

NEARLY EVERY INSURANCE PLAN COVERS THE COST OF COLORECTAL CANCER SCREENING

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SCREENING SCHEDULE FOR COLORECTAL CANCER

United States Preventive Services Task Force*

Summary of Recommendations

Population	Recommendation
Adults, beginning at age 50 years and continuing until age 75 years	The USPSTF recommends screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults, beginning at age 50 years and continuing until age 75 years. The risks and benefits of these screening methods vary.
Adults age 76 to 85 years	The USPSTF recommends against routine screening for colorectal cancer in adults 76 to 85 years of age. There may be considerations that support colorectal cancer screening in an individual patient.
Adults older than age 85 years	The USPSTF recommends against screening for colorectal cancer in adults older than age 85 years.

***** The U.S. Preventive Services Task Force is an independent, volunteer panel of national experts in prevention and evidence-based medicine. The Task Force works to improve the health of all Americans by making recommendations about preventive services such as screenings, counseling services, and preventive medications.

Task Force members come from the fields of preventive medicine and primary care, including internal medicine, family medicine, pediatrics, behavioral health, obstetrics and gynecology, and nursing. Their recommendations are based on a rigorous review of existing, proven evidence and are intended to help primary care clinicians and patients decide together whether a preventive service is right for a patient's needs.

Each year, the Task Force makes a report to Congress that identifies critical gaps in research on clinical preventive services and recommends priority areas that deserve further examination

DESCRIPTION OF SCREENING TESTS FOR COLORECTAL CANCER

American Cancer Society

Screening is the process of looking for cancer in people who have no symptoms. Several tests can be used to screen for colorectal cancers. These tests can be divided into:

- **Tests that can find both colorectal polyps and cancer:** These tests look at the structure of the colon itself to find any abnormal areas. This is done either with a scope (a tube-like instrument with a light and camera) put into the rectum or with special imaging (x-ray) tests. Polyps found during these tests can be removed before they become cancer, so these tests may prevent colorectal cancer. Because of this, these tests are encouraged if they are available and you are willing to have them.
- **Tests that mainly find cancer:** These tests check the stool (feces) for signs of cancer. These tests are less invasive and easier to have done, but they are less likely to detect polyps.

Tests that can find both colorectal polyps and cancer are encouraged if they are available and you are willing to have them. But the most important thing is to get tested, no matter which test you choose.

These tests, as well as others, can also be used when people have symptoms of colorectal cancer and other digestive diseases such as inflammatory bowel disease.

A. Tests that Can Find Both Colorectal Polyps and Cancer

Flexible sigmoidoscopy

During this test, the doctor looks at part of the colon and rectum with a sigmoidoscope (a flexible, lighted tube about the thickness of a finger with a small video camera on the end). It's put in through the anus and into the rectum and moved into the lower part of the colon. Images from the scope are seen on a video screen.

Using the sigmoidoscope, your doctor can look at the inside of the rectum and part of the colon to detect (and possibly remove) any abnormality. The sigmoidoscope is only 60 centimeters (about 2 feet) long, so the doctor is able to see the entire rectum but less than half of the colon with this procedure.

This test is not widely used as a screening test for colorectal cancer in the United States.

Before the test: Be sure your doctor knows about any medicines you take. You might need to change how you take them before the test. Your insides must be empty and clean so your doctor can see the lining of the sigmoid colon and rectum. You will get specific instructions to follow to clean them out. You may be asked to follow a special diet (such as drinking only clear liquids) or to use enemas or strong laxatives the day before the test to clean out your colon.

During the test: A sigmoidoscopy usually takes about 10 to 20 minutes. Most people don't need to be sedated for this test, but this might be an option you can discuss with your doctor. Sedation may make the test less uncomfortable, but you'll need some time to recover from it and you'll need someone with you to take you home after the test.

You'll probably be asked to lie on a table on your left side with your knees pulled up near your chest. Before the test, your doctor may put a gloved, lubricated finger into your rectum to examine it. For the test itself, the

sigmoidoscope is first lubricated to make it easier to insert into the rectum. The scope may feel cold as it's put in. Air will be pumped into the colon through the sigmoidoscope so the doctor can see the walls of the colon better.

