

# NUTRITIONAL YEAST

You'll probably find a vat of nutritional yeast, also known as dietary yeast, and nicknamed "nooch", in the fridge or pantry of most plant-based eaters. It is even showing up on the menus of restaurants lately. It may look like a shaker of flakes you would feed to a pet fish, but it's not fish food! You can find it as an ingredient in salad dressings and croutons. And it's even being used as a seasoning in omnivorous NYT Cooking recipes.

## Basics

Nutritional yeast is a condiment or seasoning used to make bland dishes flavorful and delicious, and to add a burst of umami (savoriness) to almost anything. It also adds an appealing, yellow-orange color to recipes. The flavor of nutritional yeast is somewhat savory, cheesy, or nutty.

Nutritional yeast can be either fortified, with added vitamins and minerals, or unfortified. The former version is often used as a source of important vitamins and minerals, especially for plant-based eaters. It doesn't contain animal-derived ingredients. This makes nooch a useful culinary alternative to dairy cheese in certain dishes.

Nutritional yeast comes from the same species of yeast (*Saccharomyces cerevisiae*) used to make beer, bread or kombucha. But it's a different end product. One major difference is that people use baker's and brewer's yeast in their active form. Nutritional yeast is inactive, so it has no leavening ability. In other words, it won't make dough rise, and it won't reproduce inside you, even if you eat it raw. Nutritional yeast is made by growing *S. cerevisiae* on a sugar-rich molasses medium, usually sugarcane or sugar beets. It is deactivated with heat, washed, pasteurized, dried, and crumbled. Nutritional yeast is a primary-grown yeast, which means it's cultivated specifically for its nutritional value and not as a by-product or a means to another recipe.

## Nutritional Yeast Nutrition Facts

Not only does nutritional yeast taste good, but it can also be good for you! It's packed with several nutrients that are in short supply in the modern Western diet.

One tablespoon of nutritional yeast may contain as much as 180% of the Reference Daily Intake (RDI) for various B vitamins. Some of these, including B1, B3, B5, B6, and B7, form naturally as yeast grows, and others, most notably vitamin B12, are found in nutritional yeast through fortification. B vitamins are involved in important bodily processes, such as metabolism, energy production, DNA synthesis, brain function, hormone regulation, and making blood cells. Vegans and other people who eat a plant-based diet might look to nutritional yeast as a source of vitamin B12. Though fortified nutritional yeast will contain B12, it's usually not enough to rely upon for all of your needs, so other sources are still important.

Nutritional yeast is over 50% protein by weight. It contains more protein per calorie than any meat product. In only ¼ of a cup of nutritional yeast, you'll find 8 grams of protein, 3 grams of fiber, very little sodium, and no sugar.

Nutritional yeast is particularly rich in the essential amino acids lysine and tryptophan. Lysine helps the body absorb calcium, enhances the production of collagen, and may even prevent cold sores. Tryptophan is the precursor to 2 neurotransmitter hormones important for sleep: serotonin and melatonin.

Nooch also contains a wealth of trace minerals, such as zinc, selenium, magnesium, phosphorus, and potassium. These are all essential nutrients for good health. They also support a strong immune system and active metabolism. The potassium in nutritional yeast is particularly beneficial because most people in the modern world are getting too little potassium but too much sodium. This balancing of electrolytes is necessary to help regulate critical bodily functions.

It contains potent antioxidants too, which help prevent cell damage that can lead to many chronic diseases. One of the particularly potent antioxidants in nutritional yeast is glutathione, which plays an important role in cellular

defense mechanisms. It can help protect your cells and eliminate toxins from your body. Nutritional yeast contains a very concentrated 2.5 mg of glutathione per gram.

### **Nutritional Yeast Health Benefits**

**Cholesterol.** The beta-glucans in nutritional yeast may help lower blood cholesterol and triglyceride levels. This effect has been researched primarily in oats (another rich source of beta-glucans), but yeast has similar benefits. It also lowers LDL cholesterol.

**Immune Effects.** Studies show that the immune function of elite athletes is typically impaired by strenuous exercise, making them more likely (in the short run) to get sick. Adding nutritional yeast to their diets bolsters their immune systems, decreasing the frequency of after-event illnesses. But athletes aren't the only ones who can benefit from nutritional yeast's immune benefits. Research shows that beta-glucans derived from fungi and yeast have immune-modulating effects and can significantly reduce symptoms of the common cold in anyone.

