

Fact Sheet: Bowel cancer prevention

What is bowel cancer?

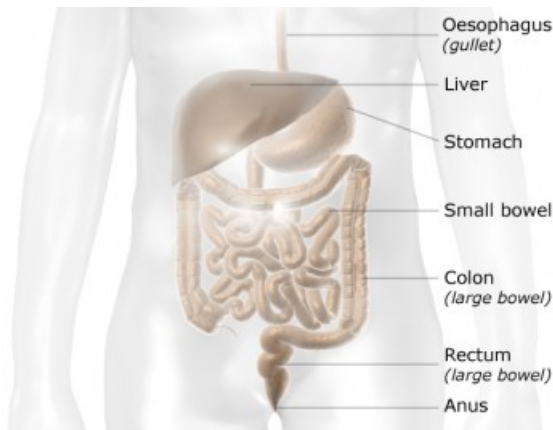
Bowel cancer usually means cancer of the large bowel, which is the colon, the rectum and the anus (back passage). The medical term for cancer of the large bowel is colorectal cancer. Cancer of the small bowel is rare.

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What are the signs of bowel cancer?

There are no specific signs of bowel cancer. The first warning signs are similar to those of other more common problems like haemorrhoids (piles), ulcerative colitis or Crohn's disease. These signs are blood or mucus in the stools, or changes in bowel patterns that last for several weeks (diarrhoea or constipation). Although it is not likely to be cancer, seeing a doctor about these problems could mean catching a cancer early if one does develop.

How big is the risk of getting bowel cancer?

In developed countries, about 1 out of 18 people will get bowel cancer at some time in their lives, but the risk is very small for younger people. The risk of bowel cancer grows with age. The risk also increases if close family members like parents and brothers or sisters have had it.

People are at particularly high risk of bowel cancer if they have inherited one of two conditions: hereditary non-polyposis colorectal cancer (HNPCC) or familial adenomatous polyposis (FAP). Polyposis simply means a large number of polyps. People who have FAP could get more than 100 polyps. Having an inflammatory bowel disease for years also increases the risk of developing bowel cancer.

What are the possible ways to prevent bowel cancer?

There are several factors that people who have a lower risk of bowel cancer have in common. These include having diets high in fibre, fruit and vegetables and lower in processed and red meat. People who have regular daily exercise are also less likely to get bowel cancer. People who are overweight or obese have a slightly higher risk of getting bowel cancer. However it does not automatically follow that, for example, a change in diet or losing weight will reduce bowel cancer risk.

Research is needed before we can know for sure if a lifestyle change or other factor can prevent bowel cancer. These kinds of studies have been taking place for several years. The state of knowledge on bowel cancer prevention is summarised briefly here.

Fibre, fruit and vegetables: Researchers have tested whether or not the risk of bowel cancer is reduced if people increase the fibre in their diet, for example, by taking fibre supplements, or eating more fruit and vegetables. These studies did not show that this can protect against bowel cancer. More studies are under way.

Antioxidant vitamin supplements and minerals: Research on the antioxidants such as vitamin C, vitamin E and beta-carotene show reason for caution. These vitamins, alone or in combinations, have not been shown to prevent bowel cancer. If anything, people who took these vitamins actually died slightly more often. This difference was very small, but it was enough to help rule out antioxidants as a way of preventing bowel cancer. There has also been no success with folic acid or folate supplementation. It is too soon to know whether or not selenium supplements are effective.

Calcium: Studies have shown that people who take relatively large calcium supplements developed fewer polyps. This supports the theory of a preventive effect. However, researchers remain cautious, because something that slows down the growth of polyps does not

necessarily also prevent bowel cancer, which develops far more slowly.

Drugs: Various drugs are being studied to see if they can prevent bowel cancer, but no drug has yet been licensed as effective for this purpose. The drugs being tested include acetylsalicylic acid (ASA) and other similar so-called non-steroidal anti-inflammatory drugs or painkillers. Daily use of these drugs might slow down the growth of polyps. However these drugs can have many adverse effects especially when taken over the long term, so these adverse effects and the potential benefits must be carefully weighed. More research is needed on this option. Statins (cholesterol-lowering drugs) do not seem to prevent bowel cancer.

Menopausal hormone therapy can slightly reduce the risk of bowel cancer, but it also slightly increases the risk of breast cancer and stroke. Having taken the oral contraceptive pill for several years might reduce a woman's risk of bowel cancer. Because of this, new types of hormonal and other drugs are being developed to try to find more ways to prevent bowel cancer.

