

THE GLUTEN FREE DIET

Fact sheet

A gluten free diet is followed by individuals with coeliac disease, dermatitis herpetiformis or non-coeliac gluten intolerance.

What and Where is Gluten?

Gluten is the main protein in wheat, rye, oats, barley and triticale and flour derived from these. It contains an equal amount of two protein fractions glutelin and prolamin.¹ It is the latter, alcohol soluble prolamin that is thought to cause damage in coeliac disease.

Oats contain 5-15% of the damaging prolamins, and are still recommended to be excluded by people requiring a gluten free diet. There is current research investigating the possibility that some people with coeliac disease may be able to tolerate oats in their diets². The inclusion of oats in gluten-free diets is also controversial not only because of uncertainty whether they cause mucosal damage in coeliac disease, but also because oats are commonly contaminated by contact with wheat or barley during harvesting, transport, storage or milling.³

Different prolamins are also found in rice, corn/maize, millet and sorghum, however, these prolamins do not have the same damaging effects and can be consumed safely. More research is needed to further understand the mechanisms involved.

Gluten-containing Food and Understanding Food Labels

Gluten is found in foods containing wheat, rye, oats, barley and triticale, all of which need to be avoided in a gluten free diet. As gluten has rubbery, elastic characteristics, it is often used as an ingredient in bread, cakes, pasta and many other types of prepared and commercial foods.

Gluten can also be found in foods that contain ingredients that are derived from the gluten-containing grains listed above, including bran, couscous, flour, semolina, spelt and wheat germ, as well as wheaten cornflour, malt, malt extract, malt vinegar and starch derived from wheat.

For this reason it is not always apparent which foods contain gluten. Examples of less apparent sources of gluten include confectionery, sauces, gravies, soups, sausages or processed meats, starch, hydrolysed vegetable protein (HVP), natural flavouring, soy sauce, and even beer and some medications. It is surprising where you can find it!

The following list of foods and ingredients should be avoided in a gluten free diet:⁴ Please note this list is not exhaustive.

SOURCES OF GLUTEN		
Barley	Semolina	Malt/Malt extract
Beer	Spelt	Malt vinegar
Bran	Triticale	Soy Sauce (wheat)
Couscous	Wheat	Oatmeal
Flour	Wheatgerm	Oats
Noodles/ Pasta	Cornflour (wheat)	
Rye	Starch (wheat)	



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THE GLUTEN FREE DIET (Continued)

To assist people who need to avoid gluten, Food Standards Australia New Zealand (FSANZ) requires that ingredients derived from cereals containing gluten and their products, namely, wheat, rye, barley, oats and spelt and their hybridised strains must always be declared on food labels (other than beer and spirits)⁵. This requirement is part of the food standard relating to Mandatory Declaration of certain substances in Food Likely to Cause Adverse Reactions (including gluten).^{2,6,7} Reading the ingredient lists on products is extremely important! Where food is offered without its label e.g restaurants, canteens, buffets, for immediate consumption, the allergen information must be declared in connection with the display of the food, or declared to the purchaser upon request.

Food labeled as 'low gluten' must contain less than 0.02% gluten (or 20 mg gluten per 100g food), and no oats or malt.

Example Ingredient List:

INGREDIENTS: Corn (90%), Sugar, Salt, Malt Extract (From Barley), Vitamins (Niacin, Thiamin, Riboflavin, Folate), Mineral (Iron)

Ingredients derived from gluten-containing grains must be declared on food labels.

Gluten Free Food

The manufacture of gluten free products requires that stringent processing guidelines be followed. This is to ensure that gluten free raw material is not contaminated by gluten containing foods.

According to the Food Standards Australia New Zealand, food labeled as 'gluten free' must not contain any detectable gluten, and no oats or malt. Food labeled as 'low gluten' must contain less than 0.02% gluten.

Once familiar with label reading, following a gluten free diet will not be difficult to manage, but it is recommended to seek initial expert guidance from an Accredited Practising Dietitian, who can give assistance with advice to suit individual needs.

Care must also be taken to replace wheat, rye, oats and barley with other cereals because these grains are a valuable source of carbohydrates, fibre, vitamins and minerals.

Gluten free and some low gluten products are recommended for inclusion in a gluten free diet:

Fact sheet



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Gluten free and some low gluten products are recommended for inclusion in a gluten free diet:

Naturally gluten free	No detectable gluten	May contain traces of gluten if derived from gluten containing grains
Arrowroot	Caramel colour	Thickeners 1400-1450
Amaranth	Glucose (syrup and powder)	Dextrin
Buckwheat	Maltose	Maltodextrin
Corn/Maize	Fructose	Pre-gel starch
Lupin	Dextrose	Baking powder
Maize cornflour		Stock
Millet		
Polenta		
Potato flour		
Psyllium		
Rice		
Sago		
Seeds		
Sorghum		
Soy		
Tapioca		

Cooking Gluten Free

In cooking, gluten makes rising possible, stretching around trapped air and setting when cooked. It can be very difficult to replace gluten in cooking. For baking, a mixture of flours often works best.⁷ To make an acceptable substitute, ensure you substitute by weight and not by volume. Also, to make gluten free flours rise better, mix gluten free baking powder or soda with water before adding it to the dry ingredients.

References

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