

## Colorectal Cancer—You can Prevent It

Did you know that colorectal cancer is almost 100% preventable? It's true. The third most common cancer and third leading cause of death for both men and women can be completely avoided. But, to avoid it, you have to take action. First, you must understand your risk factors. Then, you have to get screened regularly. With proper screening, the disease can be completely prevented. Unfortunately, many people do not get screened early enough or frequently enough. That's why over 150,000 Americans are still being diagnosed each year with colorectal cancer. And for many of them, it's too late.

### What is Colorectal Cancer?

Colorectal cancer is cancer in the lining of the large intestine which includes the colon (the upper four to five feet) and/or the rectum (the lower six inches); together they are referred to as "colorectal cancer". These cancers almost always begin with benign polyps which can become cancerous over long periods of time, usually between ten and 15 years. If detected early, these polyps can be non-surgically removed, before they have a chance to become cancerous. Routine screenings can prevent cancer completely, but they can also detect cancer in very early stages when it is highly curable. If undetected, colorectal cancer can penetrate the colon walls and spread to nearby lymph nodes, blood vessels or organs. Without detection and treatment, the prognosis can be grim. The exact cause of colorectal cancer is unknown, but in general, cancer occurs when healthy cells become altered and begin to divide or spread.

### Am I at Risk?

Although colorectal cancer has no known cause, certain risk factors are associated with it. If one of the following risk factors describes you, then talk to your doctor about being screened:

### At a Glance

- Colorectal cancer is the third most common cancer and third leading cause of death among men and women
- People with a family history of the disease are two times more likely to develop colorectal cancer
- Colorectal cancer is almost 100% preventable
- 90% of colorectal cancer begins with small growths, called polyps, in the intestinal tract
- Regular screening is the most powerful weapon in the prevention of colorectal cancer
- If detected early, cancerous polyps can be removed through a simple, non-surgical procedure
- Genetic testing can be a very powerful tool in assessing your risk for the disease

*Family history of the disease.* If you have a first degree relative (parent, sibling or child) who has had colorectal cancer, your risk for developing the disease is two times greater than someone who doesn't. And, the risk is even higher if you have more relatives who have had the disease.

*Over the age of 50.* Over 90% of people diagnosed with colorectal cancer are over the age of 50. Younger adults are certainly not immune from the disease, but incidence increases sharply at age 50.

*History of polyps or cancer.* If you've had previous adenomatous polyps, your chances of developing colorectal cancer are greater. And, if you've ever been diagnosed with colorectal cancer, even if it

has been removed, your chances of developing new, cancerous polyps are greater.

*History of Crohn's or Ulcerative Colitis.* These inflammatory diseases of the colon can increase your risk for colon cancer.

*Genetic syndromes.* Approximately five percent of people who are diagnosed with colorectal cancer are predisposed to the disease because of genetic conditions. These conditions are very rare and, if not monitored properly, will likely lead to colon cancer at an early age. The most common genetic conditions are Familial Adenomatous Polyposis (FAP) and Hereditary Nonpolyposis Colorectal Cancer (HNPCC) or Lynch Syndrome. Both syndromes can be detected through genetic testing.

*Obesity.* People who are extremely overweight are at an increased risk for developing polyps as well as colorectal cancer. It is estimated that their risk is 50-100% greater than a person of average weight.

*Ethnic background.* Of all ethnic groups, African Americans have the highest incidence and mortality rate of colorectal cancer in the United States.

### **What are the Symptoms?**

In its early stages, colorectal cancer may not exhibit any noticeable symptoms. Typically, symptoms do not become present until the cancer is more advanced. That's why it is so important to have regular screenings—before you start having symptoms. Although symptoms vary greatly from patient to patient, the following may be warning signs that something is up:

- Change in bowel habits
- Dark stools
- Rectal bleeding
- Cramping/abdominal pain
- Persistent weakness and fatigue
- Unexplained weight loss

If you have one of these symptoms, it doesn't necessarily mean you have colorectal cancer; most of these symptoms can indicate other diseases. However, if you are experiencing them, you should discuss it with your doctor.

