

Healthy living with diabetes and coeliac disease

Coeliac disease is an autoimmune disease in which the immune system reacts abnormally to gluten causing inflammation and damage to the small intestine. Inflammation can also occur in other parts of the body. The damage to the small intestine affects its ability to absorb nutrients from food, which can lead to nutritional and growth deficiencies. Gluten is a protein found in wheat, rye, barley and oats. The only treatment for coeliac disease is a lifelong gluten free diet. Following a gluten free diet prevents further damage to the small intestine, and allows it to steadily repair itself so that symptoms resolve and nutrition from food can be absorbed properly.

Coeliac disease and type 1 diabetes can occur together because they are both autoimmune conditions. Type 1 diabetes has no known cause or cure. If you have type 1 diabetes your pancreas is no longer producing the insulin your body needs. This is replaced by insulin given by injections or an insulin pump.

It's estimated that 5-10% of people with type 1 diabetes may have coeliac disease. Some people with type 2 diabetes also develop coeliac disease, but the two conditions are not related. For more information on diabetes, visit the Diabetes Queensland website; diabetesqld.org.au.



What are the symptoms of coeliac disease?

The symptoms of coeliac disease can vary from person to person. Symptoms may include: Diarrhoea and/or constipation, weight loss, flatulence, fatigue, abdominal bloating and cramping, anaemia or iron deficiency, fluctuating blood glucose levels, miscarriage and infertility. Children may also show poor growth.

Some people have no obvious symptoms. Although you, or your child may not have any of these symptoms, a lot of people living with both coeliac disease and type 1 diabetes report feeling better once starting the gluten free diet.



How is coeliac disease diagnosed?

A blood test is used to screen for coeliac disease. This test measures antibody levels in the blood. If this is positive, a referral to a gastroenterologist is required to confirm the diagnosis. For more information on Coeliac disease diagnosis, visit: coeliac.org.au/s/coeliac-disease/diagnosis.

It is important to wait until your diagnosis is confirmed before you start on the gluten free (GF) diet. People with type 1 diabetes may have coeliac disease without any symptoms, so screening is important to detect this condition. Ask your diabetes health care team for more information.

The Gluten Free Diet

The GF diet requires complete avoidance of the grains wheat, rye, barley, oats and ingredients derived from these grains. Obvious sources of gluten include bread, breakfast cereals, pasta, pastry, pizza, biscuits, crackers, cakes, batter and breadcrumbs (GF substitutes are available). Many foods are naturally GF such as fruit, vegetables, meat, eggs, legumes, nuts and dairy.

It's important to know how to read and understand food labels to follow a GF diet. Speak to your dietitian and access resources from Coeliac Australia to assist you with this.

What happens if you don't follow a GF diet?

Left untreated, coeliac disease increases the risk of developing other medical problems such as intestinal damage, growth failure, low vitamin D levels, low iron stores, infertility, osteoporosis and some cancers. In those with diabetes, it can also lead to variable BGLs.

Monitoring your BGLs

It's important to continue monitoring your blood glucose levels (BGLs) as you start on the GF diet; as your small intestine heals, and the absorption of food improves, you require insulin adjustments.

Hypoglycaemia (hypo) treatment

Blood glucose levels (BGLs) of 3.9mmol/L or below need to be treated immediately with 15g of fast-acting GF carbohydrate. Suitable options include: 1/2 glass or 125ml of fruit juice, 3 teaspoons of honey, sugar, GF lollies and glucose tablets (check food labels and serving sizes to provide 15g of carbohydrates). Your dietitian / diabetes team can provide an hypo treatment plan to manage low BGLs and suitable GF treatments. It's important not to over-treat hypos as this will lead to high BGLs.

Healthy eating

Healthy food choices are important when living with coeliac disease and type 1 diabetes. This includes: regular GF meals containing high fibre and low glycemic index (GI) carbohydrates, foods low in saturated fat, foods rich in calcium, lean protein, legumes and plenty of vegetables and fruit.

If you've been diagnosed with both conditions it is recommended that you see a dietitian who has experience in managing coeliac disease and diabetes. They can help develop a healthy eating plan that is right for you.

Gluten free carbohydrate foods

Healthy eating for diabetes includes choosing the right type and amount of carbohydrate foods. It is important to note that the carbohydrate amounts in GF food may be different to gluten containing equivalents. Many commonly eaten carbohydrate foods such as breads, cereals, pasta, biscuits and crackers contain gluten, so you will need to avoid these. Look for GF alternatives.

