



Eating Well

during bowel cancer treatment & recovery



Bowel Cancer
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Find out more about Kate at: missionnutrition.co.nz



Can I still enjoy my food?

A bowel cancer diagnosis impacts many aspects of your daily life, including what and how you eat. It's normal to have lots of questions about food including: what can I eat, what should I avoid, can I still eat the foods I enjoy?

A varied, well-balanced diet can have a positive long term impact on physical and psychological health. However, during bowel cancer treatment, you may need to make temporary changes to your normal diet. Avoiding certain foods and drinks can help manage side effects and aid the healing process.

Treatments, including surgery, chemotherapy, and radiotherapy can affect bowel function and the ability to digest certain foods. Your appetite may decrease, your bowel habits are likely to change, and some foods you used to eat may no longer appeal to you. Reassuringly, these changes are only temporary for most people, and you can still enjoy some of your favourite foods. Once treatment is over, it's likely you will be able to return to a normal diet including a wide variety of food and drinks.



Keep a food diary. Recording what you eat and drink each day can be a useful tool to help you figure out the foods and drinks that may cause issues. This information can be helpful when planning your meals and also when you visit your specialist or GP.

Sharing food with others is a great source of joy for many of us. The good news is you can continue to enjoy shared meals with friends and family, perhaps with just a few changes to what you eat.

This guide contains practical information and tips to help you eat as well as possible during treatment and recovery, and manage new digestive symptoms that may arise. With a little patience and flexibility, your experience of eating and enjoying food can continue despite a bowel cancer diagnosis.

Sorting fact from fiction

Unfortunately, a considerable amount of misinformation about diet during cancer recovery circulates online via websites and social media. After a bowel cancer diagnosis, well-meaning people may think they are helping you by sharing this misinformation. It's always safest to follow the dietary advice of your medical team, GP or dietitian who can provide evidence-based recommendations.



Eating before surgery

Surgery is an essential treatment, and it can be tough on your body. Following a healthy and well-balanced diet before your operation can help your recovery.

Talk to your medical team to check if there are certain foods you need to include or avoid before surgery.

For some people, part of their bowel is narrowed due to a tumour or inflammation. In this case, certain high fibre foods may need to be temporarily avoided to prevent a blockage, e.g. fruit skins, nuts, and wholegrain cereals such as muesli.

Some people lose a significant amount of weight after a bowel cancer diagnosis, and a high calorie/ protein drink (called a 'nutritional supplement') may be recommended to encourage healthy weight gain before surgery or treatment.

A balanced pre-surgery diet is key for most people. Aim to include a variety of foods every day to make sure you're getting the range of nutrients you need (for more detail on healthy eating see page 30 for Ministry of Health guidelines).

Protein-rich foods contain amino acids, vitamins and minerals important for wound healing, e.g. meat and fish, eggs, cheese, milk and yoghurt, nuts and seeds and legumes (beans, chickpeas, lentils). Carbohydrate-rich foods supply energy for your body to recover from the physical stress of surgery and provide fibre for bowel health, e.g. wholegrain breads, breakfast cereals, crackers, rice, pasta, fruit and vegetables. Eating a little healthy fat in your diet can provide extra energy for your body to recover. Choose healthy fats and oils from plant-foods, e.g. olive or canola oil, avocado, and nut butters.

Eating after surgery

Surgery can affect the digestive process, and your bowel will take time to adjust after the operation. Dietary changes may be recommended during the early stages of your recovery.

For the first few weeks after surgery, you may be advised to follow a low fibre diet (explained on page 11).

Eating 5-6 small meals over the day may be better tolerated after surgery, rather than your normal three meals. Regular eating times will help you develop a more predictable bowel habit too.

For a while (a few weeks or months), you may not feel like eating the foods you used to enjoy. As your body heals after surgery, your bowel function could change significantly. Some people have firmer, less frequent bowel motions, and others have loose, frequent bowel motions. This is normal and part of the healing process.

Depending on the type of surgery you have, you may be initially advised to avoid high fibre foods which can overstimulate the bowel and cause wind, bloating, and diarrhoea. Fruits and vegetables with tough skins, seeds or pips, or grainy foods that need a lot of chewing can be difficult to digest and are best introduced gradually into your normal diet. Remember, it may take a while to establish a new, more predictable bowel pattern.

After surgery, there may be narrowing around the area where the bowel has been rejoined. Muscles that help move food through your bowel may be weakened by surgery, reducing their efficiency. Regular, gentle exercise like walking can help these muscles recover and reduce constipation and bloating. Try to avoid sitting for long periods without moving. Gentle activity helps move food and gas through the bowel and reduces discomfort.

