

Information about

Gastrointestinal Disease

Dietary Advice for Chronic Gastrointestinal Disease

Gastrointestinal conditions that can result in poor nutrition:

- **Inflammatory Bowel Disease: Crohn's Disease and Ulcerative Colitis**
- **Coeliac disease**
- **Short Bowel Syndrome**
- **Previous gastrectomy (surgical removal of part or all of the stomach)**
- **Chronic Pancreatitis**
- **Chronic Liver Disease**
- **Cancers of the gastrointestinal tract**

Detailed information of these conditions can be found in other Digestive Health Foundation publications available at www.gesa.org.au

Coeliac disease is a condition of the small bowel that requires a specific gluten-free diet. Information about coeliac disease, including dietary advice, can be found in a brochure at www.gesa.org.au.

What are the symptoms of Chronic Gastrointestinal Disease?

People with gastrointestinal diseases may experience a range of symptoms including weight loss, pain in the abdomen, nausea, vomiting, bloating, passage of excess wind or heartburn. Change in bowel habit such as constipation or diarrhoea (frequent or loose bowel motions, sometimes with blood and mucus) may also be noticed. Fatigue and tiredness are also common. The symptoms and their severity vary from person to person and across the different gastrointestinal diseases and may worsen or improve over time. Children in particular need to be monitored, as some gastrointestinal diseases can disrupt normal growth and delay puberty.

Weight loss due to gastrointestinal illness is always a sign of concern, and you should consult a doctor promptly if you find you are losing weight without effort.

Some gastrointestinal conditions interfere with the normal absorption of important nutrients such as vitamins and minerals. Deficiencies of iron, folate and vitamin B12 can result in anaemia (low red blood cell count), vitamin D deficiency can lead to thinning of the bones, and vitamin K deficiency can lead to bruising. Low blood protein levels can lead to swelling in the tissues, particularly in the legs.

Frequent diarrhoea may cause dehydration and losses of important nutrients such as sodium, potassium, magnesium and zinc, which can have serious health consequences.



An information leaflet for patients and interested members of the general public prepared by the Digestive Health Foundation

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Factors contributing to poor nutrition

People with chronic gastrointestinal disease may develop poor nutritional health due to:

1. Not eating enough nutritious foods

Sometimes, for different reasons, you simply might not be able to eat enough food at all, let alone be able to focus on wholesome nutritious food. You may also not want to eat for fear of causing gastrointestinal symptoms (e.g. pain, nausea or diarrhoea). Many patients are also advised, or choose through their own research, to follow very restrictive diets. These often limit the variety of foods consumed. If you believe food is contributing to your symptoms, please seek the advice of your gastroenterologist and Accredited Practising Dietitian before changing your diet.

2. Malabsorption

Inflamed and infected areas of the lining of the bowel can result in some nutrients being poorly absorbed. Also, if you have had bowel surgery which has reduced the length of your bowel, you will have a smaller surface area through which to absorb your nutrients. Overgrowth of bacteria, which may occur in a diseased or shortened intestine, can also prevent proper absorption of some nutrients. Not producing enough enzymes or bile acids to assist in the breakdown of foods can also mean nutrients are poorly absorbed.

3. Increased losses of nutrients

If you have chronic diarrhoea, you may lose essential nutrients including sodium, potassium, magnesium, zinc, calcium and copper. Bleeding from your gastrointestinal tract can result in loss of iron from the body. In some conditions, protein can be lost from the body through the intestine.

