

Leaving mushrooms out in the sun may sound like an odd idea but researchers say that sun-bathing your mushrooms increases their vitamin D content nearly eightfold. New findings funded by [Hort Innovation outline the health impact of mushrooms under UV light](#).

“A recent evaluation of random controlled trials showed that UV-exposed mushrooms are effective in increasing active vitamin D levels, especially in adults deficient in vitamin D, and studies show that it is just as effective as supplements at increasing vitamin D levels in the blood,” says Dr. Flavia Fayet-Moore of Nutrition Research Australia.

The lead researcher of the project goes on to explain that placing five button mushrooms or one portobello mushroom under UV light for 10-15 minutes generates about 24 micro-grams of vitamin D.

This unit is significant, research suggests, being nearly 1000 international units - the recommended amount of vitamin D according to Australian nutritional guidelines. Fayet-Moore details that fungi like mushrooms are already predisposed to something called 'pre-vitamin D' - or ergosterol. This high concentration of ergosterol means that the common mushroom has a high potential to produce vitamin D.

What happens is that the 'pre-vitamin D' - which is similar to the structure and function of that substance found in human skin - is converted to vitamin D when exposed to UV light.

While this is true, some critics ask if the bloodstream can absorb the vitamin after the mushrooms have been 'tanned'. Dr. Fayet-Moore says yes, it does make it to the bloodstream.

And, mushrooms retain the vitamin D content for up to eight days through refrigeration. Production of the nutrient can also be increased by 30% if the fungi were placed in the sun with the underside facing up. Even more so, production is shown to go up 60% if the mushrooms were sliced prior to sun exposure.

Why is vitamin D important?

“Low vitamin D levels are now a global public health issue,” outlines Dr. Fayet-Moore.

"Sun exposure guidelines to address vitamin D deficiency recommend that during winter, adults spend up to half an hour in direct sunlight at midday, with face, arms and hands exposed. And in summer, around 10 minutes of mid-morning or late afternoon sunlight, with face, arms and hands exposed is recommended," she says.

This research has bigger implications on the ability of alternatives, other than the harmful rays of direct UV sunlight to consume vitamin D, of vitamin consumption. Since Australia has "one of the highest rates of skin cancer globally," research demonstrates that it is difficult to meet vitamin D requirements without exposing yourself too much to the sun.

So, in order to adhere both to sun safe messages and recommendations for vitamin D intake, scientists say it's important to fortify with mushrooms at home.