There could be some pain around the site of the operation, and this usually settles over time. Taking pain relief can help reduce discomfort but if you are worried, or pain is severe, contact your medical team for advice.

These tips may help reduce discomfort:

- Start with a low fibre diet (see page 11).
- Take time to chew your food well, eat and drink slowly and relax.
- Eat at regular times, and have several small meals throughout the day.
- Keep hydrated: drink at least 6-8 cups of fluid a day, e.g. water, tea, thin or smooth soups, diluted cordial etc.
- Avoid foods that you know will give you discomfort or wind.
- Do some gentle, regular exercise.
- It will take time to recover, so don't expect too much too soon.

How does surgery affect the digestive process?

Digestion begins in the mouth when food is chewed and mixed with saliva. Chewed food is swallowed through the oesophagus into the stomach where muscular contractions and gastric juices break it down further. The liquid food then passes into the small bowel where enzymes break down and release nutrients that are absorbed into the bloodstream for use by the body. The leftover food travels through to the large bowel (colon) where liquid is absorbed to be re-used by the body. Fibre (the undigested part of plant foods) also reaches the colon and is broken down by bacteria and other microbes to form 'gas'. High fibre foods also tend to loosen bowel motions.

Dietary fibre is important to keep your bowels healthy. Too much fibre may cause bloating, diarrhoea and discomfort, and so a low fibre diet may be recommended in the early days after surgery or treatment.

The remaining residue moves through the colon, gradually becoming thicker until it reaches the rectum (lower part of the bowel) where it is stored in a more solid form until passed as a stool. Surgery and treatment can change the way your bowels work and may affect nutrient absorption. Generally, this depends on the location of the surgery and how much of your bowel has been removed or affected.



A low fibre diet

You may be asked to follow a low fibre diet for several weeks (usually 4-6 weeks) after surgery. A low fibre diet may also be recommended during other treatments such as chemotherapy or radiotherapy, to help with bowel problems due to side effects.

After surgery, most people start on a modified diet, usually beginning with fluids and gradually transitioning to soft foods.

A low fibre diet limits the amount of undigested material (mostly from plants) that passes through your large bowel, reducing gas and the size and frequency of your stools. This can help the healing process and reduce discomfort, bloating or excessive bowel motions.

After several weeks you can begin a gradual return to your regular diet and food choices unless your specialist has recommended otherwise. However, some of the foods you once enjoyed, or the amount of food you used to eat may now affect your digestive tract differently.

(Some people are advised to follow a 'low residue diet'. This is usually more restrictive than a low fibre diet, limiting milk and certain dairy products as well. Always follow the recommendations of your medical team or dietitian).

Low Fibre Diet Guidelines

The ability to digest food varies for each person, and the following guidelines give you information about the types of foods you can include, and avoid, on a low fibre diet. Depending on the surgery/ treatment you've had and your tolerance for certain foods, your medical team may recommend a diet that is more or less restrictive.

Foods generally allowed

Breads and cereals

- White bread, bread rolls, wraps without seeds/ grains, or very fine wholemeal bread.
- Crackers and plain biscuits without seeds, coconut or dried fruit, e.g. arrowroot biscuits, cream crackers.
- White pasta, plain couscous, noodles, white rice (must be well cooked).
- Cereals, e.g. cornflakes, Ricies, Original Special K, fine oatmeal porridge.
- Plain cakes or slices without nuts, seeds, coconut or dried fruit.
- Pancakes, plain muffins made from white flour.

Fruits and vegetables

- Most canned or cooked fruits without skins, pips/ seeds and strings (avoid pineapple), e.g. banana, canned/ cooked peaches, pears, apples, apricots.
- Canned or well-cooked vegetables without pips/ seeds, skins or strings, e.g. cooked carrots, tomatoes, kumara, potato, pumpkin, courgette, soft florets of broccoli and cauliflower (avoid stems).
- Avoid raw vegetables and most raw fruits (except ripe banana).
- Well blended vegetable and fruit juices, smooth without pulp or 'bits'.

Milk and milk products

- Natural yoghurt, fruit yoghurt without seeds.
- Cheese, cottage cheese, sour cream, cream.
- Milk pudding, ice cream, custard.

Protein foods

- Cooked eggs.
- Tofu.
- Tender, soft cooked meat, chicken and fish (no skins or tough gristle).

Other foods

- Butter, margarine, oils, salad dressing (no seeds).
- Marmite, Vegemite, smooth jam (no seeds), honey.
- Smooth peanut butter (up to 2 tablespoons per day).
- Jellies, desserts (without seeds/ pips, dried fruit, coconut).

Fluids

- Water, diluted cordials/ sports drinks, clear fruit drinks.
- Tea, coffee, Milo.
- Milk, or soy/ almond/ rice milk.
- Smooth strained soups.
- Complan or other nutritional supplements (prescribed by a dietitian).

