

Gluten Intolerance

An intolerance to a certain food often develops in adulthood, and may involve a food which has been eaten without any problems for many years. For this reason it is often not recognised.

Gluten Intolerance is a condition where the inner lining of the small intestine is damaged by an immune reaction to gluten in the diet.

A healthy gut wall is lined with folds called 'villi' which increase the surface area for the absorption of nutrients. If this becomes inflamed the villi can become flattened, reducing the surface area.

Gluten is a family of proteins first discovered in wheat. Some of the proteins that make up gluten are called gliadin. Gliadins are long-chain amino acids. Gliadin-like proteins are also found in barley, rye and oats but these foods may be tolerated by people with a gluten intolerance because they often only cause a weak reaction. Rice and corn do not contain these proteins.

A healthy intestine only absorbs single or very short chain amino acids. In susceptible individuals gliadins enter the cells lining the intestine, causing an auto-immune reaction. The severity of the symptoms varies, depending on the length of intestine affected. Symptoms are caused by malabsorption or malnutrition.

Malabsorption

There are three main kinds of nutrients: carbohydrates, proteins, and fat. Absorption of all three can be affected but the main one is fat, which leads to diarrhoea, bad-smelling flatulence, bloating, and yellow stools. Malabsorption of carbohydrates, particularly lactose (found in dairy products), causes diarrhoea, flatulence, bloating and pain.

Malnutrition

Malnutrition is an insufficiency of vitamins and minerals, which may be caused by a reduction in the surface area of the gut wall, as described above. This can lead to any of the following:

- fluid retention
- anaemia (lack of Vit B12 and iron)
- osteoporosis (lack of Vit D and calcium)
- easy bruising (lack of Vit K)
- peripheral neuropathy (lack of Vit B12 and thiamine)
- infertility, miscarriage and low birth weight babies
- muscle weakness (lack of potassium and magnesium)

Treatment and recovery

The only safe effective treatment is a totally gluten-free diet. A partial gluten-free diet may prevent obvious symptoms but malabsorption could lead to complications in later life. One such complication is small bowel ulcers: recurrent episodes of small ulcerations of the gut wall and the formation of strictures causing intestinal bleeding, weight loss, abdominal pain, and obstruction.

It is possible to have a co-existing condition such as Irritable Bowel Syndrome, bacterial overgrowth of the small bowel, microscopic colitis, or pancreatic insufficiency.

People with a gluten-intolerance who change to a gluten-free diet may feel better within 48 hours or a number of weeks.

Improvements in symptoms are followed by the reappearance of the intestinal villi. It may take many months for the small intestine to return to normal.

Diet

Be sure to eat a nutritious diet high in vitamins and minerals. Aloe vera juice, whole apples and cooked fruits and vegetables are helpful.

See page 2 for more dietary advice.

INGREDIENTS TO AVOID	WHERE YOU MIGHT FIND THEM
<ul style="list-style-type: none"> • Wheat flour, • wheat germ or bran, • wheat starch, wheat-based semolina, • rye, • barley, • oats and oat bran • gluten or gluten stabilisers. 	<ul style="list-style-type: none"> *Bread, pasta, crackers, cakes, pies, biscuits, breakfast cereals, noodles, semolina, creamed or breaded vegetables, most packaged rice mixes, baked beans, gravies and sauces, prepared vegetables, salads and salad dressings, egg substitutes, potato products, prepared meats, sausages, tinned and packet soups, stock cubes, flavoured yogurt, puddings, pudding mixes, ice cream cones, thickened or prepared fruits, dried fruit, sweets, flavoured syrups, some herbal teas.
<ul style="list-style-type: none"> • Malt extract 	<ul style="list-style-type: none"> *Malted milk, chocolate drinks, non-dairy cream substitutes, Ovaltine, sweets, brown rice syrup, corn syrup.
<ul style="list-style-type: none"> • Beer and other alcoholic drinks distilled from cereals. 	
<ul style="list-style-type: none"> • Artificial sweeteners: Use fructose instead 	

Some sources include buckwheat, quinoa, and millet in the 'avoid' list in the above list. Others include them in the list below.

YOU CAN EAT	INCLUDING
<ul style="list-style-type: none"> • Animal protein 	<ul style="list-style-type: none"> • fish • fresh meat • sausage without cereal filler • poultry • eggs
<ul style="list-style-type: none"> • All vegetables, nuts and pulses 	<ul style="list-style-type: none"> • soya • sweet potatoes, • Plain, fresh, frozen, or tinned vegetables made with gluten-free ingredients • Dried peas and beans, • lentils and some commercially prepared vegetables. • Nuts, peanut butter
<ul style="list-style-type: none"> • All fruit and fruit juice 	
<ul style="list-style-type: none"> • Gluten-free bread 	Ingredients include: corn, rice, soybean, arrowroot, potato starch, pea, potato, whole-bean flour, tapioca, sago, rice bran, cornmeal, buckwheat, millet, flax, teff, sorghum, amaranth, and quinoa.
<ul style="list-style-type: none"> • Gluten-free cereals 	<ul style="list-style-type: none"> • Puffed Rice, • Rice crispies • Cereals made with soy, brown and white rice, buckwheat, millet, cornmeal, and quinoa flakes. • cereals labelled 'gluten-free'
<ul style="list-style-type: none"> • Rice, • Millet • Corn 	<ul style="list-style-type: none"> • rice noodles • rice cakes/crackers • popcorn
<ul style="list-style-type: none"> • Some milk and milk products 	<ul style="list-style-type: none"> • sour cream, • whipping cream, • yogurt, frozen yogurt, • all aged cheese such as cheddar, edam, Parmesan, cottage cheese, cream cheese, some cheese spreads
<ul style="list-style-type: none"> • Butter, margarine, vegetable oil, nuts, peanut butter, some salad dressings, mayonnaise, 	
<ul style="list-style-type: none"> • Homemade soups made with allowed ingredients, some commercially tinned soup 	
<ul style="list-style-type: none"> • Sugar, molasses, honey, jelly, jam, some sweets, plain chocolate, coconut, meringues, most syrups. 	
<ul style="list-style-type: none"> • Gluten-free cakes, pastries and puddings 	
<ul style="list-style-type: none"> • Cornstarch, tapioca and rice puddings, some pudding mixes, custard, ice cream, sorbet, mousse 	
<ul style="list-style-type: none"> • Pure cocoa 	
<ul style="list-style-type: none"> • Pure instant or ground coffee, tea, carbonated drinks, wine, rum, some herbal teas 	

- Most herbs, spices, tomato puree and paste, olives, bicarbonate of soda, baking powder, cream of tartar, dry mustard, etc (read the labels carefully)
- Cider vinegar, rice/wine vinegar
- Alcoholic drinks which are not made from cereals