why?

"Getting a colorectal cancer screening test could save your life. Here's how:

- Colorectal cancer usually starts from polyps in the colon or rectum. A polyp is a growth that shouldn't be there.
- Over time, some polyps can turn into cancer.

- Screening tests can find polyps, so they can be removed *before* they turn into cancer.
- Screening tests also can find colorectal cancer early. When it is found early, the chance of being cured is good."²

"Precancerous polyps and early-stage colorectal cancer don't always cause symptoms, especially at first. This means that someone could have polyps or colorectal cancer and not know it. That is why having a screening test is so important."²

Talk with your doctor about when to begin screening and how often if you have any of these risk factors.

Screening Tests

What Type?

"Screening is the process of looking for cancer in people who have no symptoms."¹³ "Several different screening tests can be used to find polyps or colorectal cancer. Each can be used alone. Sometimes they are used in combination with each other."²

[Fecal occult blood test \(FOBT\).](#)

"A fecal occult blood test is a test to check stool (solid waste) for blood that can only be seen with a microscope. Small samples of stool are placed on special cards and returned to the doctor or laboratory for testing. Blood in the stool may be a sign of polyps or cancer."⁶ "There are two types of FOBT. One test uses a chemical called guaiac to detect blood in your stool. The other – a fecal immunochemical test (FIT) – uses antibodies to detect blood in the stool. You will receive a test kit from your health care provider. At home, you use a stick or brush to obtain a small amount of stool. You return the test to the doctor or a lab, where stool samples are checked for blood."²

Stool DNA test. Instead of looking for blood in the stool, this test checks for cells that are shed by colon cancers or precancerous polyps.⁷ Colorectal cancer cells often contain DNA (genetic material) mutations (changes) in certain genes. Cells from colorectal cancers or polyps with these mutations are often shed in the stool where tests may be able to detect them.¹³ Your doctor will give you a test kit with instructions on collecting an entire bowel movement, which will be sent to a lab.^{2,7}

Sigmoidoscopy. “Sigmoidoscopy [also called flexible sigmoidoscopy] is a procedure to look inside the rectum and sigmoid (lower) colon for polyps, abnormal areas, or cancer.”⁶ For this test, the doctor puts a short, thin, flexible, lighted tube with a lens for viewing into your rectum. It may also have a tool to remove polyps or tissue samples, which are checked under a microscope for signs of cancer.¹³

Colonoscopy. This test is similar to sigmoidoscopy, except the doctor uses a **longer**, thin, flexible, lighted tube to check for polyps or cancer inside the rectum and the **entire length** of the colon. During the test, the doctor can find and remove most polyps and some cancers.²



Virtual colonoscopy. This test uses a series of x-rays (called computed tomography [CT]) to examine the inside of the colon. A computer is used to make detailed 2-dimensional (2-D) and 3-D pictures of the colon.⁶ Instead of one picture, like an x-ray, a CT

scanner takes many pictures as it rotates around you while you lie on a table.¹³ These images may show polyps and anything else that seems unusual on the inside surface of the colon.⁶

Double contrast barium enema (DCBE). A barium enema is a series of x-rays of the lower gastrointestinal tract, sometimes called a lower GI series.⁶ A liquid that contains barium (a silver-white metallic compound) and air are put into the rectum. The barium coats the lower gastrointestinal tract and outlines the inner part of the colon and rectum to look for abnormal areas.^{6,13}

Digital rectal exam (DRE). This test is an exam of the rectum. “The doctor or nurse inserts a lubricated, gloved finger into the lower part of the rectum to feel for lumps or anything else that seems unusual.”⁶

Talk with your doctor about which test(s) is right for you. For more about each procedure and its advantages and disadvantages, see [Weighing the Pros & Cons of Colorectal Cancer Screening](#).

Screening Tests When?

“Several major organizations, including the [U.S. Preventive Services Task Force](#) (a group of experts convened by the U.S. Public Health Service), the [American Cancer Society](#), the [U.S. Multi-Society Task Force on Colorectal Cancer](#), and the [American College of Radiology](#), have developed [guidelines](#) for colorectal cancer screening. Although some details of their recommendations vary regarding which screening tests to use and how often to be screened, all of these organizations support

Talk to your doctor about when to start screening, which test(s) is right for you, and how often you should have them.

screening for colorectal cancer beginning at age 50 for average-risk adults, with earlier and/or more frequent screenings for those in higher-risk groups.”¹ For higher-risk groups, see Colon Cancer Screening Guidelines recommended [here](#).

