## the truth about GLUTEN: a publication of the Wheat Foods Council

Celebrities, athletes, talk show hosts and nearly 30 percent of people say they are turning to gluten-free diets to solve health issues from "foggy mind" to bloating and obesity. But before you throw out the flour or start embracing all things non-wheat, barley and rye, it's important to consider that nutrition experts do not advocate a gluten-free diet for most people. In fact, at least 93 percent of people - and probably many more - are completely healthy and happy following a diet that includes wheat and its protein, gluten.

According to Dr. Stephano Guandalini, founder and director of the Center for Celiac Disease at the University of Chicago, "There is a popular belief that gluten is bad for everyone. This is not the case. There is no evidence to show that anyone who does not suffer from celiac dissease (CD) or non-celiac gluten sensitivity (NCGS) benefits from following a gluten-free diet."
GLUTEN: WHEAT PROTEIN EXPLAINED
Gluten is a protein matrix in wheat formed by gliadin and glutenin. It's also present in barley and rye, and their many ancient grain ancestors. Gluten's structure forms pockets that trap carbon dioxide released by leavening agents, such as yeast, baking powder or baking soda, giving bread and baked goods their texture. Glutenfree breads and products are denser and heavier because they can't form air pockets without gluten.
WHEAT AND GLUTEN FACTS
Celiac disease, an autoimmune disease, is very real and affects about 1 in 141 people - less than 1 percent of the population. For people who have celiac, even a small amount of gluten is unsafe. When they eat it, their bodies immediately react, damaging the lining of their intestinal tract. The damage allows many proteins and other substances to enter the blood stream that should not, setting up physical reactions and digestive problems with serious health consequences.
Incidences of all autoimmune diseases are on the increase, with CD four times more common than it was 60 years ago. Research is being conducted by a number of leading medical and scientific institutions to investigate if changes in our gut bacteria might be the cause.
"It's very important that people who have celiac get diagnosed and tested so that they can begin following a gluten-free diet as soon as possible. And, it's something they have to stay on for the rest of their lives," said Dr. Joseph Murray, celiac disease researcher at the Mayo Clinic.

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## UNDERSTANDING GLUTEN-FREE DIETS

"Following a gluten-free diet is very difficult and one must know how to read labels. Foods such as broths, soups, gravies, sauces, seasoned rice mixes and seasoned tortilla or potato chips may contain small amounts of gluten," said Tricia Thompson, registered dietitian and founder of the Gluten Free Watch Dog. "The new FDA labeling rules define 'gluten-free' foods as having less than 20 parts per million of gluten. This is extremely helpful for people with celiac disease or NCGS who must avoid all gluten, even in tiny amounts."

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THE TOPIC OF WEIGHT MANAGEMENT
According to the NPD Group, a leading market research firm that has followed nutrition trends for more than 20 years, the biggest driver behind the gluten-free trend is weight loss. In addition, glu-ten-free products can be significantly more expensive - one study showed an average of 242 percent higher in cost.
"Eliminating wheat products (bread, rolls, cereals, pasta, tortillas, cakes, cookies, crackers) will result in fewer calories, but important nutrients like B-vitamins (thiamin, riboflavin, niacin and folic acid), and iron and fiber will also be lost," said Pam Cureton with Boston's Center for Celiac Research and chair of the Academy of Nutrition and Dietetics' sub-practice group, Dietitians in Gluten Intolerance Diseases (DIGID). "Grains provide 43 percent of the fiber in the U.S. diet and wheat is approximately three-quarters of the grains eaten in the U.S. Nutritionally, many gluten-free products are not equal replacements for their wheat-containing counterparts." Cureton recommends that anyone thinking about starting a gluten free diet see a skilled dietitian first to be sure it is nutritionally sound and to help guide them through the difficulties of the diet.

## FACTS ABOUT WHEAT BREEDING

Some promoters of the gluten-free lifestyle say that recent wheat breeding practices have led to higher, more "toxic" types of wheat. They believe that such practices are increasing the rates of celiac and gluten sensitivity, even though you must have a gene to develop celiac disease.
"Wheat, like all other food plants we eat, has undergone farmer selection and traditional breeding over the years," states Brett Carver, PhD, wheat genetics chair in Agriculture at Oklahoma StateUniversity. "The hybridization that led to bread wheat occurred 8,000 to 10,000 years ago. All cultivated wheat varieties, both modern and heirloom varieties, have these hybridization events in common, so the kinds of protein (and gluten) present in today's varieties reflect the proteins present throughout the domestication process of wheat."
In case there is any doubt of this, scientists have carefully reviewed available data back to 1925 and have not found any evidence supporting increased gluten content due to wheat breeding over the past century. Dr. Guandalini, like many other celiac speci al ists, is frustrated by the myths about wheat that are promoted by talk show hosts, articles and websites.
"Genetically modified wheat is not commercially available anywhere in the world," said Guandalini. "Wheat has been, and contiues to be, a life-saving and nutritious grain for most people."
GLUTEN-FREE:THE BOTTOM LINE
Most of us can eat and enjoy the many varieties of wheat foods available to us. And, luckily, for the few of us who can't, there are gluten-free options.
"The increased awareness by the food industry of the need for gluten-free foods has helped provide many options for those on gluten-free diets. There are more choices and better tasting products every day," said Amy Jones, dietitian at Mary Rutan Hospital, Bellfontaine, Ohio, and chair-elect of DIGID.
But for the vast majority of us, going gluten-free can be expensive, less nutritious and just plain unnecessary. The bottom line: gluten is a complex plant protein found in some of our favorite foods, and most of us have been tolerating it for thousands of years. For more information, visit www.wheatfoods.org.


