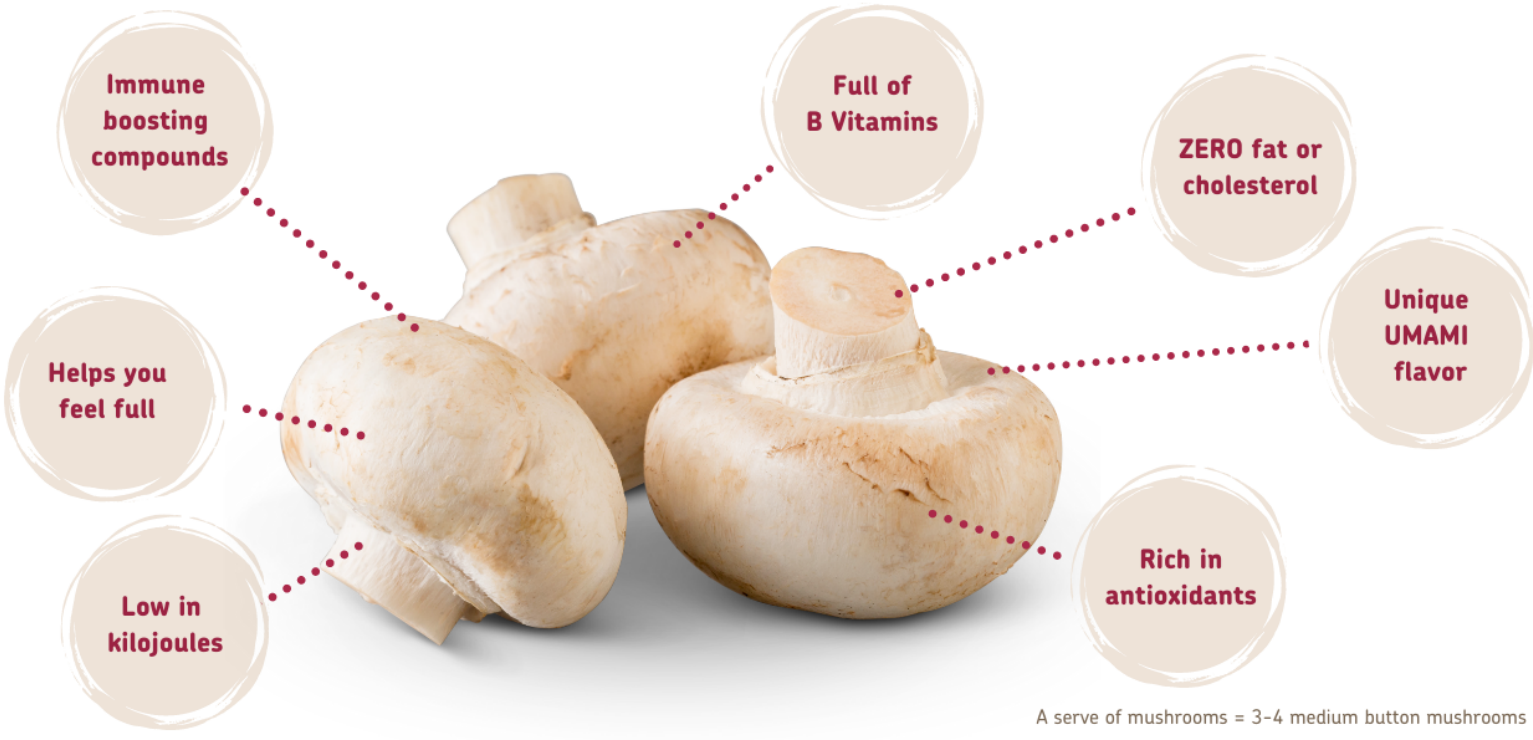
Mushrooms for health

The nutritional power of mushrooms contain a unique blend of vitamins, minerals and antioxidants that the whole family needs.



A serve of mushrooms = 3-4 medium button mushrooms

Dietitians recommend eating just one serve of mushrooms (3-4 medium button mushrooms) to give you a quarter (25%) of your daily needs of the essential vitamins, riboflavin, biotin, niacin and pantothenic acid, while contributing to your folate needs too.

For more information on the power of mushrooms, visit:
www.australianmushroomgrowersassociation.com.au

AMGA
Australian Mushroom Growers' Assoc.

Mushrooms for health

Mushrooms deliver a surprising array of essential vitamins and minerals

Mushrooms are an exceptionally nutrient dense food, with one serve offering a surprising amount and array of essential nutrients. Just take a look at the table overleaf.)

