Keyword: Do mushrooms have protein

Slug: do-mushrooms-have-protein

Meta Desc: Discover the hidden nutrition of mushrooms. From high-quality protein to their vitamin content. Learn why mushrooms are a valuable addition to any diet.

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Alt: mushrooms other nutrition facts

Do Mushrooms Have Protein? 4 Findings and Other Nutrition Facts

Mushrooms are like a diamond in the rough. They may seem unassuming, but these fungi pack a nutritional punch like no other foods.

Yes, they contain proteins. And vitamins and minerals: they are filled with hidden treasures that can transform your health.

In fact, they are a complete protein source, meaning they have all the nine essential amino acids required for human health. This is unlike some other plant-based foods, such as rice and wheat.

Dried mushrooms contain surprising amounts of protein that rival those of animal-based sources.

Discover the true potential of this nutritional powerhouse and learn:

- The nutrient content of various mushrooms
- Why mushrooms are a valuable addition to any diet
- How you can incorporate mushrooms into your diet

1 - Dried Mushrooms Contain a Surprising Amount of Protein



Alt:

Caption: Dried mushrooms are a great source of high-quality protein. 100 grams of dried oyster mushrooms has over 26 grams of protein full of the 9 essential amino acids!

The answer to the question, do mushrooms have protein, is a resounding yes.

100 g of fresh mushrooms contain an average of 2.9 g of protein [1], which is quite low compared to animal-based proteins like chicken breast (which contains 32.1 g in a 100 g serving [2]).

Dried mushrooms, however, contain more protein than fresh mushrooms. Indeed, research conducted on *Amanita zambiana* showed that the protein content increased significantly after drying from 2.1 g of protein to 24.1 g per 100 g [3].

It's surprisingly much higher than the protein content in some plant-based proteins, such as lentils (100 g of lentils contain 9 g of protein [4]) and closer to that of animal-based sources.

For example, dried white button mushrooms, *Agaricus bisporus*, have 29.9 g of protein for every 100 g [5] compared to the 32.1 g in chicken breast.

The daily recommended intake of protein is 0.36 g for every pound, which translates to about 50 g for someone weighing 140 pounds [6].

However, meeting the recommended intake of protein with mushrooms alone could be challenging as you'd need to consume a **large portion of mushrooms**.

If, say, your recommended intake is 50 g, you need to eat at least 1700 g of fresh mushrooms or take 167 g of dried mushroom powder. So, it's more ideal to incorporate other sources of protein in your diet than rely on mushrooms alone.

Protein Content in Fresh and Dried Mushrooms

The table below lists the protein level content of dried culinary mushrooms, from low to high and compares the amount to that in fresh mushrooms. (As a point of comparison, there is **32.1 g** of protein in 100 g of chicken breast.)

Mushroom Species	Fresh Protein Content (g/100 g)	Dried Protein Content (g/100 g)
Chanterelle, Cantharellus cibarius	1.49	19.9
Portabella, Agaricus bisporus	2.75	25.1
Morel, Morchella esculenta	3.12	28.2
White button, Agaricus bisporus	3.00	29.29

Alt: table of fresh and dried content of mushroom species

Among culinary mushrooms, **morel has the highest** protein content when fresh. Oyster mushrooms, on the other hand, contain the **highest fresh and dried** protein content compared to other functional mushrooms, as shown in the table below.

Functional Mushroom	Fresh Protein Content (g/100 g)	Dried Protein Content (g/100 g)
Shiitake, <i>Lentinula edodes</i>	2.41	17.5
Maitake, <i>Grifola frondosa</i>	2.2	21.1
Lion's mane, Hericium erinaceus	2.5	22.3
Oyster, Pleurotus sajor caju	3.31	26.34

Alt: table of fresh and dried content of functional mushroom

2 - Mushrooms Proteins Are High Quality and Have a High Bioavailability

Though fresh mushrooms have lower protein content than animal-based foods, they make up for it in **quality**.

The quality of a protein refers to its ability to **provide the nine essential amino acids** needed for human nutrition. It's measured by a protein's bioavailability, which is the extent and rate at which nutrients are absorbed, digested, and used by the body.

Mushrooms contain **high-quality protein**, which includes all the nine essential amino acids typically found in meat. They have **a high bioavailability** that rivals the quality of animal-derived sources, unlike other plant-based foods, like rice and wheat.

Studies on Amanita mushrooms showed that their protein digestibility is very high [15]. In addition, their amino acid content is comparable to that of an egg white, and their bioavailability surpasses that of wheat and soybean.

A higher bioavailability means that mushroom proteins are utilized more efficiently by the body for **growth**, **repair**, **and maintenance of tissues**.

