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Just In

2010 Dietary Guidelines Target Obesity

By the end of the year, the 2010 Dietary Guidelines for Americans (DGA), which recommend optimal dietary choices for U.S. citizens, will be released. What will they look like this time around? The DGA will focus on recommendations for reducing obesity and improving health, said Robert Post, Ph.D., Deputy Director of the U.S. Dept. of Agriculture’s (USDA) Center for Nutrition Policy and Promotion, at a press conference hosted by USDA and the Institute of Food Technologists on July 19, 2010. The Dietary Guidelines Advisory Committee Report, released in June 2010, will shape the final version of the DGA. Every section of the report addresses the relationship between obesity and diet, as well as the effects of sodium intake on blood pressure. In addition, the report addresses eating behaviors, such as breakfast consumption, snacking and fast foods, and recommends a shift in food intake patterns to a more plant-based diet of vegetables, legumes, whole grains, nuts and seeds.

Food Allergies: When Food Bites Back

We’re a population of sensitive eaters—it seems as if nearly everyone avoids one food or another because of some sort of intolerance. In fact, the Food Allergy & Anaphylaxis Network, an organization of health care professionals, government agencies and food industry members raising public awareness for food allergies, reports that food allergies afflict about 12 million people in the U.S.—that’s around 4 percent of the population. In addition to those with clinically-proven allergic responses to foods, another one out of three people believe they have a food allergy and, as a result, change the way they (or their family) eats. Unfortunately, many people avoid foods unnecessarily because of confusions surrounding food allergies, which can have a negative impact on a balanced diet.

How do you know if you have a true food allergy? Three official definitions can help clarify the topic of food allergies, according to Randy J. Horwitz, M.D., Ph.D., Medical Director of the Arizona Center for Integrative Medicine, who completed a fellowship in Allergy & Clinical Immunology at the University of Wisconsin and spoke at the Seventh Annual Nutrition and Health Conference in Atlanta on May 11, 2010. These are:

• Adverse food reaction: any untoward reaction after the ingestion of a food; may be due to a food allergy or food intolerance.
• Food allergy: an abnormal immunologic response following ingestion of a food.
• Food intolerance: an adverse food reaction mediated by a non-immunologic mechanism.

An adverse food reaction is a generic term that lumps together any kind of negative reaction you get from eating a food, no matter what its cause. If you have a food allergy, your immune system decides that a particular food is harmful to your body, thus it creates specific antibodies to it. The next time you eat that food, the immune system releases large amounts of chemicals, including histamine, to protect your body. These chemicals trigger allergic symptoms that can affect the respiratory system, gastrointestinal tract, skin, or cardiovascular system. A classic example is a peanut allergy that might produce symptoms like swelling of the tongue and throat within a short period of time after consuming even a tiny amount of peanut. Unlike a food allergy, a food intolerance does not involve the immune system and is not life-threatening. A common example is lactose intolerance, difficulty in digesting milk sugar.

The Magic of Mushrooms as Medicine

Nothing compares to the earthy fragrance and taste of mushrooms freshly sautéed in a bit of olive oil and garlic. But did you know that mushrooms are far more special than their delicious taste suggests? Neither plant nor animal, mushrooms are classified in the kingdom of fungi. But mushrooms are even more unique within the fungi kingdom, because they are the complex fruiting body of the fungal organism. Just as a tree produces fruit to bear seeds to continue the species, so does a fungal organism produce mushrooms to carry spores to continue its own species. With thousands of mushroom species present in the world, most remain mysterious, as only 10 percent of the species have been identified.

Given their uniqueness, it’s not surprising that mushrooms have piqued interest for their potential medicinal value. For thousands of years people have treasured them for both their rich flavor and therapeutic effects. According to Donald Abrams, M.D., Professor at the University of California San Francisco and Director of Osher Center for Integrative Medicine, mushrooms have long been used medicinally in Asia, and they are now becoming more accepted around the world.
Mushrooms (continued from page 1)

globe for therapeutic purposes. A number of well-known drugs originated in the fungi kingdom, including penicillin, two statins (lovastatin and squalestatin,) and cephalasporin. And, *Ganoderma lucidum* (known as the “mushroom of immortality” in China) is responsible for $1.5 billion in worldwide extract sales because of its purported medicinal value.

“Super” mushrooms for health.

Naturally low in calories and fat, mushrooms only contain 18 to 28 calories per three-ounce serving, depending on the variety. What’s even more important is what mushrooms contain. Abrams, who studied medicinal mushrooms and spoke about them at the Sixth Annual Nutrition and Health: State of the Science & Clinical Applications Conference on May 11, 2009 in Chicago, reports, “In the 60s and 70s, scientists began to isolate special active constituents in mushrooms.” These constituents include beta-glucans (sugar molecules), proteins, carbohydrates, fats, vitamins, trace elements and naturally-occurring plant compounds like sterols, phenols, and terpenoids. Researchers also point out that mushrooms have a number of bacteria, yeasts and molds that may hold health-promoting promise.

