

## GLUTEN

**Gluten** is a naturally-occurring protein found in some cereal grains. Gluten in the kernels (seeds) of grains nourishes the plant embryo as it grows. It also contributes to the elastic nature of bread dough, giving bread its chewy texture. Wheat, barley and rye contain gluten. Grains such as oats, corn and rice do not.

Gluten is found in foods and beverages like:

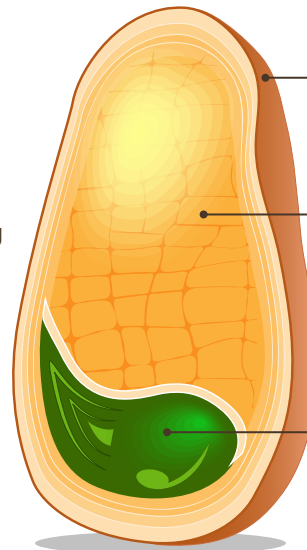
- Breads, baked products and cereals
- Pasta (made from durum wheat)
- Beer (made from barley)

Wheat or parts of wheat flour are also used as thickeners, as binding agents to hold substances together and in seasonings. Thus, gluten may also be found in other food products, including:

- French fries
- Hot dogs
- Salad dressing
- Soy sauce
- Soups



## GRAINS IN YOUR DIET



- **Bran**  
Protective outer shell of kernel. High in fibre and B vitamins.
- **Endosperm**  
Feeds a plant as it grows. Consists of starch, protein (including gluten from grains containing gluten), some B vitamins and minerals.
- **Germ**  
Seed for a new plant. Contains healthy fats, B vitamins, minerals and some protein.

**Whole grains** contain all 3 parts of the kernel and are the best for you nutritionally. A diet rich in whole grains has been shown to reduce the risk of heart disease, Type 2 Diabetes, obesity and some forms of cancer. Whole-grain diets also help maintain regular bowel movements and promote growth of healthy bacteria in the colon. Examples of whole grains include whole wheat, barley, rolled oats, brown rice and wild rice.

## IS GLUTEN BAD FOR YOU?

Not for the vast majority of people. People with **celiac disease** cannot eat gluten because it can damage their intestines, preventing them from absorbing nutrients from food. About 1% of the population is estimated to have celiac disease, although it is believed that the majority of people who have the disease remain undiagnosed.<sup>1</sup>

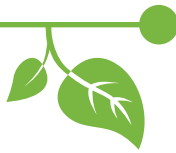
Some people may experience bloating, cramping and/or diarrhea after eating foods containing gluten, although they do not test positive for celiac disease.<sup>2</sup> This is often referred to as **gluten sensitivity**; however, gluten sensitivity is not well understood. The condition has been linked to gluten, but more recent research indicates it may be actually caused by another component of cereal grains called **fructans**<sup>3</sup>, carbohydrates that the human body has difficulty breaking down.

A **wheat allergy** is caused by protein in wheat, but not necessarily gluten. It is a rare allergy that may result in skin, respiratory or gastrointestinal reactions. A wheat allergy is most common in children – and 2/3 outgrow it by age 12.<sup>4</sup>



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## THE CONSEQUENCES OF GOING “GLUTEN-FREE”



People who are gluten-free because of health issues follow a diet carefully prescribed by a medical doctor or registered dietitian. However, if you do not have celiac disease, gluten sensitivity or a wheat allergy, a gluten-free diet may actually be bad for your health.

- Many processed gluten-free foods contain refined grains. **Refined grains** (e.g., white rice, white flour) have had the germ and bran removed during processing and are not as healthy as whole grains. They also have additional fat and sugar to make them tastier, which can contribute to weight gain and weight-related conditions such as diabetes and heart disease.
- Refined grains contain less fibre. Fibre helps lower cholesterol, improves digestion and controls blood sugar levels.
- Eating foods containing less dietary fibre often means you'll eat more of them. Dietary fibre makes you feel full, resulting in eating fewer calories.



Refined white rice



## Food labelling

In Canada, only foods that have been developed to protect the health of individuals with celiac disease are allowed to carry a gluten-free label.<sup>5</sup>

