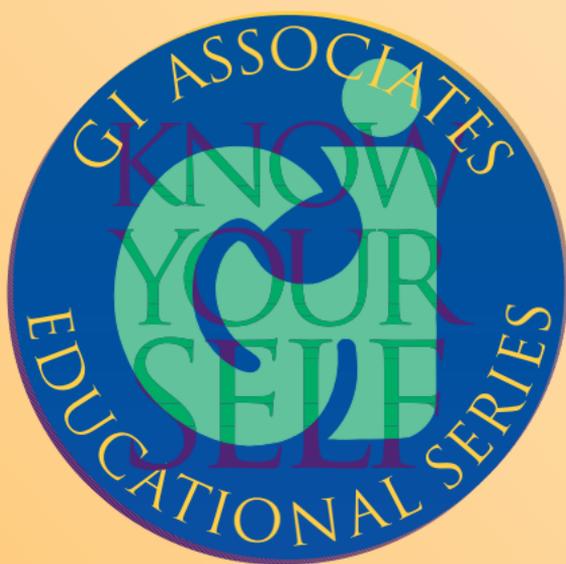


# Gastrointestinal Cancer and Polyps



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# Rx for Prevention

Why is everyone interested in prevention? Because what you do today may well determine your future level of health.

In spite of advanced medical technology and highly skilled physicians, each individual can influence their level of health through the choices one makes.

Unfortunately, knowing what is best doesn't always lead to doing what is best. Change in lifestyle is the ultimate challenge of prevention efforts.

The physicians of GI Associates hope that the following information will contribute to a healthful lifestyle and will help you understand that early detection and treatment of problems may save your life!

**There are three basic levels of prevention—*primary, secondary and tertiary.***

## Levels of Prevention

- Primary prevention is taking action to prevent a disease or health problem from occurring. Primary prevention is impossible if the cause of the health problem is not known. For instance, until the last decade, little was known about the causes of cancer, so primary prevention was not possible. We know more about cancer now. We understand that a diet high in fat and/or low in fiber may contribute to cancer development, so we can attempt to prevent cancer through diet. The ability to totally prevent cancer, however, is not possible with our current level of knowledge.

If the cause of a disease is known, then steps may be taken to eliminate the disease. An example is hepatitis. When the causative agent for hepatitis was discovered, a vaccination was developed and through vaccination, some types of hepatitis can be prevented.

- When it is not possible to practice primary prevention, the next best level of prevention is secondary prevention, which aims at detecting a disease early, so the disease can be treated promptly to avoid a life-threatening situation. For instance, if cancer is diagnosed and treated at an early stage, treatment is more effective. Early detection saves lives.

- The aim of the third level of prevention, tertiary prevention, is to preserve the highest level of functioning possible when a person has a disease for which there may be no treatment, or a medical problem that has been treated as far as technology allows. In that situation, the goal is to keep the patient as comfortable as possible and at the highest level of health possible with their specific problem, thus preventing a further decline in health.

## Steps Toward Prevention

### 1. ID your risks

To practice prevention successfully each individual must first identify the health problems for which he or she has the highest risk. For instance, if you are over forty years of age, you are at a higher risk of developing colorectal cancer. Know your own individual risks. (What Are Your Risk Factors, page 6)

### 2. Understanding steps to prevention

The second step is to understand what steps must be taken to reduce specific risks. For example, if a high fat, low fiber diet is increasing your risk of developing cancer, make the appropriate food choices that will reduce your risk.

(Healthy Dietary Choices, page 7)

### 3. Screening tests

The third step is to practice secondary prevention by having the recommended screening tests at the appropriate intervals, to increase the possibility of early diagnosis, before symptoms appear. (Screening Tests, page 7)

### 4. Action

The fourth, and perhaps the most important step is to choose action over procrastination. Talk with your GI physician about lifestyle changes and about scheduling the needed screening tests.



# What is Cancer?

## What About Prevention?

- Cancer is a leading cause of death worldwide and gastrointestinal cancer is the second most commonly occurring cancer in the United States.
- When abnormal cells divide and spread, the result is a new growth or tumor, known as a neoplasm. Such new growths are usually classified as either benign (abnormal, but not life-threatening) or malignant (cancerous and potentially life-threatening).
- Cancer is a disease in which cell growth is uncontrollable and if not stopped, could cause death.
- Without treatment, cancer cells continue to divide and spread, overtaking healthy cells, in a process called infiltration. Cancer may also spread to other areas of the body via blood or lymphatic circulation.