If you are not sedated during the procedure, you might feel pressure and slight cramping in your lower belly. To ease discomfort and the urge to have a bowel movement, it helps to breathe deeply and slowly through your mouth. You'll feel better after the test once the air leaves your colon.

If a polyp is found during the test, the doctor may remove it with a small instrument passed through the scope. The polyp will be looked at in the lab. If a pre-cancerous polyp (an adenoma) or colorectal cancer is found, you'll need to have a colonoscopy (see below) later to look for polyps or cancer in the rest of the colon.

Possible complications and side effects: This test may be uncomfortable because of the air 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 might see a small amount of blood in your first bowel movement after the test. More serious bleeding and puncture of the colon are possible complications, but they are very uncommon.

Colonoscopy

For this test, the doctor looks at the entire length of the colon and rectum with a colonoscope, a thin, flexible, lighted tube with a small video camera on the end. It's basically a longer version of a sigmoidoscope. It's put in through the anus and into the rectum and colon. Special instruments can be passed through the colonoscope to biopsy (sample) or remove any suspicious-looking areas such as polyps, if needed.

Before the test: Be sure your doctor knows about any medicines you are taking. You might need to change how you take them before the test. The colon and rectum must be empty and clean so your doctor can see the lining of the entire colon and rectum during the test. This process of cleaning out the colon and rectum is sometimes unpleasant and can keep people from getting this important screening test done. However, newer kits are available to clean out the bowel and may be better tolerated than previous ones. Your doctor can discuss the options with you.

Your doctor will give you specific instructions. It's important to read them carefully a few days ahead of time, since you may need to follow a special diet for at least a day before the test and to shop for supplies and laxatives. If you're not sure about any of the instructions, call the doctor's office and go over them with the nurse.

You will probably 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 that day.

Because a sedative is used during the test, you will need to arrange for someone you know to take you home after the test. You might need someone to help you get into your home if you are sleepy or dizzy, so many centers that do colonoscopies will not discharge people to go home in a cab or a ridesharing service. If transportation might be a problem, talk with your health care provider about the policy at your hospital or surgery center for using one of these services. There may be other resources available for getting home, depending on the situation.

During the test: The test itself usually takes about 30 minutes, but it may take longer if a polyp is found and removed. Before it starts, you'll be given a sedating medicine (into a vein) to make you feel relaxed and sleepy during the procedure. For most people, this medicine makes them unaware of what's going on and unable to remember the procedure afterward. You'll wake up after the test is over, but might not be fully awake until later in the day.

During the test, you'll be asked to lie on your side with your knees pulled up. A drape will cover you. Your blood pressure, heart rate, and breathing rate will be monitored during and after the test.

Your doctor might insert a gloved finger into the rectum to examine it before putting in the colonoscope. The colonoscope is lubricated so it can be inserted easily into the rectum. Once in the rectum, the colonoscope is passed all the way to the beginning of the colon, called the cecum.

If you're awake, you may feel an urge to have a bowel movement when the colonoscope is inserted or pushed further up the colon. The doctor also puts air into the colon through the colonoscope to make it easier to see the lining of the colon and use the instruments to perform the test. To ease any discomfort, it may help to breathe deeply and slowly through your mouth.

The doctor will look at the inner walls of the colon as he or she slowly removes the colonoscope. If a small polyp is found, it may be removed and then sent to a lab to be checked if it has any areas that have changed into cancer. This is because some small polyps may become cancer over time.

If your doctor sees a larger polyp or tumor or anything else abnormal, a biopsy may be done. A small piece of tissue is taken out through the colonoscope. The tissue is checked in the lab to see if it's cancer, a benign (non-cancerous) growth, or inflammation.

Possible side effects and complications: The bowel preparation before the test is unpleasant. The test itself might be uncomfortable, but the sedative usually helps with this, and most people feel normal once the effects of the sedative wear off. Because air is pumped into the colon during the test, people sometimes feel bloated, have gas pains, or have cramping for a while after the test until the air passes out.

