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BY ANNE C. WILLIS

### THE LIFESTYLE OF THE TWENTY-FIRST CENTURY HAS

impacted us all on many levels. Several health concerns are plaguing us, and trying to decipher the root cause can be overwhelming. Celiac disease and gluten-sensitive enteropathy is certainly one of the most widespread conditions, which, according to the Celiac Disease Foundation, afflicts one out of 133 people in the United States. The exact cause of celiac disease is currently under examination, with studies demonstrating that when people with celiac disease eat foods or use products that contain gluten, their immune system reacts by damaging tissue.

The disease can develop at any point in life, from infancy to late adulthood. People who have a family member with celiac disease are at greater risk for developing the disease. The disorder is most common in Caucasians and people of European ancestry. Women are affected more often than men. Exploring metabolic typing, the burden of hazardous chemicals and stress are essential during the evaluation and assessment of this disease.



# GLUTEN-FREE SKIN CARE

### Effects of gluten on the body

There are four different classes of proteins in wheat that can cause allergies: albumin, globulin, gliadin and gluten. Any of them can cause an allergic reaction. Celiac disease and gluten-sensitive enteropathy are terms that have been used to refer to a disease process affecting the small bowel. However, documented evidence has been accumulating demonstrating that gluten sensitivity can exist even in the absence of intestinal damage, but affecting many organs. Based on overwhelming evidence, antibodies to gluten have been demonstrated to react with the heart, thyroid, joints, muscle, bone and skin.

So how does gluten cause so much havoc? When the wheat protein (gluten) is digested, some of the gliadin becomes water-soluble, and is able to come in contact with human tissue. If the gluten was subject to processing, such as flour grinding, cooking, bleaching, fermentation or hydrolysis (acid treatment), much more gliadin becomes water-soluble. Because gliadin stays fairly intact in the tissue, it is easy for it to get through tissue mucosa in one piece. Once gliadin comes in contact with tissue mucosa, it easily crosses into the bloodstream, and can stick to many places throughout the body. This attachment happens whether or not a person's body can make anti-gliadin antibodies. If a person's



body can make anti-gliadin antibodies, then the body will mistake healthy tissue for a virus. In this case, the immune system will kill the cells that have the gliadin attached, as well as some neighboring cells. This causes inflammation in the areas where the gliadin was attached.

Antibodies may also attach to gliadin molecules flowing in the blood. The resulting antibody-gliadin “clumps” can collect in capillaries. This effect is recognized in dermatitis herpetiformis, and may be involved in many other conditions. It can actually weaken mucus defenses, which permits more direct exposure to other toxins and infections.

## Tests and the interpretation of celiac disease and gluten-sensitive enteropathy

IgM and IgA are the names for the types of antibodies that tests are run for. If IgM is positive, the individual usually reacts quickly to the food. If IgA is positive, the reaction is much slower and more difficult to detect.

The normal level is between 0 and 20. Any reading over 20 indicates an allergic condition, and the patient should eliminate that food. If the patient says that they know they are allergic to many foods, chances are that those are acquired food sensitivities, and the usual culprit is gliadin.

**Note:** It is also possible for someone to be sensitive to a food and still not test positive. If the food is not in their diet, they will not build antibodies to it. In the case of gliadin, the immune system can be so overwhelmed by this molecule that it is literally giving up and not producing much in the way of antibodies. So a patient of Northern European descent (a light skinned Caucasian) with a test result of 20 (which is a high range of sensitivity but still “normal”) would be taken off gliadin for four months and then given foods rich in gliadin to see if they react. If they do react (gas, bloating and numerous other symptoms), it is because their gut has sufficiently healed and the gut’s immune system is now able to fight and respond. This confirms that they are intolerant of gliadin, and need to abstain from foods with the ingredient.

## Gluten in personal care products

Can ingredients in skin care products affect celiac disease and gluten-sensitive enteropathy? According to Sidney Draggan, ecologist and science policy analyst for the Canadian Centre for Occupational Health and Safety (CCOHS), ingredients applied to the skin can be absorbed into the bloodstream. Some doctors may not necessarily agree that gluten, or harmful fractions of gluten like gliadin, could pass into the patient’s body and cause harm. However, doctors who are more forward thinking in their treatment methods are more aware of the latest research on gluten sensitivity. Kenneth Fine, M.D. of Enterolab.com is one of these doctors.

“Gluten sensitivity is a systemic immune reaction to gluten anywhere in the body, not just entering the body via the gut,” he explains. “Therefore, topically applied lotions, creams, continues



### INGREDIENTS DERIVED FROM WHEAT:

- Tocopherols
- Mixed Tocopherols
- Fermented Grain Extract
- Amp-Isostearoyl Hydrolyzed Wheat Protein
- Hydrolyzed Wheat Gluten
- Starch, PG-Propyl Silanetriol
- Amino Acids Hydroxypropyltrimonium
- Steardimonium Hydroxypropyl Protein/PVP

### CROSSPOLYMER

- Triticum Vulgare Bran Extract
- PG-Propyl Silanetriol
- Triticum Lipids
- Germamidopropyldimonium Hydroxypropyl
- Cyclodextrin
- Dextrin Palmitate
- Stearyldimoniumhydroxypropyl

### INGREDIENTS DERIVED FROM WHEAT GERM OIL:

- Wheat Germ Glycerides
- Disodium Wheat Germamido PEG-2 Sulfosuccinat Vitamin E Germ Oil
- Triticum Vulgare
- Triticum Vulgare Germ Extract
- Wheat Germ Glycerides
- Wheat Germ Extract

### INGREDIENTS DERIVED FROM BARLEY:

- Barley Extract
- Samino Peptide Complex
- Hordeum Vulgare Phytosphingosine Extract

shampoos and other products containing gluten would indeed provide a source of gluten to the body, so we recommend that all such products be discontinued for optimal health."

So what ingredients should be avoided? Hydrolyzed wheat protein is an effective substitute for hydrolyzed animal protein derived from acid, enzyme or any other method of hydrolyses. It offers conditioning, moisturizing and film forming properties and is widely used in skin care products to help skin retain its moisture and improve its overall appearance. As we discussed earlier, processed wheat protein means gliadin becomes more water-soluble, thus allowing for this molecule to stick to tissue, causing damage and an unfavorable immune response.

One of the conditions we see as a result of gluten intolerance is dermatitis herpetiformis. Skin symptoms include discrete papules, small blisters, waxy lesions and smooth, itchy lesions that resemble hives. If untreated, dermatitis herpetiformis on the face usually waxes and wanes, although symptoms persist with continued dietary intake or topical application of gluten. Encouraging your clients to seek medical help is the first step to relieving this condition. Avoid trying to treat it topically unless you are working

with a therapeutic grade skin care system. Reduce clients' risk of developing these allergies by eliminating the use of products that contain the gluten-derived ingredients.

As practitioners, avoiding these ingredients is also imperative because your exposure to these allergens is higher. Our ultimate goal should be to become more aware of the risk factors associated with gluten so we can all live healthy and productive lives. ■



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Willis co-authored *The Esthetician's Guide to Working With Physicians*, and has been featured in numerous publications. For more information, contact her at [info@delaterreskincare.com](mailto:info@delaterreskincare.com) or visit [www.delaterreskincare.com](http://www.delaterreskincare.com).

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**Rejuvi n Bio Rejuvenating Complex** also contains several anti-aging peptides such as Palmitoyl tetrapeptide-7, Palmitoyl oligopeptide and Ceramide-2 (Dermaxyl and Matrixyl 3000) in a very penetrative delivery system for skin rejuvenation.