One serve of mushrooms (100g – three button mushrooms) has:

- One-third of your daily needs of the vitamins riboflavin and biotin.
- One-quarter of your daily needs of the vitamins niacin and pantothenic acid.
- All your daily needs of vitamin D in light exposed mushrooms.
- A modest amount of folate and vitamin B12.
- A quarter or more of your daily needs of the essential minerals selenium, chromium and copper.
- About 10% of your needs of potassium and phosphorus.
- Abundant antioxidants (covered in the section on immunity).

It is almost like taking a vitamin and mineral supplement, only far tastier!

B Vitamins

The vitamins niacin and riboflavin are involved in maintaining red blood cells, healthy nerve function and in the release of energy from carbohydrate, protein and fat. So, the fitter you are, the more riboflavin and niacin you need. And, of course, they are needed for the normal growth and development of children. That makes adding mushrooms to dinner or having mushrooms on toast for breakfast a very smart idea.

Pantothenic acid is involved in more than 100 different steps in making neurotransmitters, hormones and haemoglobin, while biotin is also involved in normal body metabolism including the production of glucose. Both vitamins work primarily as co-enzymes, compounds that allow enzymes to function properly. They are both also important for mental performance.

Vitamin B12 & folate

It is often said that mushrooms have vitamin B12, a vitamin commonly found in animal foods. Ground-breaking research at the University of Western Sydney revealed that there are wide-ranging amounts of B12 in mushrooms in a bio-available form (meaning that it can be used by the body) (Koyyalamudi 2009).

Although mushrooms provide a modest amount of vitamin B12, they are not a major source of B12. A serve provides no more than 5% of the daily needs for this vitamin.

However, this still makes the mushroom the only non-animal fresh food source of B12. If you are vegetarian, you will also get B12 from milk, yogurt, cheese and eggs. Some soy beverages are fortified with B 12.

There is a modest amount of folate too, a very important vitamin for women just before pregnancy and in their first trimester, as it increases the chances of having a healthy baby. Folate is also very important for blood cell formation and normal immune function. Being such a critical vitamin it is important to eat a wide range of foods that have folate, such as fruit and vegetables, especially green leafy vegetables.

Vitamin D

Another surprise from the mushroom is that it generates vitamin D when it is in the sunlight. Wild mushrooms naturally generate 2-40 mcg of **vitamin D** in 100g serve. Compare that to the 5-15 mcg we need each day. Exposing commercial mushrooms to sunlight (or UV light) after harvest also triggers the production of vitamin D. In some parts of Australia you can buy vitamin D mushrooms with your daily needs of vitamin D in a serve of three button mushrooms.

The mushroom is the only non-animal natural source of vitamin D. There is more information on the vitamin D naturally present in mushrooms in our Bone Health sheet or here.

Minerals

Potassium is a natural mineral in plant foods and it plays a major role in maintaining fluid and electrolyte balance. A diet with plenty of potassium and low in sodium (salt) appears to both prevent and help correct high blood pressure. This, in turn, helps to prevent strokes.

About one quarter of your **copper** requirements are found in a serve of mushrooms. Copper is very important in the production of red blood cells and it's also a component of antioxidant enzymes naturally produced by the body. It is also involved in energy production, and the making of tendons and neurotransmitters.

Mushrooms will provide 11% of your daily phosphorus needs. The main role of phosphorus is, in combination with calcium, to form the structure of teeth and bones. The other roles of phosphorus include energy metabolism and being a critical part of ATP, the high-energy molecule used during muscle contraction.

Selenium is one of the body's antioxidants nutrients helping to prevent free radical formation. A serve of mushrooms can provide a quarter of your daily needs of selenium. A lack of selenium has been implicated in the cause of both heart disease and some cancers.

There has been interest in **chromium** because it potentiates the action of insulin and this, in turn, may help blood glucose control in people with diabetes.

Minerals	Mushroom	NRV/RDI (recommended dietary intake)	% NRV/RDI
Copper (mcg)	370	1200-1700	22-31
Selenium (mcg)	15.4	60-70	22-26
Phosphorus (mg)	110	1000	11
Potassium (mg)	360	2800-3800	9-13
Sodium (mg)	9	460-920	
Chromium (mcg)	13.4	25-35	38-54
Iron (mg)	0.45	8-18	
Magnesium (mg)	15	320-400	4-5

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References

Koyyalamudi SR, Jeong SC, Cho KY, Pang G. Vitamin B12 is the active corrinoid produced in cultivated white button mushrooms (Agaricus bisporus). J Agricultural & Food Chemistry 2009; 57 (14): 6327-6333

Koyyalamudi SR, Jeong SC, Manavalan S, Vysetti B, Pang G. Micronutrient mineral content of the fruiting bodies of Australian cultivated Agaricus bisporus white button mushrooms. J of Food Composition & Analysis 2013; 31: (109-114)