Foods to avoid

- Seeds, nuts, and coconut, and foods containing them.
- Legumes: dried beans, peas and lentils including baked beans.
- Most raw fruit, and raw or undercooked vegetables including corn, peas, mushrooms.
- Fibrous vegetables, e.g. bok choy and Asian greens, Brussel sprouts, cabbage, celery, onions.
- Wholegrain breads, crackers, cereals, e.g. muesli, bran, and wholegrain pasta.
- Brown rice, wild rice, other wholegrains, e.g. oats, barley, popcorn, buckwheat, quinoa.

After 4-6 weeks you can gradually increase the range of foods you eat, including foods with more fibre. Remember to introduce new foods one at a time and in small amounts.

Over time, most people will be able to return to their normal diet. In some instances, particular foods may cause ongoing issues and may need to be avoided long term, e.g. whole nuts and corn.



Helpful tips after surgery:

- Have small meals spread evenly over the day; avoid eating or drinking a large amount in one go.
- Slowly increase the amount of food you eat; do not force yourself to eat.
- Take small mouthfuls, chew food well.
- Keep to a regular schedule for meals and snacks.
- Add new foods one at a time in small amounts. Keep a food diary so you can easily identify foods that cause problems.
- Keep hydrated: drink at least 6-8 cups of fluid a day, e.g. water, tea, thin, smooth soups, diluted cordial etc.

Dietary advice for bowel problems during treatment

It's common for treatments like chemotherapy and radiotherapy to cause side effects such as diarrhoea, constipation and wind. These symptoms may improve after a few months, but some people have longer-term changes.

- Dietary changes may only help to a small degree during treatment, and many people need advice from their medical team. There are several effective medications for both diarrhoea and constipation, so don't be afraid to ask for help.

When you don't feel like eating

Anxiety, pain and discomfort, fatigue, nausea, medication side effects ... all of these can affect your appetite after surgery and during radiotherapy and chemotherapy treatments. So, what can you do?

Eating a good variety of nutritious foods can be a real challenge when your appetite is low. If necessary, your medical team can prescribe medications to help with surgery and treatment-related side effects like nausea. If you continue to struggle with eating, ask to see a dietitian who can provide recommendations, including nutritional supplements if needed, to improve your nutrition and help you maintain a healthy weight.

Tips to boost food intake

- Eat small, frequent snacks and small meals throughout the day.
- Eat slowly and chew food well.
- Introduce your favourite foods again when you can (after the 'all clear' from your medical team).
- Keep up your fluid intake: aim for at least 6-8 cups a day. Add variety, e.g. water flavoured with a little fruit juice, soups, cordials/fruit drinks, flat ginger ale, tea, milk etc.
- You can 'fortify' your food and drinks to add extra calories and protein:
 - Add grated cheese, cream, peanut butter, butter or oils to food and drinks, e.g. add cream or olive oil to soup, or sprinkle grated cheese into cooked vegetables.
 - Use full-fat milk and dairy products rather than low-fat versions.
 - Add milk powder to porridge, smoothies, soups, or into puddings.
 - Include desserts in your day, e.g. ice cream, custard, Greek yoghurts, rice puddings.

Diarrhoea

Diarrhoea is when your bowel motions are more loose, runny and more frequent than normal. Unfortunately, this is a common side effect of treatment and may have you racing to the toilet several times a day.

Surgery can cause diarrhoea, especially if the lower part of the small bowel is removed, causing malabsorption of bile acids.

Other possible causes include medicines like antibiotics and infections. Your medical team will work with you to find out what is causing your diarrhoea so you can get the right treatment.

Avoiding dehydration

When you have diarrhoea, you need to drink enough fluid to avoid getting dehydrated. Take regular, small sips and aim for at least 6-8 cups of fluid a day. Try diluted cordial/ juice / sports drinks, water, weak tea, or broth-based soups. Very sugary drinks, and drinks that contain caffeine, like coffee, can irritate the bowel and make diarrhoea worse. As well as losing water, you will be losing salts and other important nutrients. If you are eating your usual diet with a variety of foods, and a little added salt, this should be enough to replace these losses. You could also try something dry and salty, e.g. toast with Marmite, or crackers. If you can't eat or drink enough, or you become dehydrated, your medical team may suggest or prescribe an oral rehydration drink which you can pick up from the pharmacy. You can ask to see a dietitian who can provide recommendations, including nutritional supplements if needed, to improve your dietary intake.

