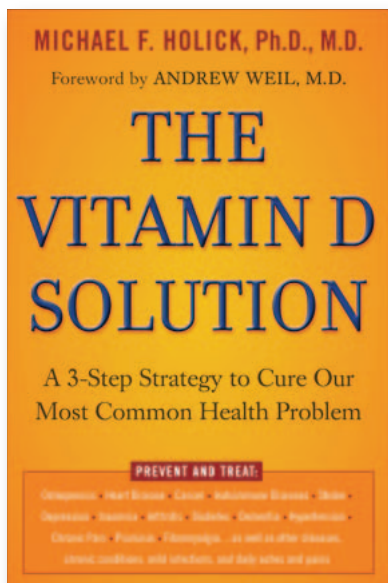




Interest in Vitamin D Continues to Rise

For more than 30 years, Michael F. Holick, Ph.D., M.D., has studied vitamin D. Today he works ceaselessly to increase awareness of the "sunshine vitamin," and its role in nutrition and overall health. His research indicates that increased levels of vitamin D may play a positive role on immunity and a remarkable number of daily ailments and chronic diseases, including obesity, heart disease, depression, asthma and diabetes.



"The benefits of vitamin D are varied and profound," says Dr. Holick. "In order to get more vitamin D, I recommend a combination of sun exposure, supplements and food for my patients. Specifically, I recommend mushrooms because they happen to be one of the top natural food sources of vitamin D."

Mushrooms are the only source of vitamin D in the produce aisle. The mechanism mushrooms use to convert light to vitamin D is similar to the way humans process this essential vitamin: mushrooms' plant sterol – ergosterol – converts to vitamin D when exposed to light. All mushrooms contain vitamin D, but growers also have the unique ability to increase D levels in mushrooms to up to 97 percent of the Daily Value (400 IU) per raw 84 gram serving by exposing mushrooms to light.



Dr. Michael F. Holick has studied vitamin D for more than 30 years.

Mushrooms continue to earn recognition as a valuable source of vitamin D. For the first time ever, mushrooms are listed as one of the leading food sources of vitamin D in the 2010 Dietary Guidelines Advisory Committee's Report to the secretaries of Agriculture (USDA) and Health and Human Services (HHS). This report will inform USDA and HHS as they update the *Dietary Guidelines for Americans*.

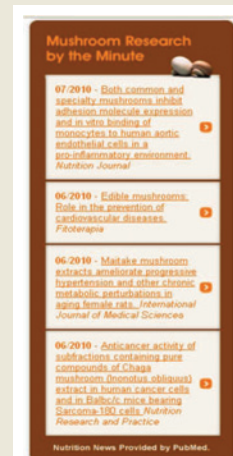
Further, the Institute of Medicine (IOM) has appointed an Expert Committee to assess current relevant data and update as appropriate the Dietary Reference Intakes (DRIs) for vitamin D and calcium. The Committee's Report is expected in October or November 2010.

To learn more about mushrooms and vitamin D, visit the "[All About Vitamin D](#)" section at www.mushroominfo.com.

Mushroom Research and Online Resources

Visit the [nutrition](#) section of the Mushroom Council's website and explore "Mushroom Research by the Minute" to read the latest research on mushrooms and health. For example, a study published in the July issue of the *Nutrition Journal* explores the effects of mushrooms on cardiovascular disease. Results indicate that both common (white button and crimini), and specialty (shiitake, oyster and maitake) mushrooms may protect against cardiovascular disease by interfering with events that contribute to atherogenesis. Consumption of mushrooms significantly reduced the formation of adhesion molecules with subsequent reductions in cells binding to human aortic endothelial cells which contribute to atherogenesis and to cardiovascular disease development.

An additional resource for information regarding mushrooms and health is the International Society for Mushroom Science's (ISMS) new website, www.mushroomsandhealth.com. The site features *Mushrooms and Health 2008*, a comprehensive report prepared by the Commonwealth Scientific and Industrial Research Organization (CSIRO) and Food Science Australia, which assesses the state of the science linking mushrooms and health.



