



# Nutrition News

*Feeding the world with knowledge*

Dole celebrates  
National Salad Month



May 2015

## Carrots Could Cut Cancer Risk

*Beta-Carotene and Zeaxanthin Linked to Lower Risk of Pancreatic Cancer*



cancer.

Carrots are packed with beneficial phytochemicals like lutein, zeaxanthin, and beta-carotene, all carotenoids that are linked to eye health and that may promote longevity, lower blood pressure, and reduce risk of cancer. A 2014 study published in the *International Journal of Cancer* suggests eating vegetables like carrots that are rich in beta-carotene and zeaxanthin may specifically help lower the risk of pancreatic

Using data from the European Prospective Investigation into Cancer and Nutrition (EPIC) study, an examination of chronic disease in ten European countries, researchers analyzed baseline blood levels of antioxidants and other nutrients including beta-carotene in nearly 900 participants similar in age and other factors. Half of this group was later diagnosed with pancreatic cancer; the other half were matched controls who were cancer free.

Those who originally had the highest levels of beta-carotene or zeaxanthin in their blood had only about half the risk of developing pancreatic cancer down the line compared with those who had the lowest levels. Additional analysis showed that with each doubling of beta-carotene, sum of carotenoids, or zeaxanthin in the blood, the risk of pancreatic cancer was reduced by 15%, 22% and 19%, respectively.

Get more beta-carotene and zeaxanthin from your diet by loading up on orange and dark green vegetables. Carrots are an excellent source of beta-carotene, along with sweet potatoes, squash and pumpkin. Spinach, kale, romaine lettuce, broccoli, and Brussels sprouts are all top sources of zeaxanthin. Toss spinach and kale into smoothies and salads, stir pumpkin puree into oatmeal, roast sweet potatoes and squash for a delicious side dish, and snack on carrot sticks dipped in hummus. In our [Kale and Carrot Tart](#), dark green and orange come together for a flavorful entrée jam-packed with beta-carotene and zeaxanthin.

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**Bonus:** Build strong bones with beta-carotene! A Japanese study of female college students found those with daily intake of beta-carotene-rich veggies were 500% less likely to suffer low bone mass.

## Plant-Based Fats Pack A Punch

*Omega-3 Fatty Acids from Plants Are as Effective as Fats from Fish for Heart Health*



EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid), both omega-3 fatty acids found in fish, have been widely popularized for their noted health benefits. These healthy fats may help lower risk of Alzheimer's disease, reduce age-related hearing loss, lower levels of stress hormones in the blood, and help prevent heart disease. Promising 2014 research suggests ALA (alpha-linolenic acid), the omega-3 fatty acid found in plant foods such as chia seeds, walnuts, flaxseeds, and pumpkin seeds, might also offer the same benefits for your heart.

Penn State nutritionists reviewed current evidence on the benefits of the different omega-3 fatty acids, finding strong evidence for the benefits of ALA. In a Dutch study, people who ate one or more grams of ALA per day had a 35-50% lower risk of stroke after up to 13 years of follow-up. Other evidence has found that with each extra gram of ALA per day, risk of death from heart disease drops 10%. Three different trials comparing ALA with DHA and EPA found similar beneficial effects on heart disease risk factors like cholesterol and triglyceride levels. Research from Appalachian State University at the North Carolina Research Campus, home of the Dole Nutrition Institute's research laboratory, found that eating about 2.5 tablespoons of chia seeds per day increased blood levels of ALA by 58% and EPA by 39%, suggesting dietary ALA increases circulating EPA, which could confer health benefits.

Fish oils have previously gained most of the health attention due to differences in study designs. Many studies looking at EPA and DHA involve supplement use for omega-3 fats rather than fish consumption. In most studies looking at ALA, omega-3 fats have come from food, not supplements, leaving room for variations between groups that could affect results. A challenge for researchers has been isolating the benefits of ALA. Plant food sources provide lots of other nutrients that also offer cardiovascular benefits, so it can be difficult to determine which nutrient is causing the positive effect. Despite these challenges, researchers concluded that when it comes to heart health, plant-based omega-3 fats are just as effective as the omega-3 fats from fish.