“The decision to have a certain test will take into account several factors, including the following:

- the person’s age, medical history, family history, and general health;
- the accuracy of the test;
- the potential harms of the test;
- the preparation required for the test;
- whether sedation is necessary during the test;
- the follow-up care after the test;
- the convenience of the test; and
- the cost of the test and the availability of [insurance coverage](#).”¹

Talk to your doctor about when to start screening, which test(s) is right for you, and how often you should have them.

Screening Tests How to prepare?

Before you have any of the screening tests, it is important to be prepared. Make sure you’ve talked with your doctor and had all your

questions satisfactorily answered. Ask about any restrictions in your diet prior to the test, and be sure to inform your doctor about any medications you are taking. Find out if sedation is required or recommended with your test and, if so, plan for someone to drive you home. You will also want to know if your [insurance](#) covers the cost of the procedure.

Here is some information about each test from the American Cancer Society¹⁴ that may help you prepare. Click on each procedure name below to learn more about how to prepare, what happens during the procedure, and any potential complications or side effects.

- [Fecal occult blood test \(FOBT\)](#)
- [Fecal immunochemical test \(FIT\) test](#)
- [Stool DNA test](#)
- [Sigmoidoscopy](#)
- [Colonoscopy](#)
- [Virtual colonoscopy](#)
- [Double contrast barium enema](#)
- [Digital rectal exam](#)

Once you decide to be screened, be sure you are seeing a trained doctor. Your primary doctor may need to refer you to other specialists for the actual screening test(s).

Screening Tests

Finding a doctor

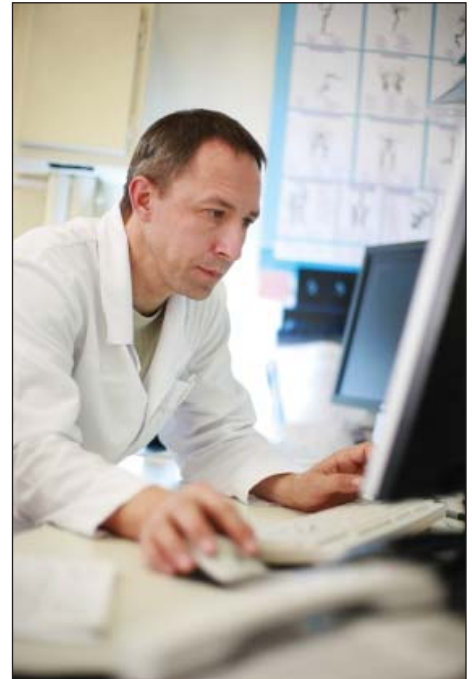
Once you decide to be screened, be sure you are seeing a trained doctor. Your primary doctor may need to refer you to other specialists for the actual screening test(s).

For stool tests such as FOBT or FIT, your primary care doctor can provide you with a kit to take home to collect a stool sample. Be aware that a stool sample taken in a clinic or doctor's office is not an appropriate screening for colorectal cancer. Stool sampling should be done with a "take-home" kit and should be repeated 2-3 times for accurate diagnosis. If these tests have positive results, your doctor may refer you to a gastroenterologist – a doctor who specializes in diagnosing and treating disorders of the digestive system.¹⁵

If you are having a procedure that involves endoscopy (such as sigmoidoscopy or colonoscopy), be sure your doctor is properly trained in such procedures. "More than 11,000 domestic and international gastroenterologists, surgeons, and other medical specialists are expertly trained in endoscopy."¹⁶

Both double contrast barium enema and virtual colonoscopy are usually done in the radiology department. A radiologic technologist and/or radiologist – a physician specifically trained to supervise and interpret radiology examinations – may guide the patient through these procedures.

A radiologist will analyze the images and send a signed report to your primary care or referring physician, who will discuss the results with you.^{17, 18}



If you need help finding a doctor, you can call the American Cancer Society (1-800-ACS-2345) or National Cancer Institute (1-800-4-CANCER) for live help.

"Getting a colorectal cancer screening test could save your life."² Talk with your doctor about when to begin screening, which screening test or tests are right for you, and how often you should be screened. Then follow through, and get screened for life.

This document is meant for educational purposes only and is not intended to replace the advice of your doctor or other health care provider.

