We are pleased to provide you with this up-to-date information about colon cancer screening. We hope the information will help you to decide if you want to be screened and, if so, which screening test seems right for you.

What colon cancer screening tests are available and what do they involve?

Screening is checking for health problems *before* they cause symptoms. As you may have heard, you have more than one choice of colon cancer screening tests. Having choices can be confusing. But having choices also means most people will find a test that is right for them!

Most doctors recommend these two tests: a **home stool blood test** (also called a "fecal occult blood test") and **a colonoscopy**. *Either* test is an acceptable way to screen for colon cancer. According to researchers, neither test is better than the other at preventing colon cancer. They are both reasonable options.

Let's compare the details of each test.

AVAILABLE TESTS	Home stool blood test	Colonoscopy
What does the test involve?	You put a small amount of your stool on a test card. You do this for 2 or 3 different days. The lab will look at your test cards to see if there is blood that you can't see with the naked eye.	The doctor will put a flexible, lighted tube in your rectum at the end of your lower intestine. The doctor advances the tube about 4 to 5 feet into your colon. This lets the doctor see your whole colon.
What does the test look for?	The test looks for colon polyps. These are small growths that can turn into colon cancer over a 5 to 10 year period. Sometimes polyps bleed, and the test can pick this up. Sometimes, but not often, the test finds actual colon cancer.	The test looks for colon polyps. These are small growths that can turn into colon cancer over a 5 to 10 year period. The doctor will be able to see polyps anywhere in the colon. Sometimes, but not often, the test finds actual colon cancer.
How does the test prevent colon cancer?	If your test results are positive, you will have a colonoscopy to see if there are polyps. The doctor will remove any polyps found during the colonoscopy.	The doctor can remove any polyps found immediately during the colonoscopy.
Who does the test and where?	You collect the samples in your home and then mail or take them to your doctor's office.	A gastroenterologist, a doctor who specializes in stomach problems, usually does this test. The test is usually done in the doctor's office or in a "same-day procedure" room of a hospital.
If the test is normal, how long before I need to be tested again?	1 year.	10 years.
What if I have an abnormal test result?	You will have a follow-up colonoscopy.	In most cases, there is no follow-up procedure. Your doctor will remove the polyps during the colonoscopy. It is very rare, but if your doctor finds cancer during the test, you may have to have surgery and/or medical treatment (chemotherapy) later.

AVAILABLE TESTS	Home stool blood test	Colonoscopy
Does insurance cover the test and what will the cost be to me?	• **Medicare** (a federal health insurance program) covers this test every year, at no cost to you.	• **Medicare** (a federal health insurance program) covers this test every 10 years. In some types of Medicare plans, there may be some cost to patients. Costs in different plans range from a few dollars to more than $100. Please check with your health plan or doctor's billing office to find out what your costs would be.
	• **State insurance (Medi-Cal)** covers this test every year, at no cost to you.	• **State insurance (Medi-Cal)** covers this test every 10 years. Depending on your Medi-Cal plan, you might have to pay some of the cost. For most plans, the cost varies from a few dollars to more than $100. Ask your insurance plan or doctor's billing staff what your costs would be.
	• If you have ***no*** **health insurance,** many doctors' offices participate in special screening programs that do this test for free or at a very low-cost. Ask your doctor or their billing office about this kind of program.	• If you have ***no*** **health insurance,** many doctors' offices participate in special screening programs that do colonoscopies for free or at a very low-cost. If patients have to pay part of the cost, it will probably be based on what you can afford. Ask your doctor or their billing office about this kind of program.
	• Many – but not all – **private and employer-based insurance plans** also cover a yearly home stool blood test. In most cases, you pay nothing or just a few dollars. Ask your health plan or your doctor's billing office if the test is covered, and if you would have to pay part of the cost.	• Many – but not all – **private and employer-based insurance plans** also cover a colonoscopy every 10 years. In most cases, you pay nothing or just a few dollars. Even if your plan covers the test, you may have to pay some of the cost. For most plans, the cost varies from a few dollars to hundreds of dollars. Ask your health plan or your doctor's billing office if the test is covered, and what your cost would be.

How effective is screening in preventing colon cancer?

Colon cancer screening compares well with other common tests you may know about, such as mammograms and cholesterol testing, in preventing illness.

Direct evidence from research studies shows home stool blood testing lessens the risk of developing and eventually dying from colon cancer. For every 1200 people who get home stool blood testing every 2 years, over a 10 year period, on average one death from colon cancer will be prevented.