### **You Can Stop it Before it Starts**

So, how do you make sure you don't get colorectal cancer? The answer is simple: know your risks and get routine screenings. Statistics show that the majority of people diagnosed with colorectal cancer are diagnosed the first time they are screened—this means they are not getting screened early enough. And, we know that only half of the at-risk population is actually getting screened for the disease.

### **You must know your risk factors and start early.**

Beginning at age 50, men and women at average risk for developing the disease should be screened. If you are at increased risk (based on above factors), then you should start routine screening at a younger age. For example, if you have a direct family history of the disease, you should be screened when you are ten years younger than the age the family member was diagnosed. Make sure you talk with your doctor about your risk factors and determine when you should begin the screening process so you can stop it before it starts. Colorectal cancer is not something to be embarrassed about—you have the power to control it.

There are many different tests available today to screen for polyps and colorectal cancer. Each test has advantages and disadvantages. Some are more invasive than others, and some are more comprehensive. The most comprehensive tests might be slightly uncomfortable, but the benefits of having them far outweigh any temporary discomfort you may experience. Compared to a cancer diagnosis, they are a minor inconvenience. Talk to your doctor about what is best for you:

*Fecal occult blood test.* In this test, a sample of the stool is taken, either at the doctor's office or with a kit in the convenience of your home. The stool is carefully examined for blood, which may be an indication of cancer. However, blood in the stool is not always a sign of cancer and it is also possible to have cancer without the presence of blood in the stool. If blood is found, a colonoscopy will be required to determine the source.

There are many options for colorectal cancer screening. Talk to your doctor about which one is best for you.

	Detects Cancer	Detects Polyps	Biopsies Taken	Polyp Removal	Requires Sedation	Slight Risk of Colon Perforation
Fecal Occult Test	Sometimes	No	No	No	No	No
Fecal Immunochemi Test	Sometimes	No	No	No	No	No
Stool DNA Test	Sometimes	No	No	No	No	No
Flexible Sigmoidoscopy	Yes	In lower third of colon	Yes	No	No	Yes
Colonoscopy	Yes	Yes	Yes	Yes	Yes	Yes
Barium Enema	Sometimes	Sometimes	No	No	No	Yes
CT Colonography	Yes	Yes	No	No	No	No

*Fecal immunochemical test.* Very similar to the fecal occult test, this at-home kit will help your doctor determine if there is blood in your stool. Again, blood in the stool may or may not be an indicator of cancer, and cancer can be present without blood in the stool.

*Stool DNA testing.* This is a new test in which stool is collected at home and then analyzed for DNA makers to determine if cancer is present. Although it does not detect all cancers, it is thought to be more accurate than other stool-based tests. It is not widely available and is may not be covered by many insurance plans.

*Flexible sigmoidoscopy.* With this test, your doctor will insert a flexible, lighted tube through your rectum to examine the lower third of your colon. It does not require sedation, and will only take a few minutes. During the test, if any polyps are found, biopsies can be taken immediately. However, to remove polyps completely a colonoscopy is required. This exam will not detect polyps in the upper two thirds of the colon.

*Colonoscopy.* This is the most comprehensive and preferred screening method for colorectal cancer. During a colonoscopy, a flexible, slender tube is inserted through your rectum allowing your doctor to view the entire colon. During the process, precancerous and cancerous polyps can be found and immediately removed painlessly. Routine colonoscopy has been proven to reduce the risk of colon cancer.

*Barium enema.* With this test, you will be given a barium enema (a contrast dye) and then x-rays will be taken of your rectum and colon. If polyps are detected, then a colonoscopy will be required. The test is fairly reliable at detecting sizeable polyps, but may miss small polyps or cancers.