## What We Don't Know About Cancer

For many years, researchers have sought clues about how normal cells become cancerous. Experts agree that cancer is the result of changes in specific genes called oncogenes, that “turn on” the abnormal growth and spread of cells. There are other genes called antioncogenes that are thought to stop that process.

Some persons are thought to have been born with a mutation in their genes that places them at a very high risk.

We also know that harmful environmental factors, such as cigarette smoke, exposure to radiation and some industrial chemicals may also “switch on” the cancer process within cells.

Different types of cancer grow and spread at different rates of speed. Some cancer cells are slow growing, taking many years to develop to the point to which extreme bodily harm is possible. Other cancer cells grow and spread rapidly and can cause death in a relatively short period of time.

We cannot completely prevent the occurrence of cancer, because there are still many things we do not know about why cancer develops.



## What We Do Know About Cancer

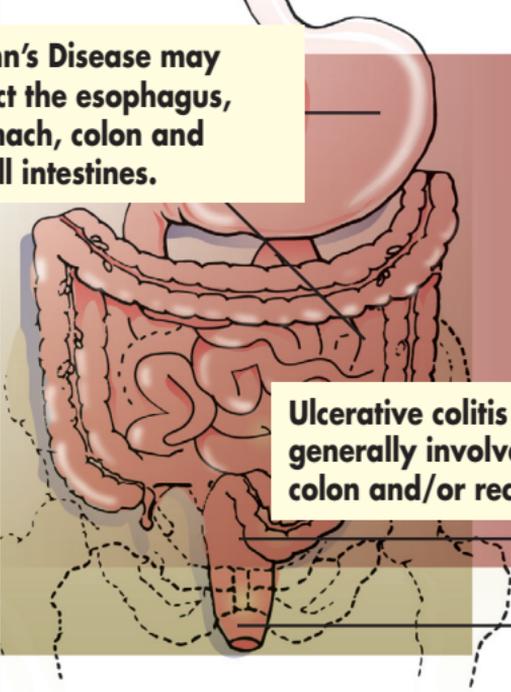
- There are specific lifestyle precautions or changes that will reduce your tendency to develop cancer, however, they will not totally protect you.
- Cancer is no longer a death sentence. Many people in Mississippi have been successfully treated for cancer and show no signs of recurrence.
- Although our greatest medical strides have been made in our ability to find cancer at its early more treatable stages of development, many people do not undergo the necessary screening tests to find and treat cancer at its earliest developmental stage.

# Cancer of the Gastrointestinal Tract

## What Are Your Risk Factors?

There are many forms of cancer that affect the gastrointestinal tract. The following general discussion will cover the most common forms, and will list both the risk factors and screening guidelines for each. Because colorectal cancer is the most common of all gastrointestinal cancers, it will be discussed in greater detail in a special section of this booklet.

- A personal or family history of cancer or polyps of the colon or rectum increases one's risk.
- Having inflammatory bowel disease, such as ulcerative colitis, may also increase risk.
- High fat, low fiber diets also increase your risk of gastrointestinal cancer.
- Heavy drinkers are more likely to develop cancer of the mouth, throat, pancreas, esophagus and liver. Risk is even higher when excessive drinking is accompanied by smoking.
- Smokers have an increased risk of stomach cancer and almost twice the risk of pancreatic cancer.
- Use of smokeless tobacco (chewing tobacco and snuff) increases risk of cancer of the mouth, throat and esophagus.
- A diet high in smoked and salt or nitrite-cured foods increases risk of stomach cancer.



**Crohn's Disease may affect the esophagus, stomach, colon and small intestines.**

**Ulcerative colitis generally involves the colon and/or rectum.**

# Reduce Your Risk

## 1. Healthy Dietary Choices

- Follow a high fiber, low fat diet.
- Eat a varied diet that includes lots of vegetables. Also, eating fruits with a high vitamin A and C content may help reduce risk.
- Avoid smoked and salt or nitrite-cured foods.
- Antioxidants, which are vitamins C, E and Beta Carotene (a form of vitamin A), play a role in the prevention of cancer. Antioxidants are thought to work against cancer by helping to eliminate free radicals, which are naturally-occurring harmful byproducts of environmental factors such as radiation, tobacco smoke and some bodily processes.



