

Prevention of Colon Polyps and Cancer

The colon is the large intestine. It begins where the small intestine ends, near the appendix inside the right lower abdomen. The colon extends in a wide loop, up the right side of the abdomen where it turns down connecting to the rectum. The main function is to solidify stool by reabsorbing much of the water from the liquid stool. And, of course, it stores formed stool until it can be evacuated through the rectum.

Polyps and Cancer

Polyps are growths that form on the inside lining of the colon. They are usually shaped like mushrooms or dome-like buttons, and vary in size from a tiny pea to larger than a plum. While colon polyps start out as benign tumors, certain types of polyps (called adenoma or adenomatous polyp) may turn to cancer. The risk is greater as the polyps get larger. However, polyps are rather slow growing. It may take five years or more for a polyp to reach 1/2 inch in size. If an adenomatous polyp does turn to cancer, it may take an additional five to ten years, or more, to reach that stage.

Colon cancer is very common, occurring in over 150,000 people in the United States each year. More than 90% of the patients can be cured if the cancer is detected and removed at an early stage. Adenomatous polyps can be removed before they become cancerous with a procedure called colonoscopy. A lighted flexible tube is inserted into the colon. Various accessories can be passed through the tube to remove any polyps that may be formed. This procedure is usually done in an outpatient setting and under light sedation.

Causes and Risks

The complete cause of polyp formation and colon cancer is unknown, but it is known that hereditary plays a key role. Certain genes seem to prevent colon cancer from developing. Some people may lose these protective genes. This genetic deficiency can be inherited. Family history (parents, brothers, sisters) of colon cancer significantly increases the risk of developing it. There is also risk (but to lesser degree) if uncles, aunts and grandparents have had the disease. Therefore, everyone with a family history of polyps and colon cancer should be evaluated by their physician and examined regularly.

Lifestyle and some medical conditions can increase the odds of developing colon polyps or cancer. A low fiber diet (10-15 g) appears to contribute to the development of colon cancer. The rate of colon cancer increases in people after the age of fifty, as well as in people who have ulcerative colitis for a long period of time. Also, females who have had genital or breast cancer are at increased risk of developing colon cancer.

Prevention

Diet seems to be important in preventing colon cancer. Rural residents in Africa and India rarely develop colon polyps or cancer. Their diets are high in unprocessed grains (the bran and fiber is not removed). However, when these people move to westernized societies and adopt the typical western diet, over time they develop the same incidence of colon polyps and cancer. It appears that adopting a high fiber diet with at least 20 to 30 grams a day could play an important role in reducing the risk of developing polyps and colon cancer.

Meat: used in excess in the diet may be harmful. The fat, when broken down by the body's digestive juices, may change into compounds called carcinogens. These molecules are known to cause colon cancer in some animals. Diet high in fiber and roughage produce bulky stools. It is likely that large, bulky stools help to sweep the colon of carcinogens.

Fiber: the indigestible parts of plants. Insoluble fiber does not dissolve in water. It adds bulk to the stool and regulates movement of the stool through the bowel. Wheat bran is a good source of insoluble fiber. Soluble fiber absorbs great quantities of water, and becomes gelatinous. It is known to reduce blood cholesterol. Soluble fiber is found in such foods as oats, barley, brown rice, legumes, apples, strawberries, and carrots.

There are also stool-bulking agents available in drug stores which contain a soluble fiber called psyllium mucilloid. These products go by trade names such as Metamucil and Konsyl. There are also generic forms available. They are useful in treating irregularity, some diseases involving the intestinal tract (such as irritable bowel syndrome and diverticulosis), and perhaps in preventing polyps and colon cancer.

If there is a problem getting enough fiber in the diet, use the following recipe for a low-calorie fiber supplement. Buy milled wheat bran from a health food store and a Nutrasweet psyllium mucilloid product from the drug store. Take a heaping tablespoon of each in 6 to 8 oz of water or juice, once or twice a day. This formula contains 20 grams of soluble and insoluble fiber.

Calcium: one of the most common minerals in the body. It is necessary for bone strength and for many of the body's important chemical processes. For example, it is needed in regulating the growth of cells. Animal studies have found that a lack of calcium leads to excessive cell growth in the colon. It is not clear if calcium has a preventative benefit for humans. Since it is important to the body in so many other ways, everyone should get enough calcium in the diet. All adults should have 1000 mg per day. After menopause, females have a great risk of osteoporosis (loss of calcium) causing bones to weaken, and they should have 1500 mg of calcium a day. The supplement form best absorbed is calcium citrate.

A quart of milk a day does a good job of providing adequate calcium. Most people do not drink a quart of milk everyday, but there are other sources of calcium. Remember that foods, such as puddings and custards, are prepared with milk. All dairy products (such as cheeses and yogurt) shellfish, seafood and many leafy green vegetables are not as available for use by the body as calcium in milk. Some people on low calorie or special diet may not be able to get enough calcium in their diets. In these cases, the physician can recommend a calcium supplement.

Aspirin: a miraculous drug. It relieves pain and fever and is good for heart patients because it thins the blood. Some medical studies show that the incidence of cancer of the colon may be less in those people who take aspirin regularly. However, a recent report of a large group of physicians who took regular aspirin tablet every other day showed no benefit. So the aspirin benefit is still not clear-cut. It is known that prostaglandin (a hormone-like substance produced by the body) may promote excessive or abnormal cell growth in the intestine. Aspirin appears to interfere with prostaglandin, which may account for a possible role in preventing colon cancer.

How much aspirin is enough? A regular adult aspirin contains 325 mg. The effective dose for blood thinning is probably in the range of 150 mg a day. One children's aspirin contains 81 mg. There is one caution; aspirin can cause stomach ulcers or even serious bleeding. Therefore, even in low doses, it should only be taken with the approval of a physician.

Summary

Each person is unique and should be evaluated by a physician for the treatment of any medical condition or disease. In general, the following are important actions to follow in preventing the development of colon polyps and cancer.

1. Fiber: 20-30 grams a day in the diet and/or as supplements
2. Calcium: 1000-1500 mg of dietary calcium and/or supplements in the form of calcium citrate
3. Aspirin; a possible benefit. Take one regular aspirin a day but check with physician first
4. Colonoscopy: for those with close relatives who have had colon polyps or cancer
5. Colon polyp removal: to prevent these polyps from becoming cancer