The Importance of Vitamin D

Vitamin D is a fat-soluble vitamin and also a hormone. Vitamin D is found in foods like fatty fish, egg yolks, and mushrooms. Some foods are fortified with vitamin D like milk, margarine, and orange juice. The body can also make vitamin D from sunlight. The recommended dietary allowance (RDA) for vitamin D is 600 IU, or 15 mcg, per day.

Vitamin D is important for bone metabolism and helps with the absorption of calcium. Adequate vitamin D status has been associated with decreased risk for some cancers, high blood pressure, autism, Alzheimer’s and other chronic diseases. Deficiency causes calcium to be removed from bones, which makes them softer. This can cause rickets in children or osteomalacia in adults.

In addition to contributing to bone strength, vitamin D is essential for athletes because it is involved in muscle function. Deficiency is associated with generalized muscle pain and weakness, which could impair performance. Vitamin D deficiency greatly impairs the function of Type II fast-twitch muscle fibers. These muscle fibers are important for athletes because they are needed for quick bursts of activity and avoiding falls.

Know What you Need

Adults need 600 IU (15 mcg) of vitamin D per day. Here are some important foods to include in your diet:

• Fatty fish: This includes fish like wild salmon, mackerel, catfish, and sardines. They contain 200-500 IU in 3 ounces.
• Shiitake mushrooms: They contain about 250 IU in 4 mushrooms.
• Egg yolks: 1 egg yolk contains about 25 IU.
• Fortified milk: 1 cup of fortified milk contains about 100 IU.

If you think you might be deficient in vitamin D, talk to a dietitian about ways to include vitamin D-rich foods in your diet. You can also ask your physician to check your blood levels.

Vitamin D is also involved in reducing inflammation. Reducing inflammation can help athletes more quickly recover from difficult workouts. Also, vitamin D is involved with the immune system. Low vitamin D status is associated with increased colds, influenza, upper respiratory infections, and gastroenteritis (inflammation of the stomach and intestines) in athletes. As you can see, vitamin D is involved in many processes in the body and performance may be impaired if your levels are low.

Did you Know?

In general, Americans get only about 10% of their vitamin D from food and the other 90% comes from the sun. A fair-skinned person can make 20,000 IU when in the sun for only 30 minutes!
Making Sense of the Myths

Myth: If a little is good, more is better.

With all of the ways that vitamin D can impact health and athletic performance, some individuals may believe that the more vitamin D you consume, the better the results will be. However, this is not true. Vitamin D is a fat-soluble vitamin, which means that excess will be stored in fat tissue throughout the body. Although it is unlikely that you will consume too much through diet, it is possible to consume toxic amounts through a supplement. Overconsumption can cause nausea, irritability, joint pain, and loss of muscle tone. It also can increase calcium levels in the blood, which can cause calcification and damage to the heart, kidneys, and blood vessels. This is why you should not consume more than the upper limit of 4000 IU (100 mcg), unless directed by a physician.

Myth: All athletes need a vitamin D supplement.

Actually, there is no evidence that supplementation enhances performance if the individual is not deficient. Supplements increase the level of active vitamin D in the blood, but once this level reaches "sufficient,” benefits of supplementation disappear. Although not everyone needs a supplement, certain athletes are at a higher risk for deficiency and should be evaluated by a dietician. Vegans and vegetarians are at risk because they do not consume animal products, which are main sources of vitamin D. Also, some athletes are at risk due to limited sun exposure or decreased ability to convert sunlight into vitamin D. Some examples are athletes with dark skin, who live in the northern parts of the United States, who practice indoors, and who wear a lot of clothing or sunscreen.

References:

About the Author

Michelle Dilling is a senior at the University of Akron and will graduate in May 2018 with a Bachelor of Science in Nutrition and Dietetics and a Psychology Minor. She will then pursue her master’s degree in Exercise Science and Adult Fitness. She has been involved in sports throughout her life and continues to stay active as a competitive figure skater. In addition to being a student, Michelle is a private figure skating coach.

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Try this Recipe!

Breakfast Burrito

Ingredients
• 1 tsp olive oil
• 1 cup chopped mushrooms
• 1 cup chopped kale
• 4 large eggs
• ½ cup shredded cheese
• 1 tbsp milk
• ¼ tsp black pepper
• 2 whole wheat tortillas

Instructions
1. In a skillet, sauté mushrooms for 5 mins.
2. Add kale and sauté for 5 more mins.
3. Whisk together eggs, cheese, milk, and black pepper in a bowl.
4. Pour mixture into the skillet. Stir and cook until eggs are scrambled, about 2-3 mins.
5. Remove from skillet, split into 2 tortillas, and wrap. Makes 2 servings.

This burrito is a great way to consume vitamin D! It has about 100 IU of Vitamin D, which is found in the mushrooms, kale, eggs, cheese, and milk.

Recipe from: https://teaspoonofspice.com/egg-mushroom-kale-breakfast-burrito/