Healthy gluten free tips:

- When shopping – look for foods marked as ‘gluten free’, however be aware that many other suitable foods may not be labelled as “gluten free”.
- Use the Coeliac Australia Ingredient List App to check if the ingredients are gluten free or the FoodSwitch app to check if foods are suitable.
- Shop in a variety of places – different supermarkets, health food stores, and independent grocers may provide different GF options.
- Store gluten free and gluten containing foods separately – have a dedicated pantry shelf, tub, or use different coloured containers.
- Use separate water in a clean pot for cooking or re-heating GF pasta. Use a separate colander for GF pasta, or drain it first.
- Clean oil should be used for deep frying. If sharing with family, cook the GF items first, followed by the gluten containing items.

Try to make the family evening meal entirely or mostly gluten free, e.g. risotto with all gluten free ingredients; fresh meat and veggies with gluten free seasoning, sauce or gravy; or gluten free bolognese sauce with pasta to suit the different dietary needs.

Fibre for a gluten free diet

Dietary fibre helps to keep bowels and ‘the gut’ working regularly and supports ‘healthy bug’ communities. Fibre is important to prevent or treat constipation and decrease the risk of bowel cancer. Removing gluten from the diet removes many high fibre foods such as bread, grains and cereals. fruit, vegetables, nuts, seeds, beans/lentils and whole grains.

As a general rule, a safe range of dietary fibre intake for children is between age plus 5 and age plus 10 g/day. Adult females need at least 25g/day, and men need at least 30g/day of fibre.

Bread

Made from rice, corn, potato, soy or flour made from GF grains. Includes GF pizza bases, GF corn tortillas, GF pancakes GF wraps and GF muffins

Breakfast cereals

GF rice flakes, GF muesli, **rice bran**, GF cornflakes, puffed rice and corn, rice porridge, GF breakfast bix

Crispbread

Corn thins, rice cakes, corn cakes, GF crackers

Dairy products and alternatives*

Milk, GF calcium fortified soy milk, GF custard, GF yoghurt and GF ice cream

Grains

Quinoa, buckwheat, sorghum, chia, tapioca, polenta, teff and amaranth

Fruit

All types of fruit, are gluten free

Foods **in bold** have a lower GI, which means they raise blood glucose levels slowly. Including low-GI foods as part of a healthy eating plan can help manage your blood glucose levels. Visit glycemicindex.com for up-to-date information

*Always check the ingredient list to make sure the product is GF

Legumes*

Kidney beans, chickpeas, lentils, three-bean mix, butter beans, black eye beans, GF baked beans

Pasta

Corn pasta, **rice pasta, rice vermicelli, rice noodles, bean thread (mungbean) noodles, buckwheat soba noodles**

Rice

Basmati (white or brown), Doongara™ (SunRice^R Clever Rice or SunRice^R Low-GI brown Rice), SunRice^R brown rice and quinoa blend, **SunRice^R low GI long grain**, white rice, Arborio rice, brown rice, jasmine rice

Vegetables containing carbohydrate

Potatoes, sweet potato, **sweet corn**, taro, yam,, cassava and **Carisma™ potato**



Parties and eating out and travelling

It is important for you, or your child not to feel left out when attending parties, eating out in restaurants or visiting others.

- Call in advance and let the host know you require a GF diet. Offer to bring food and provide some ideas and suggested brands for GF foods. For school, ask if you can keep some individually wrapped and labelled GF cupcakes in the staffroom freezer for those times cake is shared in class. Alternatively, leave a GF option with the teacher so your child can participate in social events.
- For restaurants, try to research ahead of time. Check Coeliac Australia's list of accredited restaurants. Look at menus online for GF options. You can also call ahead at a time when staff are less likely to be busy. Be the last person to order your meal, so your request is more likely to be remembered.
- Some different cuisines offer a large selection of naturally GF dishes. Different restaurants may use different ingredients and processes, so always ask if the dishes are GF. Try: Thai, Mexican, Vietnamese and Indian cuisines.
- As coeliac disease requires a strict lifelong GF diet, it is important that other family members are aware. Make sure they have basic education on the GF diet, and they are aware that it is not okay to have a little bit, as this can still cause intestinal damage.
- When travelling, try to research ahead of time. Coeliac Australia provides cards in various languages which state you have coeliac disease and require a GF diet.

Alcohol

The distillation process removes the gluten protein from alcohol. The only alcoholic beverage that is not GF is normal beer. Gluten free beers are available. Wine, spirits and ciders are GF.

Valuable information

- Coeliac Australia Ingredient List App.
- The FoodSwitch app is available on Apple and android mobiles, which has a GlutenSwitch feature which allows you to scan barcodes of packaged products to let you know whether or not it's GF, and suggests other GF foods.
- Join Coeliac Australia to access valuable information and support to manage coeliac disease. The Coeliac Australia website also has valuable information to get you started coeliac.org.au.
- The Live Your Life Community is an easy way for you to connect with others who understand the day to day of living with diabetes. A place where you'll find caring support and practical tips and advice. diabetesqld.org.au/join