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SPORTS NUTRITION HANDBOOK

When The Food You Eat Makes You Sick

Food Allergies

Eating a balance of our six essential nutrients is necessary to sustain our health and wellness. For most athletes, eating is an enjoyable experience! However, for some athletes, consuming certain foods can be a debilitating, possibly even life-threatening, experience. Individuals with various forms of food allergies and sensitivities must avoid certain foods or food ingredients while meeting their daily nutrient needs for health and performance. For these athletes, food selection can become a tedious task requiring diligence in reading all food labels, food preparation requires careful attention to details such as "cooking from scratch", they must seek alternative recipes for many dishes, as well as avoid all shared utensils, containers, and cooking surfaces which may have contacted a food with their afflicting allergen.

True food allergies are abnormal, heightened responses of the immune system to components of certain foods. The components of foods that elicit these abnormal immune responses are typically the protein component in each allergen. The immune system's response can be immediate or delayed. In immediate hypersensitivity reactions, symptoms begin to develop within minutes to an hour or so after ingestion of the offending food. Immediate hypersensitivity reactions have been noted with many foods and can sometimes be quite severe. In delayed hypersensitivity reactions, symptoms do not begin to appear until 24 hours or up to 5 days after the ingestion of the offending food.

There are documented allergies to a variety of foods, however the "Big 8" allergen foods are listed in the side table. These eight foods account for more than 90% of all allergies reported. By definition, shellfish include: shrimp, crab, lobsters, clams, mussels, oysters, as well as octopus, squid and scallops. And, tree nuts include: Brazil nuts, cashews, chestnuts, filberts hazelnuts, macadamia nuts, pecans, pistachios, pine nuts, and walnuts.

One man's food may be another man's poison.

~Lucretius

Did You Know?

The 8 Major food allergens are:

Milk

Eggs

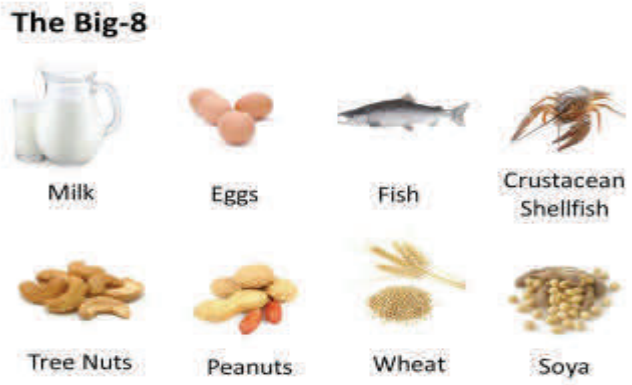
Wheat

Fish

Shellfish

Peanuts

Tree Nuts



The "Big 8" account for90% all food allergies in the United States.

Food Allergen Labeling and Consumer Protection Act

The Food Allergen Labeling and Consumer Protection Act (FALCPA), which took effect January 1, 2006, mandates that the labels of foods containing the 8 major food allergens declare the allergen in plain language, either in the ingredient list or via:

- **The word "Contains" followed by the name of the major food allergen, for example, "Contains milk, wheat", or**
- **A parenthetical statement in the list of ingredients, for example, "albumin (egg)"**

Such ingredients must be listed if they are present in any amount, even in colors, flavors, or spice blends. Additionally, manufacturers must list the specific nut (e.g., almond, walnut, cashew) or seafood (e.g., tuna, salmon, shrimp, lobster) that is used.

Although FALCPA has made label reading easier for those living with food allergies, it is highly recommended that anyone living with a food allergy continue to read all labels on all packages carefully. Even if you have purchased and/or consumed a certain food previously, it is still recommended that you re-check the label. Manufacturers can often change their ingredients within a "recipe" and/or change the production facility of a certain food.

A food manufacturing company may also provide a statement of cross-contamination, such as "Manufactured on equipment that processes peanuts". However, these statements are not required by law.

Are You Intolerant"?

While an "intolerance" to a specific food is not the same condition as a food allergy, intolerances can create the same level of disruption to one's nutrient intakes and be debilitating if consumed.

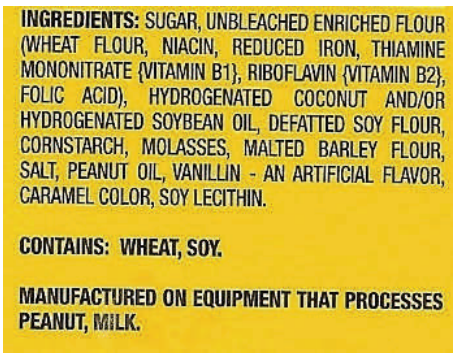
Lactose Intolerance

An intolerance is an abnormal reaction to consumption of a specific food which does not involve the immune system. One of the most common forms of intolerance is lactose intolerance.