Researchers have not studied if colonoscopy screenings prevent colon cancer. But it is very likely that colonoscopy is as effective as the home blood stool test in lowering your chance of getting and then dying of colon cancer. Here are the reasons why medical researchers support colonoscopy screening:

- It is the test that medical professionals recommend if the results from a home stool blood test are abnormal.

- It looks at the whole colon.
- The doctor can remove polyps during the test

While colon cancer screening reduces the chances of dying from colon cancer, it does not, on average, lead to an increased lifespan. How can this be?

Think of it this way: while people who get screened are less likely to die from colon cancer, they instead die from other conditions, such as heart disease and other types of cancer.

What are the risks of colon cancer screening?

As mentioned earlier, both the home stool blood test and colonoscopy are acceptable ways to screen for colon cancer. According to researchers, neither test is better than the other at reducing the risk of getting colon cancer. Each test has different advantages and disadvantages.

For example, all medical tests have some **risks**. Let's compare the different risks of a home stool blood test and a colonoscopy.

RISKS	Home stool blood test	Colonoscopy
What is the chance that this test will miss polyps in my colon?	The chances of missing polyps on just one test are fairly high. This is because the test only finds polyps that happen to bleed during the test period. Doing the test every year increases the chance that polyps will be found before they turn into cancer. But even if you do the test every year, the home stool blood test, on average, misses more polyps than a colonoscopy.	The chances of missing polyps are low. A colonoscopy looks directly at the *whole* colon. That means it is more likely to find polyps than a single home stool blood test. But colonoscopy is not perfect. It misses about 1 out of every 10 large polyps. It also misses a greater number of small polyps.
What is the chance of a false positive – test results that say I have polyps, but none are found during a follow-up test?	The chances of a false positive result are fairly high. Many things besides polyps can cause rectal bleeding. And sometimes even with no bleeding, your test result can be a "false alarm." That could mean doing a follow-up colonoscopy that turns out to be unnecessary.	The chances of a false positive result are low. In most cases, it is easy to see polyps with the scope, and your doctor can order a biopsy to make sure.
What is the risk of tearing the colon?	None if the test result is normal. If your home stool blood test result is positive, you will have a colonoscopy. There is some risk of tearing (perforation) during that test. *(Please read the box to the right.→)*	The risk of tearing during a colonoscopy is low. It happens about once or twice for every 1000 tests. The risk of tearing goes up a little if the doctor removes polyps during the test.

RISKS	Home stool blood test	Colonoscopy
What is the risk of bleeding?	None if the test result is normal. If your home stool blood test result is positive, you will have a colonoscopy. There is some risk of bleeding with a colonoscopy. *(Please read the box to the right.→)*	Very, very low if the doctor does not do a biopsy. The risk of bleeding goes up a little if the doctor removes polyps during the test. But unless you are taking medicines or have medical conditions that can cause bleeding problems, the risk is still quite low.
What is the risk of infection?	None if the test result is normal. If your home stool blood test result is positive, you will have a colonoscopy. There is some risk of infection with that test. *(Please read the box to the right.→)*	The scope that your doctor will use during your test will be carefully cleaned and disinfected before your test. This means the risk of causing an infection in the colon is very low.
Do I have to take medicine to make me feel sleepy?	No.	Most doctors ask you if you *want* medicine to make you feel sleepy, but they do not require you to take it. If you take this medicine, there is a small risk of breathing problems, which in very rare cases cause death.

What are the inconveniences of colon cancer screening?

Now that you know about the potential benefits and risks of the home stool blood test and colonoscopy, let's compare their inconveniences.

INCONVENIENCES	Home stool blood test	Colonoscopy
How much time will it take, including preparation, travel, and recovery?	About 15 minutes.	The day before the test, you take a liquid medicine to clean out your bowels. You have to stay near a toilet after taking the medicine because it will make you go to the bathroom several times. This may take about 1-2 hours. But some people may need more time to clean out their bowels. On the day of the test, you will need from 4-8 hours. It depends on how long it takes for the medicine to wear off.
What about transportation?	You do the test at home. And you mail the test cards back to your doctor's office.	You must have someone who can drive you to and from the appointment.
Do I need to take time off work for the test?	No.	Yes. Most people need a full day off. But sometimes, it can take just part of the day. It also takes time to clean out your bowels the night before the test. Depending on your work schedule and your job duties, you may also need to take time off from work the day before the test.

