AVENA FOODS INGREDIENTS WEBSITE

SECTION: LEARNING CENTRE

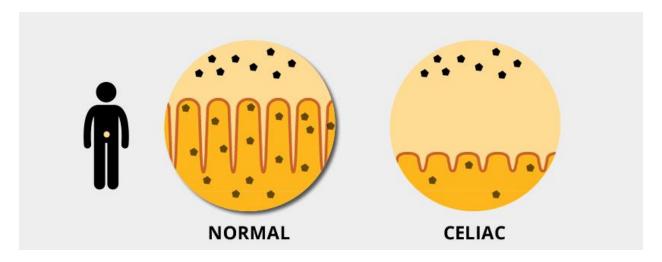
CELIAC DISEASE

Celiac Disease, Gluten Intolerance, and Wheat Allergies

Gluten is a protein in wheat (all kinds, including spelt, Kamut® khorasan, einkorn and farro/emmer), barley, rye and triticale (a rye/wheat hybrid) that is hard for some people to digest.

This group includes the estimated 1-2% of the population with celiac disease – an autoimmune form of gluten intolerance – who must eat a gluten-free diet for life. Other people may not have celiac disease, but may be allergic to wheat (about 0.2-0.4% of people) or may have what's termed non-celiac gluten sensitivity (a group some experts estimate at from 1% to 6% of the population) -- though new research shows NCGS may not actually be the issue it was once thought to be.

Celiac Disease: Fast Facts



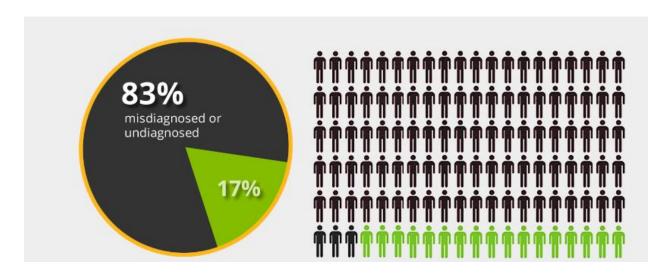
Celiac disease is a serious genetic autoimmune disease that damages the villi of the small intestine and interferes with absorption of nutrients from food.

An estimated 1 in 133 Americans, or about 1% of the population, has celiac disease.

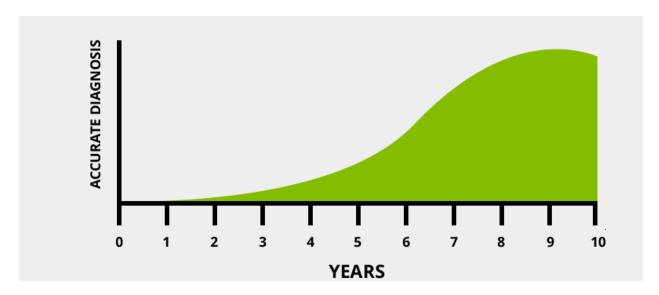
Celiac disease can affect men and women of all ages and races.

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It is estimated that 83% of Americans who have celiac disease are undiagnosed or misdiagnosed with other conditions.



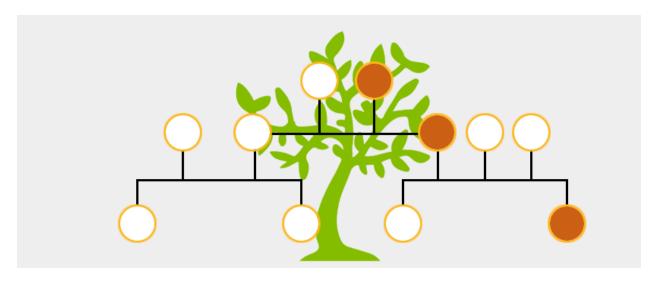
6-10 years is the average time a person waits to be correctly diagnosed. (Source: Daniel Leffler, MD, MS, The Celiac Center at Beth Israel Deaconness Medical Center)

Celiac disease can lead to a number of other disorders including infertility, reduced bone density, neurological disorders, some cancers, and other autoimmune diseases.

Over a four-year period, people with undiagnosed celiac disease cost an average of \$3,964 more than healthy individuals. (Source: Long et al, 2010)

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5-22% of people with celiac disease have an immediate family member (first degree relative) who also has celiac disease.



There are no pharmaceutical treatments or cures for celiac disease.

A 100% gluten-free diet is the only existing treatment for celiac disease today.

The celiac disease diagnosis rate may reach 50-60% by 2019, thanks to efforts to raise public awareness of celiac disease. (Source: Datamonitor Group, 2009)

Gluten-free sales reached more than \$2.6 billion by the end of 2010 and are now expected to exceed more than \$5 billion by 2015. (Source: Packaged Facts, 2011)

Sources: The Whole Grain Council, Celiac Central