



# TAKING A CLOSER LOOK AT NUTRIENTS FOUND IN MUSHROOMS

The immune system is made up of a network of cells, tissues and organs that work together to protect the body against infection and maintain overall health. Mushrooms, like other fruits and vegetables, can play a positive role in supporting a healthy immune system.

The 2015-2020 Dietary Guidelines for Americans<sup>1</sup> emphasizes the importance of creating a healthy eating pattern to maintain health and reduce the risk of disease. Suggestions include:

- Make half your plate fruits and vegetables.
- Move to low-fat and fat-free milk or yogurt.
- Make half your grains whole grains.
- Focus on whole fruits and vary your vegetables.
- Drink and eat less sodium, saturated fat and added sugars.
- Vary your protein routine.

## NUTRIENTS IMPORTANT FOR OVERALL WELLNESS

There are a variety of micronutrients, as identified by the Linus Pauling Institute at Oregon State University<sup>2</sup>, that are important for supporting a healthy immune system including selenium and vitamins D and B6, which can be found in mushrooms.

	THE FACTS	NUTRIENTS IN MUSHROOMS <sup>3</sup>
<b>SELENIUM<sup>4</sup></b>  RDA (Adults): <b>55 mcg/day</b>	<p>Selenium is an essential trace mineral which means your body must get this mineral in the food you eat.</p> <p>Selenium helps your body make special proteins, called antioxidant enzymes<sup>5</sup>. These play a role in preventing cell damage.</p>	<p><b>Excellent Source</b></p> <ul style="list-style-type: none"> <li>• 4 crimini mushrooms: 20.8 mcg 38% RDA</li> <li>• 1 piece whole portabella: 15.6 mcg 28% RDA</li> </ul> <p><b>Good Source</b></p> <ul style="list-style-type: none"> <li>• 5 medium mushrooms: 8.35 mcg 15% RDA</li> </ul>
<b>VITAMIN D<sup>6</sup></b>  RDA (Adults): <b>20 mcg/day</b>	<p>Vitamin D helps build and maintain strong bones by helping the body absorb calcium. Vitamin D is available via diet, supplements and sunlight, which is why it is also referred to as the "sunshine vitamin."</p> <p>Vitamin D has other roles in the body, including modulation of cell growth, neuromuscular and immune function, and reduction of inflammation<sup>6</sup>.</p>	<p><b>Excellent Source</b></p> <ul style="list-style-type: none"> <li>• 5 medium mushrooms, exposed to UV light: 23.6 mcg 118% RDA</li> <li>• 4 crimini mushrooms, exposed to UV light: 25.52 mcg 128% RDA</li> <li>• 1 piece whole portabella, exposed to UV light: 23.9 mcg 120% RDA</li> <li>• 1 cup diced maitake mushrooms: 19.7 mcg 99% RDA</li> </ul>
<b>VITAMIN B6 (PYRIDOXINE)<sup>7</sup></b>  RDA (Adults): <b>1.3 mcg/day</b>	<p>Vitamin B6 helps convert food into usable energy and assists in the formation of neurotransmitters, red blood cells, proteins and DNA<sup>8</sup>.</p>	<p><b>Good Source</b></p> <ul style="list-style-type: none"> <li>• 4 whole shiitake mushrooms: 0.224 mcg 13% RDA</li> </ul>

<sup>1</sup><https://www.dietaryguidelines.gov/current-dietary-guidelines/2015-2020-dietary-guidelines>

<sup>2</sup><https://lpi.oregonstate.edu/mic/health-disease/immunity>. Written in March 2016 by: Giana Angelo, Ph.D. Linus Pauling Institute, Oregon State University. Reviewed in February 2017 by: Catherine Field, Ph.D. Professor of Nutrition, Department of Agricultural, Food and Nutritional Science, University of Alberta. This link leads to a website provided by the Linus Pauling Institute at Oregon State University. The Mushroom Council is not affiliated or endorsed by the Linus Pauling Institute or Oregon State University.

<sup>3</sup>U.S. Department of Agriculture, Agricultural Research Service, FoodData Central. 2019. [fdc.nal.usda.gov](https://fdc.nal.usda.gov).

<sup>4</sup><https://ods.od.nih.gov/factsheets/Selenium-HealthProfessional/>

<sup>5</sup>U.S. National Library of Medicine. Selenium in Diet. <https://medlineplus.gov/ency/article/002414.htm>

<sup>6</sup><https://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/>

<sup>7</sup><https://ods.od.nih.gov/factsheets/VitaminB6-HealthProfessional/>

<sup>8</sup><https://lpi.oregonstate.edu/mic/health-disease/immunity#micronutrients>. This link leads to a website provided by the Linus Pauling Institute at Oregon State University. The Mushroom Council is not affiliated or endorsed by the Linus Pauling Institute or Oregon State University



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