Tips for managing diarrhoea

- Drink plenty of fluids, e.g. diluted cordial /juice /sports drinks, water, weak tea, or broth-based soups.
- Choose plain, easy to digest foods without heavy seasonings.
- Avoid high-fibre foods (see the low fibre diet recommendations).
- Eat small amounts at regular intervals throughout the day.
- Eat slowly and chew food well.
- Keep a food diary to figure out which foods make your diarrhoea worse.

Foods that may help

- White rice/ pasta/noodles.
- White bread or toast.
- Crackers without grains.
- Bananas.
- Marshmallows.
- Mashed potato (no skin).
- Low-fibre cereals like Ricies or cornflakes.
- Chicken without skin/ white fish/ hard-boiled eggs.

Foods and drinks to avoid

- Milk and other dairy products.
- Fatty foods.
- Raw vegetables and fruit.
- Beans.
- Spicy food.
- High-fibre cereals like muesli and bran.
- A sweetener called sorbitol, found in sugar-free sweets and drinks.
- Drinks containing caffeine.
- Alcohol.

Diarrhoea medicines

Your medical team may offer you medications that help diarrhoea by slowing down the movement of the large bowel. Common medications include loperamide or codeine phosphate. If surgery has removed the lower part of your small bowel (responsible for absorbing bile acids), your specialist can give you medicine to help with this. If your cancer treatment is likely to cause diarrhoea, your specialist may provide medicines you can keep at home 'just in case'.

Constipation

This is when your bowel motions are hard, dry and difficult to pass. If you are going to the toilet less often than usual, straining and having difficulty emptying your bowels, you may have constipation. Speak to your medical team who can help you find a solution.

Causes of constipation

- Surgery or treatment.
- Certain medications.
- Less physical activity than normal.
- A change in diet, or less food or fluid than normal.
- A lower dietary fibre intake.
- Pain, anxiety or depression.



What should I eat and drink?

Consult your medical team before making big changes to your diet, because some foods may make the problem worse or could irritate your bowel.

Things to try

- Eat regular meals, try to follow similar meal times each day.
- Drink plenty of fluids, aim for at least 6-8 cups a day.
- Gentle exercises – consult your medical team.
- Go to the toilet when you feel the urge to go, don't 'hold on'.
- Increase your fibre intake if advised. Follow specific recommendations from the dietitian and your medical team.

If it's recommended for you to eat more dietary fibre, foods that may help include:

- Wholegrain bread, crackers and breakfast cereals.
- Rolled oats/ porridge.
- Fresh, dried or tinned fruit, e.g. prunes, kiwifruit etc
- Fruit juices such as prune juice.
- Vegetables.
- Peas, beans and lentils.
- Ground flaxseeds/ golden linseed: add a little to food/ drink and build up gradually.

Always increase your fluids when you eat more fibre. This helps keep bowel motions soft.

Let your medical team know if constipation is an ongoing issue for you. They can provide medicine to help such as stool softeners for a hard poo that is difficult to pass, laxatives for a sluggish bowel, or fibre supplements to help soften and add bulk to the stool. Take these only as directed.

Important Note: If you haven't passed a bowel motion for more than a few days, and you have pain, feel sick or have been sick (vomited) tell your medical team straight away.

Nausea and loss of appetite

Bowel cancer treatment commonly causes side effects such as nausea, loss of appetite and fatigue. Chemotherapy treatments can also result in particular symptoms including a sensitivity to hot and cold foods and drinks and certain seasonings, a change in the way food smells and tastes (metallic taste in the mouth), and mouth ulcers. All of these can affect your ability and desire to eat, and it may be difficult to find foods that appeal. Staying as healthy as you can during chemotherapy can be a tall order when you don't feel well, so here are some tips that may help.

For nausea and vomiting

- Drink plenty of fluids and take small sips frequently over the day.
- Eat small, frequent meals: try dry food like toast and crackers.
- Ginger has well-known anti-nausea properties: try a ginger tea, ginger biscuits, or sip ginger ale.
- Suck ice cubes or a flavoured ice block.

For a sore mouth

- Try fruit smoothies or milkshakes, yoghurts, ice cream and jellies.
- Avoid salty and spicy foods and citrus fruits like oranges.
- For sore gums use a soft-bristled toothbrush.
- Your medical team can advise on mouthwashes that may help.

For a dry mouth

- Suck ice cubes or a flavoured ice block.
- Take frequent sips of fluids over the day.
- Add some gravy or sauce to help soften foods.

If you are having serious problems with symptom management, contact your medical team for advice and assistance as soon as possible.



Eating well with a stoma

The colostomy and ileostomy are surgical procedures connecting either a part of the large bowel (colon) or small bowel (ileum) to an opening on the abdomen called a stoma.

Waste leaves through the stoma and is collected by a bag (also known as a 'pouch') attached to your abdomen which you can change and/ or empty as needed.