## 2. Screening Tests

Even though gastrointestinal cancers often have very few physical symptoms in the early stage of the disease, cancer can be detected by specific screening tests.

**If a strong family history places you at a higher than average risk, screening tests may need to be started at a younger age.**

For instance, the 5-year survival rate for colorectal cancer detected in an early stage, before it has spread, is 91% for colon cancer and 83% for rectal cancer. If the cancer has had the opportunity to spread within that region of the body, 5-year survival rates decrease to 60% (colon) and 50% (rectum). If extensive spread of the cancer has occurred, 5-year survival rates decrease to 7%. Remember that most cancers that are discovered early never recur following treatment.

Have the screening tests that are needed for your individual characteristics and risk factors. Your gastroenterologist will help determine what tests are needed. If you belong to a high-risk group, consultation with your physician is needed to determine an individualized program based on your specific

risk factors. For instance, if a strong family history places you at a higher than average risk, screening tests may need to be started at a younger age.

## Colorectal Cancer

### The Most Common GI Cancer

Major breakthroughs have been made in understanding the underlying genetic process that causes some types of colon cancer, but prevention tactics based on these discoveries are still experimental and will not be available for general use for many years. GI Associates continually monitors new methods of diagnosis or treatment and makes them available to patients as quickly as possible.

Cancer of the colon is one of the most treatable forms of cancer and often can be cured if found at an early stage.

Colorectal cancer is the third most lethal cancer in the United States, causing 60,000 deaths a year, yet many people ignore the colon and rectum when thinking about preventive health practices. Unless there is a problem with bowel movements or another major symptom, it is an easy area to ignore.

Colorectal cancer is silent in its early stages, usually creating no symptoms. For that reason, early detection of colorectal cancer depends on having the necessary screening tests at the recommended intervals.

### What are the colorectal cancer risk factors?

Even though we are all at risk of cancer, for each type of cancer there are specific risk factors that place a person at higher than average risk.

- **Age:** Colorectal cancer is much more common in both males and females after age 40. Then, risk doubles each decade after 50.
- **Personal or family history:** In at least 20% of colorectal cancer cases, inherited tendencies play a strong role. If either you or a family member has had colorectal cancer, or inflammatory bowel disease (ulcerative colitis or Crohn's disease), especially lasting over ten years, your risk of developing colorectal cancer is much higher.

A personal or family history of polyps of the colon also places one at higher than average risk. A group of inherited diseases that can cause many polyps in the colon, known as Familial Polyposis Syndrome, places one at much higher risk for cancer and often at an earlier age. Pre-cancerous polyps may even develop in adolescence. See the special section of this pamphlet entitled Polyps and Polypectomy.

- **Lifestyle:** A growing body of research suggests that diet is a factor in the development of colorectal cancer. A diet high in fat and/or low in fiber increases your risk of developing colorectal cancer.

## **Colorectal Screening Tests**

### **They Can Save Your Life!**

As an illustration of effectiveness, one study reported by the Journal of the American Medical Association found that patients who had a sigmoidoscopy were 59% less likely to die from colorectal cancer than those who did not have the procedure (diagnosed at a later stage, as a result of symptoms).

Stool blood tests, digital rectal examination and proctosigmoidoscopy are recommended by the American Cancer Society to detect colon or rectal cancer in asymptomatic patients.

- **Stool blood test:** The stool blood test, also called the fecal occult blood test or guiac, is a simple method to test the feces for blood. It involves sampling three stool specimens to determine whether or not a person is bleeding within the GI tract. The patient obtains the stool specimen at home and returns it to a designated place, usually the physician's office, a hospital or a laboratory for analysis. The fecal occult blood test can determine the presence of blood, even if the amount is too small to be visible. The test is simple, inexpensive and easy to administer, but is highly prone to error. In other words, unless the patient follows the instructions for collecting the specimen exactly, the results may be questionable.

Blood in the stool is an indicator that cancer might be present. However, blood could be present due to any number of other less serious reasons. Any blood in the stool needs to be carefully diagnosed.