To view the references used in this newsletter, go to:
<http://fcs.tamu.edu/health/healthhints/2010/jun/ref.php>

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Guidelines & Recommendations for Colorectal Cancer Screening from Professional Organizations

The following guidelines are schedules recommended by two different professional groups for screening adults at average risk for colorectal cancer. Though both groups differ in some areas, both recommend screening beginning at age 50, with repeat screenings over time. If you are at higher risk due to personal or family history, you may need to be screened earlier and more often. Be sure to talk with your doctor about how and when *you* should have colorectal cancer screening.

American Cancer Society, the U.S. Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology

American Cancer Society (ACS), the U.S. Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology recommend the following guidelines for colorectal cancer screening.

Beginning at age 50, both men and women should follow one of these testing schedules.^{1,2}

Tests that find polyps and cancer:

- flexible sigmoidoscopy every 5 years*, or
- colonoscopy every 10 years, or
- double-contrast barium enema every 5 years*, or
- CT colonography (virtual colonoscopy) every 5 years*

Tests that primarily find cancer:

- yearly fecal occult blood test (FOBT)**, or
- yearly fecal immunochemical test (FIT)**, or
- stool DNA test (DNA), interval uncertain**^{1,2}

* If the test is positive, a colonoscopy should be done.

** The multiple stool take-home test should be used. One test done by the doctor in the office is not adequate for testing. A colonoscopy should be done if the test is positive.

U.S. Preventive Services Task Force

The U.S. Preventive Services Task Force (USPSTF) recommends the following guidelines for colorectal cancer screening for men and women aged 50-75 using:^{3,4}

- high-sensitivity fecal occult blood testing (FOBT), once per year; or
- flexible sigmoidoscopy, every 5 years; or
- colonoscopy every 10 years.*^{3,4}

*Note that colonoscopy is used as a follow-up test if anything unusual is found during one of the other screening tests.³

“The USPSTF recommends against routine screening for colorectal cancer in adults 76 to 85 years of age.”⁴ There may be considerations that support colorectal cancer screening in an individual patient. The decision to be screened after age 75 should be made on an individual basis. If you are older than 75, ask your doctor if you should be screened.³

“The USPSTF recommends against screening for colorectal cancer in adults older than age 85 years.”⁴

“The USPSTF concludes that the evidence is insufficient to assess the benefits and harms of computed tomographic colonography and fecal DNA testing as screening modalities for colorectal cancer.”⁴

For higher risk groups, see Colon Cancer Screening Guidelines recommended [here](#).

Talk to your doctor about which test or tests are right for you.

Be sure to talk with your doctor about how and when you should have colorectal cancer screening.

Sources

1. American Cancer Society (2010). American Cancer Society guidelines for early detection of cancer [online]. Retrieved May 10, 2010. From http://www.cancer.org/docroot/ped/content/ped_2_3x_acs_cancer_detection_guidelines_36.asp.
2. Levine B, Lieberman DA, MacFarland B, Smith RA, Brooks D, Andrews KS, Dash C, Giardiello FM, Glick S, Levin TR, Pickhardt P, Rex DK, Thorson A, and Winawer SJ. Screening and surveillance for the early detection of colorectal cancer and adenomatous polyps, 2008: A joint guideline from the American Cancer Society, the U.S. Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology. *CA Cancer Journal for Clinicians*; 58; 130-160.
3. U.S. Department of Health and Human Services Centers for Disease Control and Prevention (2009). Colorectal cancer screening [online]. Retrieved April 12, 2010. From http://www.cdc.gov/cancer/colorectal/pdf/Basic_FS_Eng_Color.pdf.
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Weighing the pros & cons of colorectal cancer screening

Being an informed consumer

It is important to be an informed consumer of your own health care. The following information will further inform you about each colorectal cancer screening test, and the table on the following two pages will help you see at-a-glance the advantages and disadvantages of each procedure. Use this information to have good, open communication with your doctor about the screening test or tests that are right for you.