Some people may have low blood pressure or changes in heart rhythm from the sedation during the test, but these are rarely serious.

If a polyp is removed or a biopsy is done during the colonoscopy, you might notice some blood in your stool for a day or 2 after the test. Serious bleeding is uncommon, but in rare cases, bleeding might need to be treated or can even be life-threatening.

Colonoscopy is a safe procedure, but in rare cases the colonoscope can puncture the wall of the colon or rectum. This is called a *perforation*. Symptoms can include severe abdominal (belly) pain, nausea, and vomiting. This can be a major (or even life-threatening) complication, because it can lead to a serious abdominal (belly) infection. The hole may need to be repaired with surgery. Ask your doctor about the risk of this complication.

Double-contrast barium enema (DCBE)

This test is also called an *air-contrast barium enema* or a *barium enema with air contrast*. It may also be called a *lower GI series*. It's basically a type of x-ray test. Barium sulfate, which is a chalky liquid, and air are put into the colon and rectum through the anus to outline the inner lining. This can show abnormal areas on x-rays. If suspicious areas are seen on this test, a colonoscopy will need to be done to explore them further.

This test is not widely used as a screening test for colorectal cancer in the United States.

Before the test: It's very important that the colon and rectum are empty and clean so they can be seen during the test. You'll be given specific instructions on how to prepare for the test. For example, you may be asked to clean your bowel the night before with laxatives and/or take enemas the morning of the exam. You'll probably be asked to follow a clear liquid diet for at least a day before the test. 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 the night before the test.

During the test: The test takes about 30 to 45 minutes, and sedation isn't needed. You lie on a table on your side in an x-ray room. A small, flexible tube is put into your rectum, and barium sulfate is pumped in to partially fill and open up the colon and rectum. You are then turned on the x-ray table so the barium moves throughout the colon and rectum. Then air is pumped into the colon and rectum through the same tube to expand them. This might cause some cramping and discomfort, and you may feel the urge to have a bowel movement.

X-ray pictures of the lining of your colon and rectum are then taken to look for polyps or cancers. You may be asked to change positions to help move the barium and so that different views of the colon and rectum can be seen on the x-rays.

If polyps or other suspicious areas are seen on this test, you'll probably need a colonoscopy to remove them or to study them fully.

Possible side effects and complications: You may have bloating or cramping after the test, and will probably 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 look grey or white until all the barium is out. There's a very small risk that inflating the colon with air could injure or puncture it, 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.

CT colonography (virtual colonoscopy)

This test is an advanced type of computed tomography (CT or CAT) scan of the colon and rectum. A CT scan uses x-rays, but instead of taking one picture, like a regular x-ray, a CT scanner takes many pictures as it rotates around you while you lie on a table. A computer then combines these pictures into detailed images of the part of your body being studied.

For CT colonography, special computer programs create both 2-dimensional x-ray pictures and a 3-dimensional view of the inside of the colon and rectum, which lets the doctor look for polyps or cancer.

This test may be especially useful for some people who can't have or don't want to have more invasive tests such as colonoscopy. It can be done fairly quickly, and sedation isn't needed. But even though this test is not invasive like a colonoscopy, the same type of bowel prep is needed. Also, a small, flexible tube is put in the rectum to fill the colon with air. Another possible drawback is that if polyps or other suspicious areas are seen on this test, a colonoscopy will still probably be needed to remove them or to explore them fully.

Before the test: It's important that the colon and rectum are emptied before this test to get the best images. You'll probably be told to follow a clear liquid diet for at least a day before the test. There are a number of ways to clean out the colon before the test. Often, the evening before the procedure, you drink large amounts of a liquid laxative solution. This often results in spending a lot of time in the bathroom. The morning of the test, sometimes more laxatives or enemas may be needed to make sure the bowels are empty. Newer kits are available to clean out the bowel and may be better tolerated than previous ones. Your doctor can discuss the options with you.

