

- Vegetables

Want to improve your mental health? Eat your greens

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FEELING down? Forget your usual comfort foods. Try eating your greens instead.

Years of research underscores that eating more vegetables is not only good for your physical health, but it can improve mental health as well. It doesn't take much. Even adding just one more serving of fruit or vegetables to your plate each day can improve your mood. Here are some of the recent findings.

A 2023 British study associated higher consumption of fruits with feelings of relaxation, confidence and energy.

A 2022 Australian study of fruit and vegetable consumption in more than 4,000 women, showed that those who consumed at least five servings of vegetables a day had 19 per cent lower risk of developing depression over a period of 15 years compared with those eating a maximum of one serving. For fruits, four portions versus one meant 25 per cent lower odds of depression.

A meta-analysis of 18 studies found that for every 100 grams of vegetables consumed, depression risk dropped by 3 per cent.

A study of food diaries found that the benefit to mental health of eating more vegetables was equivalent to getting a job after being unemployed.

A UK study found that increasing one's daily fruit and vegetable consumption by just one portion provides the same estimated increase in mental well-being as eight days of 10 minute walks.

"There is definitely growing evidence that high consumption of vegetables and fruits does help mental health, especially anxiety," says Uma Naidoo, a physician and director of nutritional and lifestyle psychiatry at Massachusetts General Hospital.

Links between fruit and vegetable consumption and mental well-being have been found in countries as diverse as Ghana, India, Russia and China. What's more, all the extra plant foods may be the reason vegetarians and vegans tend to be less depressed than omnivores. (While a few studies have shown worse mental health in vegetarians and vegans, some of them have been funded by the meat industry).

Do happy people eat vegetables or do vegetables make people happy?

It may simply be that happy people gravitate toward carrots rather than cookies. And healthy eaters could possess certain traits potentially lowering their risk of depression or anxiety, but those questions typically can't be answered in observational studies.

Now, several randomized control trials conducted in recent years offer more insights and suggest that eating greens really does make us feel good.

In 2022, Angela De Leon, a nutritional biologist at Indiana University Bloomington, and her colleagues, published results of a trial for which they randomized 75 people into two groups. The first

group stayed on their regular diet. The second group received weekly deliveries of vegetables – carrots, squash, bell peppers and kale, among other items they chose themselves.

"We've eliminated some of the cited barriers to vegetable consumption, which is cost, convenience and availability," De Leon said.

To make sure that the participants really ate the veggies, the scientists measured blood and skin levels of carotenoids, which are phytochemicals that are a good indicator of fruit and vegetable consumption.

The results showed that after just eight weeks, people from the vegetable-delivery group reported feeling considerably happier than before, and happier than the members of the control group. Other studies suggest that eating fruits and vegetables may improve mental wellbeing almost instantaneously. In a 2021 study published in *Psychology & Health*, the more people indulged in fruits and vegetables on a certain day, the more they claimed to enjoy their experiences the following day. This established a virtuous cycle, where the uplifting emotions led the participants to treat themselves to even more healthy foods.

One reason that eating your greens may boost mental well-being, experts say, is the "substitution effect." Loading up on plants may leave less room in your stomach for unhealthy foods.

"Standard American diet is called SAD for a reason," Naidoo says. Research shows, for instance, that high consumption of sweets increases the odds of feeling nervous, panicky or hopeless. The mental health benefits may also be due to getting more fiber, which can lead to a healthier microbiome.

"The more soluble fiber we have in our diet, the more the beneficial gut microbes will thrive," says Stephen Ilardi, psychologist at the University of Kansas, who researches lifestyle effects on depression.

Studies show that gut microbes are key players in depression and anxiety, as the health of your microbiome influences the production of serotonin and regulates inflammation, both of which play a role in mental health. "We have mountains of evidence now that gut microbes are very good at influencing brain function and mental function," Ilardi said.

Phytochemicals, which are naturally produced plant compounds, also have "profound anti-inflammatory effects," Ilardi said. Research suggests that polyphenols, a type of phytochemical found in high amounts in berries, artichokes, onions, spinach, nuts and seeds, could increase concentrations of serotonin and dopamine, neurotransmitters that help regulate mood and motivation.

A 2020 review of 37 studies showed that polyphenols reduce the risk of depression, while a randomized control trial published in 2023, concluded that drinking orange juice rich in flavonoids, a type of polyphenols, improves symptoms of depression.

The problem, of course, is to convince yourself to stick to a plant-loaded diet, instead of reaching for ice cream or sugary treats whenever you're feeling low. "These foods are engineered to tap into our cravings," Naidoo says.

To break unhealthy habits, Naidoo recommends mindful eating, which means paying attention to feelings of hunger, fullness and your reasons for wanting to eat. She also suggests keeping your kitchen stocked with healthful foods and getting rid of foods that aren't good for you.

Finally, just start adding more vegetables to your meals. De Leon points to research showing that it's through repeated exposure to foods that we start to like them. To make greens more appealing, she recommends watching cooking shows and experimenting with herbs and spices. "Any vegetable can be made delicious," she says. — *The Washington Post*