

What every patient *and* practitioner should know

What is gluten?

Gluten is a general name for approximately 50% to 80% of the proteins found in wheat, rye, spelt and barley. It is the ingredient responsible for helping foods maintain their shape and for the elastic texture of dough. As a matter of fact, the word gluten is derived from its "glue-like" properties and is used in many different foods as an additive.

Gluten consists primarily of the proteins, glutenin and gliadin. Ordinarily, proteins are broken down into amino acids and digested easily. However, gliadin contains long proline peptides, which are difficult to digest efficiently. As a result, some individuals are sensitive to dietary gluten and may even experience immunological and opioid-like effects on the nervous system after eating foods containing gluten.

Why gluten free?

Many people avoid gluten in their diets. The term "gluten-related disorders" encompasses all conditions related to gluten intake; it includes autoimmune, allergic, and non-autoimmune and non-allergic diseases. More specifically, people's reasons for removing gluten may be due to either a medical condition, such as celiac disease or a wheat allergy, or because they have what is called non-celiac gluten sensitivity (NCGS).

These statements have not been evaluated by the Food and Drug Administration.
These products are not intended to diagnose, treat, cure, or prevent any disease.

**Ask your healthcare professional today if
Gluterase® is right for you!**



(905)476-3554

Biotics Research Canada
Box 283 • Keswick ON L4P 3E2
orders@bioticscan.com
bioticscanada.com

Gluterase®

*Digestive Support for Those with
Gluten Intolerance or Sensitivity*



Why go gluten free?



Celiac disease is an autoimmune-like gluten-related disorder triggered by gluten. This condition affects between 0.5% and 1% of the general population and can be difficult to diagnose because it affects people differently. The more than 200 symptoms of celiac disease may occur in the digestive system or other parts of the body. Oftentimes, there are no symptoms at all.

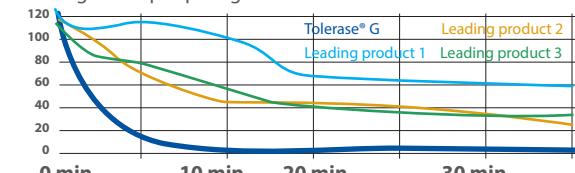
A wheat allergy occurs when your body produces antibodies to proteins found in wheat causing a unique immune system reaction. Some symptoms of a wheat allergy include swelling, itchy rash, nasal congestion, headaches, breathing difficulties, and digestive problems.

Non-celiac gluten sensitivity (NCGS) is a category used for people with neither celiac disease or a wheat allergy, but who still experience symptomatic relief when removing gluten from their diets. Removing gluten from the diet also means removing other components associated with wheat, such as glyphosate, an herbicide often applied to wheat crops. This makes it challenging to identify the exact culprit, but the self-reported prevalence of people with NCGS who choose to go gluten free fluctuates between 0.5-13% of the population.

Gluten-digesting enzymes available on the market are not very effective

Methods

Commercial dietary supplements for gluten digestion were compared to *in vitro* gluten epitope digestion.



Currently available gluten-digesting enzyme supplements are not effective.

Gluten Contamination

With gluten wreaking havoc on the health of many people, over 10% of our population avoids it, or at least tries to avoid it. One study, however, has shown that 66% of people trying to follow a gluten-free diet had been exposed to gluten and reported a symptomatic reaction. This may happen due to cross contamination or because food products containing 20 parts per million or less of gluten can be labeled gluten-free, according to the FDA. Cross-contamination is when a food product may be gluten free by nature but is exposed to other foods containing gluten. Because of the accumulation of small amounts of gluten that add up on a daily basis and cross-contamination, adhering to a diet entirely gluten free can pose a challenge and, for those with medical conditions, a serious health risk. Some studies show that even when following a gluten free diet, unintentional gluten intake can range from 200 mg per day up to 3000 mg per day.

Gluten Digestive Support

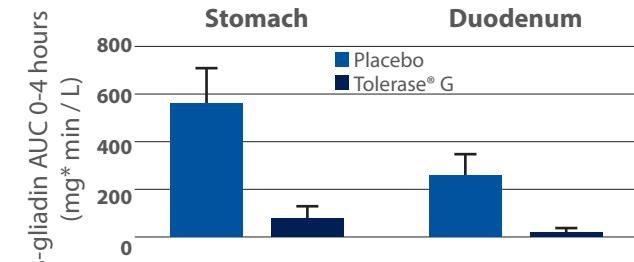
Gluterase® is a formula for those gluten-sensitive patients who are already following a gluten-free diet, but want help breaking down residual gluten. It contains proline-specific digestive enzymes that significantly degrade gluten in case of unintentional consumption.

Designed to have optimal activity under the harsh conditions of the stomach, **Gluterase®** works to digest the proteins into amino acids that can be comfortably absorbed through the intestinal wall.

Gluterase® is ideal to take prior to those meals where you have less control over the food preparation.

Having **Gluterase®** on hand can take the worry out of eating when going out for a meal at a restaurant or a friend's house.

Tolerase® G degrades gluten (Glia- α 3) in stomach and duodenum of human volunteers



Tolerase® G significantly degrades gluten epitope concentrations in the stomach and duodenum of human volunteers compared to placebo.