During the test: This test is done in a special room with a CT scanner. It takes about 10 minutes. You may be asked to drink a contrast solution before the test to help "tag" any stool left in the colon or rectum, which helps the doctor when looking at the test images. You'll be asked to lie on a narrow table that's part of the CT scanner, and will have a small, flexible tube put into your rectum. Air is pumped through the tube into the colon and rectum to expand them to provide better images. The table then slides into the CT scanner, and you'll be asked to hold your breath for about 15 seconds while the scan is done. You'll likely have 2 scans: one while you're lying on your back and one while you're on your stomach or side.

Possible side effects and complications: There are usually few side effects after this test. You may feel bloated or have cramps because of the air in the colon and rectum, but this should go away once the air passes from the body. There's a very small risk that inflating the colon with air could injure or puncture it, 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.

B. Tests That Mainly Find Colorectal Cancer

These tests look at the stool (feces) for signs of cancer. Most people find these tests easier to have than tests like colonoscopy, and they can often be done at home. But these tests aren't as good at finding polyps such as tests like colonoscopy. And if the result from one of these stool tests is positive (abnormal), you'll probably still need a colonoscopy to see if you have cancer.

Guaiac-based fecal occult blood test (gFOBT)

One way to test for colorectal cancer is to look for occult (hidden) blood in stool. The idea behind this test is that blood vessels in larger colorectal polyps or cancers are often fragile and easily damaged by the passage of stool. The damaged vessels usually bleed into the colon, but only rarely is there enough bleeding for blood to be seen in the stool.

The guaiac-based fecal occult blood test (gFOBT) detects blood in the stool through a chemical reaction. This test can't tell if the blood is from the colon or from other parts of the digestive tract (such as the stomach). If this test is positive, a colonoscopy will be needed to find the reason for the bleeding. Although blood in the stool can be from cancers or polyps, it can also have other causes, such as ulcers, hemorrhoids, diverticulosis (tiny pouches that form at weak spots in the colon wall), or inflammatory bowel disease (colitis).

Over time, this test has improved so that it's now more likely to find colorectal cancer. The American Cancer Society recommends the more modern, highly sensitive versions of this test for screening.

This test must be done every year, unlike some other tests (like colonoscopy).

This test is done with a kit that you can use in the privacy of your own home that allows you to check more than one stool sample. *A FOBT done during a digital rectal exam in the doctor's office (which only checks one stool sample) is not enough for proper screening.*

People having this test will get a kit with instructions from their doctor's office or clinic. The kit will explain how to take stool samples at home (usually samples from 3 straight bowel movements are smeared onto small squares of paper). The kit is then returned to the doctor's office or medical lab (usually within 2 weeks) for testing.

Before the test: Some foods or drugs can affect the results, so you may be instructed to avoid the following before this test:

- Non-steroidal anti-inflammatory drugs (NSAIDs), such as 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.) **Note:** People should try to avoid taking NSAIDs 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.
- Vitamin C in excess of 250 mg daily from either supplements or citrus fruits and juices for 3 days before testing. (This can affect the chemicals in the test and make the result negative, even if blood is present.)
- Red meats (beef, lamb, or liver) for 3 days before testing. (Components of blood in the meat may cause a positive test result.)

Some people who are given the test never do it or don't return it because they worry that something they ate may affect the test. Even if you are concerned that something you ate may alter the test, the most important thing is to get the test done.

Collecting the samples: Have all of your supplies ready and in one place. Supplies typically 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 stool samples. **Be sure to follow the instructions that come with your kit, as different kits might have different instructions.** If you have any questions about how to use your kit, contact your doctor's office or clinic. Once you have collected the samples, return them as instructed in the kit.

If this test finds blood, you will need a colonoscopy to look for the source. It's not enough to simply repeat the gFOBT or follow up with other types of tests.

Fecal immunochemical test (FIT)

The fecal immunochemical test (FIT) is also called an *immunochemical fecal occult blood test* (iFOBT). It tests for occult (hidden) blood in the stool in a different way than a guaiac-based FOBT. This test reacts to part of the human hemoglobin protein, which is found in red blood cells.

