
Gluten-free diet

Summary

- Gluten is a protein found in wheat, rye, barley, triticale and oats.
 - A lifelong gluten-free diet is the only treatment for coeliac disease.
 - A person on a gluten-free diet can still enjoy a wide and varied diet, but it is important to read the labels of all packaged or prepared foods.
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Gluten is a protein found in wheat, rye, barley, triticale and oats. In people with coeliac disease, eating or drinking anything containing gluten causes different symptoms and damage to the lining of the small bowel. Gluten is commonly blamed for gut symptoms experienced by people with irritable bowel syndrome (IBS). However, recent research suggests that the carbohydrate component in wheat, rye and barley is more likely to be the cause of the problem (part of a group of foods known as **FODMAPs**). A gluten-free diet allows bowel healing and symptom improvement in people with coeliac disease.

Gluten-free foods

Despite the restrictions, a person on a gluten-free diet can still enjoy a wide and varied diet. It is important to read the labels of all packaged or prepared foods.

Some gluten-free foods that people with coeliac disease can enjoy include:

- meat products – unprocessed meat, fish, chicken, bacon, ham off the bone and meats that are frozen or canned, but with no sauce
- dairy products – eggs, full-cream milk, low-fat milk, evaporated milk, condensed milk, fresh cream, yoghurt, processed or block cheese, and some custards, ice creams and soy milks
- fruits and vegetables – fresh, canned or frozen (but not sauced), fruit juices
- seeds, nuts and nut butters
- gluten-free cereal and baking products – corn (maize) flour, soya flour, lentil flour, rice (all types), rice flour, rice bran, potato flour, sorghum, buckwheat, millet, amaranth, breakfast cereals made from corn and rice (without malt extract from barley), polenta and psyllium
- gluten-free bread, cakes and biscuits – most rice crackers, corn cakes, rice crispbreads, corn tortillas and corn taco shells, packaged breads labelled gluten free, packaged biscuits and cakes labelled gluten free
- gluten-free pasta and noodles – gluten free pasta, rice noodles, rice or bean vermicelli and 100 per cent buckwheat noodles
- condiments – tahini, jam, honey, maple syrup, cocoa, all vinegars (except malt vinegar), most tomato pastes, some sauces and some salad dressings
- snacks – plain chips, plain corn chips and unflavoured popcorn
- drinks – water, full-cream and low-fat milk, fruit and vegetable juices, tea, coffee, mineral water, wine, spirits and liqueurs.

Gluten-free cereal products

Naturally gluten-free cereal products and grains that can be enjoyed include:

- amaranth
 - arrowroot
 - buckwheat (despite its name it is not a type of wheat)
 - chestnut flour
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- chickpea flour (also known as gram flour and besan)
- coconut flour
- cornflour (from maize) – some cornflours are not made from corn, so always check the label
- cornmeal
- corn tortillas
- lentil flour
- millet meal
- pappadums (most types)
- polenta
- potato flour
- psyllium
- quinoa
- rice (any kind)
- rice bran
- rice flour
- rice vermicelli
- sago
- sorghum
- soy flour
- tapioca
- teff.

Specially made gluten free products

You can buy commercially prepared gluten-free products, including:

- beer
- biscuits
- bread and crumpets
- breadcrumbs
- breakfast cereals
- baking mixes
- cakes
- condiments, including soy and other sauces, mayonnaise, yeast extract spreads
- corn chips
- crackers
- flours
- gnocchi
- muesli bars and other snack bars
- pancake mix
- pastries
- pastas
- potato chips
- seasonings
- smallgoods
- stock and gravy.

Always check the labels of foods and drinks carefully, as gluten can sometimes be contained in products you might think are safe.