*CT colonography or virtual colonoscopy.* This procedure utilizes a computerized tomography (CT) machine, instead of an inserted scope, to examine the colon. It is non-invasive, but it does require a bowel preparation to remove any stool. If abnormalities are found, a colonoscopy will be required. The test is not good in detecting small polyps. At the current time, this test is not widely available and not covered by insurance for screening.

A healthy lifestyle can also help prevent colorectal cancer. A high-fiber diet rich in fruits and vegetables may decrease your risk of cancer, while frequent consumption of red meats and processed foods may actually increase your chances of developing cancer. Combined with 30 minutes of exercise at least five times a week, a healthy diet may significantly lower your risk of developing polyps and/or colorectal cancer.

### **Genetics: Knowledge is Power**

Family history of colorectal cancer and genetic syndromes related to the colon significantly increase your risk of developing colorectal cancer. Unfortunately, many people including health care professionals either do not understand the importance of their family history or quite possibly, their medical history remains a mystery to them. Discovering this knowledge can be a powerful tool in preventing and treating colorectal cancer (as well as other cancers).

At Baylor College of Medicine, we can help you unlock this mystery in our department of Molecular and Human Genetics. This world-renown facility is the largest genetics department in the country and receives more research funding from the National Institute of Health than any other facility of its kind. Here you will find some of the most respected and highly-trained geneticists in the field in one convenient location. These physicians are experts in their individual areas of interest and are renowned for research discoveries that yield the latest information on genetic diseases and their causes, and state-of-the-art testing methodologies. With their knowledge and expertise you can gain a better understanding of your unique genetic makeup and your risk for developing colorectal cancer. Armed with this knowledge, you and your doctor can make better decisions about screening choices and timing.

Colorectal cancer below age 50, family history of colorectal cancer, or multiple other cancers such as ovarian, uterine or lung are some of the criteria that may require genetic testing for colorectal cancer.

### **You Need a Doctor You can Trust**

There is nothing more important than your health—and it is up to you to maintain it. That's why you need a doctor you can trust and talk to openly and honestly. Your doctor needs to be

### **Our Screening Expertise is Open to You**

If you want to take advantage of the state-of-the-art screening technology and internationally recognized physicians at Baylor Clinic, but don't have time for a specialist visit, we have a plan for you. With our open-access colonoscopy screening, you can simplify your screening process, and save time and money. You'll just need a referral from your doctor and a phone. One phone call, one trip, and you're done. It's simple and comprehensive.

someone that you are comfortable talking to about all your health concerns—including your risk for colorectal cancer.

After discussing your risk for colorectal cancer with your doctor, he can help you determine when colorectal screening is appropriate for you, and what type of screening is best. He may order the test for you himself, or he may direct you to a specialist. The area of specialty related to digestive tract disorders is called gastroenterology. At Baylor Clinic our department of Gastroenterology and Hepatology is comprised of some of the best minds in medicine—and those minds are available to you. Our physicians are highly specialized in their field and have access to the most advanced, state of the art diagnostic equipment. We offer a complete array of screening options for colorectal cancer all in one convenient location. At Baylor, you will benefit from the most up-to-date screening technology that can identify small and even flat polyps—before they become cancerous. And, your testing will be done by a compassionate, skilled physician who will deliver the personalized care you deserve. After your testing is completed, you will receive your results quickly thanks to our on-site radiology and lab services. With Baylor's unique collaborative approach to medicine including electronic record sharing, you can rest assured that all your Baylor doctors will work together to provide you with the most comprehensive care possible. You can put your healthcare in our trusted hands.