The output through the stoma is affected by what you eat, when and how much. The output from a colostomy will be thicker and stools more formed whereas output from an ileostomy may be quite liquid at first, thickening over time to the consistency of porridge.

As time goes by and you resume a normal diet, you will be able to identify a pattern in how your bowel works post-surgery, whether on a permanent or a temporary basis.

Eating at set times can help regulate stoma function. Certain foods can also affect the output from your stoma so experiment by trying a range of foods to increase your chances of achieving a well-balanced diet. If you have problems with the frequency or consistency of output, you may need medication to control it, and your medical team, stoma nurse or dietitian will have strategies and tips that may be helpful too.

In general, people with a colostomy can eat whatever they like.

There are no definite 'do's and don'ts' or foods to avoid, and your bowel will adjust to a normal diet over time. Initially, after surgery, follow dietary advice to introduce foods gradually, which are well tolerated and soft. You may be asked to follow a low fibre diet (see page 11).

For those with an ileostomy, some foods may be harder to digest, and you will be given specific dietary recommendations by your stoma nurse and dietitian. This will help you add variety to your diet in a gradual, safe and comfortable way. Adding salt to your food is often recommended as this can help replace salt losses through your stoma output.

6-8 weeks after surgery, you can introduce a wider variety of foods, including different types of vegetables and fruits, and most people can transition to a normal, well-balanced diet.

Sometimes a blockage can occur soon after surgery when the bowel is still swollen and healing. You may experience abdominal pain and bloating, feel sick, and your stoma may stop working. If this happens, contact your medical team straight away for advice.

Some foods may be more likely to cause a blockage, e.g. whole nuts, sweet corn, popcorn, legumes (dried beans, chickpeas, lentils) dried fruit, mushrooms, fibrous, stringy vegetables, and fruit with the skin on. If a particular food is a problem for you, avoid eating it for a while until your bowel settles down. You may wish to re-trial a certain food again after several weeks. Chewing food well helps reduce the risk of blockages.

General tips for eating well with a stoma include:

- Follow initial dietary advice to gradually introduce foods that are well tolerated and soft. You may be asked to follow a low fibre diet.
- Introduce new foods, in moderation, 6-8 weeks after surgery. Try new foods one at a time, in small amounts and increase fibre slowly. If you have unpleasant side effects, wait 2-3 weeks and try again.
- At first, introduce foods that are well-tolerated, e.g. tender meat (skinless chicken or fish), eggs, mashed or whole potatoes without skins, pasta, rice, white breads, cooked pumpkin/ carrots/ kumara, cooked fruit (no skins), and bananas.
- Chew food thoroughly before swallowing to break it down as much as possible before it reaches your stomach. This will help digestion and reduce problems in the bowel, such as bloating and other symptoms.

- Be sure to drink at least 6-8 cups of fluid every day. You may need more if you have an ileostomy, especially during times of high output.
- Some types of foods may cause bowel problems like wind or loose output. Try cutting out one food at a time if you suspect it's a problem, but do include as much variety as you can.
- Foods that may cause wind include nuts, beans and pulses, onions, cabbage, curries or spicy foods, sweet corn, and beer.
- Foods that can cause odours include green leafy vegetables, fish, eggs, beans, and cheese.
- Foods that can control odours include tomato juice, orange juice, natural yoghurt, and parsley.
- Foods that can thicken stools include bananas (ripe), boiled rice, marshmallows, porridge, smooth peanut butter, instant mashed potato, white bread, and pasta.

Ostomy reversal

Some people have a surgical procedure to reverse the ostomy and reconnect the bowel. Even without the stoma, your bowel may not work the way it used to, so introduce new foods gradually (particularly high fibre foods). Your bowel function may take some time to improve, so don't expect too much too soon.

For more information visit Ostomy NZ at www.ostomy.org.nz

Probiotics – are they right for you?

Probiotics may be beneficial to some people undergoing bowel cancer treatments, but everyone is different. Always discuss with your medical team before taking probiotics.

Probiotics are not recommended for everyone, especially patients who are neutropenic, a side effect of chemotherapy where the white cell count drops to a low level, increasing susceptibility to infection.

The bowel is home to a diverse population of trillions of microbes and bacteria, essential to our overall and digestive health. During treatments for cancer (chemotherapy and radiotherapy), this balance is disrupted as gut cells are damaged, affecting bowel function and the absorption of nutrients.

In some cases, probiotics may be recommended by your medical team before or during treatment to promote a healthy balance of 'good bacteria', to help reduce diarrhoea, abdominal cramping and bloating, and improve bowel movements. For example, some people may suffer less diarrhoea if taking probiotics during radiotherapy.

