

Coeliac disease and kids: from diagnosis to a new diet

Key points:

- Symptoms of coeliac disease include low iron, poor growth or gastrointestinal symptoms,
- but some infants and young children don't get any obvious symptoms.
- Testing for coeliac disease is simple and having a diagnosis is important for improving health.
- The only treatment for coeliac disease is a strict, lifelong gluten-free diet which allows the small intestine to heal so that it can absorb essential nutrients.
- Do not remove gluten from your child's diet without discussing this with your doctor.
- Grains are an important source of energy, fibre and B vitamins.
- A gluten-free diet requires planning to ensure your child gets the nutrients they need for healthy growth and development.

Finding out your child has coeliac disease may come as a shock, followed by a period of adjustment to a new way of eating. Once coeliac disease is diagnosed, your child needs to eat a gluten-free diet. Many common foods need to be replaced with gluten-free alternatives and you will also need to learn to identify hidden sources of gluten, particularly in packaged foods or when eating away from home. Initially, you may spend more time than usual in the supermarket, getting to know products that are suitable. By removing all foods containing gluten from your child's diet, the small intestine will heal and return to normal.

What is Gluten?

Gluten is a protein found in the cereal grains: wheat, rye, barley, oats, triticale and spelt wheat.

People with coeliac disease are sensitive to gluten and need to know which foods contain gluten. Many foods are obvious sources of gluten, such as most bread, pasta and breakfast



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cereals. There is also a whole range of ingredients that may contain gluten. Flour is often added to products to thicken them or make them smooth. For example, wheat flour could be put into the sauce that goes with baked beans.

What is coeliac disease?

Coeliac disease is an 'autoimmune' condition where the small intestine becomes damaged when foods containing gluten are eaten. The small intestine is lined with tiny finger-like structures called villi which help absorb food nutrients. In people with coeliac disease, the villi become flat and inflamed when gluten-containing foods are eaten. The damaged villi cannot absorb many nutrients needed by the body.

What are the symptoms of coeliac disease?

Coeliac disease is usually diagnosed after investigation of symptoms such as poor growth or gastrointestinal symptoms. However, some infants and young children don't suffer any obvious symptoms but are still at risk for the complications of undiagnosed coeliac disease. Testing for coeliac disease is simple and getting a diagnosis is important for improving health. See your doctor about testing for coeliac disease if your child has any of the following symptoms or issues:

- Persistent, unexplained abdominal or gastrointestinal symptoms, such as stomach pain, diarrhoea and bloating
- Faltering growth or failure to thrive
- Prolonged fatigue
- Unexpected weight loss
- Severe or persistent mouth ulcers
- Unexplained iron, vitamin B12 or folate deficiency

What is the treatment for coeliac disease?

The only treatment for coeliac disease is a strict, lifelong gluten-free diet. The sensitivity to gluten remains throughout life. Care must be taken to avoid all sources of gluten as eating even very small amounts of gluten can cause further damage to the small intestine and affect growth, even if your child doesn't get symptoms from these foods. By removing all foods containing gluten from your

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child's diet, the symptoms of coeliac disease can be managed and the small intestine can return to normal.

Common foods that contain gluten include:

- bread
- cakes
- biscuits
- breakfast cereals
- pizza bases
- pasta
- pastry
- crumbed or battered food



Identifying gluten-free products

There are 3 groups of foods that are suitable for those on a gluten free diet:

1. Naturally gluten-free
2. Labelled gluten-free
3. Gluten-free by ingredient

1. Naturally gluten-free foods

There is a wide variety of fresh foods that are naturally gluten-free. These include:

- Fresh fruit and vegetables
- Fresh meat, poultry and fish eggs
- Nuts and legumes
- Oils
- Grains: rice, corn (maize), soy, sago, tapioca, buckwheat, millet, amaranth, sorghum, quinoa, arrowroot Milk (note: some flavoured milk and soy milk may contain gluten).

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2. Foods labelled gluten-free

The Coeliac Australia Endorsement Logo incorporates the internationally recognised cross grain logo. Products that have the endorsement logo have been tested and show no detectable gluten, therefore are suitable for a strict gluten free diet.

For foods labelled 'gluten free' but not carrying the Coeliac Australia Endorsement logo, it is best to check the ingredients list.



3. Gluten-free by ingredient

Use the tables below to check the ingredients list on food labels to determine whether packaged foods are gluten free. If you are unsure of the gluten content of any food, use the general rule: 'if in doubt, leave it out'. Food labels constantly change so it is a good idea to read them regularly.

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✘	✔	✔	?
Contains Gluten	Gluten-free	Gluten-free	May contain gluten
<hr/> Wheat Rye Barley Oats* Semolina Cous cous Triticale Pasta Noodle Crumbs Wheat vermicelli Farina Burghul Spelt Durum Hydrolysed vegetable grain Soy sauce (wheat) Cornflour (wheat derived) Wheaten cornflour Wheat starch Malt Malt extract Starch Modified starch Malt vinegar	Naturally gluten-free <hr/> Rice Corn/maize Sage Soy Tapioca Millet Buckwheat Sorghum Arrowroot Quinoa Amaranth Besan (chickpea) Cornmeal Rapeseed (canola) Dhal Seeds Psyllium Lupin Anti-caking agents Vinegar (except malt vinegar) Maize cornflour Corn starch Modified maize starch Beverage whitener Hydrolysed vegetable protein (HVP)	No Detectable gluten** <hr/> Caramel colour from wheat Glucose syrup from wheat Dextrose from wheat	(if derived from gluten-containing grains) <hr/> Thickeners (1400s) Dextrin Maltodextrin Pre-gel starch Baking powder Stock

* Oats are not included in a gluten-free in Australia. Oats are gliadin-free, but not gluten-free as they contain avenin. Some people with coeliac disease will react to pure oats and you can't rely on the absence of symptoms to confirm tolerance.