3 - Mushrooms Are a Rich Source of Dietary Fiber

Mushrooms contain both **simple and complex carbohydrates**, which are beneficial to digestive health.

Simple carbohydrates, such as glucose and fructose, are converted into energy, which fuels the body's activities. The average carbohydrates content of mushrooms is 4 g, which is about 1% of the DV intake [1]. This makes them an excellent option for **keto and weight-loss diets**.

Complex carbohydrates are absorbed gradually into the digestive system, which keeps blood sugar levels in check and promotes feelings of fullness and satiety.

A study conducted with protein-matched amounts of meat and *Agaricus bisporus* showed that consuming the mushrooms was more satiating than eating meat [16]. Participants who consumed 226 g of mushrooms for breakfast reported **decreased hunger and greater fullness** than those who had 28 g of meat. This is just another example of why <u>mushrooms</u> make an ideal meat substitute.

The study also showed an increase in fiber intake after mushroom consumption. Mushrooms contain dietary fiber, such as chitin, which animal-based proteins don't have.

Chitin is an insoluble fiber unique to mushrooms that helps maintain its structure and bulk. When consumed, it aids in **digestion and regulates bowel movement**, which helps reduce constipation.

Edible mushrooms are also a rich source of beta glucans [17], a soluble fiber that has powerful health benefits, including:

- Supporting immune function
- Promoting a healthy inflammation response
- Regulating blood sugar

Examples of mushrooms that are rich sources of beta glucans include:

- Cordyceps
- Reishi
- Turkey tail
- Shiitake

"The more whole, plant-based foods we eat, the better our health outcomes. So, let's make mushrooms a staple in our diets for their delicious flavor and impressive health benefits." - Michael Greger - American physician, best known for his advocacy of a whole-food, plant-based diet.

4 - Mushrooms Contain Over 10 Vitamins and Minerals

Mushrooms contain a variety of essential vitamins and minerals. Some key vitamins found in mushrooms include:

- Vitamin B: Mushrooms are an excellent source of B vitamins, particularly B2
 (riboflavin), B3 (niacin), B5 (pantothenic acid) and B6 (pyridoxine). These B vitamins
 play an important role in maintaining a healthy skin, nervous system, and
 metabolism.
- Vitamin D: Edible mushrooms are one of the few non-animal sources of Vitamin D, also known as the "sunshine vitamin." When mushrooms are exposed to sunlight, they synthesize vitamin D, which helps regulate calcium levels in the body and maintain strong bones [18].
- Vitamin C: While not as high in Vitamin C as some other fruits and vegetables, mushrooms still provide a small amount of this antioxidant, which supports a healthy immune system.

Oyster mushrooms have the highest niacin (vitamin B3) content at **31%** of the DV intake [14]. Wild funnel chanterelles, on the other hand, have the highest vitamin D content at 21.1 mcg/100 g, which is **140%** of the DV value [18].

In addition to these vitamins, mushrooms are also a great source of minerals, such as calcium and magnesium [10].

Calcium helps maintain strong bones and teeth, while also promoting proper muscle and nerve function. A 100 g serving of white button mushrooms contains approximately 5 mg of calcium, which is 2% of the recommended daily intake (RDI).

Magnesium, on the other hand, is essential for regulating muscle, nerve function and blood sugars. Chanterelle mushrooms contain a significant amount at 220 mg of magnesium, which is approximately 50% of the RDI [18].

Aside from calcium and magnesium, edible mushrooms also contain other essential minerals, such as potassium, copper, iron, selenium, and phosphorus.

The table below compares the mineral content in a 100 g serving among six different mushrooms.

Mushroom Type	Iron (mg)	Magnesium (mg)	Copper (mg)
White button	18.5	108.8	29.2
Cordyceps	14.4	3.4	-
Reishi	82.6	7.95	26
Lion's mane	11.2	75.8	1.1
Shiitake	6.9	102	1.1
Oyster	10.2	125	1.42

Alt: mineral content of different mushrooms

Alt: dried mushrooms contain protein

Unlock the Nutritional Benefits of Mushrooms With Real Mushrooms

<u>Mushroom supplements</u> are a convenient way to incorporate the health benefits and nutritional content of mushrooms into your diet. They can be added into a variety of dishes, such as soups, smoothies, sauces, and can even make a cup of coffee.

Real Mushrooms have exactly what you need to unlock these nutritional benefits. We have over 10 <u>capsules</u> and <u>powders</u> made from <u>organic mushrooms from high quality growers in China</u> including:

- Turkey Tail
- Chaga
- Lion's mane
- Reishi
- Cordyceps

<u>Our products</u> are made from the fruiting bodies of certified organic mushrooms, which means they have no mycelium or grain fillers.

