MUSHROOMS

The Only Source Of Vitamin D In The Produce Aisle

Few foods naturally contain vitamin D, but mushrooms are unique for being the only food in the produce aisle with the ability to increase its vitamin D levels through exposure to UV-light or sunlight.

The sun is the most common producer of vitamin D as the ultraviolet (UV) rays from sunlight strike the skin and trigger vitamin D synthesis. Mushroom farmers took note and began exposing their mushrooms to UV light during the growing process, increasing the overall vitamin D content[1]. Some varieties, such as crimini and portabella, contain higher levels of the plant sterol, ergosterol, which converts to vitamin D upon exposure to UV light and, in turn, results in a higher amount of vitamin D (see Table 2).

Why Vitamin D Is Important

Although the majority of Americans consume sufficient amounts of most nutrients, vitamin D is consumed by many individuals in amounts below the Estimated Average Requirement.[2] The 2015-2020 Dietary Guidelines for Americans identified vitamin D as a nutrient of public health concern because low intakes are associated with health concerns.[2] Vitamin D helps build and maintain strong bones by helping the body absorb calcium, therefore insufficient levels can lead to rickets in children and osteoporosis in adults.[3]

Table 1: Recommended Dietary Allowances (RDAs) For Vitamin D3

Age	Male	Female	Pregnancy	Lactation
0-12 months*	10 mcg	10 mcg		
1-13 years	15 mcg	15 mcg		
14-18 years	15 mcg	15 mcg	15 mcg	15 mcg
19-50 years	15 mcg	15 mcg	15 mcg	15 mcg
51-70 years	15 mcg	15 mcg		
> 70 years	20 mcg	20 mcg		

Did you know?

Several specialty mushrooms pack in a full day's recommend allowance of vitamin D in one serving[1].

1 cup diced maitake mushrooms

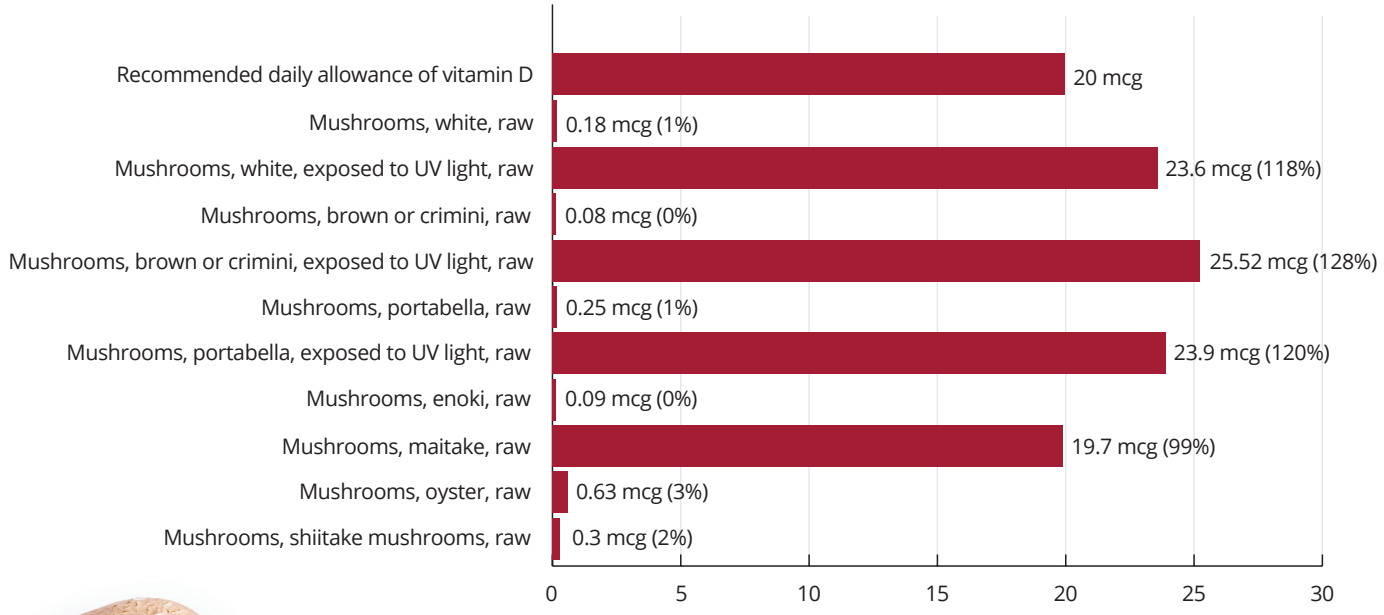
19.7mcg/99%

Mushrooms are the Source of Vitamin D in Many Plant-Based Diets

A review of mushrooms as a potential source of dietary vitamin D (*Nutrients, 2018*) found that vitamin D-enhanced (or UV-light exposed) mushrooms are the only non-animal food product with substantial amounts of bioavailable vitamin D and, as such, have the potential to be a primary source of dietary vitamin D for vegans and vegetarians[4].

Table 2: Vitamin D Levels In Mushroom Varietites[5]

Portabella, white, crimini and maitake are tops in vitamin D.



Data Source: U.S. Department of Agriculture, Agricultural Research Service. FoodData Central, 2019. fdc.nal.usda.gov.

1. McHugh T. UV processing of mushrooms increases vitamin D content. Food Technology 3/15. Page 75, 3rd column, 2nd paragraph. 2. U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2015. 8th Edition, Washington, DC: U.S. Government Printing Office, January 2016. 3. Vitamin D. Fact Sheet for Health Professionals. National Institutes of Health. Reviewed August 7, 2019. Accessed February 5, 2020. 4. Cardwell, G.; Bornman, J.F.; James, A.P.; Black, L.J. A Review of Mushrooms as a Potential Source of Dietary Vitamin D. Nutrients 2018, 10, 1498. 5. U.S. Department of Agriculture, Agricultural Research Service. FoodData Central, 2019. fdc.nal.usda.gov.

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