INCONVENIENCES	Home stool blood test	Colonoscopy
How long do I wait before I do the test?	A few days.	It depends on where you do your test. In some locations it takes just a few days. In others, it may take a few weeks or even months to get an appointment.
Is the test painful or uncomfortable?	No.	Sometimes. But for most people, it is like a mild, stomach pain or cramps – like gas – and it only lasts for a few minutes. But you may feel bloated or have gas for a few hours after the test.
Do I have to clean out my bowels before the test?	No.	Yes. Different doctors use different methods. Most doctors prescribe a laxative or an enema. These are medicines that you take the night before the test that make you move your bowels to clean out your colon. Sometimes they cause some stomach cramps.
Will I have to follow a special diet?	With some home stool blood tests, you may have to avoid certain common foods, vitamins, and some medicines before and during the test period. For **3 days** before the test, and during your test days, you may have to avoid: • Citrus fruits (oranges, lemons, limes) • Citrus juices • Vitamin C supplements For **7 days** before the test, and during your test days, you may have to avoid: • Aspirin • Ibuprofen (Motrin) • Naproxen (Aleve), and • other non-steroidal inflammatory drugs (NSAIDs) Sometimes these foods, vitamins, and medicines cause a false positive or "false alarm." Or they may cover up a real problem. Ask your doctor if the home stool blood test you will use means you will have to avoid these foods, vitamins, or medicines.	Yes. On the day of the test, you cannot eat or drink anything. Your doctor may also ask you to cut back or avoid solid foods for 1 or more days before your test. Your doctor may also ask you to stop taking some of your regular medicines until after the test.

So how can this information about the potential benefits, risks, and inconveniences of the home stool blood test and colonoscopy help you decide which screening to do?

We suggest you take a moment to think about your own personal wishes and beliefs. Then think how the potential benefits, risks, and inconveniences of each test fit with your preferences and beliefs. Doing this may help you see which test you prefer. Later, you can tell your doctor about your preference. This will help your doctor provide care that is right for you!

Key Points

• Colorectal cancer is a disease in which cells in the colon or rectum become abnormal and divide without control, forming a mass called a tumor (see Question 1).

• The exact causes of colorectal cancer are not known. However, studies show that certain factors increase a person's chance of developing colorectal cancer (see Question 2).

• Health care providers may suggest one or more tests for colorectal cancer screening, including a fecal occult blood test (FOBT) or colonoscopy (see Question 4).

• People should talk with their health care provider about when to begin screening for colorectal cancer, what tests to have, the benefits and risks (potential harms) of each test, and how often to schedule appointments (see Question 5).

Common Questions and Answers

1. What is colorectal cancer?

Colorectal cancer is a disease in which cells in the colon or rectum become abnormal and divide without control, forming a mass called a tumor. (The colon and rectum are parts of the body's digestive system, which takes up nutrients from food and water, and stores solid waste until it passes out of the body.) Colorectal cancer cells may also invade and destroy the tissue around them. In addition, they may break away from the tumor and spread to form new tumors in other parts of the body.

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). It is the second leading cause of cancer death in the United States after lung cancer. Although the rate of new colorectal cancer cases and deaths is decreasing in this country, more than 145,000 new cases were diagnosed and more than 49,000 people died from this disease each year over the past 5 years.

2. Who is at risk of developing colorectal cancer?

The exact causes of colorectal cancer are not known. However, studies have shown that certain factors are linked to an increased chance of developing this disease (2–11), including the following:

• Age—Colorectal cancer is more likely to occur as people get older. Although this disease can occur at any age, most people who develop colorectal cancer are over age 50.

• Polyps—Polyps are abnormal growths that protrude from the inner wall of the colon or rectum. They are relatively common in people over age 50. Most polyps are benign (noncancerous), but experts believe that the majority of colorectal cancers develop in polyps known as adenomas. Detecting and removing these growths may help prevent colorectal cancer. The procedure to remove polyps is called a polypectomy. Some individuals may be genetically predisposed to

develop polyps. Familial adenomatous polyposis, or FAP, is a rare, inherited condition in which hundreds of polyps develop in the colon and rectum. Because individuals with this condition are extremely likely to develop colorectal cancer, they are often treated with surgery to remove the colon and rectum in an operation called a colectomy. Rectum-sparing surgery may also be an option. In addition, the Food and Drug Administration (FDA) has approved an anti-inflammatory drug, celecoxib, for the treatment of FAP. Doctors may prescribe this drug in combination with surveillance and surgery to manage FAP.

• Personal history—A person who has already had colorectal cancer is at an increased risk of developing colorectal cancer a second time. Also, research studies have shown that some women with a history of ovarian, uterine, or breast cancer have a higher than average chance of developing colorectal cancer.

• Family history—Close relatives (parents, siblings, or children) of a person who has had colorectal cancer are somewhat more likely to develop this type of cancer themselves, especially if the family member developed the cancer at a young age. If many family members have had colorectal cancer, the chances increase even more.