** These ingredients are so highly processed that they are gluten free, even though a gluten source may be indicated.

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Check food labels!

Labelling laws require food labels to specify when ingredients are derived from gluten-containing grains. All ingredients derived from gluten-containing grains will be declared in the ingredients list. If the ingredients are not derived from gluten-containing grains, they are just listed without their source.

Advisory statements

It is important to check the label for an advisory statement such as:

- May contain gluten/wheat
- May contain traces of gluten/wheat
- Manufactured on the same line as gluten/wheat containing products.

These statements advise potential contamination risks and some gluten may be found in the product. Products marked with these labels would NOT be considered gluten free and are NOT suitable for a person with coeliac disease.

Either/or statements

Where an either/or statement is used, e.g. maltodextrin (wheat or maize), there is no way of knowing whether the product is gluten free or not. This product would NOT be considered safe to eat.

Hidden gluten

Some brands of the following items may contain gluten:

- Processed meats – sausages, smallgoods, bacon, rissoles, crumbed items, meats with marinades
- Cornflour – some cornflours contain wheat
- Stocks (gluten free varieties are available)
- Gravy (gluten free varieties are available)
- Sauces – barbecue, soy sauce, sweet chilli, worcestershire (gluten free varieties are available)
- Icing sugar mixture – some contain wheaten cornflour
- Mayonnaise – some contain wheat (gluten free varieties are available)

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- Vinegars – malt vinegar is not gluten free as it contains barley (but all other varieties are gluten free)
- Salad dressing (gluten free varieties are available)
- Mustards – always check the label
- Flavoured milks – may contain malt (barley)
- Soy milk – some brands contain gluten
- Barbecue chicken – contains gluten in the stuffing and coating.
- Hot chips – some chips contain wheat dextrin and some seasonings may also contain wheat. There is also a contamination risk if foods containing gluten are cooked in the same oil as the chips.
- Ice cream – some brands may contain wheat
- Chocolate – some brands may contain wheat.

Taking care when you eat out

Eating out is an important social activity that your child can still enjoy, but you and your child need to take extra care to avoid mistakenly eating foods with gluten. Many restaurants will state gluten-free items on their menus but it's still a good idea to let staff know that your child can eat only food that is strictly-gluten free.



How do I balance my gluten free diet?

It takes extra planning, especially when commencing a gluten-free diet, to follow a balanced and nutritious gluten-free diet. Grains are an important source of energy, fibre and B vitamins. Cutting out familiar gluten-containing grains means that you will need to find substitute grains which are gluten-free. Since many of these substitutes may be unfamiliar to you, it will take time and effort to include them regularly. It is important to see an Accredited Practising Dietitian to ensure your child is getting all the nutrients they need for healthy growth and development.

Your doctor may also suggest that your child has a low lactose diet for a short period. This is because the changes of coeliac disease can lead to temporary lactose-intolerance. However, once your child's small intestine recovers with a gluten-free diet they will be able to tolerate lactose again. Milk

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and yoghurt are important for your child's bones and teeth, so including them when possible is important.

Medications & Supplements

Ingredients containing wheat, such as wheat starch, are sometimes used in medications and supplements. If your child is taking medication or supplements, check with a doctor or pharmacist to find out whether they contain gluten as it is not always declared on the label. If in doubt, it is best to contact the manufacturer. A daily multivitamin supplement may be necessary. It is a good idea to discuss this with an Accredited Practising Dietitian.

Avoiding contamination

It is important to remove all sources of gluten in your child's food. Even small amounts of gluten can cause damage to the small intestine of someone with coeliac disease. As little as 1/100th of a slice of bread can cause damage, even if it doesn't cause symptoms.

- Ensure that cooking utensils and appliances are thoroughly cleaned before preparing gluten free foods.
- Avoid contaminating dips and spreads with knives or forks that have been used with gluten-containing food
- Use gluten-free flour for dusting meat or fish and lining cake tins before cooking.
- Ensure all gluten free products are stored in separate containers and clearly labelled once they have been removed from the original packaging.
- Clean oil used for deep frying regularly to remove all visible batter or crumbs.

What next?

It is important for your child to have follow-up appointments with their doctor and Accredited Practising Dietitian. Your child's growth and blood levels should be monitored to ensure they recover as expected. It can take over a year for blood levels to return to normal.

Coeliac disease is a medical condition that requires a long-term follow-up plan to maintain good health and prevent complications. A strict, gluten-free diet needs to be followed for life. Although the

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small intestine will recover by following a gluten-free diet, the body will always react to gluten in someone with coeliac disease.

Membership with Coeliac Australia (www.coeliac.org.au) will give you access to information, resources and updates to stay informed about managing coeliac disease.

Further support

If you are concerned about your child's food intake, eating behaviours, growth or nutrition-related health, contact a GP, paediatrician or Accredited Practising Dietitian who can provide a comprehensive assessment that considers your child's medical history, eating patterns including mealtime experiences, physical activity and genetic factors.

Find an Accredited Practising Dietitian with experience in infant and child growth - <https://dietitiansaustralia.org.au/find-an-apd/>

Coeliac Australia - www.coeliac.org.au

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