Glossary

small bowel

The small bowel is the four or five metres of the bowel in between the stomach and the large bowel (colon). It has three parts: duodenum, jejunum and ileum. The small bowel is also called the small intestine. In here, nutrients are further processed and absorbed into the body.

familial adenomatous polyposis (FAP)

Familial adenomatous polyposis (FAP) is an inherited disease that affects the large bowel (colon) and rectum. People with FAP will develop a large number of polyps at an early age. There is a high chance that bowel cancer might develop in some of them.

FAP

Abbreviation for familial adenomatous polyposis. This is an inherited disease that affects the large bowel (colon) and rectum. People with FAP will develop a large number of polyps at an early age. There is a high chance that bowel cancer might develop in some of them.

folate

Folate is the salt form of the vitamin folic acid.

folic acid

Folic acid is a water-soluble vitamin. Green and leafy vegetables (eg lettuce, spinach and broccoli), liver, egg yolk, and particularly wheatgerm are rich sources of folic acid. Having too little of this vitamin can lead to anaemia. In pregnancy, low levels of folic acid can increase the risk of a fetal abnormality called spina bifida. This is why women who are pregnant, or trying to get pregnant, are encouraged to increase their intake of folic acid.

hereditary non-polyposis colorectal cancer (HNPCC)

Hereditary non-polyposis colorectal cancer (HNPCC) is an inherited form of bowel cancer that does not start with the development of a large number of bowel polyps.

calcium

Calcium is an important mineral for human health. It is one of the building blocks for bones and teeth, and it is

necessary for blood clotting, the muscles and the nerves. Calcium occurs in milk and milk products, as well as in green leafy vegetables. People can get a calcium deficiency if they have a chronic inflammatory bowel disease, as well as in pregnancy or during breastfeeding.

colorectal cancer

Colorectal cancer is cancer in the large bowel (including the colon) and/or the rectum. "Colo" stands for the colon, and "rectal" for the rectum. Colorectal cancer is one of the most common forms of cancer.

polyps

Polyps are growths in the mucus membranes, for example in the bowel or inside the nose. The term usually means a benign growth, although strictly speaking the term does not describe whether or not the growth is harmless.

rectum

The rectum is the last 15 to 20 centimetres of the large bowel, that ends with the anus (back passage).

selenium

Selenium is a mineral that is necessary for human health. It occurs in fish, meat, grains, nuts and offal (organ meats and giblets). Selenium deficiency can be caused by a chronic stomach or bowel disease, or an unhealthy diet. The body needs selenium to produce particular elements that are essential to protect the body cells.

vitamin C

Vitamin C is water-soluble. It is also called ascorbic acid. It is the vitamin that people need to have the most of every day. It occurs primarily in fresh fruit and vegetables. Vitamin C is one of the antioxidants. This means it protects cells from damage caused by particular aggressive atoms and molecules called free radicals. The food industry uses it frequently as a conservative. A major vitamin C deficiency leads to tiredness, irritability, and symptoms in bones, cartilage and teeth.

vitamin E

Vitamin E describes a group of 8 different fat-soluble vitamins. They are antioxidants, which mean they protect cells from damage caused by aggressive types of atom or

molecule called free radicals. Vitamin E occurs particularly in nuts and cold-pressed plant oils, like sunflower oil. The food industry uses it as a conservative. Because it is not water-soluble, the body only absorbs vitamin E if it comes in fats in the diet.

stroke

A stroke (also sometimes called brain attack, or apoplexy, which is Greek for “struck down”) is an acute condition where the brain does not get enough oxygen. It is most commonly caused by a blood clot that has travelled through the bloodstream and is blocking blood vessels in the brain. In rarer cases bleeding in the brain may also result in a stroke. Depending on which part of the brain is affected, there may be paralysis of either all or certain parts of one half of the body, facial nerve impairment, vision problems, trouble balancing and severe problems speaking. A stroke is a medical emergency: the parts of the brain that are affected need to be supplied with oxygen as quickly as possible, to avoid the death of more brain tissue. The risk of having a stroke is greater for older people and people who have hypertension or chronic arteriosclerosis.

ulcerative colitis

Ulcerative colitis is one of two similar forms of chronic inflammatory disease of the bowel (the other is Crohn’s disease). Ulcerative colitis affects the large bowel. There are periods without symptoms, but also phases of pain in the left abdomen, diarrhoea and weight loss that may be so severe that people cannot go to work or even need to go to the hospital.

Sources

The German Institute for Quality and Efficiency in Health Care (IQWiG)

The German Institute for Quality and Efficiency in Health Care (IQWiG) was established by legislation to provide evaluations of the effectiveness, quality and efficiency of healthcare services. This includes the assessment of medicines as well as the publication of health information for consumers and patients.

Evidence basis of our health information

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at [**www.informedhealthonline.org**](http://www.informedhealthonline.org)

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