

Eye on Extension

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Preserve Food, Preserve Nutrients!

With the end of summer approaching, (can you believe it?) it is a great time to preserve fresh and local fruits and vegetables for months ahead. If you grow a garden or have a fruit tree, you may already know how fun and practical it can be to preserve excess produce for enjoyment all year long. Processing of any sort can affect the nutrition and health benefits of foods, sometimes negatively and sometimes positively. Have you ever wondered whether canned, frozen, dehydrated, or fresh produce is better for your health, and whether you should choose one over the other?

It is often said that fresh produce is best, but that may not always be the case. Fresh, whole fruits and vegetables lose nutrients over time. For example, a freshly picked head of broccoli consumed shortly after harvest will contain more nutrients than a head of broccoli sitting in the fridge and consumed a week or two later. When it comes to preservation, while some nutrients can be lost or destroyed from the use of certain preservation techniques, many nutrients are also preserved. In some cases, preservation allows for a longer nutrient shelf life. Additionally, some nutrients can become more available to our bodies when preserved. For example, have you ever heard that canned tomatoes have more lycopene than fresh ones? Lycopene is a phytonutrient that is released during cooking and canning.

Keep in mind that preservation done commercially versus preservation done in the home can vary in the ingredients added, such as salt or sugar, and the containers used, such as glass jars or metal cans. This too, may impact the nutrition and health benefits of the preserved food. Here is a summary of how three different common preservation methods can impact nutrients in foods.

Canning:

Some nutrients, such as vitamin C and the B vitamins, decrease during the canning process. However, this loss also occurs when using heat to cook fresh vegetables over the stove or in the oven, for example. According to the USDA, canning, on average, decreases some nutrients by about 1/3 to 1/2, but once they are canned, further loss is only 5 to 19% per year. Once the food is canned, it should be stored in a cool, dark place for best nutrient preservation.

Even though some nutrients are lost during canning, some nutrients are quite stable, such as fiber, vitamin A, carotenoids, minerals, and vitamin E. As mentioned above, some nutrients may actually become easier for the body to digest. For example, some berry phytonutrients are more easily absorbed by the body after being heated. Any salt or sugar as an ingredient in canned foods is for flavor, not preserving.

Freezing:

Most nutrients are fairly stable to the freezing process but begin to break down during storage. Some vitamin loss in frozen foods occurs during the preparation, which depends on the food to be frozen. For example, vegetables are blanched before freezing to destroy enzymes that cause deterioration over time.

Once in storage, frozen foods lose nutrients more quickly than canned largely due to oxidation. For example, folate is almost completely lost from some vegetables within 3 months. Thus, eat frozen foods within 3-6 months for maximum nutrition. For best nutrient retention, freeze quickly, keep frozen at 0 degrees F or less, and store in airtight containers to keep out as much oxygen as possible.

Dehydrating:

Nutrients are stable in dried foods because the rates of enzyme and chemical reactions slow down without water. Vitamin A, beta-carotene, and vitamin C losses occur because of oxidation due to air exposure. Dipping foods in ascorbic acid, metabisulfite, citric acid, or lemon juice solution before drying also reduces nutrient loss. In addition, less is lost during rapid drying at higher temperatures, rather than slower drying at lower temperatures. Dried foods should be stored in airtight containers, out of direct light, and used within 6 – 12 months.

Tips:

- Just as preservation method can impact nutrients, so can variety, cultivar, growing condition, and cooking method as well. So, to get a full range of nutrients, eat a variety of foods prepared in a variety of ways!
- Preserve food as soon as possible after harvest, because this is when nutrients will be at their highest.
- Once preserved, store the food properly: in a cool, dark place, and in airtight containers.
- Eat canned foods within a year, frozen foods within 3-6 months, and dehydrated foods within 6-12 months for the best quality and nutrition.
- Visit the CSU Extension website at <http://extension.colostate.edu/> for complete guides to canning, freezing and dehydrating.

Have fun trying your hand at a new preservation method this summer and reap the benefits all year long!

For more information contact Mary Ellen Fleming at 852-7381, or visit the CSU Extension Office for the San Luis Valley Area at 1899 E. Hwy 160 in Monte Vista. Please feel free to visit our website at: <http://sanluisvalley.colostate.edu> for information about services provided.

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