Fecal occult blood test (FOBT) & Fecal immunochemical test (FIT)

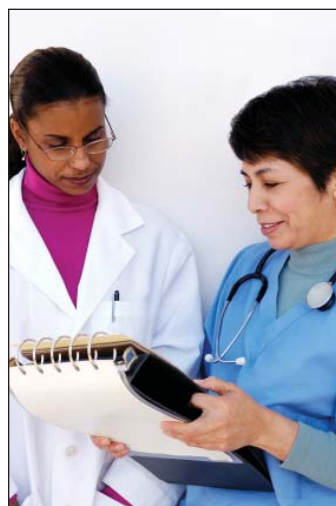
Patients should be aware that these tests are usually done with 2-3 samples being collected at home. A one-time sampling is likely to be ineffective.¹ Additional procedures, such as colonoscopy, may be necessary if the test indicates an abnormality.²

Stool DNA test

Patients should be aware that “this is a newer type of test, and the best length of time to go between tests is not yet clear. This test is also much more expensive than other forms of stool testing.... Like other stool tests, if the results are positive, a colonoscopy will need to be done.”³

Sigmoidoscopy

Patients should be aware that in this test, the doctor checks for polyps or cancer inside the *rectum and lower third of the colon*.^{4,5} Using the sigmoidoscope, your doctor can view the inside of the rectum and part of the colon to detect (and possibly remove) any abnormality. However, because the sigmoidoscope is only 60



centimeters (about 2 feet) long, the doctor is able to see the entire rectum but less than half of the colon.³ “A sigmoidoscopy and a digital rectal exam (DRE) may be used together to screen for colorectal cancer.”⁵ Additional procedures, such as colonoscopy, may be necessary if the test indicates an abnormality.²

Colonoscopy

The colonoscope used in colonoscopy has a video camera on the end that is connected to a display monitor so the doctor can see and closely examine the inside of the colon. Patients should be aware that special instruments can be passed through the colonoscope to remove (biopsy) any suspicious-looking areas, such as polyps, if needed.³

Virtual colonoscopy

Virtual colonoscopy is a newer test, and clinical trials are comparing virtual colonoscopy with commonly used colorectal cancer-screening tests.⁵ Patients should be aware that if polyps or other abnormalities are discovered, a traditional colonoscopy will be needed to examine them in more detail or to remove them.⁶

Double contrast barium enema

Patients should be aware that if the test indicates an abnormality, additional procedures will be necessary.²

Digital rectal exam

Patients should be aware that “because this exam can find less than 10 percent of colorectal cancers, it must be used along with another screening test.”⁶ Additional procedures are necessary if the test indicates an abnormality.²

The following table from the National Cancer Institute² outlines some of the advantages and disadvantages of the colorectal cancer screening tests. Use this table as you talk with your doctor to help decide what screening test or tests are right for you.

Advantages and Disadvantages of Colorectal Cancer Screening Tests*

Test	Advantages	Disadvantages
Fecal Occult Blood Test (FOBT)	<ul style="list-style-type: none"> • No cleansing of the colon is necessary. • Samples can be collected at home. • The cost is low compared with other colorectal cancer screening tests. • FOBT does not cause bleeding or tearing/perforation of the lining of the colon. 	<ul style="list-style-type: none"> • This test fails to detect most polyps and some cancers. • False-positive results (the test suggests an abnormality when none is present) are possible. • Dietary restrictions and changes, such as avoiding meat, certain vegetables, vitamin C, iron supplements, and aspirin, and increasing fiber consumption, are often recommended for several days before a guaiac FOBT. These restrictions and changes are not required for immunochemical FOBT. • Additional procedures, such as colonoscopy, may be necessary if the test indicates an abnormality.
Sigmoidoscopy	<ul style="list-style-type: none"> • The test is usually quick, with few complications. • For most patients, discomfort is minimal. • In some cases, the doctor may be able to perform a biopsy (the removal of tissue for examination under a microscope by a pathologist) and remove polyps during the test, if necessary. • Less extensive cleansing of the colon is necessary with this test than for a colonoscopy. 	<ul style="list-style-type: none"> • This test allows the doctor to view only the rectum and the lower part of the colon. Any polyps in the upper part of the colon will be missed. • There is a very small risk of bleeding or tearing/perforation of the lining of the colon. • Additional procedures, such as colonoscopy, may be necessary if the test indicates an abnormality.
Colonoscopy	<ul style="list-style-type: none"> • This test allows the doctor to view the rectum and the entire colon. • The doctor can perform a biopsy and remove polyps or other abnormal tissue during the test, if necessary. 	<ul style="list-style-type: none"> • This test may not detect all small polyps, nonpolypoid lesions, and cancers, but it is one of the most sensitive tests currently available. • Thorough cleansing of the colon is necessary before this test. • Some form of sedation is used in most cases. • Although uncommon, complications such as bleeding and/or tearing/perforation of the lining of the colon can occur.