Heart disease is the leading cause of death in the United States, and this new information could help in preventing the disease. ALA is found in walnuts, pumpkin seeds, flaxseeds, chia seeds, and oils made from these sources. It's also found in canola oil and tofu. Adding these foods to your diet could be a step in the right direction towards heart disease prevention. Try snacking on a handful of walnuts between meals, tossing pumpkin seeds in green salads, using canola oil in cooking, and sprinkling ground flaxseed or chia seed on oatmeal (whole chia seeds do not allow ALA into the blood so they should be milled or ground). For a real omega-3 kick, try our [Parsley Walnut Pesto](#) tossed with whole wheat pasta, lean chicken, and fresh broccoli florets.

# Tone Your Body And Your Mind

## *Exercise May Help Cognition by Boosting Oxygen in the Brain*



When you hear about brain exercises, you typically think of puzzles and memory games. While crosswords, board games, and other mental challenges can help keep your mind strong, studies also show that a work out for your muscles may double as a work out for your brain. A 2014 study from New Zealand suggests exercising regularly may result in better oxygen circulation in the brain and possibly a sharper mind.

Researchers recruited 52 healthy women ages 18 to 30 years. Participants completed questionnaires about their exercise habits. Researchers then measured oxygen levels in the front part of the brain while the women sat still. Next, the women completed three tasks that activate regions in the back of the brain. Researchers again measured frontal-brain oxygen levels while the women completed the tests.

As expected, oxygen levels dropped in the front of the brain during the tasks, suggesting more blood was recruited to the back of the brain as it was engaged. However, women who reported higher levels of physical activity maintained higher levels of front-brain oxygen during the tasks, and higher frontal-brain oxygen was associated with better mental performance during the most difficult task.

Oxygen is essential to maintaining normal brain function, and higher levels of oxygen may enhance cognitive performance. Engaging in regular physical activity is one way to help boost oxygen levels in the brain and past research found adding short, intense sprints to an exercise routine can boost learning by 20%. Aim to get at least 30 minutes of moderate activity, like jogging or cycling, five days per week and to add strength training two days per week. Making physical activity a regular part of your day, starting from a young age, will benefit your brain, help delay onset of chronic disease and keep you feeling young!

# Are There Bugs In My Food?

## *A Discussion of Probiotics, Prebiotics, and Benefits to Health*



Nothing ruins an appetite quite like spotting a bug on your plate, but there might be bugs you don't see that are actually helping your health. Probiotics and prebiotics are two components of food that have gained much attention for their link to gut health and other potential benefits. Here we'll discuss the differences between the two, what foods contain them, and how eating these foods may affect your health and well-being.

Probiotics are live microorganisms found in foods like yogurt and kefir (a product similar to drinkable yogurt) that may offer health benefits if you eat enough of them. They're the "good bugs" that may improve intestinal health, boost the immune system, and help treat irritable bowel syndrome. There is some evidence probiotics may potentially lower risk of cancer and heart disease. Food sources include fermented dairy like yogurt, soy-based products like tempeh (a

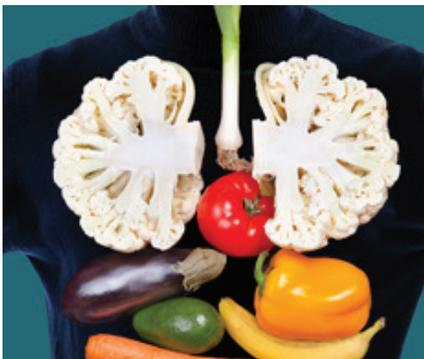
vegetarian protein made from fermented soybeans) and tofu, fermented foods like sauerkraut and kimchi, and even some kinds of dark chocolate! It's tough to tell the exact amount of probiotics a food contains, but products that list specific strains of bacteria on the label are generally sources.

Prebiotics are not alive, but they may also benefit health. They're compounds in food that aren't digested and help out by promoting growth or activity of the healthy bacteria in the intestine. Past research has shown the power of including prebiotic foods in the diet, with potential benefits including increased bone density, healthier weight maintenance, and enhanced defense against foodborne illness. The most common prebiotics are fructooligosaccharides, a non-digestible carbohydrate found naturally in bananas, artichokes, nectarines, asparagus, and onions.

