

Cancer Association of South Africa (CANSA)

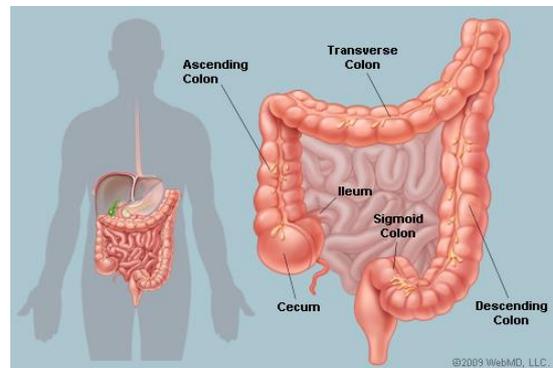


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Nutritional Guidelines for Individuals Diagnosed with Colorectal Cancer

Introduction

The colon is the last part of the digestive system. It extracts water and salt from solid wastes before they are eliminated from the body. It is also the site in which flora-aided (largely bacterial) fermentation of unabsorbed material occurs. Unlike the small intestine, the colon does not play a major role in absorption of foods and nutrients. About 1.5 litres of water arrives in the colon each day.



[Picture Credit: Colon]

The length of the adult human colon is, on average, for women 155 cm (range of 80 to 214 cm) and for men 166 cm (range of 80 to 313 cm). The colon is also called the large intestine. The ileum (last part of the small intestine) connects to the caecum (first part of the colon) in the lower right abdomen. The rest of the colon is divided into four parts:

- The ascending colon travels up the right side of the abdomen
- The transverse colon runs across the abdomen
- The descending colon travels down the left abdomen
- The sigmoid colon is a short curving of the colon, just before the rectum

(WebMD; Wikipedia).

Colorectal Cancer

Colorectal cancer is cancer that starts in the colon or rectum. The colon and the rectum are parts of the large intestine, which is the lower part of the body's digestive system.

[Picture Credit: Colorectal Cancer Image]

During digestion, food moves through the stomach and small intestine into the



colon. The colon absorbs water and nutrients from the food and stores waste matter (stool). Stool moves from the colon into the rectum before it leaves the body.

Most colorectal cancers are adenocarcinomas (cancers that begin in cells that make and release mucus and other fluids). Colorectal cancer often begins as a growth called a polyp, which may form on the inner wall of the colon or rectum. Some polyps become cancer over time. Finding and removing polyps can prevent colorectal cancer.

Colorectal cancer is the fifth most common type of cancer in men and the fourth most common cancer in women in South Africa according to the National Cancer Registry, 2010. (National Cancer Institute; National Cancer Registry, 2010).

Food Types and Bowel Cancer

Fibre is found mostly in fruit, vegetables and cereals, including flour and bread. The World Cancer Research Fund (WCRF) classifies dietary fibre as probably protective against bowel cancer. Fibre is recommended as part of a healthy diet. People who do not eat enough fibre tend to be constipated. So any cancer causing agents are in contact with the bowel lining for longer and increase bowel cancer risk.

Eating more fruit and vegetables may lower the risk of bowel cancer, according to results from the European Prospective Investigation into Cancer and Nutrition (EPIC) study. But the evidence is not conclusive. The WCRF has classified non starchy vegetables and fruit as possibly protective against bowel cancer, based on limited evidence.

The WCRF say that red and processed meats increase bowel cancer risk. It is estimated that around 1 in 5 bowel cancers are linked to eating these meats. Red meat includes lamb, pork, veal and beef. Examples of processed meat includes sausages, salami, ham, bacon, pâté and tinned meat.

Poultry meats, such as chicken and turkey, probably do not increase one's risk of bowel cancer.

There is mixed evidence around whether eating fish is protective against bowel cancer. The WCRF thinks there is limited evidence on this link. Fish might protect against bowel cancer because some types of fish contain fats called long chain polyunsaturated fatty acids which have a protective action.

Cooking methods may increase the cancer risk of meat and fish. Meats cooked at very high temperatures can form chemicals that are thought to increase cancer risk. But studies have not linked these chemicals specifically to bowel cancer.

In some studies, high fat diets have been linked to bowel cancer. But many researchers think this may be tied up with meat intake.

The WCRF classifies milk as probably protective against bowel cancer.

Based on limited evidence, the WCRF classifies foods that contain sugar as a possible cause of bowel cancer.

Some studies have found an increase in risk of cancer of the large bowel (colon) for the highest intake of sugar compared to the lowest intake. But other studies have found no link

between sugar and risk of colon cancer. An analysis of 13 studies found no link between colon cancer risk and sugar sweetened soft drinks.

Alcohol increases the risk of bowel cancer. A 2011 systematic review showed a 21% increase for both colon and rectal cancer. The risk increases with the volume of alcohol consumed.