Virtual Colonoscopy	<ul style="list-style-type: none"> • This test allows the doctor to view the rectum and the entire colon. • This is not an invasive procedure, so there is no risk of bleeding or tearing/perforation of the lining of the colon. 	<ul style="list-style-type: none"> • This test may not detect all small polyps, nonpolypoid lesions, and cancers. • Thorough cleansing of the colon is necessary before the test. • If a polyp or nonpolypoid lesion 6 to 9 millimeters in size or larger is detected, standard colonoscopy, usually immediately after the virtual procedure, will be recommended to remove the polyp or lesion or perform a biopsy.
Double Contrast Barium Enema (DCBE)	<ul style="list-style-type: none"> • This test usually allows the doctor to view the rectum and the entire colon. • Complications are rare. • No sedation is necessary. 	<ul style="list-style-type: none"> • This test may not detect some small polyps and cancers. • Thorough cleansing of the colon is necessary before the test. • False-positive results are possible. • The doctor cannot perform a biopsy or remove polyps during the test. • Additional procedures are necessary if the test indicates an abnormality.
Digital Rectal Exam (DRE)	<ul style="list-style-type: none"> • Often part of a routine physical examination. • No cleansing of the colon is necessary. • The test is usually quick and painless. 	<ul style="list-style-type: none"> • The test can detect abnormalities only in the lower part of the rectum. • Additional procedures are necessary if the test indicates an abnormality.
<p>*This table is an excerpt from National Cancer Institute (2008). Colorectal cancer screening [online]. Retrieved April 12, 2010. From http://www.cancer.gov/cancertopics/factsheet/Detection/colorectal-screening.</p>		

Sources

1. Levine B, Lieberman DA, MacFarland B, Smith RA, Brooks D, Andrews KS, Dash C, Giardiello FM, Glick S, Levin TR, Pickhardt P, Rex DK, Thorson A, and Winawer SJ. Screening and surveillance for the early detection of colorectal cancer and adenomatous polyps, 2008: A joint guideline from the American Cancer Society, the U.S. Multi-Society Task Force on Colorectal Cancer, and the American College of Radiology. *CA Cancer Journal for Clinicians*; 58; 130-160.
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Insurance Coverage for Colorectal Cancer Screening

“Insurance coverage varies. People should check with their health insurance provider to determine their colorectal cancer screening benefits. Because virtual colonoscopy is a fairly new procedure, reimbursement policies may be more uncertain than for other types of screening.”¹

Medicare covers several colorectal cancer screening tests for its beneficiaries. Specific information about Medicare benefits is available on the Medicare website at <http://www.medicare.gov/health/overview.asp> or <http://www.medicare.gov/navigation/manage-your-health/preventive-services/colon-cancer-screening.aspx>.

If you have private insurance, check with your insurance provider to learn what’s included in your plan. The cost will depend on which kind of test you need.²

If you don’t have health insurance, you can still get important screening tests. To learn more, go to the U.S. Department of Health and Human Services: Health Resources and Services Administration site and [find a health center near you](#).²

Sources

1. National Cancer Institute (2008). Colorectal cancer screening [online]. Retrieved April 12, 2010. From <http://www.cancer.gov/cancertopics/factsheet/Detection/colorectal-screening>.
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Colorectal Cancer Screening Preparing for your procedure

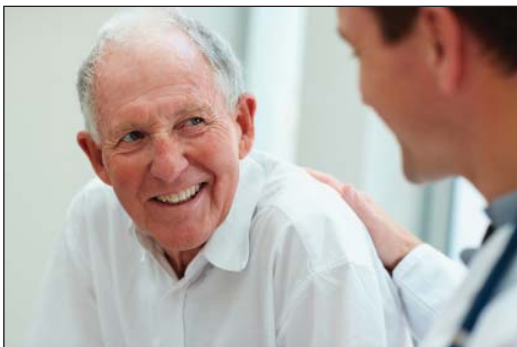
The following information is adapted from *Can colorectal polyps and cancer be found early?* by the American Cancer Society (2010).

