

## NUTRIENTS AND PHYTONUTRIENTS IN OHIO PRODUCE

Concerned with getting the most nutrients as possible from produce to optimize health benefits?

Look for these cards at the farmers' markets throughout the season!

Phytonutrients are natural compounds in plants and foods derived from plants that can have health benefits when consumed. As opposed to nutrients, omission of phytonutrients in the diet will not cause deficiency symptoms, but including them can have additional health benefits.



For more information or how to maximize nutrients in other fruits and vegetables, see <http://localfoods.osu.edu/maximizenutrients>.

## Farm to Health Series



### HOW COOKING OR PRESERVING CAN IMPACT NUTRIENT AND PHYTONUTRIENT LEVELS

Cooking and preserving exposes fruits & vegetables to heat, air, and light – all can degrade nutrient and phytonutrient levels. How do you maximize the levels in your food? Keep reading...

Cooking or Preservation Method	How to Maximize Nutrients and Phytonutrients
Boiling	Shorter cooking time maximizes nutrients; Save cooking water to use in soup or to cook rice later.
Steaming	Shorter cooking time maximizes nutrients; Minimal contact with water helps retain water-soluble nutrients.
Sautéing	Lower temperatures and shorter cooking times maximizes nutrients; lack of water during cooking maintains water-soluble nutrients. Light cooking can increase availability of phenolics and carotenoids in peppers.
Roasting or grilling	Choose a cooking method with lower temperatures to maximize nutrient retention.
Canning	Can improve absorption of carotenoids from vegetables.
Freezing	Results in high nutrient retention; if blanching before freezing, can have loss of heat-sensitive and water-soluble nutrients.
Drying	Loss of all water-soluble nutrients. To maximize nutrient and phytonutrients, choose a different preservation method.

## HOW THEY IMPROVE HEALTH

Fruits, vegetables, and their combination of nutrients and phytonutrients likely play a role to reduce risk of age-related chronic diseases, like cancer and cardiovascular disease. Vitamins and minerals listed are at levels providing more than 10% of the daily value (an average adult's needs for the day) for ½ cup produce.

Produce	Vitamins and Minerals	Phytonutrients	Health Benefits
<b>Beets</b>	Folate, Potassium	Betalains	Antioxidant and anti-inflammatory compounds; Blood pressure benefits
<b>Cruciferous Vegetables</b>	Vitamin C, Vitamin A, Vitamin K	Glucosinolates	Cancer protection, especially bladder and prostate
<b>Green Beans, Pea Pods</b>	Vitamin C, Folate, Vitamin A	Carotenoids, Chlorophyll	Antioxidant compounds
<b>Green Leafy Vegetables</b>	Vitamin C, Vitamin A, Vitamin K, Folate, Magnesium, Iron, Calcium, Potassium	Carotenoids, Chlorophyll	Antioxidant and anti-inflammatory compounds; Cancer protection; Bone health
<b>Peppers</b>	Vitamin C, Vitamin A	Carotenoids, Capsaicin	Cancer protection; May improve plasma cholesterol profile
<b>Sweet Corn</b>	Vitamin C, B vitamins (Thiamin, Folate)	Carotenoids, Other antioxidants	Antioxidant compounds; Slows digestion; Blood sugar control
<b>Tomatoes</b>	Vitamin C, Vitamin A	Carotenoids (lycopene)	Cancer protection, especially prostate; Heart disease protection
<b>Winter squash, Pumpkins, Carrots</b>	Vitamin C, Vitamin A	Carotenoids (beta-carotene)	Antioxidant and anti-inflammatory compounds; Cancer protection; Blood sugar control
<b>Apples, Pears, Peaches</b>	Vitamin C, Vitamin A	Quercetin	Anti-inflammatory compounds
<b>Berries</b>	Vitamin C, Vitamin K	Anthocyanins, Ellagitannins	Anti-inflammatory compounds; Cancer protection, especially mouth, esophagus, intestine, and prostate
<b>Melons</b>	Vitamin C, Vitamin A, Folate, Potassium	Carotenoids (lycopene or beta-carotene)	Antioxidant and anti-inflammatory compounds;

*This information is not meant to diagnose, treat, cure, or prevent any disease. This project is made possible by funding through OSU CARES - an initiative of OSU Extension and the Ohio State University to expand faculty, staff & student partnerships with communities throughout Ohio.*



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