



## Sweet Potato Potential

*Sweet Potatoes May Reduce Symptoms of Vitamin A Deficiency in Children*



Whether you like them mashed, baked, souffléed or in a pie, fall is the season that the sweet potato shines. This favorite autumn vegetable is delicious, nutritious and beautiful inside. Its vibrant orange color comes from beta-carotene, a healthful phytonutrient and a precursor to vitamin A, a nutrient that helps keep skin healthy, promotes good vision and eye health, and helps maintain a working immune system.

In a 2015 study published in *World Development*, researchers from the International Food Policy Research Institute studied the benefits of promoting orange sweet potatoes in 36 Mozambique villages with a high prevalence of vitamin A deficiency. They specifically looked at whether orange sweet potatoes could reduce the prevalence and severity of diarrhea in children, a side effect of vitamin A deficiency. Two-thirds of the villages were part of the intervention that supported growth of orange sweet potatoes in home gardens, while the remaining third served as controls. About three years after the beginning of the intervention, the data showed a reduction in the occurrence and duration of diarrhea, marking a correlation between vitamin A in sweet potatoes and gut health in children.

Vitamin A plays a major role in the health of the immune system, the link between vitamin A deficiency and diarrhea. Though vitamin A deficiency is less common in the United States than in developing countries, filling up on vitamin A from sweet potatoes can help maintain a healthy gut and keep the immune system strong as flu season draws near. One medium sweet potato packs nearly 370% of your daily vitamin A for just 112 calories.

The possibilities for including sweet potatoes or other vitamin A-rich foods in the diet are abundant. Sweet potatoes taste great mashed, cubed and roasted, or simply baked. Try adding a sprinkle of cinnamon or cayenne pepper for an extra kick of flavor. Keep our recipe for [Turkey Vegetable Soup with Red Pesto](#)—a tasty mix of Thanksgiving leftovers—on file for a sweet potato-packed fall dinner.

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## Featured Recipe



- [Banana Pumpkin Panna Cotta](#)

**BONUS:** Bananas may offer similar benefits. A study published in the *Pediatric Infectious Diseases Journal* found children given two bananas per day had 60% less evidence of infectious diarrheal diseases.

## Guide to Eating Green

### *Delicious Ways to Enjoy Leafy Greens*



Gone are the days when iceberg lettuce lonely ruled the produce shelves. Walk into any grocery store today and you have myriad choices when it comes to getting your green on. With high nutritional value, great taste and versatility, it's not only important but easy to fit some green into your daily diet and onto your Thanksgiving table. Here we break down a few leafy greens you're sure to see in the store, how you can prepare and enjoy them, and why they may be good for your health.

**Arugula** - This peppery green is an excellent source of vitamin K, which is important for bone health. With a strong spicy flavor, arugula is best enjoyed raw in salads or slightly wilted in whole wheat pasta dishes or atop warm flat bread pizzas such as this [Figs and Green Tart](#). Serve this dish as a Thanksgiving appetizer.

**Mustard Greens** - Mustard greens have a slight bitter flavor and make a delicious side dish lightly sautéed with lemon juice and olive oil. Served cooked, mustard greens have nearly half your daily vitamin A to support vision and immunity.

**Kale** - A new crowd favorite, kale is a rich source of glucosinolates, sulfur-containing compounds linked to cancer prevention. This versatile vegetable can be eaten cooked or raw—lightly massage with lemon juice and olive oil to add delicacy and sweetness for salad—or added to [smoothies](#) and green juices for a nutritional boost.

**Spinach** - Finally shedding its stigma, spinach is now embraced as a household staple green. Just ½ cup cooked offers about 16% of your daily vitamin B<sub>6</sub>, needed for energy metabolism and nervous system function. Add spinach to soups and stews, stir into pastas or serve sautéed with garlic alongside baked fish. Spinach's delicate texture also lends itself well as a salad green, and is delicious slightly wilted like in our [Warm Brussels Sprouts and Spinach](#), a perfect Thanksgiving side.

**Bok Choy** - Usually seen in Asian cuisines, bok choy is great for stir fry and slaw. You can also grill it to serve with salmon or shrimp. Like other cruciferous vegetables, bok choy is a source of healthful glucosinolates. It is also an excellent source of vitamins A, C and K.