Fecal occult blood test (FOBT)

Before the test. Some foods or drugs can affect the test, so your doctor may suggest that you avoid the following before this test:

- non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen (Advil), naproxen (Aleve), or aspirin (more than 1 adult aspirin per day) for 7 days before testing. (They can cause bleeding, which can lead to a false-positive result.) Acetaminophen (Tylenol) can be taken as needed.
- Vitamin C in excess of 250 mg daily from either supplements or citrus fruits and juices for 3 days before testing. (It can affect the chemicals in the test and make it appear negative, even when blood is present.)
- red meats (beef, lamb, or liver) for 3 days before testing (Components of blood in the meat may cause the test to show positive.)

Some people who are given the test never do it or don't give it to their doctor because they worry that something they ate may interfere with the test. For this reason, many doctors tell their patients it isn't essential to follow any restrictions in their diet. The most important thing is to get the test done. People should try to avoid taking aspirin or related drugs for minor aches. But if you take these medicines daily for heart problems or other conditions, don't stop them for this test without talking to your doctor first.



Collecting the samples. Have all of your supplies ready and in one place. Supplies will include a test kit, test cards, either a brush or wooden applicator, and a mailing envelope. The kit will give you detailed instructions on how to collect the specimen.

Follow-up. If this test finds blood, a colonoscopy will be needed to look for the source. It is not sufficient to simply repeat the FOBT or follow up with other types of tests.

Fecal immunochemical test (FIT)

Before the test. The FIT is done essentially the same way as the FOBT, but some people may find it easier to use because there are no drug or dietary restrictions (vitamins or foods do not affect the FIT), and sample collection may take less effort. This test is also less likely to react to bleeding from parts of the upper digestive tract, such as the stomach.

Collecting the samples. Have all of your supplies ready and in one place. Supplies will include a test kit, test cards, long brushes, waste bags, and a mailing envelope. The kit will give you detailed instructions on how to collect the specimen.

Follow-up. The FIT, like the FOBT, may not detect a tumor that is not bleeding, so multiple stool samples should be tested. And if the results are positive for hidden blood, a colonoscopy is required to investigate further. To be beneficial, the test must be repeated every year.

Stool DNA tests

Before the test. The stool DNA test is not invasive and doesn't require any special preparation.

Collecting the samples. People having this test will receive a kit with detailed instructions from their doctor's office or clinic on how to collect the specimen. Always follow the instructions on your kit.

This test requires an entire stool sample. It is obtained using a special container, which is placed in a bracket that stretches across the seat of the toilet. You have

your bowel movement while sitting on the toilet, making sure it goes into the container. You then place the container and an ice pack in a shipping box and close and label the box. The specimen must be shipped to the lab within 24 hours of having the bowel movement.

Follow-up. Like other stool tests, if the results are positive, a colonoscopy will need to be done.

Sigmoidoscopy

Before the test. You will need to have a bowel preparation to clean out your lower colon. The colon and rectum must be empty and clean so your doctor can view the lining of the sigmoid colon and rectum. Your doctor will give you specific instructions to follow. You may be asked to follow a special diet (such as drinking only clear liquids) for a day before the exam. You may also be asked to use enemas or to use strong laxatives to clean out your colon before the exam. Be sure your doctor is aware of any medicines you are taking, as you may need to change how you take them before the test.

During the test. A sigmoidoscopy usually takes 10 to 20 minutes. Most people do not need to be sedated for this test, but this may be an option you can discuss with your doctor. Sedation may make the test less uncomfortable, but it requires some time to recover from, as well as having someone with you to take you home after the test.

Possible complications and side effects. This test may be uncomfortable because air is put into the colon, but it should not be painful. Be sure to let your doctor know if you feel pain during the procedure. You may see a small amount of blood in your first bowel movement after the test. Significant bleeding and puncture of the colon are possible complications, but they are very uncommon.

Colonoscopy

Colonoscopy may be done in a hospital outpatient department, in a clinic, or in a doctor's office.

Before the test. Be sure your doctor is aware of any medicines you are taking, as you may need to change how you take them before the test. The colon and rectum must be empty and clean so your doctor can view their inner linings during the test. You will need to take laxatives (liquids, pills, or both) the day before the test and possibly an enema that morning. Your doctor will give you specific instructions. It is important to read these instructions carefully a few days ahead of time, since you may need to shop for

special supplies and get laxatives from a pharmacy. If you are not sure about any of the instructions, call the doctor's office and go over them step-by-step with the nurse. Many people consider the bowel preparation to be the most unpleasant part of the test, as it usually requires you to be in the bathroom quite a bit.

