

Lentini Chiropractic Health Series

What is gluten? What is gliadin?

Traditionally, gluten is defined as a cohesive, elastic protein that is left behind after starch is washed away from a wheat flour dough. Only wheat is considered to have true gluten. Gluten is actually made up of many different proteins.

There are two main groups of proteins in gluten, called the gliadins and the glutenins. Upon digestion, the gluten proteins break down into smaller units, called peptides (also, polypeptides or peptide chains) that are made up of strings of amino acids--almost like beads on a string. The parent proteins have polypeptide chains that include hundreds of amino acids. One particular peptide has been shown to be harmful to celiac patients when instilled directly into the small intestine of several patients. This peptide includes 19 amino acids strung together in a specific sequence. Although the likelihood that this particular peptide is harmful is strong, other peptides may be harmful, as well, including some derived from the glutenin fraction.

It is certain that there are polypeptide chains in rye and barley proteins that are similar to the ones found in wheat. Oat proteins have similar, but slightly different polypeptide chains and may or may not be harmful to celiac patients. There is scientific evidence supporting both possibilities.

When celiac patients talk about "gluten-free" or a "gluten-free diet," they are actually talking about food or a diet free of the harmful peptides from wheat, rye, barley, and (possibly) oats. This means eliminating virtually all foods made from these grains (e. g., food starch when it is prepared from wheat, and malt when it comes from barley) regardless of whether these foods contain gluten in the very strict sense. Thus, "gluten-free" has become shorthand for "foods that dont harm celiacs."

In recent years, especially among non-celiacs, the term gluten has been stretched to include corn proteins (corn gluten) and there is a glutinous rice, although in the latter case, glutinous refers to the stickiness of the rice rather than to its containing gluten. As far as we know, neither corn nor glutinous rice cause any harm to celiacs.

<http://www.celiac.com/articles/8/1/What-is-gluten-What-is-gliadin/Page1.html>
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