The International Agency for Research on Cancer (IARC) classified smoking as a cause of bowel cancer. The risk is higher in current smokers compared with people who have never smoked. The risk increases with the volume of tobacco smoked per day. (Cancer Research UK; Colorectal Cancer Association of Canada; WebMD; World Cancer Research Fund International).

Nutritional and Diet Guidelines

People treated for locally advanced colon cancer with surgery and/or chemotherapy can greatly improve their odds of survival by choosing a healthy way of eating. This consists of a diet high in fruits and vegetables, fish and poultry - and avoiding the food choices characteristic of the so-called Western diet, i.e., high intake of meat, fat, refined grains and dessert.

Following treatment for colorectal cancer, a healthy diet is needed to optimise recovery and improve health. Recent research suggests that diet and lifestyle factors after diagnosis can also affect one's risk of colorectal cancer returning.

Avoid all alcoholic beverages - alcohol is a Group 1 cancer causing agent according to the International Agency for Research on Cancer (IARC) and is best avoided.

Eat as healthy as possible as allowed by the digestive system - fruits, vegetables, lean protein, and whole grains are all nutrient dense foods. Nutrient dense foods are foods that contain protein, complex carbohydrates, healthy fat, vitamins, and minerals all needed by the body to function optimally. Consult a registered dietitian for specific recommendations based on one's level of food tolerance.

No single food will supply all the nutrients one's body needs, so good nutrition means eating a variety of foods. It is important to eat foods from each group at each meal every day.

Foods are divided into five main groups:

- Fruits and vegetables (oranges, apples, bananas, carrots, and spinach)
- Whole grains, cereals, and bread (wheat, rice, oats, bran and barley)
- Dairy products (milk, cheese, and yogurt)
- Meats and meat substitutes (fish, poultry, eggs, dried beans, and nuts)
- Fats and oils (oil, butter, and margarine)

It is important to eat foods from each food group at each meal every day. Meals and snacks should include starch/grains, protein, dairy, fruits, vegetables and fats. By eating foods from each food group at each meal, an individual ensures that his/her body has a proper balance of all nutrients it needs to function.

Frequent small meals - eat small, more frequent meals to begin with rather than 3 large meals a day. Try to avoid long gaps between meals.

Eat whole grain foods when possible - cereals, breads, brown rice, whole wheat pasta, and crackers are good whole grain choices. Whole grain foods will have “whole grain flour,” “whole wheat flour,” or “oats” as one of the first 3 ingredients. If diarrhoea is an issue, one may need to avoid whole grains for a while due to their higher fibre content. A registered dietitian can provide guidelines for following a low residue diet for diarrhoea.

Avoid excess sugar and sweets – because some studies have found an increase in risk of cancer of the large bowel (colon) for the highest intake of sugar compared to the lowest intake one should consider reducing the intake of excess sugary foods and fizzy drinks. These foods tend to provide the body with kilojoules but few nutrients. Too many processed or sugary foods that are high in carbohydrates can raise the odds that one’s cancer will come back after treatment.

If excessive weight loss becomes an issue, one’s body may need more kilojoules and it is fine if some of them come from sugar as long as one is able to tolerate sweet foods. Consult a registered dietitian if this becomes a problem.

Drink sufficient fluids to avoid dehydration - choose beverages that contain nutrients and kilojoules. A good starting point is to strive for several glasses of nutritious beverages per day. Only take small sips with meals to avoid excessive bloating, gas or feeling too full to eat. The best time to drink fluids is an hour before or after a meal. Choose beverages that contain kilojoules and nutrients such as juices, smoothies, and liquid nutrition supplements.

A registered dietitian can provide recommendations for which liquid nutrition supplement and how much is best.

Choose low-fat foods - a fatty diet brings more acid into the intestine, which might lead to cell damage and help tumours grow. Instead, eat lean poultry, low-fat dairy products, and “good” omega-3 fats like found in fatty fish (salmon, mackerel, sardines), walnuts, and canola oil.

Try to eat with others when possible - Typically this makes meal times more enjoyable and may encourage one to eat more than eating alone.

Eat slowly and chew food really well - Digestion begins in the mouth. Smaller food particles are much easier to digest and are less likely to cause discomfort during the digestion process.

Limit red meat, and avoid processed, cured, or salted kinds (like bacon) - they can ‘hurt’ the colon. Do not eat more than two 120g servings of red meat a week - and when eaten, opt for lean cuts with excess fat trimmed off. Avoid all processed, cured and salted meats.

Keep a journal - record eating times, foods consumed, and any effects to track and determine which foods are best tolerated.

Be observant of changes in bowel habits – be observant of bowel changes and adapt diet accordingly. The assistance of a registered dietitian may be helpful.