The study of mushrooms’ health benefits has focused primarily on their anti-cancer activity, antioxidant action and immune-enhancing benefits. A few studies have looked into other potential benefits, including weight management and satiety, and reduction in levels of blood lipids and glucose. Mushroom beta-glucans may be the secret ingredient, as they appear to have immune-stimulating and cholesterol-lowering effects, as well as anti-cancer activity, according to a November 2009 study in *Nutrition Reviews*. Mushrooms are such a promising food, that the healthy aging guru, Andrew Weil, M.D., lists them as a separate recommended food group on his Anti-Inflammation Food Pyramid (www.drweil.com/drw/u/ART02995/Dr-Weil-Anti-Inflammatory-Food-Pyramid.html)

**Mushrooms take on cancer.** According to Abrams, mushrooms may be especially beneficial in cancer treatment, with some varieties under study for their direct anti-cancer activity, as well as immune-enhancing response in cancer patients. “Mushrooms are widely used as an adjuvant therapy for cancer in Japan and China,” adds Abrams. A number of studies have already demonstrated that some varieties might reduce the risk of certain cancers, as well as inhibit tumor growth. At City of Hope, a National Cancer Institute-designated Comprehensive Cancer Care Center in Duarte, CA, researchers are currently investigating mushrooms’ potential in reducing or even stunting breast and prostate cancer growth in human clinical studies.

An unlikely vitamin D source. Another reason mushrooms are on scientists’ radar is because they’re an excellent source of today’s most buzz-worthy vitamin—vitamin D. Linked with many important health benefits, including maintaining healthy bones, teeth and muscles; cancer prevention, autoimmune disease protection, immune defense and mental health promotion (See *EN* April 2010, “Vitamin D-Fense against Disease”), vitamin D is not easily found in many food sources. Similar to the way in which humans absorb sunlight through the skin and convert it to vitamin D, mushrooms contain ergosterol that converts to vitamin D when exposed to sunlight. Thus, these mushrooms contain high levels of vitamin D from exposure to ultraviolet light under controlled conditions. For example, portobello mushrooms exposed to ultraviolet light contain 387 International Units (97% Daily Value) of vitamin D per 84 gram (about three ounces) serving. The most popular mushroom in America, white or button mushrooms (*Agaricus bisporus*) contain an abundance of ergosterol, according to an April 2009 study published in the *Journal of Agricultural and Food Chemistry*. The Australian research team reported that commercial production of button mushrooms enriched with vitamin D through exposure to sunlight might be a practical approach for improving consumer health. Today, more mushroom growers are exposing their mushrooms to UV light to increase vitamin D levels.

Get cooking with mushrooms. Now that you know how unique they are, why not pop mushrooms into your diet more often? Many cuisines, from European to Indian to Asian, highlight a variety of delectable fungi. While Americans are most familiar with the white variety, there are so many delicious types available that are worth tasting (see “Mushroom Varieties for the Picking”). Remember that mushroom hunting in the wild is risky business, because many species are poisonous—but don’t be afraid to hunt for them in your weekly supermarket or farmers market shopping expeditions.

—Sharon Palmer, R.D.

**Curried Mushroom Barley Soup**

2 Tbsp butter
1 cup sliced carrots
1 cup chopped onion
8 ounces smoked ham, diced
4 to 5 tsp curry powder
2 cans (14 ounces each) reduced sodium chicken broth
1 can (14 ounces) stewed tomatoes
1 cup dandie barley
1. In a large saucepan melt butter. Add carrots and onion, cook until nearly crisp-tender.
2. Add mushrooms, cook until mushrooms are tender. Add ham and curry powder, cook stirring constantly for one minute.

**Nutrition Information per Serving:** 150 calories, 5 grams fat, 27 g carbohydrates, 10 g protein, 95 dietary fiber, 350 milligrams sodium. Recipe courtesy of the Mushroom Council.

**Popular Mushroom Picks**

**WHITE (or button):** The most popular variety in the U.S., this mushroom has a mild taste that blends well with most anything. Sauté as a side dish; cook in pizza, pasta, burgers, soups and casseroles; or enjoy raw in salads.

**CRIMINI:** Similar in appearance to white mushrooms, these have a tan-to-brown cap, firmer texture and deeper flavor. Slice them into stews, soups, pastas, stuffing, quesadillas, omelets and risottos.

**PORTABELLA:** A larger relative of crimini, these have tan or brown caps, measure up to six inches, and have a deep, meaty texture and flavor. Grill, broil and roast them as an entrée (the perfect vegetarian meat alternative), side dish or appetizer.

**ENOKI:** These tiny, button-capped mushrooms with long, spindly stems are mild tasting and crunchy. Try them raw in salads and sandwiches, stir them into soups, and stir-fry them with tofu and vegetables.

**OSTER:** Delicately flavored with a velvety texture, oyster mushrooms can be gray, pale yellow or blue. Sauté them with a small amount of butter and onions to bring out their flavor, or slice into pasta, soups or salads.

**MAITAKE:** Often called “Hen of the Woods,” these mushrooms are fan-shaped with a woody taste and aroma. Sauté them as a side dish or use as an accompaniment for hearty entrees, soups and grain dishes.

**SHIITAKE:** These tan-to-dark brown mushrooms have umbrella-shaped caps, and curved stems (remove the tough stems for better texture). With a meaty texture and rich flavor, shiitake are excellent in bold stir-fries, pastas, soups, entrees and grain dishes.

Source: Adapted courtesy of the Mushroom Council.