

# NIH News in Health

## Plants: Partners in Health?

### *Vegetables, Fruits, Herbs, and You*

Is there anything more delicious and nutritious than vine-ripened tomatoes, just-harvested peaches and corn, or fresh herbs and spices? Growing your own edible plants—whether in a backyard garden or a few pots on your windowsill—can be fun, rewarding, and healthful. If you share your garden’s bounty with friends and neighbors, you might even expand your social connections and spread the health around.

“Gardening has many health benefits. It allows you to get outside, get active, and sit less, which might help to reduce stress,” says Dr. Philip Smith, a life-long gardener who oversees obesity research at NIH. “Gardening can also help to improve your diet if you eat more fruits and vegetables. They’re especially delicious, with a more intense flavor, when ripe and freshly picked.”

Fruits and vegetables are packed with fiber and essential vitamins and minerals. Research has shown that eating fruits and vegetables as part of an overall healthy diet can reduce your risk for long-term diseases, such as heart disease, stroke, and some types of cancer. The fiber in fruits and vegetables can help relieve constipation and normalize your bowel movements.

Fruits and vegetables may also help reduce your calorie intake—especially if they’re replacing high-calorie, high-fat foods—to help you control your weight. Herbs can add rich and interesting flavors to your meals without adding calories.

Gardening might enhance your mental health as well. Some studies have found that being physically active in natural environments—or even simple exposure to nature—can improve mood, reduce anxiety, and enhance self-esteem. “Growing your own vegetables and digging into the dirt can increase physical activity and give one a feeling of well-being and a sense of connection to the Earth,” Smith says.

Children can also benefit from growing and caring for edible plants. Some studies have found that kids involved with gardening programs tend to make healthier food choices, eat more fruits and vegetables, and have improved social skills.

“Gardening can help little children learn about growing and caring for things. They may find that they enjoy eating the fruits and vegetables they’ve grown themselves. And they may like eating the foods they know are good for them,” Smith says. “Adults, too, often find they appreciate the many delicious tastes of fruits and vegetables that come fresh from the garden.”

Cancer survivors who took up gardening in a small NIH-funded study tended to have increased physical activity and vegetable intake, along with improved strength and endurance. A larger

NIH-funded study is now under way to see whether gardening might enhance the health and well-being of older cancer survivors.

Another recently launched NIH-funded study is looking at whether American Indian families who engage in community gardening will boost their fruit and vegetable intake and reduce their body weight. “The researchers are also looking at whether gardening can lower blood pressure, increase hand strength, and lead to better mental and physical health,” says NIH’s Dr. Charlotte Pratt, who oversees research on nutrition, physical activity, and heart health.

“Americans generally don’t eat enough fruits and vegetables; it’s one of the major drawbacks of our diets today,” Pratt says. The federal Dietary Guidelines for Americans published in 2015 recommends that adults who eat about 2,000 calories daily should eat about 2.5 cups of vegetables and 2 cups of fruit a day. But only a small percentage of adults and children meet both fruit and vegetable recommendations.

When choosing vegetables, eat an assortment of colors and types every day. Broccoli, spinach, collard greens, kale, and other dark leafy greens are good choices. You might also choose red and orange vegetables, such as tomatoes, carrots, sweet potatoes, or red peppers. Many of these are easy to grow at home.

“These are all good sources of vitamins in general, including vitamins A and C, and they tend to be good sources of fiber as well,” Pratt says. “Some vegetables can also provide minerals, like potassium, iron, and calcium.”

The many nutrients in fruits and vegetables are essential to good health. If you’re taking certain medications, though, you need to be aware that some plant-based products can interfere with how certain medicines work. For instance, grapefruit can interact with certain drugs—including some cholesterol, blood pressure, and allergy drugs—and lead to serious side effects.

“For people who take medications to prevent blood clots, problems might arise from eating dark green vegetables, which are rich in vitamin K, or by taking vitamin K supplements,” Pratt says. Vitamin K helps to promote blood clotting, but blood thinners like warfarin (also called Coumadin) are designed to have the opposite effect. Foods rich in vitamin K include kale, spinach, Brussels sprouts, and some types of lettuce.

Many types of herbs can also interact dangerously with certain medications. But these problems are much more likely when herbs are taken as supplements.

“Herbs and spices have long been used to flavor foods. And they’ve been used since ancient times for medicinal purposes as well,” says Dr. Craig Hopp, an expert in herbal products research at NIH. “When you grow herbs in your garden, you’ve planted the seeds, watched them grow, and you know what they’ll taste like. But when you get these things in supplement form, you’re usually getting a concentrated extract of the plant that’s much more potent than what’s in your garden.”

Hopp adds that some herbs purchased in supplement form are not what they claim to be—“either they’re adulterated with some type of pharmaceutical ingredients, or they don’t contain the ingredients that their labels indicate.”

Hopp stresses that it’s important to talk with your doctor about any supplements you’re taking to ensure they won’t cause harmful interactions with your medications. You can learn more about herbs, potential side effects, and what the science says about their medicinal properties at NIH’s [Herbs at a Glance](#) website.

If you think you don’t have space for a backyard garden, think again. “Some vegetables like carrots, lettuce, kale, and hot peppers don’t require much space,” says Smith. These can be grown in pots or small gardens. “You can also try growing hanger tomatoes, which can be suspended from your deck or porch,” Smith says.

But no matter where you get them—whether from your own back yard, a farmer’s market, or a store—make sure you and your family eat plenty of fruits and vegetables every day.

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