• Ulcerative colitis or Crohn colitis—Ulcerative colitis is a condition that causes inflammation and sores (ulcers) in the lining of the colon. Crohn colitis (also called Crohn disease) causes chronic inflammation of the gastrointestinal tract, most often of the small intestine (the part of the digestive tract that is located between the stomach and the large intestine). People who have ulcerative colitis or Crohn colitis may be more likely to develop colorectal cancer than people who do not have these conditions.

• Diet—Some evidence suggests that the development of colorectal cancer may be associated with high dietary consumption of red and processed meats and low consumption of whole grains, fruits, and vegetables. Researchers are exploring what role these and other dietary components play in the development of colorectal cancer.

• Exercise—Some evidence suggests that a sedentary lifestyle may be associated with an increased risk of developing colorectal cancer. In contrast, people who exercise regularly may have a decreased risk of developing colorectal cancer.

• Smoking—Increasing evidence from epidemiologic studies suggests that cigarette smoking, particularly long-term smoking, increases the risk of colorectal cancer.

3. What is screening, and why is it important?

Screening is checking for health problems before they cause symptoms. Colorectal cancer screening can detect cancer; polyps; nonpolypoid lesions, which are flat or slightly depressed areas of abnormal cell growth; and other conditions. Nonpolypoid lesions occur less often than polyps, but they can also develop into colorectal cancer. If colorectal cancer screening reveals a problem, diagnosis and treatment can occur promptly. In addition, finding and removing polyps or other areas of abnormal cell growth may be one of the most effective ways to prevent

colorectal cancer development. Also, colorectal cancer is generally more treatable when it is found early, before it has had a chance to spread.

4. What methods are used to screen people for colorectal cancer?

Health care providers may suggest one or more of the following tests for colorectal cancer screening:

• Fecal occult blood test (FOBT)—This test checks for hidden blood in fecal material (stool). Currently, two types of FOBT are available. One type, called guaiac FOBT, uses the chemical guaiac to detect heme in stool. Heme is the iron-containing component of the blood protein hemoglobin. The other type of FOBT, called immunochemical FOBT, uses antibodies to detect human hemoglobin protein in stool. Studies have shown that FOBT, when performed every 1 to 2 years in people ages 50 to 80, can help reduce the number of deaths due to colorectal cancer by 15 to 33 percent.

• Colonoscopy—In this test, the rectum and entire colon are examined using a lighted instrument called a colonoscope. During colonoscopy, precancerous and cancerous growths throughout the colon can be found and either removed or biopsied. However, it is not yet known for certain whether colonoscopy can help reduce the number of deaths from colorectal cancer. A thorough cleansing of the colon is necessary before this test, and most patients receive some form of sedation.

Scientists are still studying colorectal cancer screening methods, both alone and in combination, to determine how effective they are. Studies are also under way to clarify the potential risks, or harms, of each test. See Question 5 for a table outlining some of the advantages and disadvantages, including potential harms, of specific colorectal cancer screening tests.

5. How can people and their health care providers decide which colorectal cancer screening test(s) to use and how often to be screened?

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, and professional societies, 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 screening for colorectal cancer.

People should talk with their health care provider about when to begin screening for colorectal cancer, what tests to have, the benefits and harms of each test, and how often to schedule appointments.

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.

The following table outlines some of the advantages and disadvantages, including potential harms, of the colorectal cancer screening tests described in this fact sheet.

Advantages and Disadvantages of Colorectal Cancer Screening Tests

Test	Advantages	Disadvantages
Fecal Occult Blood Test (FOBT)	• No cleansing of the colon is necessary. • Samples can be collected at home. • The cost is low compared with colonoscopy	• This test fails to detect most polyps and some cancers. • False-positive results (the test suggests an abnormality when none is present) are possible.
Colonoscopy	• 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.	• 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.

6. Do insurance companies pay for colorectal cancer screening?

Insurance coverage varies. People should check with their health insurance provider to determine their colorectal cancer screening benefits. Medicare covers colorectal cancer screening tests for its beneficiaries.

7. What happens if a colorectal cancer screening test shows an abnormality?

If the fecal occult blood test (FOBT) test finds an abnormality, the health care provider will perform a physical exam and evaluate the person's personal and family medical history. Additional tests may be ordered. These tests may include x-rays of the gastrointestinal tract or, most often, colonoscopy (see Question 4). If either FOBT or colonoscopy shows an abnormality, the health care provider may also order a blood test called a CEA assay to measure carcinoembryonic antigen, a protein that is sometimes detected in greater amounts in patients with colorectal cancer.