

Surprising Superfood – Red Cabbage Sprouts

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STORY AT-A-GLANCE

- › In one study, mice on a high-fat diet were given red cabbage sprouts, which helped optimize their cholesterol levels better than the control group
- › The United States Department of Agriculture (USDA) did a similar study on 25 different commercially available sprouts, finding that in comparison with the mature version, they were nutritionally far superior
- › When you eat just about any vegetable, from sweet potatoes to radishes to Brussels sprouts, their microgreen counterparts will net higher nutritional advantages, pretty much across the board
- › Purchasing sprouts costs anywhere between \$25 and \$50 per pound, but growing your own is an easy way to remedy that

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Science reveals that red cabbage sprouts contain 40 times more **vitamin E** and six times more **vitamin C**, aka ascorbic acid, than the same veggie as a fully mature plant. That's a lot of colds prevented and inflammation decreased.

Microgreens represent a young category in the world of healthy nutrition. When you grow your own veggies and notice the tender, young plants emerging from the earth, you'll be amazed to learn that not only is it OK to harvest them while they're still only a week or two old, but they also have superior health benefits.

The vitamins in full-grown veggies transfer to your body to boost your nutrition, but eating these mini-greens also help prevent weight gain, as well as reduce risk factors for developing cardiovascular disease.

Red cabbage microgreens impart more polyphenols and glucosinolates and help optimize cholesterol levels and lower liver triglycerides, just as they did in the mice in a study conducted by researchers at the University of Maryland.

The animal study¹ appeared in the Journal of Agricultural and Food Chemistry. Science Daily reported:

"To test their hypothesis, the researchers used mice that were a model for obesity. These animals also tend to develop ... other risk factors for cardiovascular disease. The team divided 60 of these mice into different diet groups.

*They received food low in fat or high in fat, and with or without either red cabbage microgreens or mature red cabbage. Both the microgreens and mature cabbage diets reduced weight gain ... in the mice on high-fat diets."*²

Are Nutrients in Other Microgreens Superior to Their Full-Grown Counterparts?

The United States Department of Agriculture (USDA) did a similar study³ but used 25 different commercially available sprouts instead of just one. Until just the last few years, the study said, there was no scientific data to show sprouts contained any nutritional differences from mature plants.

However, it was already known by 2010⁴ that diminutive spinach, even at a few weeks old, contained more nutrients than the big version of the plant.

The USDA study noted what anyone who tries sprouts for the first time experiences when they put them on their plate – "Surprisingly intense flavors, vivid colors and crisp textures [which] can be served as an edible garnish or a new salad ingredient."

Besides red cabbage, the other 24 cotyledon (usually the first embryonic leaves of a seedling) researchers examined included cilantro, garnet amaranth and green **daikon** radish, which all showed higher concentrations of ascorbic acids, carotenoids, phylloquinone and tocopherols, each with extra added bonus of antioxidants.

In another article, cilantro microgreens contained three times as much beta-carotene than mature cilantro, as well as being rich in lutein and zeaxanthin.⁵ Golden pea tendrils, as well as popcorn shoots, had a lower concentration of nutritional benefits when compared to the other microgreens.⁶

When the Littlest Greens Pack a Bigger Punch

Scientists involved in the University of Maryland study admitted they were "really surprised" by the results they got from their studies on red cabbage sprout nutrients. Zhenlei Xiao, Ph.D., one of the study's authors, said, "Some of the numbers were really, really high. We thought it might have been a mistake but we double-checked so many times and there were no mistakes."⁷

The real-world benefits can't be denied, however. In a press release by the University of Maryland, the authors noted that the high amount of vitamins C, E and K in microgreens are important for optimal health.⁸

Generally speaking, the incredible benefits you get when you eat just about any vegetable, from sweet potatoes to radishes to **Brussels sprouts**, their microgreen counterparts will net higher nutritional advantages, pretty much across the board. Here are some facts about what eating microgreens offers for you, from Care2:⁹

- The protein quality of several vegetables improves when sprouted. They change during the "wetting and waiting" process for the sprouts to appear. Cold sore-kicking lysine is an example of an amino acid that becomes more potent in the sprouting process.
- Vitamins like A, B-complex, C and E increase in power in sprouted foods, sometimes by 20% within just a few days of germination. In fact, mung bean sprouts increase in

vitamin B1 by up to 285%, vitamin B2 by up to 515% and niacin by up to 256%.

