



Health Matters

Great Smokies Medical Center of Asheville

A small, occasional publication

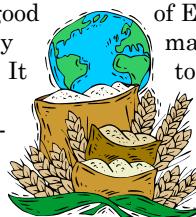
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Wheat: Staff of Life or Stuff of Disease?

The Bible refers to it as the staff of life. Martha would likely say that it's a 'good thing.' In this country, we eat it every day for breakfast, lunch, and dinner. It has, in fact, become a staple item in nearly every culture. So why are doctors recommending that patients eliminate "it" from their diets?

As it turns out, eating it —wheat— can cause big problems for some people. The most well-known health problem associated with eating wheat is Celiac Disease (CD), also called sprue or gluten-sensitive enteropathy. CD is a *permanent*, genetically-based intolerance to gluten that causes *intestinal damage* which is *reversible* with avoidance of dietary sources of gluten for 95 percent of those afflicted.

The word gluten is used here as a generic term meant to include other proteins in grains that can also be difficult to digest, including gliadin, zein, avenin, secalin, hordein, and oryzain. These proteins are in wheat, barley, rye, oats, spelt, kamut, bulgar, teff, couscous, and triticale.



The incidence of CD is greatest in people of European descent. CD is estimated to afflict one in every 200 to 900 Americans, most of whom are undiagnosed because of the lack of awareness of the wide spectrum of health problems that can result from CD and the inadequate description of CD in medical textbooks.

People with CD are unable to fully digest gluten. The resulting partially-digested gluten is then tagged as "foreign" by the immune system, resulting in the development of antibodies that attack the mucosal surface of the small intestine and its millions of tiny finger-like projections called villi which absorb nutrients. Once the villi are flattened or atrophied, various nutritional deficiencies result, each with their own unique pattern of health problems.

Nutritional deficiencies caused by CD can result in anemia, easy bruising, pallor, muscle spasm, bone tenderness, altered sensation in extremities, peripheral neu-

ropathy, edema, hair loss, low serum calcium levels, and low blood pressure.

CD can cause many symptoms including diarrhea, abdominal bloating and distension, constipation (rarely), weight loss, muscle cramping, various skin conditions, joint pain, edema, fatigue, weakness, depression, irritability, and difficulty with memory and thinking. Only about 12 percent of people with CD have the classic gastrointestinal symptoms at the time of diagnosis. About 38 percent will have atypical symptoms, a fact that can delay an accurate diagnosis for years or even decades. Another 33 percent of people with CD will have no symptoms. Physical signs that raise the suspicion of CD include short stature, a short fifth finger, orange-colored palms, clubbed fingertips, spoon-shaped (concave) thin fingernails, and pale nail beds.

A person with CD can have severe damage to the first part of the small intestine (duodenum) and still have no symptoms whatsoever because the small intestine is not really small at all,

(cont. p. 2)

Dairy: Got Milk or Not Milk?

The dairy industry uses their trademark white-mustached cultural idols to suggest that milk is somehow associated with success, good looks, and health. Most people earn success and inherit good looks, but, for many, eating dairy products results in anything but health.

Milk sugar (lactose) and milk proteins (primarily casein, but others, also) are the problematic components of dairy that impact human health. Three enzymes (protease, amylase, and lipase) that are made in the pancreas and an enzyme (lactase) that is made in the small intestine, are required to digest milk. A deficiency of lactase, though not fatal, can produce mild to severe pain, bloating,

cramps, gas, and diarrhea.

Lactose intolerance is widespread, affecting 25 percent of people of European descent and 75-90 percent of African Americans, Native Americans, and Asians. Avoidance of dairy products is the best treatment. Lactase tablets can be taken to help digest lactose, but because milk allergy can coexist with lactose intolerance (lactase does not treat milk allergy) and because lactase is destroyed by stomach acid, lactase supplementation should be used only for hidden or unavoidable, smaller amounts of dairy products.

Symptoms of dairy allergy can be immediate or delayed. Delayed responses (eating a food on Monday and reacting to it on



Wednesday) make detection of the true causes of symptoms difficult, paving the way for symptoms to become chronic. The incidence of milk allergy in bottle fed infants can be as much as seven times greater than that of breastfed infants. Add in some sugar and over-processed, devitalized foods, and the resulting impaired immunity can sentence children to a lifetime of poor health.

Milk allergy causes or contributes to depression, arthritis, ear infections, eczema, sinusitis, nasal congestion, hives, asthma, anemia, type-one diabetes, headaches, Crohn's disease, bronchitis, ADD/ADHD, headaches,

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Wheat, cont.

but about 25 feet long and its healthier portions can compensate for its more diseased portions.

Three factors are required to develop CD: a genetic predisposition, exposure to gluten-containing foods, and a triggering event that affects immune system function, such as an infection, surgery, pregnancy, or stress.

