

# CLINICAL UPDATE

A Publication Compiled by the Clinical Pharmacy Team of



**Health Solutions**

PHARMACY BENEFITS MANAGEMENT

## **NATIONAL CELIAC DISEASE AWARENESS MONTH – May 2008**

Celiac Disease (CD) is an immune-mediated response of the gastrointestinal (GI) tract which is precipitated by the ingestion of gluten. Evidence suggests that when a person with CD ingests a gluten containing product, the small intestine reacts by activating gluten-sensitive T-cells, which then initiate the inflammatory response that is accountable for the many symptoms of CD. Some people with CD experience symptoms such as diarrhea, abdominal pain, gas, constipation, fatigue, irritability, weight loss, delayed growth and muscle cramps to name a few. Others have atypical or “silent disease” in which no symptoms are expressed. In either case, the overall result is nutrient malabsorption and GI mucosal injury.

The highest prevalence of the disease is in Europe, and countries of European decent, which includes Australia and North America. It is estimated that approximately 2 million people in the United States have CD. The disease is genetic and appears to be more prevalent in females. CD may be triggered after surgery, pregnancy, viral infection, or severe emotional stress. The only treatment that is effective for CD is a strict gluten-free diet.

Newly diagnosed CD patients are typically faced with the difficult task of restricting the majority of their regular diet due to gluten content. Many patients are confused and find it challenging to recognize foods where gluten is often an overlooked ingredient (i.e. salad dressing, gravy). Therefore, successful management of CD is accomplished by a team approach. This team includes the patient and their family, the physician, a dietician, and a celiac support group. The following table contains a list of products which contain gluten:

### **Grains that contain gluten and are not allowed:**

- Wheat; Rye; Barley; Triticale (a cross between wheat and rye)

### **Ingredients that should not be consumed since they are derived from prohibited grains:**

- Malt, malt extract, malt flavoring, malt syrup, malt vinegar (derived from barley);
- Couscous, durum, einkorn, emmer, farro, graham, semolina, kamut, spelt (derived from wheat);
- Wheat bran, wheat germ, wheat starch, cracked wheat, hydrolyzed wheat protein;
- Oats, oat bran, oat syrup (due to cross contamination with wheat or barley, oats are not recommended by celiac groups in North America, but this is controversial. Patient should follow their physicians advice about eating oats.)

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## Frequently overlooked products that often contain gluten:

- Breeding, coating mixes, panko, stuffings, crutons, flour or cereal products, pastas;
- Broth, soup bases, bouillon cubes, brown rice syrup;
- Candy (ex: licorice, some chocolates);
- Imitation bacon; imitation seafood;
- Processed meats and poultry, self-basting poultry;
- Sauces, gravies, soy sauce or soy sauce solids, marinades, thickeners;
- Communion wafers;
- Herbal supplements, Rx & OTC medications, nutritional supplements, vitamins & mineral supplements

As stated in the chart above, another potential concern of CD patients, especially those with multiple disease states, are medications containing gluten. Many inactive pharmaceutical ingredients are derived from whole grains, grain flour and grain starch which are the most common sources of gluten. Ingredients to look for in CD patients medications include the following:

- **Unspecified starch, pregelatinized starch, dusting powder, flour, and gluten.** These excipients may be derived from wheat.
- **Dextri-maltose** and **caramel coloring.** These may contain gluten when barley malt is used in the manufacturing process.
- **Sodium starch glycolate, dextrin, and maltodextrin.** These usually originate from potato starch or cornstarch, but may be derived from other starches on rare occasions.

The botanical source for each of the above mentioned ingredients should be established before administration to a person with CD. Whenever a pharmaceutical product claims they have a "new manufacturer", "new product appearance", or "new formulation", the gluten status of that product should be questioned. If it is not possible to find the gluten status of the medication, it is suggested that the patient with CD find alternate therapy.

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## **Companies that Guarantee Gluten-Free Pharmaceuticals\*:**

C.B. Fleet Company (Lynchburg, VA)  
Jacobus Pharmaceutical Company (Princeton, NJ)  
M.G.I. Pharma (Minnetonka, MN)  
Novopharm USA (Schaumburg, IL)  
(AJHP 58(5) 2001:396-401)

\*verified w/ manufacturers as of 3/26/2008

There are numerous national and local organizations available to assist patients with CD and their family members. The nationally recognized Celiac organizations include:

### **Celiac Disease Foundation**

[www.celiac.org](http://www.celiac.org)

818-990-2354

### **Celiac Sprue Association/USA, Inc.**

[www.csaceliacs.org](http://www.csaceliacs.org)

877-272-4272

### **Gluten Intolerance Group of N. America**

[www.gluten.net](http://www.gluten.net)

206-246-6655