Probiotics can be taken in supplement (capsules) or powder form, and they can also occur naturally in some foods. Always check with your medical team and specialist to see if probiotics are appropriate for you.





Considerations for vegetarian and vegan diets

A carefully balanced vegetarian or vegan diet can provide additional health benefits, and many people choose this dietary approach. If well balanced, these diets generally are higher in fibre, phytochemicals (beneficial plant compounds), and plant-based foods that support good health, e.g. vegetables, fruit, whole grains, nuts/ seeds, legumes and soy products like tofu.

Meat and fish are excluded in vegetarian diets, so essential protein is derived from other foods like eggs, milk and dairy products, nuts/ seeds and legumes and soy products. In vegan diets, all animal foods are excluded, so protein sources are from plant foods only.

The level of some nutrients may be lower in vegetarian diets, and so careful planning is needed to ensure a balanced diet during cancer treatment. For example, Vitamin B12 can be lacking in vegan diets. Supplements and fortified foods can provide necessary levels of B12 (along with folate) to ensure normal production of red blood cells and keep the nervous system healthy.

Treatment for bowel cancer may change your ability to digest high fibre foods such as nuts, vegetables and beans. Good nutrition plays an important part in a healthy recovery from surgery and treatment, and you may choose to include foods you don't normally eat to provide all the essential nutrients you need for recovery.

Discuss your dietary needs with your medical team to make sure you are getting all of the nutrients you require. For more specialised help, ask to see a dietitian who can help you plan a balanced and nutritious diet. Supplements may be needed for a period of time.

Healthy eating after treatment

During bowel cancer treatment, it may have been difficult to eat all the foods you used to enjoy. This can vary from person to person, so don't be too concerned. After completing treatment, you can work towards including a wider variety of healthy foods each day. Following a healthy, balanced diet can help you feel better, both physically and emotionally, and stay well.

The NZ Ministry of Health (MoH) publishes evidence-based healthy eating and activity guidelines for all New Zealanders. Following these recommendations helps you optimise your diet and health.

For more information on healthy eating choices, visit the MoH website at www.healthed.govt.nz/resource/healthy-eating-active-living

Some of the key recommendations are summarised on the following pages.

Healthy eating:

- helps your body to work well and helps you to feel good,
- can lower your risk of heart disease, stroke and some cancers and help you to have a healthy body weight,
- means eating a variety of foods that give you the nutrients your body needs.

The four food groups

Enjoy a variety of nutritious foods, including:

- Plenty of vegetables and fruit
- Grain foods, mostly whole grain and those naturally high in fibre
- Some milk and milk products, mostly low- and reduced-fat
- Some legumes*, nuts, seeds, fish and other seafood, eggs or poultry, or red meat with the fat removed.

*Legumes include lentils, split peas, chickpeas and cooked dried beans (e.g. red kidney beans, baked beans).

Vegetables and fruit

At least 3 servings of vegetables and at least 2 servings of fruit every day.

Vegetables and fruit provide fibre, vitamins, minerals and antioxidants.

- Include them in most meals and have as a healthy snack.
- Eat many different coloured vegetables and fruit.

See table on page 34 for serving sizes and examples.

Grain foods

At least 6 servings every day.

Choose whole grain and those foods naturally high in fibre, vitamins and minerals.

Examples include:

- whole grain bread
- porridge made with whole or rolled oats
- brown rice

Refined grains have fewer naturally-occurring nutrients and much less fibre than whole grains.

Examples of refined grains include:

- white bread
- white rice
- many breakfast cereals (e.g. puffed rice).

See table on page 34 for serving sizes and examples.

Milk and milk products

At least 2 servings every day.

Choose low-fat or reduced-fat milk and milk products.

Milk, yoghurt and cheese provide protein and vitamins, and minerals, including calcium.

- If you choose a plant-based milk (e.g. soy, rice or almond), make sure that it has added calcium (and vitamin B12 if you avoid animal-based foods).

See table on page 34 for serving sizes and examples.

Legumes, nuts, seeds, fish and other seafood, eggs or poultry (e.g. chicken), or red meat with the fat removed

At least 2 servings every day of legumes, nuts or seeds OR at least 1 serving of seafood, eggs, poultry or red meat every day.

These foods provide protein to the diet. Legumes include lentils, split peas, chickpeas and cooked dried beans (e.g. red kidney beans, baked beans). Legumes, nuts and seeds are high in fibre, vitamins and minerals.

- Try to include legumes in some of your meals. For example, add lentils or a can of kidney beans to mince or a casserole.

See table on page 34 for serving sizes and examples.