The FIT is done much like the gFOBT, in that small amounts of stool are collected on cards (or in tubes). Some people may find this test easier because there are no drug or dietary restrictions (vitamins and foods do not affect the FIT), and collecting the samples may be easier. This test is also less likely to react to bleeding from other parts of digestive tract, such as the stomach.

Like the gFOBT, the FIT may not detect a tumor that's not bleeding, so multiple stool samples should be tested. This test must also be done every year. And if the results are positive for hidden blood, a colonoscopy will be needed to investigate further.

Collecting the samples: Have all of your supplies ready and in one place. Supplies typically include a test kit, test cards or tubes, long brushes or other collecting devices, waste bags, and a mailing envelope. The kit will give you detailed instructions on how to collect the samples. **Be sure to follow the instructions that come with your kit, as different kits might have different instructions.** If you have any questions about how to use your kit, contact your doctor's office or clinic. Once you have collected the samples, return them as instructed in the kit.

Stool DNA test

A stool DNA test looks for certain abnormal sections of DNA from cancer or polyp cells. Colorectal cancer cells often have DNA mutations (changes) in certain genes. Cells from colorectal cancers or polyps with these mutations often get into the stool, where tests may be able to detect them. Cologuard®, the test currently available, also tests for blood in the stool.

Collecting the samples: You'll get a kit in the mail to use to collect your entire stool sample. The kit will have a sample container, a bracket for holding the container in the toilet, a bottle of liquid preservative, a tube, labels, and a shipping box. The kit has detailed instructions on how to collect the sample. **Be sure to follow the instructions that come with your kit.** If you have any questions about how to use your kit, contact your doctor's office or clinic. Once you have collected the sample, return it as instructed in the kit.

This test should be done every 3 years. If the test is positive (if it finds DNA changes or blood), a colonoscopy will be needed.

C. What Are Some of the Pros And Cons of These Screening Tests?

Test	Pros	Cons
Flexible sigmoidoscopy	Fairly quick and safe Usually doesn't require full bowel prep Sedation usually not used Does not require a specialist Done every 5 years	Looks at only about a third of the colon Can miss small polyps Can't remove all polyps May be some discomfort Very small risk of bleeding, infection, or bowel tear Colonoscopy will be needed if abnormal
Colonoscopy	Can usually look at the entire colon Can biopsy and remove polyps Done every 10 years Can help find some other diseases	Can miss small polyps Full bowel prep needed Costs more on a one-time basis than other forms of testing Sedation is usually needed You will need someone to drive you home You may miss a day of work Small risk of bleeding, bowel tears, or infection
Double-contrast barium enema (DCBE)	Can usually see the entire colon Relatively safe Done every 5 years No sedation needed	Can miss small polyps Full bowel prep needed Some false positive test results Can't remove polyps during testing Colonoscopy will be needed if abnormal
CT colonography (virtual colonoscopy)	Fairly quick and safe Can usually see the entire colon Done every 5 years No sedation needed	Can miss small polyps Full bowel prep needed Some false positive test results Can't remove polyps during testing Colonoscopy will be needed if abnormal Still fairly new – may be insurance issues
Guaiac-based fecal occult blood test (gFOBT)	No direct risk to the colon No bowel prep Sampling done at home Inexpensive	Can miss many polyps and some cancers Can produce false-positive test results Pre-test diet changes are needed Needs to be done every year Colonoscopy will be needed if abnormal
Fecal immunochemical test (FIT)	No direct risk to the colon No bowel prep No pre-test diet changes Sampling done at home Fairly inexpensive	Can miss many polyps and some cancers Can produce false-positive test results Needs to be done every year Colonoscopy will be needed if abnormal
Stool DNA test	No direct risk to the colon No bowel prep No pre-test diet changes Sampling done at home	Can miss many polyps and some cancers Can produce false-positive test results Should be done every 3 years Colonoscopy will be needed if abnormal Still fairly new – may be insurance issues