**Chard** - Chard comes in three varieties—green (Swiss), red and rainbow—and is best when steamed, sautéed or braised. Include both the stems and the leaves for a contrast in color and texture. These sturdy leaves also make nutrition-packed wraps like in these [Carrot Miso “Burritos”](#), which pack great in school lunchboxes. Chard is a good dietary source of phenolic antioxidants that may help protect against several chronic diseases such as cancer or heart disease.

**Collard Greens** - A southern staple, collard greens are typically cut into strips and braised with onions. You can also try adding them to soups or cooking them with beans like in this [Collard Greens Beans and Rice](#) dish. For a real nutritional upgrade, try steaming them: research has shown steam cooking ups this veggie's cholesterol-lowering ability which may help lower risk of heart disease.

## Tai Chi for Better Health

### *Tai Chi May Benefit Patients with Chronic Conditions*



Though the art of Tai Chi originated in the ancient East, its applications and benefits are abundant in the modern West. This low-to-moderate intensity and impact activity is a suitable exercise for the general population and may be specifically relevant to those of older ages. A 2015 meta-analysis from the *British Journal of Sports Medicine* found Tai Chi may be beneficial for older adults with chronic diseases.

Canadian researchers compiled 33 studies, including a total of 1,584 participants, which looked at how Tai Chi improved conditions for patients with cancer, heart failure, osteoarthritis and chronic pulmonary disease (COPD). The most important findings were the benefits of Tai Chi to walking ability, muscle strength and quality of life in most of the four chronic conditions. Tai Chi also improved pain and stiffness in those with osteoarthritis, depression in those with heart failure, and fatigue in those with cancer. In many study cases, Tai Chi was the more successful intervention over other methods or controls.

Tai Chi is a Chinese practice that emphasizes the fusions of Yin and Yang, representing balance and unity. There are multiple styles of Tai Chi but all are founded on gentle and flowing movements, where each posture flows into the next without pause, keeping the body in constant slow motion. The practice involves a combination of strengthening, concentration, balance, breath control and relaxation, and has been linked to better fitness, fall prevention, flexibility and cardio-respiratory function.

If you have never given Tai Chi a try, it is not too difficult to start. The practice requires no special equipment and can be done inside or outdoors, alone or in a group. You can follow a video online or look for Tai Chi classes at local fitness clubs or senior centers.

**BONUS:** Have back pain? Try Pilates! A study found patients with chronic lower back pain saw a 30% improvement in pain and 36% improvement in daily functions such as walking and climbing stairs after attending Pilates sessions twice a week for 90 days.

## Pumpkin: A Whole Package of Health

### *Pumpkin Seeds and Shells May Have Healthful Compounds*



Thanksgiving and pumpkins go hand-in-hand, but the pumpkin pie of today just loosely resembles the dish of the past. At the first Thanksgiving feast in 1621, the dessert was served as custard inside a hollowed-out whole pumpkin instead of a pie shell. Though you can conveniently buy nutritious pumpkin puree in a can, there could be benefits to going back to our roots and cooking the whole vegetable instead.

Portuguese researchers investigated the nutritional potential of pumpkin shells and seeds, components that are typically thrown away after processing or avoided by shopping for canned. Findings are published in the *Journal of Food Science and Technology*. Scientists prepared oven-dried and freeze-dried samples of pumpkin shells and seeds

and evaluated the antioxidant activity and polyphenol content of the samples. Data showed these by-products are potentially good sources of bioactive compounds that may have health benefits. Pumpkin shells demonstrated particularly high antioxidant activity, which corresponded with a high level of phenolic compounds, suggesting these compounds may have potential to scavenge free radicals in the body. Pumpkin seeds also demonstrated antioxidant activity, yet had a lower correlation with phenolic content, suggesting other compounds may be at play for this benefit.

Though often wasted, vegetable and fruit peels and skins are typically rich sources of nutrients and could offer health benefits if eaten. A previous study we reported on found pumpkin and cucumber peels may have potential to prevent the onset of diabetic symptoms and keep blood glucose steady, likely due to polyphenols in the peels. Research from the Dole Nutrition Institute has found banana peels contain very high amounts of some of the polyphenolic antioxidant molecules found in the flesh.

Preparing and utilizing a whole sugar pumpkin or squash is not as hard as it seems. Preheat the oven to 375°F. After washing the pumpkin, cut the gourd in half and discard the stem and stringy pulp. Scoop out the seeds, rinse and save to the side. In a shallow baking dish, place the pumpkin halves face down and cover with foil. Roast pumpkin for about 1.5 hours or until it is tender.