**Screening tests recommended by the American Cancer Society and endorsed by the physicians of GI Associates**

<b>Early Detection</b>	<b>Age 40 to 50</b>	<b>Age 50 &amp; Up</b>
<b>Digital Rectal Exam</b> (The physician examines the rectum with a gloved finger)	every year	every year
<b>Stool Blood Test</b> (Samples from 3 bowel movements are tested for traces of blood)	every year	every year
<b>Proctosigmoidoscopy</b> (The physician inspects the wall of the colon with a lighted tube)	————	every year, but after 2 normal exams, can be done every 3 to 5 years

**Colonoscopy**  
(At intervals recommended by your GI physician)

May be indicated if the following warning signs are present\*:

- Diarrhea, constipation or both, intermittently
- narrowing of stool
- Increase in abdominal gas or discomfort
- Anemia
- A feeling that the bowel is never completely emptied
- A person or family history of colorectal cancer or polyps
- Inflammatory bowel disease
- Rectal bleeding

\* It is important to remember that these signs do not necessarily mean you have cancer - but do indicate that there is a problem that needs to be diagnosed to make sure it is not serious.

- Digital rectal examination: The digital rectal exam is a simple manual examination in which the physician inserts a gloved finger into the patient's rectum to feel for tumors in the lower two thirds of the rectum. Many tumors in the rectum are found by this method and it should be part of any regular physical examination, especially for all persons over the age of 40. It is simple, quick and inexpensive. It does not, however, detect tumors anywhere except that specific, limited area.

- Endoscopic examination: The best test to detect colorectal cancer is a physician's direct inspection of the walls of the colon by using a lighted tube. Endoscopy allows the physician to perform biopsies or therapeutic procedures and even take color photographs of the inside of the GI tract.

The physician can view the entire journey of the endoscope on a television monitor, which greatly enhances the physician's ability to see changes in the GI tract.

It is the more expensive test of the three, but its potential for finding early cancer is much greater. When considering the cost of detecting a cancer early versus detecting a cancer at a more advanced stage, the cost effectiveness of endoscopy cannot be questioned.

## More About Endoscopy

There are different types of endoscopic procedures used for detecting colorectal cancer. Sigmoidoscopy inspects the lower portion of the colon as well as the rectum, whereas colonoscopy inspects the entire colon and rectum.

Sigmoidoscopy, often known as a "procto", originally involved the use of a rigid tube, inserted into the rectum that allowed the physician to view the walls of the lower part (about 12 inches) of both the colon and rectum.

Technological advances have improved the procedure with the development of a thinner, flexible tube, which allows more of the colon to be viewed and also is more comfortable.

Viewing the entire colon with the flexible tube is known as colonoscopy.

Endoscopy (sigmoidoscopy or colonoscopy) is a safe, effective diagnostic tool. In addition to visual imaging, endoscopy enables the physician to determine sources of bleeding, identify lesions (such as ulcers or tumors) that might be present and allows the physician to actually treat some conditions and diseases.