"This is the only brand that I have found that actually uses real mushrooms and not mycelium. The real mushroom is where the good stuff is!" - <u>Donna</u>

What's more, we use the <u>dual-extraction method</u> to ensure both soluble and insoluble fibers are drawn from the mushrooms. This ensures our products have the highest nutrient profiles with over 25% beta glucans.

Visit our <u>shop</u> to buy any of our products and improve not just your health, but your <u>pet's</u> <u>health</u> too.

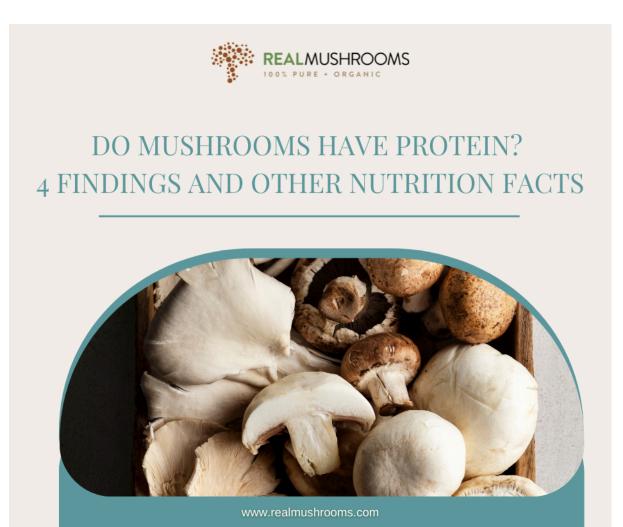
References

- 1. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/2345313/nutrients
- 2. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/331960/nutrients
- 3. Reid, T., Munyanyi, M., & Mduluza, T. (2017). Effect of cooking and preservation on nutritional and phytochemical composition of the mushroom Amanita zambiana. Food Science & Nutrition, 5(3), 538-544. Retrieved January 30,2023, from https://doi.org/10.1002/fsn3.428
- 4. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/172421/nutrients

- 5. Das, A. K., Nanda, P. K., Dandapat, P., Bandyopadhyay, S., Gullón, P., Sivaraman, G. K., McClements, D. J., Gullón, B., & Lorenzo, J. M. (2021). Edible Mushrooms as Functional Ingredients for Development of Healthier and More Sustainable Muscle Foods: A Flexitarian Approach. Molecules, 26(9), 2463. Retrieved January 30,2023, from https://doi.org/10.3390/molecules26092463
- 6. Harvard Health Publishing Staff. (2022, January 19). How much protein do you need every day? [Staying healthy]. Harvard Health. Retrieved January 30,2023, from https://www.health.harvard.edu/blog/how-much-protein-do-you-need-every-day-2015061880
- 7. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/168422/nutrients
- 8. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/2003598/nutrients
- 9. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/168423/nutrients
- 10. Dimopoulou, M., Kolonas, A., Mourtakos, S., Androutsos, O., & (University of Thessaly & Harokopio University & University of Wales Trinity Saint David). (2022, August). Nutritional Composition and Biological Properties of Sixteen Edible Mushroom Species. Applied Sciences, 12(16), 8074. Retrieved January 30, 2023, from https://doi.org/10.3390/app12168074
- 11. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/1999628/nutrients
- 12. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/2003602/nutrients
- 13. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/1999626/nutrients
- 14. U.S. Department of Agriculture. (n.d.). Agricultural Research Service. Retrieved January 30, 2023, from https://fdc.nal.usda.gov/fdc-app.html#/food-details/168580/nutrients
- 15. Greeshma, A. A., Sridhar, K. R., & Pavithra, M. (2018). Nutritional perspectives of an ectomycorrhizal edible mushroom Amanita of the southwestern India. Current Research in Environmental & Applied Mycology, 8(1), 54-68. Retrieved January 30, 2023, from https://www.creamjournal.org/pdf/CREAM 8 1 4.pdf
- 16. Hess, J. M., Wang, Q., Kraft, C., & Slavin, J. L. (2017). Impact of Agaricus bisporus mushroom consumption on satiety and food intake. Appetite, 117, 179-185. Retrieved January 30, 2023, from https://doi.org/10.1016/j.appet.2017.06.021
- 17. Cerletti, C., Esposito, S., & Iacoviello, L. (2021). Edible Mushrooms and Beta-Glucans: Impact on Human Health. Nutrients, 13(7), 2195. Retrieved January 30, 2023, from https://doi.org/10.3390/nu13072195

18. Cardwell, G., Bornman, J. F., James, A. P., & Black, L. J. (2018). A review of mushrooms as a potential source of dietary Vitamin D. Nutrients, 10(10), 1498. Retrieved January 30, 2023, from https://doi.org/10.3390/nu10101498

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