



## COOKING TO OPTIMIZE NUTRIENT ABSORPTION

With all cooking methods there will be some nutrient loss compared to raw vegetable consumption, however, some methods limit nutrient loss more than others. Different cooking levels have different effects on the breakdown of vitamins, minerals, and enzyme availability left within the food. The difference in nutrients lost ranges from about 20 to 40 percent for steaming, stir frying and roasting and as much as 50 percent for boiling. Generally, it does appear that steaming, stir frying and roasting are better than boiling. The health benefits of eating cooked vegetables outweigh the risks of not eating vegetables at all.

### Cooking Methods and Nutrient Availability

#### **Stir Frying**

Vegetables are easy to cook into a stir fry and they lose fewer nutrients in the process than with other methods of cooking. Because stir-frying involves cooking food at high heats, it's important to choose oil that has a high smoke point. The smoke point is the temperature at which oil (or other type of fat) begins to break down, beyond which it can impart a bitter taste to the food. Furthermore, because the oil is breaking down at the molecular level, it can produce carcinogens. Peanut oil has a high smoke point and a pleasant nutty flavor. Other possibilities include corn, soybean, and coconut oil. Canola oil is a good choice for a neutral flavor, as is pure grapeseed oil and olive oil (but not extra-virgin).

#### **Steaming**

This is possibly the best method of cooking vegetables because smaller amounts of nutrients are lost. Vegetables are left crisp, vibrantly colored, and packed with

vitamins and minerals. You can steam vegetables on the stove or in the microwave but still be cautious not to overcook them.

### **Sautéing**

This is a form of dry heat cooking which uses a very hot pan and a small amount of fat to quickly cook the food. Sautéing browns the food's surface as it cooks. It is important to heat the pan and add in the oil you will be cooking with before adding the food. The hot oil will help to brown the food cooking. Be cautious to overload the pan because it will prevent the food from browning on the surface.

### **Baking**

This method is best for firm vegetables and fruits such as squash, pumpkin, apples, yams and potatoes. Baking cooks food by dry heat in the oven or can be accomplished in a cast-iron Dutch Oven pan over barbecue coals. Be sure to wash vegetables thoroughly and do not peel. Preheat oven to 350 degrees and bake just until fork tender. Be sure to place a slit or fork holes in vegetables to prevent combustion.

### **Grilling**

This is an excellent method for softer vegetables such as mushrooms, peppers, tomatoes, corn, and onions. Preheat the grill and allow the flames to settle down. Place vegetables wrapped in foil or on a grill pan, whole or sliced, about 3-4 inches from the coals. This is a very quick method of cooking and only some nutrients are lost as the vegetables "caramelize."

### **Roasting**

As grilling vegetables is to summer, so roasting vegetables is to Autumn and Winter. Not only does the cooler weather make it a wonderful time to crank up the oven, but Autumn veggies are practically designed to be roasted. Roasted vegetables also add wonderful flavors to dishes with minimal fat and calorie input. Roasted root vegetables can serve as fat substitutes in mashed potatoes, cream soups, sauces, and casseroles. Carrots, onions, potatoes, sweet potatoes, Brussels sprouts, turnips, winter squash, and eggplant, are all good roasters.

### **Searing**

Anyone with a desire to cook needs to know how to sear. Most people refer to searing proteins – meat and fish - but you can sear vegetables, and even

starches. The idea behind searing all those foods is to get the outside exposed to very high heat so the sugars and proteins caramelize, becoming stronger in flavor, and actually crispier in texture - without overcooking the center.

### Blanching / Parboiling

This method rapidly cooks vegetables in boiling water for a few seconds which helps to preserve their nutritional value. It also brightens the color and slightly tenderizes fresh vegetables while keep their crisp and crunchy texture. It can also be used on veggies such as cabbage or onion to make them less pungent before adding them to recipes or salads. In addition, fruits and vegetables are easier to peel after they have been blanched.

### Boiling

With this method, vegetables are cooking in small quantity of rapidly boiling water. Most vegetables cook well this way but there is a great loss of nutrient leaching into the water. For the least amount of nutrient loss, leave vegetables cooked al dente (slightly crunchy). Re-use of the nutrient dense water for stews or soups is an efficient way to keep those nutrients in play!

Food	Nutrient	Method	% Nutrient Loss
broccoli	vitamin C	blanch	47%
carrots	folate	boiling	79%
carrots	beta-carotene	canning	27%
cauliflower	folate	boiling	69%
grapefruit juice	folate	canning	<5%
milk	vitamin B12	boiling (2-5 minutes)	30%
mixed vegetables	vitamin C	blanching (3-5 minutes)	25%
mixed vegetables	vitamin C	boiling (10-20 minutes)	55%
mixed vegetables	vitamin C	canning	67%
mixed vegetables	pantothenic acid	canning	20-35%
mixed vegetables	vitamin B6	canning	40-60%
navy beans	calcium	cooking	49%

navy beans	copper	cooking	59%
navy beans	iron	cooking	51%
navy beans	magnesium	cooking	65%
navy beans	manganese	cooking	60%
navy beans	phosphorus	cooking	65%
navy beans	potassium	cooking	64%
navy beans	selenium	cooking	50%
navy beans	zinc	cooking	50%
onions	flavonoids	boiling	30%
peanuts	lysine	cooking at 150°F (90 minutes)	20%
peanuts	lysine	cooking at 150°F (150 minutes)	40%
soybeans	thiamin	boiled	48-77%
spinach	calcium	blanching	0%
spinach	flavonoids	boiling	50%
spinach	magnesium	blanching	36%
spinach	phosphorus	blanching	36%
spinach	potassium	blanching	56%
tomato juice	folate	canning	70%

Source: [www.WHfoods.org](http://www.WHfoods.org)