Nuts and seeds are also high in healthy (unsaturated) fats

- Eat small amounts to avoid weight gain.
- Choose unsalted, raw or dry-roasted nuts and seeds.

Oily fish (e.g. salmon, tuna, sardines, and mackerel) and some seafood such as mussels are good sources of omega 3, which may reduce your risk of heart disease and stroke

- Fresh or frozen fish or fish canned in spring water are all good choices.

Red meat, chicken and fish all contain iron in a form that your body can easily absorb.

If choosing red meat, eat less than 500 g of cooked red meat a week.

If you choose not to eat red meat, chicken or fish, you can find more information on eating healthy for vegetarians on the NZ Ministry of Health website.



Food groups and serving sizes

Food group	Advice	Serving size examples
Vegetables and fruit (includes fresh, frozen and canned)	At least 5 servings per day: at least 3 servings of vegetables and at least 2 servings of fruit.	<ul style="list-style-type: none"> • ½ cup of cooked vegetables or ½ cup of salad • 1 medium potato, or similar size piece of kumara, yam, or taro • 1 medium apple, pear, banana or orange • ½ cup of fresh or stewed fruit salad
Grain foods	At least 6 servings per day (mostly whole grain and those naturally high in fibre)	<ul style="list-style-type: none"> • 2 breakfast wheat biscuits • 1 whole grain bread roll or 1 sandwich slice of whole grain bread • ½ cup of cooked porridge/ rolled oats or ½ cup of muesli • 1 cup of cooked pasta or brown rice
Milk and milk products	At least 2 servings per day (choose low- or reduced-fat options)	<ul style="list-style-type: none"> • 1 glass (250ml) of milk or calcium-added soy or rice milk • 1 small pottle of yoghurt (125–150g) • 2 slices (40g) of cheese (e.g. edam)
Legumes*, nuts, seeds, fish and other seafood, eggs, poultry or red meat with fat removed	At least 2 servings of legumes, nuts, and seeds per day OR At least 1 serving of fish and other seafood, eggs, poultry or red meat per day	<ul style="list-style-type: none"> • ¾ cup of cooked dried beans, peas or lentils • Small handful (30g) of nuts or seeds • 1 medium fillet of cooked fish (100g) • 1 egg • 2 chicken drumsticks or 1 chicken leg • 2 slices of cooked meat (100g) (e.g. roast lamb, chicken, beef or pork) • ¾ cup of mince or casserole

* Legumes include lentils, split peas, chickpeas and cooked dried beans (e.g. red kidney beans, baked beans)

A day of healthy eating could look like this

Breakfast

Rolled oats cooked with low-fat milk
 A handful of frozen berries or fresh fruit
 2 teaspoons sunflower/ pumpkin seeds
 A cup of tea

Lunch

A wholegrain wrap (bread) filled with tuna (canned in water) lettuce, tomato and relish
 An apple or an orange
 A pottle of natural yoghurt
 A glass of water

Dinner

Chicken baked with a little olive oil, mashed potato, carrots and peas
 Fruit salad with yoghurt
 A glass of water

Snacks

A handful of raw almonds
 Grainy crackers spread with cottage cheese and topped with sliced tomato
 A banana

Fluids

Water is best, aim for 6-8 cups a day

Are you eating from the four food groups every day?



Better lifestyle choices now and for the future

When you are recovering from bowel cancer, it's normal to want to do everything you can to optimise your health. A nutritious diet, including a wide variety of foods and regular physical activity, are the mainstays of keeping healthy.

Research shows lifestyle factors such as a well-balanced diet, maintaining a healthy weight, and regular exercise after diagnosis are associated with a reduced risk of bowel cancer recurring.¹

You may be more motivated than ever to make better lifestyle choices, but you don't need to change everything overnight. You'll have more success by setting realistic, achievable goals to introduce healthy habits one at a time.

Committing to long term healthy eating starts with small steps. It helps to share your goals with a friend or family member who can support you along the way.

A first goal might be to eat more veggies and fruit. You could start by committing to eat at least 3 servings of vegetables and 2 servings of fruit on a daily basis. Keeping a food diary can help you track your progress. Once you have achieved a goal, move on to the next.

¹Meyerhardt JA, Niedzwiecki D, Hollis D, et al. (2007). Association of dietary patterns with cancer recurrence and survival in patients with stage III colon cancer. JAMA, 298: 754-64

If it's exercise you'd like to focus on, choose physical activities you enjoy and build up gradually as you recover. Before you start post-treatment activity, talk to your medical team who can advise you on the best form of activity. You might start with a goal of walking 10 minutes every day, and then build up gradually to 30 minutes every day. Walking, swimming, gardening and housework all count as physical activity.