### **What are the Treatment Options?**

Treatment options for colorectal cancer vary, depending on the severity of the disease. If cancer is

### **Accurate Staging with Endoscopic Ultrasonography**

At Baylor we utilize a highly advanced technology called Endoscopic Ultrasonography (EUS) to stage colorectal cancer and determine the best treatment plan for you. EUS is performed by skilled physicians and combines the benefits of endoscopy (a small scope inserted through the rectum) with ultrasonography soundwaves. The end result is up-close, detailed imaging of the digestive tract, internal organs, lymph nodes and adjacent blood vessels. With EUS, detailed information is obtained about the depth of cancer invasion in a non-surgical, quick and painless procedure. These images can then be used to accurately stage the cancer and determine the need and timing of surgical procedures, chemotherapy and radiation, if necessary. With this advanced technology, unnecessary surgeries are avoided and the most effective treatment plans are expedited.

found in the very early stages, it can often be completely removed during a colonoscopy. However, if the cancer is more advanced, more testing will be required to stage the cancer and determine a treatment plan. The stages of colorectal cancer are as follows:

*Stage 0.* Cancer is contained to the inner layer of the colon or rectum.

*Stage 1.* Cancer has grown through the inner layer, but not beyond the colon wall or rectum.

*Stage 2.* Cancer has grown through the wall of the colon or rectum, but has not spread to nearby lymph nodes.

*Stage 3.* Cancer has spread to nearby lymph nodes, but has not affected other parts of the body.

*Stage 4.* Cancer has spread to other locations in the body and is affecting other organs.

*Recurrent.* Cancer has returned after treatment.

Often, early stage cancer can be removed via colonoscopy or laparoscopic surgery without additional therapy. However, every case is different and other therapies may be required. For later stage cancers, more invasive surgery may be necessary which may include partial or complete removal of the colon. Depending on the case, radiation or chemotherapy may be required to shrink or destroy any cancer cells that remain after surgery.

### **We Will Take Care of You**

Whether you think you are at risk for developing colorectal cancer, you're a cancer survivor, or you're perfectly healthy, it is important to get the high-quality, personalized medical care that you need. At Baylor College of Medicine it's all about you. We provide the highly-skilled resources you need to manage your health in one convenient location. Our doctors will listen to you and work collaboratively to treat you. With our integrated approach, we combine the best of medicine, science, education and service to deliver comprehensive, compassionate care. At Baylor, you will have access to all the experts you need and the benefits of the latest technology, discoveries and advances in medicine. What we are learning in our research today is implemented at the bedside tomorrow. It all comes back to you. Let our doctors take care of you.

### **Call Us Today—We're Waiting for You**

The physicians at Baylor Clinic are some of the best minds in medicine. We offer personalized care for the whole person and the whole family, meeting the needs of all ages and addressing all types of healthcare concerns. Our patients benefit from:

- Board-certified physicians and certified physician's assistants
- Onsite specialists, when needed, expediting your treatment
- Innovative treatments based on the latest research findings
- Modern systems that make the healthcare process easier
- A collaborative environment that brings together multiple specialists all working together to improve your care and treatment.

**Make an appointment with a Baylor Clinic expert physician today.**

**Baylor Clinic – Gastroenterology and Hepatology**

6620 South Main St.

12th Floor, Suite 1225

Houston, Texas 77030

Call **713.798.0950** to schedule an appointment

<http://baylorclinic.com/services/gastro/>

**Baylor Clinic – Internal Medicine**

6620 Main Street, 1375 Houston, Texas 77030

Call **713.798.2500** to schedule an appointment.

**Baylor Family Medicine (2 locations)**

3701 Kirby, Suite 100

Houston, Texas 77098

6620 Main Street, Suite 1250

Houston, Texas 77030

Call **713.798.7700** to schedule an appointment.

**Baylor Clinic – Adult Genetics Clinic**

6620 Main St.

12th Floor, Suite 1225

Houston, Texas 77030

Call **713.798.4363** to schedule an appointment.

[www.bcm.edu/genetics/cg/clinics/adultgenetics.html](http://www.bcm.edu/genetics/cg/clinics/adultgenetics.html)

*Sources:*

*American Cancer Society, Mayo Clinic, Dr. Hashem B. El-Serag MD, MPH, Professor of Medicine*

*Baylor College of Medicine, Chief of Gastroenterology and Hepatology*

**Dan L. Duncan**  
**Cancer Center**  
*at Baylor College of Medicine*

**NCI·CC**

A Cancer Center Designated by the National Cancer Institute