In case of diarrhoea - radiation can cause inflammation and irritation in the lining of the intestine, which can trigger diarrhoea. In addition to being unpleasant, it puts one at risk for dehydration. Certain foods may also cause diarrhoea. Keep the gut in check by:

- Cutting back on foods such as whole wheat, apple peels, chickpeas, beans, lentils and seeds, which are high in insoluble fibre and can irritate one's colon. Insoluble fibre comes out the same way it went in (think corn), pushing waste out with it. Things are moving too fast in one's gut as it is, so one does not need any help in that department.
- Upping intake of soluble fibre, which absorbs fluid in the gut and forms a gummy paste, making the stool more solid. Good sources include: plain oatmeal, ripe bananas, applesauce and citrus fruit. However, most foods that have soluble fibre also have some insoluble fibre as well, so a dissolvable fibre supplement may be of help to help bind the stool.

Consult a registered dietitian for advice.

In case of nausea - some of the drugs used in colon cancer treatment can set off a series of reactions in one's brain, ultimately triggering the section that controls nausea and vomiting. Along with taking anti-nausea medications, use these tactics to combat that queasy feeling:

- Stay away from greasy foods, which cause the stomach to work harder, and spicy foods, which can irritate the stomach and cause nausea.
- Try to eat five to six mini-meals per day instead of three big ones; they will be easier to digest and more appealing when nauseated and do not feel like eating.
- Drink up! One throws up fluids as well as food, which can lead to dehydration. Since chemotherapy sometimes changes the way things taste, switching to something like sparkling water, ginger ale or diluted fruit juice can help.

In case of neuropathy - one may experience pain, numbness, tingling, swelling and muscle weakness ("neuropathy") as a result of some of the common colon-cancer-fighting drugs. Hands and feet are most often affected, but one may also sense it in one's mouth and throat, which can make eating, chewing and swallowing difficult. Avoid very cold food, which can exacerbate the tingling feeling in the throat. And if neuropathy is making it difficult to stand on one's feet to buy and prepare food, ask family and friends to help with shopping and making healthy meals.

In case of an ileostomy or colostomy - often, colon cancer treatment involves removal of the diseased section of the large intestine including a part of the ileum. Sometimes before the two healthy ends are reattached, a colostomy or ileostomy - the rerouting of waste through an opening in one's abdomen (kind of like a detour on a highway under construction) - is

necessary to give the colon time to heal. For the first six to eight weeks, patients with colostomy or ileostomy will have very liquid stool (the waste is now bypassing the portion of the intestine where liquids and electrolytes used to be reabsorbed). Avoid insoluble fibres, consume more soluble fibres and make sure to drink enough fluids per day to prevent dehydration.

In case of an ileostomy (where the entire colon is bypassed and the waste is diverted out through the small intestine), one may need even more fluids. After the intestine adapts, one will be able to go back to a more normal diet.

Consult CANSA's Nutritional Guidelines for Individuals Living with an ileostomy or Nutritional Guidelines for Individuals Living with a Colostomy.

Contact a registered dietitian for additional advice.

Radiotherapy and diet – radiotherapy to the bowel often causes diarrhoea. This can take a few weeks to settle down after the treatment ends. The treating doctor can prescribe tablets to help control the diarrhoea. If it does not improve within 4 to 6 weeks of finishing treatment, let the doctor know.

While getting over the original treatment it is best to keep taking the diarrhoea medicines. One can gradually reduce the amount one is taking. The doctor or nurse will provide advice about how to manage this.

Chemotherapy and diet - chemotherapy for bowel cancer can also cause diarrhoea and may make one feel sick. One may also have a sore mouth. These side effects will disappear after the treatment is over and one can then gradually get back to a more normal diet.

Take medication as prescribed – make sure to take all medicines regularly as prescribed by the treating physician.

Be as active as possible - exercise may help to stimulate appetite and endorphin production. Being able to eat more and having an enhanced feeling of wellbeing will make one's treatments more bearable.

(The World's Healthiest Foods; WebMD; University of Otago; Cancer Treatment Centers of America; Susan Cohan Colon Cancer Foundation; Cleveland Clinic Wellness; Cancer Research UK).

Medical Disclaimer

These Nutritional Guidelines are intended to provide general information only and, as such, should not be considered as a substitute for advice, medically or otherwise, covering any specific situation. Users should seek appropriate advice before taking or refraining from taking any action in reliance on any information contained in these Guidelines. So far as permissible by law, the Cancer Association of South Africa (CANSA) does not accept any liability to any person (or his/her dependants/estate/heirs) relating to the use of any information contained in these Guidelines.

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ADDITIONAL SUPPORT

For individualised nutritional advice, consult a registered dietitian in your area by visiting:
<http://www.adsa.org.za/Public/FindARegisteredDietitian.aspx>

Sources and References

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