

## RESEARCH

# Manage Your Weight With Mushrooms



## Managing Weight to Feel Your Best

Weight management is so much more than reaching a certain number on the scale. It's about your overall health and wellness, having energy, reducing risk of diseases like diabetes, cancer and heart disease<sup>1</sup>, and feeling like the best version of yourself. It's great to have a goal in mind when losing weight but don't forget to account for other measures of success beyond the scale like how your clothes fit, your energy level and how you feel overall.

## The 411 on Satiety

A key part to managing weight is getting your hunger in check. When insatiable hunger takes control, all good eating habits are thrown out the window and overeating can occur, which is why it's so important to choose foods and snacks that keep you satiated. A couple studies have shown that mushrooms, **when substituted for meat, can improve nutrition, enhance weight loss and promote satiety.**<sup>2, 3</sup>

A one-year, randomized clinical trial at Johns Hopkins Bloomberg School of Public Health indicates increasing intake of low energy density foods - meaning few calories given the volume of food - specifically mushrooms, in place of high energy density foods, like lean ground meat, can be an effective method for reducing daily energy and fat intake while still feeling full and satiated after the meal. Participants following the mushroom-rich diet lost 7 pounds, showed improvements in body composition and maintained these changes for 6

months after losing weight. Specifically, those in the intervention group reported lower calorie and fat intake; lost more pounds and percentage body weight; achieved lower body mass index, waist circumference and percent total body fat compared to participants on the control diet. The study also suggests that **substituting mushrooms for lean ground beef in an entrée just once every week would save almost 20,000 calories or more than 5 pounds of body weight in 1 year.**<sup>2</sup>

Another recent study conducted by University of California - Davis and the Culinary Institute of America found that substituting mushrooms for a portion of meat helped improve nutrition and flavor. **Adding mushrooms to the mix helped lower calorie, saturated fat and sodium intake, while adding nutrients to the plate like B vitamins, vitamin D (when UV exposed), antioxidants and potassium (6%).**<sup>3</sup>



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## Food Pairings to Curb Hunger

Nutrient-dense meals and snacks that offer a combination of protein, good fat and fiber have the most staying power to help keep cravings at bay.



## Vitamin D and Weight

Studies have consistently shown a correlation between low vitamin D levels and obesity.<sup>5</sup> Few foods naturally contain vitamin D, but UV exposed mushrooms are unique for being the only food in the produce aisle that does contain vitamin D. In fact, the Institute of Medicine recognizes UV-exposed mushrooms as the exception to the rule that plant foods don't naturally contain vitamin D.

Although the results are not conclusive, some clinical trials have demonstrated that the **vitamin D2 present in mushrooms is bioavailable and equally effective in raising and maintaining a healthy adult's vitamin D status as taking a supplement that contains vitamin D.** In fact, a 2012 study in *Dermato-Endocrinology* showed that 25 adults who consumed 50 mcg of vitamin D2 from white button mushroom extract daily for a 3-month period were able to raise and maintain their vitamin D (25(OH)) levels similar to healthy adults who consumed 50 mcg of supplements containing vitamin D2 or D3.<sup>6</sup>

## Vitamin D Levels in Mushroom Varieties

### RECOMMENDED DAILY ALLOWANCE OF VITAMIN D

MUSHROOM TYPE	EXPOSED TO UV LIGHT	QTY.	VITAMIN D LEVELS
Whole Portabella Mushroom	✓	1 (84 g)	23.9 mcg
Medium White Mushrooms	✓	5 (90 g)	23.6 mcg
Brown or Crimini Mushrooms	✓	4 (80 g)	25.52 mcg
Diced Maitake Mushrooms		1 cup (70 g)	19.7 mcg
Small Oyster Mushrooms		6 (90 g)	0.63 mcg
Whole Shiitake Mushrooms		4 (76 g)	0.304 mcg

Data Source: U.S. Department of Agriculture, Agricultural Research Service. FoodData Central, 2019. [fdc.nal.usda.gov](http://fdc.nal.usda.gov).



<sup>1</sup> American Heart Association. "How much sodium should I eat per day?" <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sodium/how-much-sodium-should-i-eat-per-day>

<sup>2</sup> U.S. Food & Drug Administration. Sodium Reduction. Published October 13, 2021. <https://www.fda.gov/food/cfsan-constituent-updates/fda-issues-sodium-reduction-final-guidance>

<sup>3</sup> American Heart Association. "How much sodium should I eat per day?" <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sodium/how-much-sodium-should-i-eat-per-day>.

<sup>5</sup> Wortsman, J., Matsuoka, L., Chen, T., Lu, Z., Holick, M. 2000. "Decreased bioavailability of vitamin D." *American Journal of Clinical Nutrition*. 72(3); 690-693. [https://www.scrip.org/\(S/lz5mqp453edsnp55rgjct55\)/reference/ReferencesPapers.aspx?ReferenceID=805501](https://www.scrip.org/(S/lz5mqp453edsnp55rgjct55)/reference/ReferencesPapers.aspx?ReferenceID=805501)

<sup>6</sup> Vanlint, S. "Vitamin D and obesity, review." *Nutrients*. 2013, 5, 949-956. <https://vitaminwiki.com/Vitamin-D+and+Obesity+%E2%80%93+Review+March+2013>

<sup>7</sup> Raphael, J., Zhiren, L., Bogusz, J. and Holick, M. "Photobiology of vitamin D in mushrooms and its bioavailability in humans." *Dermato-Endocrinology*. 013. 5:1, 1-1. p. 175. <https://www.tandfonline.com/doi/pdf/10.4161/derm.23321>

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