Foods that contain gluten

Some foods that can contain gluten include:

- cereal and baking products – wheat, wheat flour, wheaten cornflour, freekeh, spelt, semolina, couscous, wheat bran, barley, oats, porridge, breakfast cereals containing wheat, rye, oats or barley, cereals made from corn or rice that also contain malt extract from barley, some icing sugar mixtures and some baking powders
- pasta and noodles – spaghetti, pasta, lasagne, gnocchi, hokkien noodles, soba noodles and two-minute noodles
- bread, cakes and biscuits – all bread (including spelt and sourdough), pizza, cakes, pastry and biscuits prepared with gluten-containing flours
- meat products – any products prepared with breadcrumbs or batter, sausages and other processed meats or smallgoods (unless labelled gluten free), marinated meats (unless labelled gluten free, or gluten free by ingredient) thickened soups, meat pies and frozen meals
- dairy products – malted milk, ice cream cones (unless labelled gluten free), some ice creams and some soy milks
- fruits and vegetables – textured vegetable protein (found in some vegetarian products) and fruit-pie filling
- condiments – malt vinegar, some mustards, relishes, pickles, salad dressings, stock, sauces, gravy and yeast extract from barley (for example, in Vegemite)
- snacks – liquorice, some lollies, some chocolates, packet savoury snacks and some flavoured potato chips and corn chips, muesli bars
- drinks – coffee substitutes made from cereal, and some milk-drink powders (such as malted milk powder, some drinking chocolate powders, Milo, Ovaltine)
- alcoholic drinks – beer, stout (such as Guinness), ale, and lager (most beers contain gluten, but a range of gluten free boutique beers are now available in Australia).

Food labelling and gluten

All packaged foods have ingredient labels printed on the box, package or bottle. There are three methods of finding suitable gluten-free foods by reading the labelling. These include looking for:

- foods carrying the Coeliac Australia Endorsement logo
- foods labelled 'gluten free'
- foods made for the general market that do not contain ingredients derived from gluten-containing grains (sometimes referred to as being 'gluten free by ingredient').

The product ingredient label may not list 'gluten' as a component. However, under mandatory labelling standards, all ingredients and food additives derived from wheat, rye, barley, triticale or oats must be declared on food labels. Processing aids must also be declared if they are present in the final product.

There is an Australian Food Standard for processed foods labelled 'gluten free'. When foods labelled gluten free are tested there must be 'no detectable gluten'. Currently, this test is sensitive to 0.0003 per cent (three parts per million). This is known as the limit of detection.

Gluten-free labelling in Europe and the US

In the US and Europe, a product can be labelled gluten free if it contains fewer than 20 parts per million gluten.

A note on oats

The current tests for gluten in food can measure the gluten in wheat (gliadin), barley (hordein), and rye (secalin) but not oats (avenin), as it is a slightly different protein. Accordingly, the Australian Food Standards Code prohibits the use of a 'gluten free' claim on oat-containing products.

The Australian food standard differs to the regulations in Europe and the USA, where oats can be marketed as 'gluten free'. More accurately, these 'gluten free' oats are the equivalent of oats labelled 'wheat free' in Australia i.e. there is no measurable contamination with wheat, rye or barley. For this reason, you will find products in these parts of the world that are labelled 'gluten free' but contain oats.

Evidence shows that uncontaminated oats are well tolerated by most people with coeliac disease. However, in some people with coeliac disease, oat consumption can trigger a potentially harmful immune response. Please note that the absence of symptoms when consuming oats does not necessarily indicate they are safe – bowel damage can still occur despite the absence of symptoms.

It is recommended that individuals who wish to consume oats as part of their gluten free diet do so under medical supervision to ensure appropriate review and safety. Undertaking a gastroscopy and small bowel biopsy before and after three months of regular uncontaminated oat consumption can help guide whether an individual with coeliac disease can safely consume oats.

Suggestions about gluten-free cooking

Contact your Coeliac Australia or talk to a dietitian about recommended gluten-free recipe books, websites and apps. As a general rule, when using cookbooks, choose locally published new releases, as overseas publications and older books may contain incorrect or outdated dietary information.

In some cases, you can change existing recipes for cakes and biscuits to make them gluten free. Because gluten is the ingredient in wheat that helps the cooked product to hold together, you may need to use some other types of binding agents.