You may be given other instructions as well. For example, your doctor may tell you to drink only clear liquids (water, apple or cranberry juice, and any gelatin except red or purple) for a day or two before the exam. Plain tea or coffee with sugar is usually okay, but no milk or creamer is allowed. Clear broth, ginger ale, and most soft drinks or sports drinks are usually allowed unless they have red or purple food colorings, which could be mistaken for blood in the colon.

You will likely also be told not to eat or drink anything after midnight the night before your test. If you normally take prescription medicines in the mornings, talk with your doctor or nurse about how to manage them for the day.

You may need to arrange for someone to drive you home from the test because the sedative used during the test can affect your ability to drive. Depending on the medicines that are used, some doctors require that someone drive you home.

During the test. The test itself usually takes about 30 minutes, but it may take longer if a polyp is found and removed. Before the colonoscopy begins, you will be given a sedating medicine (usually through your vein) to make you feel comfortable and sleepy during the procedure. You will probably be awake, but you may not be aware of what is going on and may not remember the procedure afterward. Most people will be fully awake by the time they get home from the test.

Possible side effects and complications. The bowel preparation before the test can be unpleasant. The test itself may be uncomfortable, but the sedative usually helps with this, and most people feel normal once the effects of the sedative wear off. Some people may have gas pains or cramping for a while after the test.

In some cases, people may have low blood pressure or changes in heart rhythms due to the sedation during the test, although these are rarely serious.

If a polyp is removed or a biopsy is done during the colonoscopy, you may notice some blood in your stool for a day or two after the test. Significant bleeding is slightly more likely with colonoscopy than with sigmoidoscopy, but it is still uncommon. In rare cases, continued bleeding might require treatment.

Colonoscopy is a safe procedure, but on rare occasions, the colonoscope can puncture the wall of the colon or rectum, which is called a perforation. It can be a serious complication and may require surgical repair. Talk to your doctor about the risk of this complication.

Double contrast barium enema

Before the test. As with colonoscopy, it is very important that the colon and rectum are empty and clean so your doctor can see them during the test. Your doctor will give you specific instructions on preparing for the test. Be sure to follow the instructions. For example, you may be asked to clean your bowel the night before with laxatives and/or take an enema the morning of the exam. You will likely be asked to follow a clear liquid diet for a day or two before the procedure. You may also be told to avoid eating or drinking dairy products the day before the test, and to not eat or drink anything after midnight on the night before the procedure. Many people consider the bowel preparation to be the most unpleasant part of the test, as it usually requires you to be in the bathroom quite a bit.

During the test. The procedure takes about 30 to 45 minutes, and it does not require sedation.

Possible side effects and complications. You may have bloating or cramping after the test and will likely feel the need to empty your bowels soon after the test is done. The barium can cause constipation for a few days, and your stool may appear grey or white until the barium leaves the body. There is a very small risk that inflating the colon with air could injure or puncture the colon, but this risk is thought to be much less than with colonoscopy. Like other x-ray tests, this test also exposes you to a small amount of radiation.

Virtual colonoscopy

Before the test. It is important that the colon and rectum are emptied before this test to provide the best images, which is why the preparation for this test is similar to that for a double contrast barium enema or colonoscopy. You will likely be told to follow a clear liquid diet for a day or two before the test. You will also be given instructions for taking strong laxatives and/or enemas the night before or morning of the exam, which will probably require you to be in the bathroom quite a bit.

During the test. This test is done in a special room with a CT scanner and takes about 10 minutes. You may be asked to drink a contrast solution before the test to help “tag” any remaining stool in the colon or rectum, which helps the doctor when looking at the test images.

Possible side effects and complications. There are usually very few side effects after CT colonography. You may feel bloated or have cramps because of the air in the colon, but this should go away once the air passes from the body. There is a very small risk that inflating the colon with air could injure or puncture the colon, but this risk is thought to be much less than with colonoscopy. Like other types of CT scans, this test also exposes you to a small amount of radiation.

For more information on what happens during each procedure, be sure to read the [Colon and Rectum Cancer Detailed Guide](#).

Source

1. American Cancer Society (2010). Can colorectal polyps and cancer be found early? [online]. Retrieved April 12, 2010. From http://www.cancer.org/docroot/CRI/content/CRI_2_4_3x_Can_Colon_and_rectum_cancer_be_found_early.asp.