

Colorectal Cancer – Risk Factors and Prevention

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Introduction

In the present times 80% of the cancer are related to the life style and by change in life style 80% cancer can be prevented. The hurry, worry and curry of modern times are the causes of many G.I. and colorectal diseases. Colorectal cancer is the second leading cause of cancer deaths in the United States. The number of new cases of colorectal cancer in the United States have been decreasing slightly, and the number of deaths due to colorectal cancer has been decreasing. The risk of colorectal cancer tends to increase after the age of 40.

The exact cause of colorectal cancer is not known. However, studies show that certain factors are linked to an increased chance of developing the disease.

There are a number of personal factors influencing who is more likely than others to develop colon or rectal cancer.

1. Age - Colorectal cancer is more likely to occur as people get older. The average age for developing colorectal cancer is around 50, but risk can begin as early as 40.
2. A history of cancer - A person who has already had colorectal cancer is at an increased risk of developing it a second time. Women with a history of ovarian, breast, or uterine cancer have a

somewhat increased chance of developing colorectal cancer.

3. A history of polyps - Polyps are relatively common in people over age 50. Most are benign (noncancerous). However, some kinds of polyps are more likely to result in the development of cancer than others. Adenomatous polyps are considered most likely to develop into cancer.
4. A history of inflammatory bowel disease - Ulcerative colitis is a condition that causes inflammation and ulcers in the lining of the colon. Crohn's colitis (also called Crohn's disease) causes chronic inflammation of the gastrointestinal tract, most often the small intestine. People who have ulcerative colitis or Crohn's colitis may be more likely to develop colorectal cancer than people who do not have these conditions.
5. Race - African Americans are at greater risk of developing colon cancer and of dying from the disease than any other racial or ethnic group in the United States.

Risk factors linked to family

1. Family history – There is an increase in risk if a first-degree relative (father, mother, brother, sister) has a history of either colon cancer or polyps before age 60; or two or more relatives at any age.
2. Familial adenomatous polyposis (FAP) - This is a rare, inherited condition in which hundreds of polyps develop in the colon and rectum. This condition can appear as early as the teen years and is very likely to lead to colorectal cancer.

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3. Gardner's syndrome - Like FAP, this hereditary condition results in polyps and colon cancer that develops at a young age. It can also cause noncancerous tumours of the skin, soft connective tissue, and bones.
4. Hereditary nonpolyposis colorectal cancer (HNPCC) - People with this hereditary condition tend to develop cancer at a young age without first having many polyps.
5. Ashkenazi Jews - These are Jews from, or whose ancestors are from, Eastern Europe. They have an inherited change in their DNA that causes a slightly increased risk of developing colon cancer

Lifestyle risk factors

1. Smoking - Recent studies show that smokers are 30 - 40 per cent more likely than nonsmokers to die of colorectal cancer.
2. Diet - Some evidence suggests that the development of colorectal cancer may be associated with certain food characteristics. Among populations that consume a diet high in fat, protein, calories, alcohol, and meat (both red and white) and low in foods with fibre, calcium and folate (folic acid), such as whole grains, fruits, and vegetables are at higher risk for colorectal cancer.
3. Exercise - Some evidence suggests that being overweight and living an inactive lifestyle may be associated with an increased risk of colorectal cancer. In contrast, people who exercise regularly may be at lower risk.
4. Alcohol - Heavy use of alcohol has been linked to colorectal cancer.

Signs and symptoms of colorectal cancer

- Unexplained weight loss

- An ongoing bloated feeling, cramping, or pain in abdomen
- Constant tiredness and weakness
- A change in bowel habits that lasts for more than a few days, such as diarrhoea, constipation, or narrow stools.
- A feeling that one needs to have a bowel movement that doesn't go away, even after going to the bathroom.
- Blood in stool or bleeding from rectum
- Jaundice (yellow-green colour of the skin and the white part of the eye)
- Other conditions, like infections, haemorrhoids, and inflammatory bowel disease can cause these symptoms. It is also possible to have no signs or symptoms with colon cancer. Most people with colon cancer have normal looking stools.

Screening

The American Cancer Society recommends colorectal cancer screenings begin at age 50. The main tests include the faecal occult blood test to detect any blood in stool; a flexible sigmoidoscopy, and a colonoscopy, and if required biopsy and/or remove any polyps; a blood test called a CEA assay (carcinoembryonic antigen, a protein that is sometimes present in higher levels in patients with colorectal cancer).

Screening innovations

New tests for colorectal cancer screening are under study. For example, virtual colonoscopy (also called computed tomographic colonography) uses special X-ray equipment to take pictures of the colon. A computer then assembles these pictures into detailed images that show polyps and other abnormalities. Virtual colonoscopy may cause less discomfort and take less time than conventional colonoscopy; it is less invasive and does not require sedating medication.

However, it is not possible to remove polyps or do a biopsy during a virtual colonoscopy.

Prevention

Regular screening is recommended at age 40 or earlier for people who have a high risk of colorectal cancer and beginning at age 50 for everyone else.

The following guidelines are for people who **do not** have an increased risk for colorectal cancer.

Colorectal screening guidelines

Test	Frequency
Faecal occult blood test (FOBT)* or Sigmoidoscopy*	Every 1 to 2 years Every 5 years
Barium enema or Colonoscopy	Every 5 years Every 10 years

*Some groups recommend combining a yearly FOBT with a sigmoidoscopy every 5 years.

Colorectal cancer prevention

Colorectal cancer can sometimes be associated with known risk factors for the

disease. Many risk factors are modifiable though not all can be avoided.

Diet and Lifestyle

Colorectal cancer is more likely to develop than among populations that consume a low-fat, high-fibre diet.

Nonsteroidal Anti-Inflammatory Drugs

Some studies have shown that the use of nonsteroidal anti-inflammatory drugs (NSAIDs) may be associated with a reduced risk of colorectal cancer.

Polyp Removal

The removal of polyps in the colon may be associated with a reduced risk of colorectal cancer.

Female Hormone Use

Postmenopausal female hormone use is associated with a decreased risk of colon cancer but not rectal cancer.

Conclusion

Few simple life style measures and appropriate health care checks for population can prevent morbidity and mortality from colorectal cancers.

FENOFIBRATE AND DIABETIC RETINOPATHY

Keech and colleagues state that “statins have proven unsuccessful in preventing diabetic retinopathy”, which seems *premature*. The two randomized trials that examined this issue found statins beneficial and attributed this to improved lipid profiles. ACCORD-EYE compares simvastatin and fenofibrate, and will help clarify the roles of lipid lowering (and fenofibrate) in retinopathy.

In particular, fenofibrate did not reduce visual loss – a key clinical outcome.

Second, the mechanisms by which fenofibrate modifies the risk of diabetic retinopathy are unclear.

Thus, fenofibrate might act via antioxidative and anti-inflammatory mechanisms to reduce the risk of both microvascular and macrovascular complications of diabetes.

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