

## Tiny Microgreens Packed With Nutrients

Microgreens Have Up to 40 Times More Vital Nutrients Than Mature Plants

By Jennifer Warner

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Aug. 31, 2012 -- They may be tiny, but a new study shows trendy microgreens punch well above their weight when it comes to nutrition.

Researchers found microgreens like red cabbage, cilantro, and radish contain up to 40 times higher levels of vital nutrients than their mature counterparts.

Microgreens are young seedlings of edible vegetables and herbs harvested less than 14 days after germination. They are usually about 1-3 inches long and come in a rainbow of colors, which has made them popular in recent years as garnishes with chefs.

Although nutritional claims about microgreens abound on the Internet, this study is the first scientific evaluation of their nutritional content. Researchers say they were astonished by the results.

“The microgreens were four- to 40-fold more concentrated with nutrients than their mature counterparts,” says researcher Qin Wang, PhD, assistant professor at the University of Maryland in College Park. “When we first got the results we had to rush to double and triple check them.”

For example, red cabbage microgreens had 40 times more vitamin E and six times more vitamin C than mature red cabbage. Cilantro microgreens had three times more beta-carotene than mature cilantro.

### **Microgreens Pack Nutritional Punch**

Researchers evaluated levels of four groups of vital nutrients, including vitamin K, vitamin C, vitamin E, lutein, and beta-carotene, in 25 different commercially grown microgreens.

Vitamin C, vitamin K, and vitamin E levels were highest among red cabbage, garnet amaranth, and green daikon radish microgreens.

Cilantro microgreens were richest in terms of lutein and beta-carotene.

“All of these nutrients are extremely important for skin, eyes, and fighting cancer and have all sorts of benefits associated with them,” says researcher Gene Lester, PhD, of the USDA.

Lester said he was surprised to find microgreens were superior in nutritional value than the mature plants.

“To find that the levels were not only detectable but in some cases 4-6 times more concentrated than in the leaves of a mature plant, I find that quite astonishing.”

Although more research is needed, Wang says there may be a good explanation for microgreens’ high nutrient content.

“Because microgreens are harvested right after germination, all the nutrients they need to grow are there,” says Wang. “If they are harvested at the right time they are very concentrated with nutrients, and the flavor and texture is also good.”

### **A Little Goes a Long Way**

Experts say the flavor of microgreens is also more intense, so a little goes a long way to enhance a meal.

Until recently, commercially grown microgreens have only been available to chefs, who use them as flavor accents and garnishes for soups, salads, and sandwiches.

Today, they are available at most farmers markets and upscale grocery stores.

They generally cost more than mature greens, but registered dietitian Roberta Duyff says that shouldn’t discourage people from eating them.

They are quick and easy to grow indoors on a sunny windowsill and are a great project for kids, says Duyff, who is the author of the *American Dietetic Association Complete Food and Nutrition Guide*.

“They are little, and kids like things that are kid’s size,” Duyff says. “They can put it on their own salad or some cheese or hummus to make it look pretty.”

Like most spices and herbs that are also highly concentrated with nutrients, she says you don’t need much to add flavor and spark to the plate.

Duyff says microgreens are extremely delicate and, like any raw vegetable, need to be washed carefully before eating. Due to their high water content, cooking microgreens isn’t recommended.

When choosing a microgreen, researchers say to look for the most intensely colored ones, which will be the most nutritious.

“It’s really kind of an artistic thing currently, but it’s nice to know that not only do microgreens look pretty and have strong flavor, but they also have an incredible punch of nutrition,” says Lester.