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## ***Genetic Testing for Risk of Cancer of the Colon or Rectum: What Does It Mean to Me?***

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### ***Colon cancer seems to run in my family. What should I do?***

Sometimes people overestimate their risk for cancer and think it is much higher than it really is. When carefully checked, your family medical history may not prove to be a cause for concern. A small portion of cancers (up to 10%) occur more often in some families than in the rest of the population. The fact that some of your relatives may have had cancer does not, by itself, mean that you have a higher chance of developing cancer than anyone else.

For particular people, however, the chance of developing hereditary colon cancer may be higher. If we are able to find out if this applies to you, we then can help you decide what to do.

Start by first reading and completing the questions on this page. Then talk with your doctor.

### ***What should I look for in my family tree?***

Look for multiple family members with colon cancer, usually **three or more** family members who have been diagnosed. Also look to see if multiple generations of your family have been affected. Be sure that those family members with cancer are related to you by blood—not by marriage or adoption.

### ***Do the three family members need to be my close relatives?***

No, but the risk that inherited colon cancer *might* run in your family is greater if all those with colon cancer are “first-degree” relatives to you or *to each other*. (First-degree relatives include mother and father, sisters or brothers, and children.)

For example, suppose your mom, her sister (your aunt), and her mother (your maternal grandmother) had colon cancer. Your aunt and your grandmother are not your first-degree relatives, but they are first-degree relatives to your mom. So, they are three relatives who are closely related to each other.

### ***Are there any other signs of increased risk of carrying a colon cancer gene?***

- (1) *First-degree* relative who got colon cancer before he or she was 50 years old (i.e., your mother or father, your brother or sister, or your child)
- (2) *First-degree* relative with uterine or ovarian cancer

*Keep in mind*, though, that the chances of inheriting colon cancer aren't high, even if someone in your family has had the disease. Many people have close family members who have had colorectal cancer, but it usually is not the inherited kind of colon cancer.

### ***Do any of the following apply to you?*** (Check the box below for those that do.)

Have any of your family members been diagnosed with colon cancer before the age of 50?

“ No                      “ Yes

Has anyone in your family been diagnosed with multiple colon polyps—someone who has, for example, had 100 colon polyps?

“ No                      “ Yes

*(continued on reverse)*

In some families, there can be an association with other cancers. Has anyone in your family had uterine cancer, ovarian cancer, or pancreatic cancer?

" **No**                      " **Yes**

Are there clusters, or bunches, of certain types of cancer among close relatives?

" **No**                      " **Yes**

If yes, please give details

If the answer to any of these questions is "yes", then you may be at increased risk for cancer.

### ***Should I have a test to find out if I carry a colon cancer gene?***

Your doctor can help you decide if a gene test might be useful for you. The first step is talking with your doctor about genetic testing, in light of your answers to the earlier questions.

Before making a decision, think how you might react if the results show that you carry the gene and are more at risk of getting colon cancer. It is important that you know where you stand and that you let others know your wishes. Research has shown that people have strong and different opinions about wanting to know if they carry a gene for colon cancer. Some people want to know about their risk in detail. For people who want to know details about their risk, it can be upsetting if they are not provided with all the facts. Knowing, instead of wondering, helps them deal with the risk of colon cancer. Others prefer not to know, as knowing they have the colon cancer gene would be too hard to cope with. For people who do not want to know their risks, it may be upsetting if they are given too much information. It is important to respect individual wishes.

If your risk is increased, your doctor may recommend a genetic counselor to you.

### ***Taking action to reduce your risk***

The term 'risk' means 'chance,' or 'possibility.' A higher "risk" of developing cancer does not mean that you are definitely going to develop cancer. There are many positive actions that you can take to help reduce your risk— regardless of your family history. These are:

- (1) **preventive measures** that can help reduce the chance that you may develop cancer later in life (lifestyle factors such as tobacco use and diet; exposures in your environment such as too much sunlight and chemicals); and
- (2) **surveillance measures** that monitor and check your body for changes in your normal state of health to help find signs of cancer and other diseases (e.g. colonoscopy/sigmoidoscopy) as early as possible when you are more likely to have it treated successfully.

### **Where can I get more information?**

You can visit the website of the Canadian Cancer Society at <http://www.cancer.ca>; they provide links to other sources of information. You also can call their Information Specialists at 1-888-939-3333 for more specific details.

The American Cancer Society has a number you can call, 1-800-ACS-2345, or check their web site: <http://www.cancer.org>

The National Cancer Institute has detailed information on their website: <http://www.cancer.gov>

Adapted from **Does cancer run in your family? Understanding inherited risk**, the Canadian Cancer Society <http://66.59.133.166/info/pubs/gnriske1.htm> and a pamphlet entitled **Genetic Testing for Breast Cancer Risk: What Does It Mean to Me?**, by Thomas C. Rosenthal, MD, and Stirling M. Puck, MD, the American Academy of Family Physicians, 1999, available at [www.familydoctor.org/handouts/332.html](http://www.familydoctor.org/handouts/332.html)

