



Approximately 4.3% of people will be diagnosed with colon cancer during their lifetimes. There are many different causes and risk factors for developing colon cancer, including genetics, environment, and chance. As with most cancers, a specific cause for the great majority of colon cancers cannot be identified. Rather it is likely that there are multiple factors which play a part in the development of the cancer. The good news is that screening for colon cancer is highly effective in reducing the frequency and severity of colon cancer, both in the general population as well as for persons with a hereditary risk.

Some of the factors that are known to increase the risk for colon cancer are:

### **Demographics**

- Age: the risk for colon cancer (and most other cancers) increases as we get older.
- Race: data has shown that African Americans have increased risk to develop colon cancer, as well as increased incidence of deaths from colon cancer. The reasons for these differences are not fully understood, but may in part be due to differences in access to screening for colon cancer.

### **Lifestyle/Environmental Factors**

- Alcohol consumption: three or more drinks of alcohol per day has been associated with elevated risk for colon cancer.
- Cigarette smoking: smoking has been implicated as a risk factor for multiple different cancers, including colon cancer.
- Obesity

### **Personal Medical Factors**

- Previous history of colon polyps: a history of colon polyps, specifically adenomatous polyps or sessile serrated polyps, indicates increased risk for future polyps and/or cancer if the polyps are not sufficiently managed.
- Previous history of colon cancer: individuals with a history of colon cancer are at increased risk not only for recurrence of that cancer, but for development of a second cancer.
- Inflammatory bowel disease (ulcerative colitis, Crohn's disease): chronic inflammation of the colon tissues can damage the cells and, over time, can lead to cancerous changes in the colon tissue.



## **Family History**

- Family history of colon cancer or advanced adenomatous polyps: how high the risk is depends on how many relatives have been diagnosed, how closely you are related to the family members who have been diagnosed, and how old those relatives were when they were diagnosed.
- Hereditary cancer syndromes: approximately 5-10% of colon cancers are due to inherited genetic mutations which increase the risk for colon cancer. Several different genes and genetic syndromes are known to be associated with increased risk for colon cancer. The links below provide more information about hereditary colon cancer genes.

## **Genes related to an increased risk for colon cancer (click on them for more information):**

- [Lynch syndrome \(MLH1, MSH2, PMS2, MSH6, and EPCAM\)](#)
- [Familial Adenomatous Polyposis \(APC\)](#)
- AXIN2-related Colon Cancer
- [CHEK2-related Colon Cancer](#)
- GREM1-related Colon Cancer
- [Juvenile Polyposis syndrome \(BMPR1A, SMAD4\)](#)
- MSH3-related Colon Cancer
- [MUTYH-Associated Polyposis](#)
- NTHL1-related Colon Cancer
- POLD1-related Colon Cancer
- POLE-related Colon Cancer
- [Cowden syndrome \(PTEN\)](#)
- Serrated Polyposis syndrome
- [Peutz-Jeghers syndrome \(STK11\)](#)
- [Li Fraumeni syndrome \(TP53\)](#)

Click [here](#) to learn more about scheduling a genetic counseling appointment for questions about hereditary cancer predisposition.