4. Increased requirements

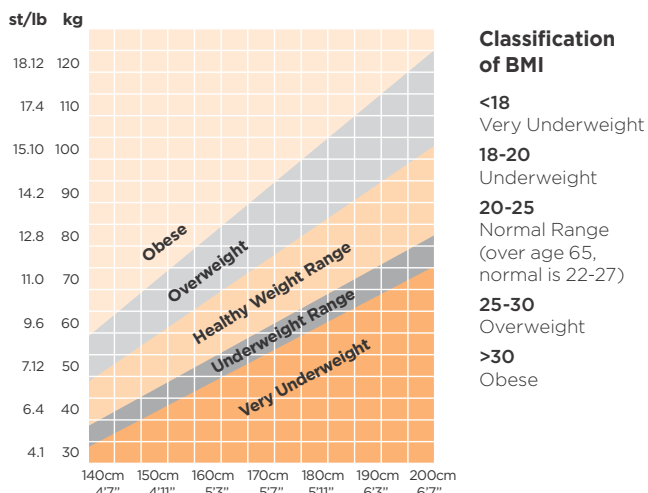
Your body needs to take in many more nutrients during times of infection, inflammation and fever than when you are healthy. If you have become malnourished due to your condition, then you will also have increased requirements to replenish your nutritional stores. Children also have greater nutritional requirements to ensure normal growth and development.

5. Drug-induced malabsorption

Some medications prescribed to treat bowel conditions can impair the body's ability to absorb some nutrients. Example, steroids reduce intestinal absorption of calcium. Methotrexate can both reduce the absorption of folate and cholestyramine, and can contribute to depletion of the fat soluble vitamins A,D,E and K. This problem can be fixed by using specific vitamin and mineral supplements as recommended by your doctor.

Monitoring your weight

The graph below shows various weight ranges.



How important is diet?

A healthy, balanced eating pattern is recommended for all people, and is especially important for normal growth and development in children. It is important to eat enough to prevent weight loss, while some people are also advised to take nutritional supplements to maintain their weight. If you find that you can eat a normal mixed balanced diet without any ill effects, then continue to do so. Eating a nutritious diet is a good approach to optimise your general health. Dietary management should focus on both increasing body weight in someone who is underweight, maintaining body weight in people at risk of losing weight, and control of symptoms.

Underweight management

- **High energy diet** – People with poor food intake and increased needs may also benefit from a high-energy diet. Add grated cheese to soups, sauces, vegetables, casseroles or mashed potato. Add cream to soups, pies, fruit, pudding, jelly etc. Butter or margarine can also be added to meats, soups, sauces, vegetables and mashed potato, or eaten with bread and dry biscuits. Use salad dressing or mayonnaise on salads, with eggs or in sandwiches. Sugar, honey or golden syrup can be added to foods such as breakfast cereals, custard & yoghurt. In general, low-fat products should be avoided. Some of these suggestions are high in fat and may not suit all people, so consult your doctor or dietitian for personalised advice.
- **High protein diet** – People with chronic liver disease, poor food intake, who are underweight and/or have increased protein needs may benefit from this diet. A high-protein diet is important to maintain muscle mass and strength as well as good immune function. Protein is found in meat, fish, poultry, eggs, nuts, seeds, legumes (e.g. baked beans, soy beans, lentils etc.), milk, cheese, yoghurt and any foods made from these. By having protein at each meal and

high-protein snacks in between meals you will be following a high protein diet. A dietitian can provide additional advice tailored to your individual needs and assist you in planning a high-protein, high-energy diet.

• **Other hints:**

- **Try not to miss meals** – Have small, frequent meals/snacks. Six small meals may be better than 3 large ones. Take advantage of those times you feel hungry and eat what you feel like, when you feel like it!
- **Try to avoid things which reduce your appetite** – Always make sure your mouth feels fresh and clean before starting a meal. The smell of food can sometimes make you feel full - prepare meals ahead of time. Cold foods are often more appealing than hot. If certain foods seem to taste different, try substituting with others for a while.
- **Try to make meal times enjoyable** – Tempt yourself with favourite foods. Keep a supply of appealing meals and snacks on hand (freezer, fridge, cupboards) to have at times when appetite is particularly poor. Try a change of scenery: enjoy eating in the garden or a favourite place while listening to music or watching T.V.
- **Include nourishing foods and drinks** – Try high protein milk drinks, milkshakes or commercial nutritional supplements. If you can only eat a small amount, it is important to include foods that are high in energy and protein.

Symptom management

A small number of people may need to modify their eating pattern, particularly if the condition is active, prolonged or surgery is required. An understanding of the site and the extent of disease is important. Active disease may affect digestion and the absorption of nutrients in different ways. Always consult with your doctor, health care specialist or dietitian before making any changes to your diet. Self-imposed restrictive diets of any kind can lead to nutritional deficiencies.