Diagnosis of CD is definitively made by a biopsy of the small intestine, and supported by a careful history and physical exam in addition to blood testing for IgA and IgG antibodies to gluten or gliadin and endomysial antibody testing. Blood testing is less than 100 percent accurate in detecting classic CD, and even less so with atypical presentations, and is revealing only in people who have been eating wheat in significant amounts for an extended period of time.

Although there is no cure for CD, treatment consists of dietary avoidance of foods that contain gluten. People whose intestinal mucosa is severely damaged may need to avoid gluten for at least a year to see results. Eating out can be tricky because of complicated or



inadequate food labeling, unknown contents of foods served, and contamination of foods with gluten during processing, packaging, transporting or cooking. Though most people find "safe" meals that allow them to enjoy eating out, challenges

are lessened and gluten avoidance is more easily accomplished when cooking and eating at home. Support groups can help smooth the bumps in the road that one travels when they have CD.

CD contributes to and is strongly associated with other diseases, including anemia (the most common first clue to the presence of CD), osteoporosis, insulin-dependent diabetes, autoimmune thyroid disease, dermatitis herpetiformis (an extremely itchy, reddened skin condition), some lymphomas, and connective tissue diseases. The incidence of these disorders increase with the duration of exposure to gluten and is a reason to get an early diagnosis and treatment.

Three other conditions can occur alongside CD that may need to be addressed in some individuals: lactose intolerance,

mold sensitivity and food allergy. Lactase is the enzyme that helps digest lactose, the sugar in milk. It is produced by the small intestine mucosa, so it is often diminished or absent in people with CD. Consequently, many people with CD are also dairy sensitive and need to eliminate lactose from their diets. Lactose intolerance can contribute to or result from CD. The natural moisture content of grains supports the growth of fungi or molds, especially when grains or flours are stored for extended periods of time. The mycotoxins associated with these molds can have devastating toxic and allergic effects on health by contributing to poor digestive and immune health.

Food allergy can either contribute to CD (A history of milk allergy during infancy increases the likelihood of CD in adulthood.) or develop as a result of impaired digestion characteristic of CD.

Postponing the introduction of wheat into the diet until one year of age (and then only with careful observation) is recommended for infants who have poor tolerance of dairy or a family history of CD.

GSMC docs have found that a two- to three-month trial of avoidance of gluten may be advisable and helpful for patients who have a conglomeration of ill-defined gastrointestinal, immune system, neurological, and/or dermatological health problems, even when blood testing fails to establish the presence of CD.

Intravenous nutritional supplementation can aid recovery for a person suffering from CD. Gluten-free oral nutrient supplementation can be given in smaller doses that may be better tolerated by a seriously impaired digestive tract. Folic acid, fish oil, the B-vitamins (including B 12), zinc, the fat soluble vitamins (A, D, and E) and digestive enzymes are among the first supplemented.

Milk, cont.



various gastrointestinal symptoms (constipation, cramping, bleeding, diarrhea, gas, and bloating), in addition to contributing to the symptoms of autism. The idea of "outgrowing" milk allergy is simply not true for many. Instead, the expression of the allergy only changes—the ear infections and ADD of childhood evolve into depression, chronic sinusitis, and other chronic ailments of adulthood.

Some scientists are concerned about the health of cows in our nation's dairy herds. Most cows are housed in crowded conditions and fed unnatural diets that necessitate antibiotics, bovine growth hormone, and pesticides to keep diseases at bay and maintain milk production.

Until recently (in the big picture of time), milk was consumed raw. But someone's been messing with Mother Nature's perfect food for mammals. Homogenization, first used in 1938 to lengthen milk's shelf life, silently contributes to heart disease when an enzyme normally present in milk, *xanthine oxidase*, becomes tiny enough to enter the bloodstream. Pasteurization, named for Louis Pasteur, is a

process of heating milk to destroy potentially harmful organisms (and leaves the dead germs in the milk). Pasteur is credited for defining the "germ theory" of disease, which states that bacteria and other organisms cause infections. Pasteur later said that the true cause of disease was an inability to defend against germs, and that germ exposure can ultimately strengthen immunity.

Raw milk advocates say that pasteurization erodes health by devitalizing milk's essential vitamins, minerals, and enzymes. Pasteurization advocates say we need it to prevent illnesses that can result from consuming raw milk. Numerous animal experiments comparing cooked vs. raw milk suggest that the ingestion of cooked milk is associated with disease. Each individual is responsible for his own healthcare decisions and to educate himself about the benefits and risks of both processed and raw milk, or to consider a trial of avoidance of dairy to help determine the impact on his own health.

All content in this newsletter is intended to be informational and is not to be taken as medical advice or to replace medical care.

Welcome to GSMC!

Mandi DeMaaijer, RN, joined GSMC in December 2004. She is a graduate of Western Carolina where she received her BSN. She worked at Mission Hospitals prior to joining GSMC. Mandi is a native of the Asheville area and has a lifelong interest in alternative healthcare. She is active in animal rescue and rights and lives in Weaverville with her husband, Erik, and a menagerie of adopted animals. Welcome to GSMC, Mandi!