Lactose is the natural carbohydrate found in milk. Any food which is derived from milk or contains milk can contain some level of lactose.

In our digestive tract, the enzyme involved with lactose digestion is lactase. In those with lactose intolerance, their body does not produce (or has low production levels) of this enzyme. Thus, when milk is consumed, the lactose is not digested. The body's response to this seemingly foreign invader is to "push" it out with increase water flow to the digestive tract (causes diarrhea), increased abdominal cramping, and subsequent bloating occurring (due to increased gas formation from the incomplete breakdown of the lactose).

It is possible to supplement the lactase enzyme in tablet form. Any lactase enzyme tablets must be consumed immediately before any milk based product to be effective.


INGREDIENTS: SUGAR, UNBLEACHED ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE {VITAMIN B1}, RIBOFLAVIN {VITAMIN B2}, FOLIC ACID), HYDROGENATED COCONUT AND/OR HYDROGENATED SOYBEAN OIL, DEFATTED SOY FLOUR, CORNSTARCH, MOLASSES, MALTED BARLEY FLOUR, SALT, PEANUT OIL, VANILLIN - AN ARTIFICIAL FLAVOR, CARAMEL COLOR, SOY LECITHIN.

CONTAINS: WHEAT, SOY.

MANUFACTURED ON EQUIPMENT THAT PROCESSES PEANUT, MILK.

SHOULD I AVOID GLUTEN?

What is Gluten?

Gluten is the protein component found in three grains: wheat, barley and rye.

What is Celiac's Disease?

Celiac's disease is an auto-immune condition which disrupts digestion of the protein gluten (found in wheat, barley and rye) which in turn causes damage to the small intestines. When gluten is consumed, the body attacks the small intestines & this causes damage to the villi, finger-like projections, leading to possible decreases in nutrient absorption.

Symptoms of Celiac's disease include: diarrhea, abdominal cramping, abdominal bloating, as well as potentially skin rashes, hives, and migraines.

Currently, the only treatment for celiac disease is lifelong adherence to a strict gluten-free diet. People living gluten-free must avoid foods with wheat, rye and barley, such as bread and beer. Ingesting small amounts of gluten, like crumbs from a cutting board or toaster, can even trigger small intestine damage.

Possible Long-Term Health Conditions

Iron deficiency anemia

Early onset osteoporosis or osteopenia

Lactose intolerance

Vitamin and mineral deficiencies

Central and peripheral nervous system disorders

Pancreatic insufficiency

Gall bladder malfunction

Neurological manifestations, including ataxia, migraine, neuropathy,

How Do I know If I Have Celiac's Disease?

If you suspect that you may have Celiac's disease, your doctor can first screen you with a blood test. However, the blood test is NOT perfect and can sometimes show false positives or false negatives. Only a true diagnosis of Celiac's disease can be made after an intestinal biopsy. The biopsy will show any damage to one's small intestine villi due to the progression of the disease.

But, the magazines say that eating gluten-free is "healthy" & gluten is "not good for you".

The facts are that as long as your body is not intolerant of gluten then it is a very safe and healthy to consume. The whole grains of wheat, barley, and rye offer many nutritional benefits. These foods are all great sources of dietary fiber and manganese, and are also a good source of magnesium. Whole grains have been also shown to assist in weight management, decrease certain cancer risks, decrease one's risk of metabolic syndrome as well as provide essential glycogen (muscle energy) to exercising muscles!

Effects To Performance From Eliminating Gluten

By eliminating the whole grains of wheat, barley and rye needlessly, you may be putting your performance at risk. Whole grains are one of the best sources for one's long-term stored muscle energy or glycogen. Without glycogen in your muscles, your muscles will feel heavy, lethargic, and tired. Inadequate glycogen stores are the largest factor causing fatigue and poor performance in athletes.

Inadequate consumption of grains in your diet can:

Cause fatigue

Slow your speed

Decrease your intensity

Reduce your strength output

Cause poor mental clarity

Before eliminating gluten, if you have a concern about gluten in your daily intakes, please consult your sports medicine staff.

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1. Burke L. & Deakin V. Clinical Sports Nutrition, 4th Ed. New York, NY: McGraw-Hill Australia Pty Ltd., 2009.

2. Rosenbloom C. & Coleman E. Sports Nutrition: A Practice Manual for Professionals, 5th Ed. Academy of Nutrition and Dietetics: 2012.

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