To make the most of your pumpkin:

1. Scoop out the soft flesh from the shell to make your own pumpkin puree—one half cup provides nearly 400% of your daily vitamin A and 25% of daily vitamin K needs for just 42 calories.
2. Use the shell to make crisp pumpkin chips: Cut the shell into chip-sized pieces, sprinkle with paprika and place in a dehydrator overnight at 115°F (or in an oven on low with the door slightly ajar).
3. Roast the seeds at 375°F for about 45 minutes or until golden brown. Add cinnamon, sea salt, cayenne pepper, or just a touch of olive oil—a tasty snack that packs 37% of your daily magnesium per ounce!

Tired of your usual pumpkin pie at Thanksgiving? Use homemade pumpkin puree and to create our [Banana Pumpkin Panna Cotta](#), a unique spin on Thanksgiving dessert.

## Do Nitrates and Nitrites Help or Harm?

*Nitrates from Plants Have Different Effects than Nitrates from Meats*



Nitrates have a bad rap. Conventional wisdom and the media say to steer clear of these dangerous, carcinogenic compounds, and keep eyes peeled for labels boasting “nitrate-free.” But not all foods with nitrates come with a label, and not all nitrates can be considered bad. Nitrates and nitrites are obtained in the diet from vegetables, fruits and processed meats, and the source of these compounds determines if they help or harm.

Vegetables and fruits account for about 80% of dietary nitrate intake and these compounds have been linked to potential health benefits. Nitrates are naturally found in certain fruits and vegetables including celery, cauliflower, radishes, beets, spinach, cabbage, carrots, broccoli and bananas. Plants obtain these compounds from soil, water and nitrogen in the atmosphere. When nitrate ( $\text{NO}_3$ ) is consumed from plants, it is converted in the body to nitrite ( $\text{NO}_2$ ), nitric oxide ( $\text{NO}$ ) and other nitrogen-containing compounds. These compounds dilate blood vessels, decrease clot

formation and prevent plaque buildup in arteries, thereby lowering blood pressure and supporting heart health

A 2009 paper from the *American Journal of Clinical Nutrition* highlighted the benefits of nitrates from fruits and vegetables for cardiovascular health, specifically protection against coronary heart disease, stroke and hypertension. In a 2015 study from Washington University, patients with heart failure saw a 35% to 50% increase in breath nitric oxide, a potential marker of muscle function, along with an 11% increase in muscle power after drinking nitrate-rich beet juice.

Dietary nitrates from plants may be particularly beneficial to athletes. A 2015 paper by researchers from the UK reviewed the current research on nitrates and exercise performance, citing a study from Exeter University in which athletes saw a 16% improvement in high-intensity exercise tolerance when they drank about two cups of nitrate-containing beetroot juice for six days. Nitrates may help by decreasing the amount of oxygen and respiratory activity required for exercise by supporting muscle energy metabolism and recovery. Norwegian researchers also found a benefit of nitrate-rich beet juice for mountain climbers in a 2015 study. When blood vessels normally contract at high altitudes, the nitrates in the beet juice allowed blood vessels to relax and return to normal function.

Nitrates and nitrites found in processed meats have different effects in the body. These compounds are added as preservatives to help develop flavor, maintain color and prevent bacterial growth. The salt sodium nitrate does this job well, but most meat producers use synthetic sodium nitrite to skip the step of chemical reduction. However, when meat is heated above 266°F, sodium nitrite reacts with other compounds in the meat and generates nitrosamines, compounds that are carcinogenic to animals. Though vitamin C can also be added to meat to prevent this reaction from happening, the fat content in meat may offset this effect. A number of studies reviewed in the *World Journal of Gastroenterology* support a positive association between processed meat intake and stomach cancer risk.

*Dietary nitrates from plants may be particularly beneficial to athletes.*

In a very recent report from the World Health Organization, 22 experts from ten different countries reviewed over 800 studies that investigated associations between eating red or processed meats and developing cancer. The evidence showed a probable link between eating red and processed meats such as bacon and hot dogs and developing colorectal, pancreatic and prostate cancers, leading experts to classify these foods as probably carcinogenic to humans.