You may find it helpful to avoid foods that seem to make your symptoms (e.g. diarrhoea) worse, particularly fatty or spicy foods, or foods with a high-fibre content (such as some fruits, vegetables, nuts and wholemeal grains). If so, it is sensible to reduce the amount of these foods in your diet during a flare up. Reintroducing food once your symptoms improve (or finding suitable alternatives) is encouraged to ensure your diet is nutritionally complete.

Some dietary changes that may be suggested for people with chronic gastrointestinal conditions are described below. These are general in nature, and should be used as a guide only.

It is recommended that people requiring dietary changes for symptom relief do so with the advice from an Accredited Practising Dietitian who specialises in gastrointestinal nutrition. The Dietitian's Association of Australia can provide you with contact details of specialist dietitians via www.daa.asn.au, or call 1800 812 942.

- **Low fat diet** – People who experience steatorrhea (loose, fatty or oily bowel motions that contain undigested dietary fats) may benefit from a low-fat diet. If steatorrhea is a problem, you can reduce your fat intake by limiting fatty foods (e.g. fried foods, pastries, butter, margarine and oils), and by choosing low-fat dairy products and lean cuts of meat. Note though, fat should not be eliminated completely from the diet, as it is an important source of energy and is also essential for growth and development in children. Some people with steatorrhea will benefit from medications taken with meals to improve fat digestion. Discuss this with your doctor.
- **No added salt diet** – People with chronic liver disease may benefit from this diet. No added salt means not adding salt while preparing or cooking food, and not adding salt at the table before eating. In addition, foods that have been prepared or cooked commercially with salt also need to be avoided. A dietitian can provide additional advice tailored to your individual needs and assist you in planning a no added salt diet. Further specific guidelines are available from the Digestive Health Foundation at www.gesa.org.au
- **Liquid diet** – If a person has a severe inability to eat, markedly reduced digestion or absorption of foods, or narrowings in the intestine, a liquid diet may be required. It is essential that a liquid diet is nutritionally balanced.
Always consult with your doctor or dietitian before undertaking a liquid diet.
- **Low lactose diet** – Lactose intolerance is the inability to metabolise lactose (a milk sugar in dairy products), because of a lack of the required enzyme lactase in the digestive system. Switching to lactose free milk and dairy products in the diet may be helpful and can be done whilst maintaining adequate calcium intake. Lactose intolerance can be diagnosed with a simple test, after which consultation with your doctor and dietitian is recommended. Further specific guidelines are available from the Digestive Health Foundation at www.gesa.org.au
- **Anti-dumping diet** – This may be required for some months following gastrectomy surgery (removal of some, or all of the stomach by surgery). It is best to speak with a dietitian to assist with planning a meal pattern that is suitable for you, and incorporates nutritious foods that you enjoy while minimising

dumping symptoms. In general, it is recommended to eat small frequent dry meals with lukewarm liquids taken 45–60 minutes afterwards. Avoid simple sugars such as glucose, and increase intake of foods with a low glycaemic index (low GI) in small frequent meals. Lying down for 15–30 minutes after each meal may be helpful.

- **Low residue diet** – During a flare-up of inflammatory bowel disease (IBD) this diet may minimise symptoms of pain and nausea in people with strictures (narrowed segments of the bowel), but it should only be followed short term.

If a low residue diet is required:

- Avoid seeds, nuts, legumes, dried fruits, skin of fruit, corn, wholegrain/wholemeal breads, and cereals (depending on the reason for the low residue diet, some additional foods may be included, or the diet may be more restricted in some circumstances)
- Take a vitamin/mineral supplement to ensure a nutritionally adequate intake
- Monitor weight
- Resume a normal diet as soon as possible

Further specific guidelines are available from the Digestive Health Foundation at www.gesa.org.au

- **Low FODMAP diet** – Reducing the intake of poorly absorbed short-chain carbohydrate food molecules (called FODMAPs) may assist in minimising symptoms of bloating, wind, abdominal pain and diarrhoea (often described as symptoms of irritable bowel syndrome) both during active disease, and whilst disease is in remission. FODMAPs are found in some fruits (apples, pears, mangoes, watermelon, peaches, apricots, cherries, plums and nectarines); some vegetables (onion, leek, garlic, asparagus, artichoke), in legumes (baked beans, kidney beans, lentils, chickpeas) and in grain products such as wheat- and rye- based breads, cereals and pasta. The low-FODMAP diet is detailed and it is recommended you seek further education from a specialist dietitian in order to understand and follow it completely. It is also only something that should be followed strictly short term. You should work with a dietitian to determine your individual tolerance to the FODMAP containing foods.