In addition to a balanced diet, these suggestions will help your overall health, and may reduce the risk of cancer recurrence:

- Avoid processed meats such as sausages, pastrami, ham, salami and bacon. They contain high levels of fat, salt and preservative.
- Limit red meat intake to 500g per week (cooked weight) and choose lean, low-fat options. Trim visible fat off before cooking and avoid eating burnt or charred meat.
- Achieve and maintain a healthy weight. It helps to limit highly processed, energy-dense foods full of fat and sugar, e.g. meat pies, pastries, cookies, chips, fast-food, and sugary drinks such as fizzy drinks. Eating too much of these foods encourages weight gain.
- There is no safe limit for alcohol when it comes to certain cancers. Drinking alcohol raises your risk of several cancers, including bowel cancer. Research shows bowel cancer risk increases significantly when two or more alcoholic drinks are consumed per day. If you choose to drink alcohol, limit the amount and follow safe drinking guidelines.
- Move your body. Do at least 30 minutes of physical activity on 5 or more days per week or aim for 150 minutes per week.
- If you smoke, seek help to quit.

Enjoying experiences: travelling and eating out

Of course, you can return to doing the things you enjoy. It just takes a little planning and preparation to make sure activities like holidays, travel and eating out run smoothly without too much stress.

At first, eating out and travelling may make you feel anxious about the chance of unpredictable bowel habits and how you'll manage. If bowel habits have an adverse effect on your life long term, your medical team or GP may be able to assist.



Below are some suggestions to help you feel more confident:

- Make sure you know where the toilets are as soon as you arrive somewhere new.
- Ask ahead if you have special dietary requests. Most cafés and restaurants can be flexible and adapt dishes if they have advance notice.
- When travelling, take a few safe food options you tolerate well, e.g. breakfast cereals, tetra packs of drinks, muesli bars, plain crackers etc.
- Deep-fried, high-fat foods can be a problem and cause urgency and loose motions. If in doubt, choose foods you know are safe options
- Medications such as loperamide and codeine phosphate can allow you to travel more comfortably on long road trips or flights, or even to enjoy an evening out with friends.

Supporting someone you love

Friends and family often struggle to know how to help a loved one going through bowel cancer treatment.

Support can be offered in many practical ways, like preparing food and drinks, doing the washing, cleaning the house, or looking after children or pets.

Don't be afraid to offer emotional support if you can. Ask how your loved one is feeling, give them space and time to share their concerns, fears, and hopes for the future. You don't need to find solutions for them. Often the best therapy is simply being present and listening.

Preparing and providing food is a valuable way to offer support and show you care. If food is not eaten, try not to take it personally. It's common for appetite to come and go, and large portions can be too much for someone recovering from treatment.

Small servings of plain food may be well received. Toast, crackers, soft fruit, jelly, yoghurt, ice cream, or a scoop of mashed potato with some gravy, may be ideal during treatment and recovery.

As much as you can, try to make mealtimes a relaxed experience. If you are concerned your loved one is not eating enough, talk to the medical team. They can review medication if nausea and vomiting is a problem, or ask a dietitian for a nutrition review.

This is an emotionally exhausting time for you as a caregiver. You don't need to do it alone. Reach out for support if you need to.

Support services

Bowel Cancer New Zealand

We are a national charity for people and their whānau affected by bowel cancer. We are working to raise awareness of symptoms, promote early diagnosis, and encourage fair and affordable access to treatment for you. We are committed to reducing the impact of bowel cancer on our community through awareness, education, support and research.

Bowel Cancer New Zealand Inc.
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info@bowelcancernz.org.nz

Bowel Cancer New Zealand Patient and Family Support Group

Our Facebook group provides a forum for people to discuss bowel cancer and their journeys with others going through similar experiences, all within a supportive environment. All are welcome, and the closed group allows maximum privacy. Only members of the support group can see the posts. Join by searching on Facebook for 'Bowel Cancer New Zealand Patient & Family Support Group'.

Bowel Cancer New Zealand Nurse Support

You are not alone. Our registered nurse is available to answer any questions you might have about your diagnosis and to help you navigate your treatment path. We are here for you.
Email: here4you@bowelcancernz.org.nz

Ostomy NZ

Joining a local ostomy support group offers opportunities to share with others in a safe environment, to pick up information and practical tips. The experiences shared are common to most people. To find if there's a support group in your area, visit their website www.ostomynz.org.nz

OstoMATES (Facebook page)

OstoMATES is a closed Facebook page, a place where people with an ostomy can ask questions, chat, and just be there as a support for each other within New Zealand. Join the group by searching for OstoMATES NZ on Facebook.

Notes for healthy eating



Bowel Cancer
NEW ZEALAND

*Reducing the impact of
Bowel Cancer on our community*

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