

WHAT'S THE BIG DEAL WITH GLUTEN?

by TED-Ed – William D. Chey

Fill in the gaps in the following sentences:

- 1) Maybe you've recently seen the phrase "gluten-free" on food packaging, or take-out menus, shampoo bottles, apartment listings, the tag of your shirt, on a hammer, as a lower back tattoo, or in your friend's resume.
- 2) Next time someone starts telling you about their newfound freedom from gluten, here are some questions you can ask, and the well-informed answers that your friend, being a reasonable individual making educated dietary choices, and by no means just following the latest diet craze, will tell you.
- 3) What is gluten? Gluten is an insoluble protein composite made up of two proteins named gliadin and glutenin.
- 4) Gluten is found in certain grains, particularly wheat, rye and barley.
- 5) Gluten is responsible for the elastic consistency of dough and the chewiness of foods made from wheat flour, like bread and pasta.
- 6) For some people, these foods cause problems, namely wheat allergy, celiac disease, and non-celiac gluten sensitivity.
- 7) Wheat allergy is an uncommon condition that occurs when a person's immune system mounts an allergic response to wheat proteins, leading to mild problems, and in rare cases, a potential dangerous reaction called anaphylaxis.
- 8) Celiac disease is an inherited disease, in which eating foods with gluten leads to inflammation and damage of the lining of the small intestine.
- 9) This impairs intestinal function, leading to problems like belly pain, bloating, gas, diarrhea, weight loss, skin rash, bone problems like osteoporosis, iron deficiency, small stature, infertility, fatigue and depression.
- 10) Celiac disease is present in one in every 100 to 200 persons in the U.S.
- 11) The most effective treatment is a gluten-free diet, which helps heal intestinal damage and improve symptoms.

- 12) Gluten sensitivity's occurrence in the general population is unclear, but likely much more common than wheat allergy or celiac disease.
- 13) For example, it may be the case that gluten can activate the immune system in the small intestine, or cause it to become leaky.
- 14) The human intestine can't break down or absorb fructans, so they make their way to the large intestine or colon, where they're fermented by bacteria, producing short-chain fatty acids and gases.
- 15) Another possible explanation behind gluten sensitivity is the nocebo effect. This occurs when a person believes something will cause problems, and because of that belief, it does. It's the opposite of the more well-known and much more fortuitous placebo effect.
- 16) So a better name than non-celiac gluten sensitivity might be wheat intolerance.