Though you likely won't find any nitrites in your Thanksgiving turkey—they are not added to fresh meats—check labels on processed deli turkey to ensure it is nitrate-free and avoid any red or processed meats like hot dogs, which have been linked to increased risk of certain cancers, COPD and early risk of death. Get your nitrates the natural way by eating lots of vegetables and fruits, which offer the whole package of nutrition, another possible reason they do not produce carcinogens.

For a healthy dinner idea, try our [Turkey Tostados with Cranberry Chili Dressing](#), made with nitrate-free leftover turkey and DOLE® Very Veggie Salad Blend.

## Blackcurrants for the Brain

### *Blackcurrants May Improve Cognitive Function*



When it comes to Thanksgiving, pie is king of desserts. Though apple may hold a traditional place on your Thanksgiving table, it may be the year to get creative with your fruit filling and try a blackcurrant pie. New research from New Zealand and the UK suggests this oft-forgotten fruit may pack benefits for your mood and brain.

In a randomized, double-blind, placebo-controlled, crossover study, 36 young adults attended three separate study visits. On each visit, participants gave blood samples; completed cognitive and mood assessments, which included various computer-based tasks; and then drank one of three drinks: blackcurrant juice, a drink made with blackcurrant powder, or a placebo. Both blackcurrant beverages contained varying amount of different polyphenols while the placebo was polyphenol-free. An hour after drinking the beverage, participants repeated the blood analysis and cognitive and mood assessments.

Both blackcurrant drinks showed benefits to mood and brain, including improvements in attention, accuracy and reaction time on mental tasks. However, the effects of the two drinks were slightly different, likely due to the variance in polyphenols between the two beverages. The blackcurrant powder contained more anthocyanins than the juice, while the juice packed more total polyphenols than the powder. Researchers attribute much of cognitive benefit to the anthocyanins in blackcurrants, but they were not the only compounds at play.

As revealed by blood analysis, one of the biggest differences between the two drinks' effects was the juice's ability to inhibit 96% of activity of MAO-B enzymes. These enzymes help control the levels of neurotransmitters in the central nervous system by breaking them down when there is an excess. High levels of MAO-B have been linked to depression and to Parkinson's disease, and MAO-B inhibitors are used in the treatments of these diseases. Researchers suspect compounds other than anthocyanins may be responsible for this observed effect since it only occurred after drinking the juice.

Thanksgiving pie is not the only way to add blackcurrants to your diet. Enjoy this berry all year round in jams, compotes, muffins and sorbets. Blackcurrants can also be used to make flavorful sauces to accompany poultry or fish. The berry itself is a bit tart, so it is best used in slightly-sweetened recipes.

**BONUS:** Anthocyanin-packed blueberries may also brighten your mood. Young adults who ate about one and a half cups of blueberries scored 15% higher on a mood test five hours later.

# FEATURED RECIPE

## Banana Pumpkin Panna Cotta

### *Ingredients:*

- 3 teaspoons unflavored gelatin
- 1/3 cup cold water
- 3-1/2 ripe DOLE® Bananas, divided
- 1 can (13.5 oz.) lite coconut milk
- 1 cup pumpkin puree
- 2 tablespoons maple syrup
- 1/2 teaspoon pumpkin pie spice
- 3 cups assorted DOLE Strawberries, Blackberries and Raspberries



*Serves:* 8 Servings

*Prep Time:* 20 minutes

### *Directions:*

1. Sprinkle gelatin over water, in small bowl and set aside for 5 minutes to soften.
2. Break 3 bananas into several pieces and combine with coconut milk in food processor or blender. Cover; blend until smooth. Add pumpkin puree, maple syrup and pumpkin pie spice and combine. Transfer mixture to a saucepan and heat, but do not boil.
3. Stir 1/2 cup hot banana mixture into gelatin, until completely dissolves. Pour mixture into saucepan and whisk until thoroughly blended.
4. Divide banana mixture evenly between 8 serving glasses (about 1/2 cup). Refrigerate for 4 hours or overnight.
5. Serve with assorted berries and remaining banana slices.

### *Tip for unmolding:*

If you choose to unmold the panna cotta, lightly spray 6-ounce ramekins or cups with cooking spray. Gently wipe the spray around the inside of the ramekin. Fill the cups with approximately 1/2 cup banana pumpkin mixture and refrigerate overnight. The longer you refrigerate panna cottas, the firmer they become!

To unmold, run the tip of the knife between the side of the cup and panna cotta. Flip the cup over and let the panna cotta slip onto the serving plate. Garnish with berries before serving.

# EDITORIAL TEAM

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