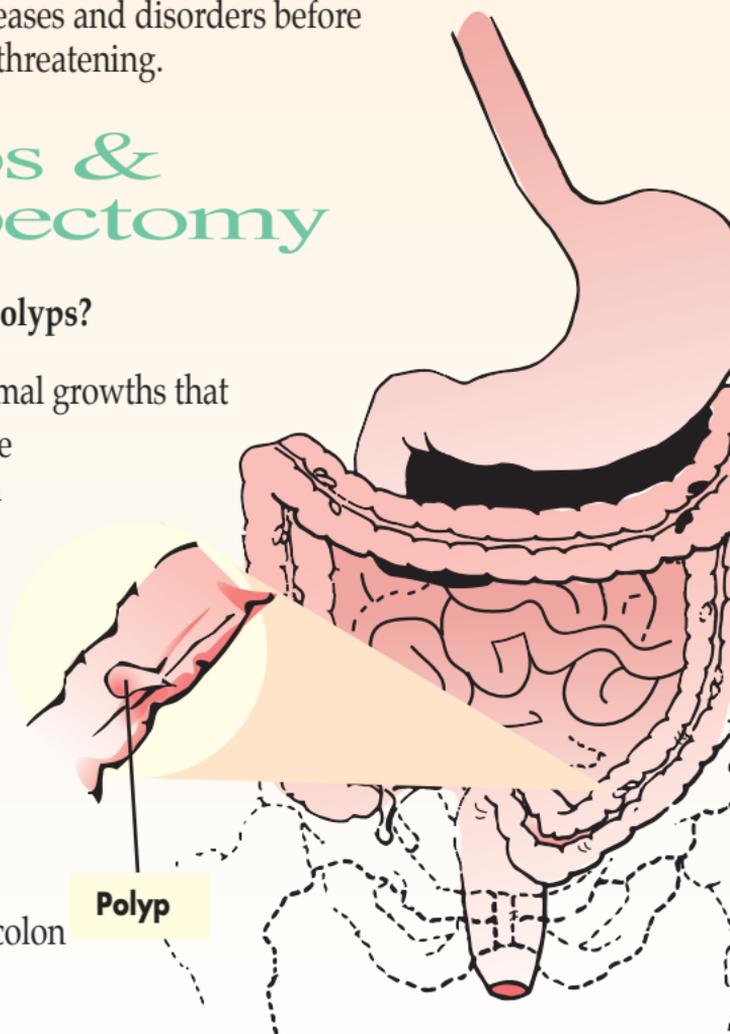
A small open channel within the endoscope tube allows the physician to use accessory instruments that can cauterize bleeding areas, remove small polyps, or inject solutions. Other tiny instruments can collect biopsy specimens.

Since endoscopy is usually done as an outpatient procedure, avoiding hospitalization often saves a tremendous amount of money. Surgery is also avoided many times, through the use of endoscopy. A major plus of endoscopy is that it literally saves lives, through early diagnosis and treatment of various GI diseases and disorders before they become life threatening.

## Polyps & Polypectomy

### What are colon polyps?

Polyps are abnormal growths that form on the inside walls of the colon and protrude into the colon passageway. They usually range in size from that of a small dot to several inches. They may occur anywhere in the colon



and there may be one or many. The most common location for polyp formation is the lower portion of the colon.

Men tend to develop polyps more often than women. There is a higher tendency to develop colorectal cancer when polyps are present.

## **What are the symptoms?**

Usually polyps cause no symptoms; therefore the only way to find them is through screening tests, such as flexible sigmoidoscopy or colonoscopy (described earlier in this publication).

## **Are polyps cancerous?**

The vast majority of polyps are not cancerous, but a small number of them may contain an area of cancerous cells. Some polyps may be considered pre-cancerous (may turn into cancer). Once polyps have reached 2 cm (1 inch) in size, there is a 50 % chance of them containing a cancer. For those reasons, polyp

**Polyp removal is an important means of prevention or cure of colon cancer.**

removal (polypectomy) is an important means of prevention or cure of colon cancer.

In other words, if a cancerous (or pre-cancerous) polyp is removed before the cancer cells can spread into the colon wall and other parts of the body, cancer can be cured at this very early stage.

For those persons who have an inherited tendency to develop polyps and/or cancer, diligent inspection for the presence of polyps and removal of them when found can be life saving.

### **Does a family history of polyps place me at a higher risk of cancer?**

A personal or family history of polyps of the colon places one at higher than average risk. A group of inherited diseases that can cause many polyps in the colon, known as Familial Polyposis Syndrome, places one at a much higher risk for cancer and often

at an earlier age. Pre-cancerous polyps may even develop in adolescence.

## How are they removed?

If your GI physician finds a polyp and feels that it should be removed, a small instrument will be passed through the endoscope that will remove the polyp from the colon wall. This is usually painless and can be done as an outpatient procedure.

## Diligent follow-up

For those persons who have a personal or family history of polyps, colonoscopy is recommended at more frequent intervals and starting at an earlier age than the population in general. Your GI physician will develop a schedule that will afford the best protection for you.

However, it is your personal responsibility to make sure that you return for follow-up at the intervals that your GI physician has recommended.

## In summary:

Although a personal or family history of polyps increases your risk of colon cancer, colonoscopy can detect polyps and facilitate their removal (polypectomy) before they become cancerous and invade other body tissues.

Your GI physician's recommendations for follow-up tests and your personal action to protect yourself can result in a much-reduced chance of colon cancer.

Take life saving action by understanding your risk factors and obtaining the needed screening tests and protective procedures.