Mushroom Council Supports Breast Cancer Research

Initial lab studies found that ingredients in mushrooms suppress the effects of a natural substance in the body called aromatase, which is important because about 75 percent of postmenopausal women with breast cancer have estrogen dependent tumors. Since 2002 the Mushroom Council has worked with City of Hope, one of the nation's leading cancer research centers, to provide more than \$700,000 in grants for lab studies and to pilot clinical trials exploring research on breast cancer and mushrooms. Clinical trials at City of Hope are currently underway to further test the effects of white button mushrooms. Look for the Mushroom Council at this year's American Dietetic Association's Food & Nutrition Conference & Expo (FNCE) at booth 2710 to learn more. To further increase breast cancer awareness, mushroom growers from around the country will go "pink" by switching to pink containers in recognition of the Mushroom Council's commitment to breast cancer research.



Umami Update

The American Heart Association (AHA) and the Dietary Guidelines Advisory Committee recommend striving for no more than 1,500 mg of sodium each day – which is less than 1 teaspoon of salt. Umami – the fifth basic taste after sweet, salty, bitter and sour – is used to describe a savory, brothy, rich or meaty taste sensation. The unique taste of umami counterbalances saltiness and allows up to a 50 percent salt reduction without compromising flavor. All mushrooms are a rich source of umami and a perfect way to enhance flavor while reducing sodium.

Generally speaking, the darker the mushroom the more umami it contains. Dried mushrooms tend to have more umami than fresh ones, and cooked mushrooms provide more umami than raw. However, adding mushrooms in virtually any form – raw, sautéed, whole cap, even a dusting of dried powder – will add an umami lift to any dish.

D-Lightful Dinner Idea

This tasty recipe is an excellent source of vitamin D and can be prepared quickly and enjoyed year-round.

Baja Salmon with Mushrooms

Preparation Time: 7 minutes

Cooking Time: 8 minutes

Serves: 4

- 1 tablespoon olive oil, divided
- 6 ounces white button mushrooms, quartered or halved
- 1 packet dry citrus marinade
- 3/4 cup frozen white sweet corn kernels, thawed
- 1/2 cup red onion, diced, run under cold water
- 1/2 cup red bell pepper, diced
- 1/4 cup cilantro leaves, minced
- 2 tablespoons lime juice, freshly squeezed
- 1/2 teaspoon kosher salt
- 4 salmon filets (about 5 ounces each)
- 1/4 cup water



Nutrition Information per Serving:

Calories: 340; Fat: 19g (Saturated Fat: 5g, Monounsaturated Fat: 9g); Cholesterol: 70.8mg; Sodium: 827mg; Carbohydrate: 12g; Dietary Fiber: 2g; Protein: 31g; Niacin: 13.6mg; Vitamin B6: 0.7mg; Vitamin B12: 1.9mcg; Vitamin C: 44.8mg; Vitamin A: 1336 IU; Vitamin K: 25.6mcg; Calcium: 70mg; Potassium: 937 mg; Iron: 1.5 mg; Selenium: 56.4mcg; Vitamin D: 516 IU

This recipe is an excellent source of protein, vitamin D, vitamin A, niacin, vitamin B6, vitamin B12, vitamin C, vitamin K, potassium and selenium.

Heat a large sauté pan over medium high heat. Add 2 teaspoons oil and swirl to coat bottom of pan. Add mushrooms and sauté 2 minutes. Add 1 tablespoon of dry citrus marinade mix to the mushrooms and continue cooking another 3 minutes.

Remove mushrooms from the pan and place in a large mixing bowl. Add the corn, onion, red pepper, cilantro, lime juice and salt to the cooked mushrooms and toss to combine. In same sauté pan, add remaining teaspoon of oil and swirl to coat pan.

Sprinkle the top of each salmon filet with 1 teaspoon dry citrus marinade mix. Add salmon, seasoned side down, to hot pan and sear 1 minute. Flip over and add water to the pan. Cover and cook another 2 minutes, or until done to taste preferences. Remove from the heat and uncover.

Place a spoonful of the mushroom salsa on each serving plate, top with a salmon filet. Garnish with a sprig of cilantro and a lime wedge.

Visit www.mushroominfo.com for the latest news, recipes and blog posts from the Mushroom Council. Follow us on [Twitter @MushroomChannel](#) and check us out on [Facebook](#).

The Mushroom Council is composed of fresh market producers or importers who average more than 500,000 pounds of mushrooms produced or imported annually. The mushroom program is authorized by the Mushroom Promotion, Research and Consumer Information Act of 1990 and is administered by the Mushroom Council under the supervision of the Agricultural Marketing Service. Research and promotion programs help to expand, maintain and develop markets for individual agricultural commodities in the United States and abroad. These industry self-help programs are requested and funded by the industry groups that they serve.