- **Essential fatty acids** also increase during the sprouting process.
- Minerals bind to proteins, making them more bioavailable. Alkaline minerals such as calcium help balance your body chemistry for both weight loss and better health overall.
- A number of diseases, including cancer, are linked to excess acid in your body, but sprouts counteract acidity by alkalizing your body.

Get Microgreen Sprouts from Your Own Garden – or Kitchen

If you ever noticed microgreens in the produce section of a supermarket or restaurant, you may have raised your eyebrows at the price; they cost anywhere between \$25 and \$50 per pound, which often means people end up eating them in smaller amounts.¹⁰

There's a good way to remedy that, though – grow your own! You won't believe how easy it is, not to mention quick, and you'll be doing your body a huge favor. In fact, whether you grow them in your backyard or on your kitchen windowsill, they're arguably one of the best values you'll get in regard to "upping" your nutrition.

When grown in soil, harvest your sprouts in about a week. A pound of seeds will probably produce over 10 pounds of sprouts. In one 10-by-10 tray, yields reach up to 2 pounds of sunflower sprouts and store them in the fridge for about a week. Fresh is always better, however. Best of all, unlike a traditional garden, when you grow microgreens you can harvest your food in a week or two of starting the process!

Red Cabbage Sprouts – The Biggest Bang for Your Nutritional Buck

Red cabbage is rich in the amino acid L-glutamine, which help heal the soft tissue that lines your intestines. This is particularly valuable for people with such disorders as leaky gut, celiac disease, Crohn's disease, irritable bowel syndrome and ulcerative colitis.

Just like the green variety, red cabbage can be steamed, sautéed or fermented, the latter of which adds enzymes and beneficial bacteria for increased gut health. Red cabbage sprouts work well added to salads or smoothies. Cabbage of either color contains healthy amounts of:

Fiber	Thiamin	Folate	Magnesium	Iron
Manganese	Calcium	Potassium	Riboflavin	Vitamin K

The vitamins, minerals and compounds found in red cabbage serve to help boost your immune system, protect your eyesight, protect against Alzheimer's, prevent ulcers, stave off premature aging, help you lose weight and ensure healthy bone development.

Its phytonutrients and other compounds are too numerous to list, but antioxidants like anthocyanins and indoles, the source of the purple color, are extremely valuable for your health. One of its most important benefits has to be its ability to prevent cancer. Organic Facts notes that all the antioxidants in red cabbage:

"... [M]ake it extremely important as a preventative measure. Antioxidants are substances that can neutralize free radicals, which are the harmful byproducts of cellular metabolism. These free radicals are responsible for various serious diseases, including cancer and heart disease ...

The rich coloring is proof of just how powerful these vegetables are for your overall health. The indoles in red cabbage have been connected to reducing breast cancer in women in a number of studies. Vitamin A has also been connected with reducing the chances of lung cancer."¹¹

Sprouting Health – Notes on Microgreens

In regard to size, microgreens vary. Broccoli sprouts, for instance, are a little smaller than sunflower sprouts. Broccoli sprouts also pass along an impressive number of super

nutrients and help detox such environmental pollutants as benzene, while providing a number of valuable enzymes that protect against chemical carcinogens.

Of all the sprouted veggies, it's possible that watercress is the most nutrient-dense of them all, exceeding both broccoli and sunflower sprouts on nutrient-density tests.

According to a review published way back in 1997, sprouts as a whole:

*"Contain an estimated 100 times more enzymes than fresh fruits and vegetables ... Large quantities of inducers of enzymes that protect against carcinogens can be delivered in the diet by small quantities of young crucifer sprouts that contain as much inducer activity as 10 to 100 times larger quantities of mature vegetables."*¹²

Reminder About Cabbage Sprouts

While cabbage sprouts are often touted for their impressive health benefits, it's crucial to approach them with caution. These nutrient-dense powerhouses can be a double-edged sword for many individuals, particularly those with compromised gut health. The very compounds that make cabbage sprouts so beneficial – such as sulfur-containing glucosinolates – can also be challenging for a sensitive digestive system to process.

Many people find that they cannot comfortably tolerate cabbage sprouts until they've taken steps to heal and balance their gut microbiome. This is a topic I explore in depth in my new book, "Your Guide to Cellular Health," where I discuss strategies for improving gut health and gradually introducing foods like cabbage sprouts. Remember, optimal nutrition isn't just about eating "superfoods" – it's about eating the right foods for your individual body and current state of health.

Sources and References

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