General good nutrition guidelines

Vitamin and mineral supplements

If you eat a varied diet, there is no need to take vitamin supplements. If dietary deficiencies are suspected or demonstrated (by simple blood tests); oral tablets or occasional vitamin injections may be needed. Vitamin and mineral supplements are recommended in the following situations:

- During long periods of disease flare-ups with poor food intake

- If folate or iron deficient
- With prolonged steroid therapy (1000–1500mg calcium a day is recommended)
- With disease or prior removal of the terminal ileum (the last segment of the small intestine (a vitamin B12 injection every three months)
- With excessive diarrhoea (zinc, potassium, magnesium and copper supplementation)
- With long-term sulphasalazine or methotrexate therapy (folate supplementation)

Almost all children with chronic disease are advised to take supplements to assist in preventing impaired growth and development. Choice of vitamin or mineral supplement should be guided by your health care specialist or dietitian.

Fluid

Ensure adequate fluid intake (at least six to eight cups a day). Extra fluid may be required to compensate for the fluid loss of diarrhoea.

Healthy eating guidelines

The following suggestions should be used as a guide only. Dietary changes may be required at times of active disease. Consultation with a dietitian is recommended for planning a nutritionally adequate diet.

1. Breads and cereals – At least 5 serves

1 serve is a slice of bread or small bowl of cereal, 1/2 cup cooked pasta or rice, 2 crispbreads or 2–3 dry biscuits

- ✓ Choose folate-fortified breakfast cereals where possible

2. Vegetables – At least 5 serves

1 serve is 1/2 cup of vegetables

- ✓ Choose at least one green leafy vegetable and one orange vegetable each day

3. Fruits – At least 2 serves

1 serve is 1/2 cup of fruit or medium piece of fruit

- ✓ Choose citrus, berry and tropical fruit for Vitamin C

4. Milk and milk products – At least 3 serves

1 serve is 1 cup milk, 200g tub of yoghurt, or 2 slices of cheese

- ✓ Choose lactose-free milk, yoghurt and ice-cream if required (hard cheeses are lactose free)
- ✓ If choosing soy or rice milk, ensure fortified with calcium
- ✓ Extra serves may be encouraged if on steroid medication

5. Meat and meat alternatives – 1–2 serves

1 serve is 75–90g cooked meat, chicken or fish, 1 cup cooked lentils or legumes, 2 eggs or 1/2 cup of nuts

- ✓ Extra serves may be encouraged if a high protein diet is required

6. Margarine, butter and oils

3-4 teaspoons

- ✓ Choose poly-unsaturated and mono-unsaturated varieties where possible

7. Fluid

Drink at least 6-8 cups of fluid

- ✓ Ensure adequate fluid intake, extra may be required to prevent dehydration if diarrhoea is problematic. Electrolyte replacement beverages may be recommended

Digestive Health Foundation

This information leaflet has been designed by the Digestive Health Foundation. This is not meant to replace personal advice from your medical practitioner.

The Digestive Health Foundation (DHF) is an educational body committed to promoting better health for all Australians by promoting education and community health programs related to the digestive system.

The DHF is the educational arm of the Gastroenterological Society of Australia (GESA). GESA is the professional body representing the specialty of gastrointestinal and liver disease. Members of the Society are drawn from physicians, surgeons, scientists and other medical specialties with an interest in gastrointestinal disorders. GI disorders are the most common health related problems affecting the community.

Research and education into gastrointestinal disease are essential to contain the effects of these disorders on all Australians.

Further information on a wide variety of gastrointestinal conditions is available on our website.

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