**Gut Health.** *S. cerevisiae*, the yeast strain found in nutritional yeast, also has benefits for your gut health. Research shows this type of yeast has probiotic activity in the body, helping treat and protect against gastrointestinal disease by reducing inflammation. Yeast, like other probiotic-rich fermented foods, is good for your digestion and helps keep you regular while preventing diarrheal illness.

### **Are There Any Nutritional Yeast Dangers You Should Be Aware Of?**

- A yeast allergy. Obviously avoid it!
- B Vitamin Excess. Nutritional yeast naturally contains niacin, which can cause a reaction called niacin flush if consumed in excess. High doses of niacin may also interact with certain medications and potentially weaken their effects or worsen the symptoms of niacin flush. However, you'd have to use significantly more nutritional yeast than the recommended serving size for niacin to have these effects. There is also a phenomenon that can occur from eating vitamin B2, or riboflavin, in excess: neon yellow urine. Your kidneys will excrete whatever excess B2 your body doesn't need. This results in yellower-than-normal, vitamin B-rich urine. For some people, the color change can be pretty dramatic. It is often seen when people take B vitamins.
- GMO Nutritional Yeast. Some nutritional yeasts may be grown on beet molasses or other mediums that could be bioengineered. About 90% of the sugar beets in the United States are the result of genetic engineering. Some nutritional yeast brands state that they are non-GMO, but unless they are USDA certified organic (or the equivalent in other countries), it is still possible that they have been grown on a substrate that had GMO origins, like beets. Many nutritional yeast brands claim independent testing finds no presence of any GMO protein or DNA in the yeast. And some say that it isn't found in the substrate, either.
- Gluten intolerance. If you have celiac disease or severe gluten intolerance, you might want to call the manufacturer of the brand of your choice to inquire about their testing processes. Nutritional yeast is grown on a carbohydrate, and occasionally the medium contains grains. Therefore, cross-contamination with gluten can sometimes occur. You can also look for a nutritional yeast brand that has been certified gluten-free through independent verification.
- Crohn's Disease. People with Crohn's disease have increased antibodies to yeast so consuming nutritional yeast can lead to symptom worsening.
- MTHFR Gene Mutation. Some nutritional yeast varieties come fortified with folic acid, which is the synthetic form of vitamin B9 (folate is the natural form). While B9 can be beneficial, folate and folic acid function very differently in the body. You may want to avoid nutritional yeast fortified with folic acid, especially if you have an MTHFR genetic mutation, which can cause impaired folic acid metabolism. Although people with the MTHFR mutation are at risk for folate deficiency, the best form to take would be 5-MTHF, not regular folic acid.

### **Nutritional Yeast Myths**

You might also run across a couple of misconceptions about nutritional yeast if you surf too many evidence-deficient websites.

One myth about nutritional yeast is that consuming too much of it will cause yeast overgrowth in your body. This actually can't happen because nutritional yeast is inactivated, and it doesn't contain *Candida albicans*. Further, the *S. cerevisiae* yeast has been proven to be a remedy in treating certain chronic infections and has never been shown to be pathogenic for humans. In fact, it's the seventh most prescribed herbal medication in Germany.

**Nutritional Yeast and MSG.** Because of its natural umami flavor, nutritional yeast is sometimes thought to contain monosodium glutamate (MSG). All yeast-based products contain glutamic acid, a naturally occurring amino acid. However, MSG is made by chemically altering glutamic acid to create an isolated sodium salt for flavor enhancement and is a documented food additive. While glutamic acid (and its ionized form, glutamate) and MSG are similar, they don't behave the same way in the body. And true MSG has to be added to foods because it's created in a lab. Although MSG is produced in a similar way as nutritional yeast, it's made from a different strain of bacteria. And nutritional yeast does not contain MSG.

It can be purchased in a shaker, bag or in the bulk food section of some grocery stores. To preserve its vitamins and minerals, store nutritional yeast in a cool, dry place, like your refrigerator. You can store it in its original packaging or an airtight container. When stored properly, nutritional yeast can last for up to two years.

Nutritional yeast goes well with many hot and cold dishes. Many people use it in place of Parmesan cheese. You can mix nutritional yeast into soups, stews, homemade bread doughs, and salad dressings, and even sprinkle it onto salad, pizza, and avocado toast. It also works well in creamy, cashew-based cheese sauces and as a light seasoning for air-popped popcorn. Some die-hard fans even enjoy the savory flavor it adds to smoothies.