Suggestions include:

- Replace the role of gluten with xanthan gum or guar gum powders. (You will generally need approximately half a teaspoon for a family-sized cake and one tablespoon for bread). These products are available from health-food stores and some supermarkets. Using gelatine and psyllium husk can also help.
- Add an extra egg to pancake batters.
- Be prepared to experiment and accept that a few of your first attempts may be unsuccessful.

Make your own gluten-free flour

There are many recipes available for gluten-free flour substitutes, or you can buy ready-made gluten-free flour mixes, pastry and baking powder.

One recipe for gluten-free plain flour involves mixing together:

- 6 cups rice flour
- 2 cups potato starch
- 1 cup gluten-free cornflour.

To make gluten-free self-raising flour, add gluten-free baking powder to the above mix, and gums as described above. Baking powder can be made from:

- ¼ cup bicarbonate soda
- ½ cup cream of tartar.

Sweet pastry can be made with:

- 60 g maize cornflour
- ¾ cup milk powder
- 1 ½ cups coconut
- 120 g melted butter.

Gluten-free diet and gluten contamination

To maintain a gluten-free diet, it is important for people with coeliac disease to avoid contaminating their own food with gluten. Tips include:

- Clean out your toaster regularly (including the crumb tray) to avoid a build-up of crumbs. Alternatively, you may choose to use a separate toaster when toasting gluten-free bread, or protect your gluten free-bread in toaster bags.

- Clean all kitchen utensils, chopping boards and appliances that have been used for gluten-containing foods.
- Prevent gluten-containing crumbs in condiments by having a single dip policy. You may need to have separate 'gluten free' spread containers for the family member/s who need to eat gluten free.
- Use a clean pot with clean water to cook gluten-free pasta, and strain it with a clean strainer.
- Use clean oil when deep frying.
- Wash your hands after handling gluten-containing food.

Gluten free diet and travel

Travelling and following a gluten-free diet can present some extra challenges, but nothing a little planning ahead can't fix.

If you are booking flights, be aware that most airlines will offer gluten free meal options. Call the airline, or check if the online booking page permits you to enter dietary requirements. It may be worth following this up a few days before you travel, just to make sure the information got through. Cruise lines are also likely to be able to accommodate gluten-free meal requests.

Always pack some gluten-free snacks in your hand luggage, just in case. Rice crackers, nuts, dried fruit and crisps are some transportable, non-perishable options.

When booking accommodation, consider short stay apartments with a kitchen, or at least a hotel room with a microwave and refrigerator. Then, if you can't find gluten-free eating-out options at your destination, you can at least purchase foods that are naturally gluten free (such as fresh fruit and vegetables, cheese, eggs, meat, fish and rice) and self-cater.

If you are staying somewhere such as a B&B, you could also consider taking toaster bags with you and buying a loaf of gluten free bread at your destination, if possible. Gluten free cereal is available at supermarkets and speciality stores in some places. Or, you could opt to eat naturally gluten free breakfast options such as yoghurt, fresh fruit and eggs. Talk to your host about the possibilities – they may have catered for people with coeliac disease before.

Jump online or download an app to locate nearby restaurants that have gluten-free menu items, and shops that stock gluten-free foods. There are also plenty of gluten-free bloggers out there spreading the word about where and how they have travelled successfully gluten free.

Travel information and restaurant cards in a variety of languages are available to members of Coeliac Australia. These are an easy way to communicate your dietary needs when language is a potential barrier to understanding and safe eating. You can also find gluten free restaurant cards published in different languages online. The level of detail provided varies from card to card, so read the card offered in your own language to check just how specific it is about what you can eat, what you need to avoid, and cross-contamination.

Some travel agencies specialise in organising gluten-free friendly holidays, so if you'd prefer someone else to do the research, this could be the choice for you.

Where to get help

- Your **GP (doctor)**
- **Gastroenterologist**
- **Dietitians Association of Australia** Tel. **1800 812 942**
- **Coeliac Australia** Tel. **1300 458 836**

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Coeliac Australia

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