Eaten together, probiotics and prebiotics may benefit your gut and overall health through a synergistic relationship. Prebiotics may improve the survival of live probiotics in the GI tract and stimulate bacterial growth and health-promoting activity, improving your overall health and welfare. To get the most from these foods, include them in your diet regularly, and try eating them together. Tasty pairings include bananas and dark chocolate, nectarines and yogurt, and grilled tofu and asparagus. Try our [Grilled Skewered Summer Vegetables with Smoked Tofu](#), offering probiotics from tofu and prebiotics from onions.

## Healthy Eating Yields Healthy Lungs

### *A Healthy Diet May Lower Risk of COPD*



Chronic Obstructive Pulmonary Disease (COPD) is a global health concern, ranking as the third most common cause of death worldwide. Though smoking is the predominant and most talked about risk factor, other modifiable lifestyle habits also affect lung function and respiratory health. Last November we discussed how maintaining a healthy body weight is associated with lower risk of COPD. A 2015 study published in the *BMJ* suggests the foods you eat may play a role as well, linking healthy eating to lower risk of COPD.

Researchers looked at data from over 120,000 women and men participating in the Nurses' Health Study and the Health Professionals Follow-up Study, two large investigations on health in the United States. Researchers obtained dietary information by reviewing food frequency questionnaires and then scored each participant's diet on a scale of 0 to 110, with a higher score representing a healthier diet that included high intakes of fruit, vegetables, whole grains, nuts, legumes, and omega-3 fats and were low in or excluded red and processed meat, trans fat, sodium, and sugary drinks. Participants also completed a questionnaire on respiratory health.

Participants who ate the healthiest diet had 33% lower risk of COPD diagnosis compared with those who ate the least healthy diet. This held true even for smokers and people who did not exercise. Researchers suggest powerful antioxidants in foods like vegetables and fruit may help protect the lungs against potentially toxic substances and harmful oxidants and play a role in helping to prevent COPD.

Eat a healthy diet and you'll not only lower risk of COPD, you may raise your IQ, lower your risk of diabetes, and extend your lifespan. Add just one more serving of vegetables or fruit to your plate at each meal replacing a less healthy option.

Mushrooms make a great substitute for red meat in burgers, fresh fruit can sub in for greasy hashbrowns at breakfast, and roasted vegetables can replace a heavy side dish like mac and cheese. If you want to explore a variety of textures and tastes in one dish, try our [Charred Summer Salad](#), Dole's Official Salad of Summer and our honoree for National Salad Month in May. Made with cauliflower, broccoli, carrots, watermelon, pineapple, strawberries, and romaine, this "kitchen sink" salad has a flavor and health benefit for everyone.

## Sleep More Weigh Less

### *Weekday Sleep Loss Linked to Weight Gain*



Who needs sleep? According to the CDC, at least 30% of adults in the U.S. do – that's the number of people who report getting less than six hours of sleep per night. The National Institutes of Health suggests adults need seven to eight hours of sleep per night, but with busy schedules, TV marathons, and noisy distractions in today's society, sleep loss has become a widespread issue and it is taking a toll on health. A 2015 study presented at the annual meeting of the Endocrine Society finds losing as little as 30 minutes of sleep per day may promote weight gain and impair blood sugar control.

The UK study involved over 500 patients who were part of the Early Activity in Diabetes trial, a larger study investigating the benefits of diet and exercise in people with type 2 diabetes. At the beginning of the study, participants kept a sleep diary for seven days, logging their weekday sleep debt (the difference between the amount of sleep you should be getting and the amount you actually get). Compared with participants who lost no sleep, people with sleep debt were 72% more likely to be obese. After 12 months, every 30 minutes of weekday sleep debt recorded at baseline was associated with a 17% increase in risk of obesity and 39% increase in risk of insulin resistance.

According to lead researcher Professor Shahrhad Taheri, MBBS, PhD, professor of medicine at Weill Cornell Medical College in Qatar, these results support that sleep loss is accumulative and can have metabolic consequences. Sleep deprivation may increase fat storage by impeding the body's ability to efficiently metabolize carbohydrates, and may also increase your appetite by raising levels of cortisol and lowering levels of leptin, both hormones that affect hunger.

Professor Taheri suggests incorporating strategies to avoid sleep debt into weight loss and diabetes interventions in order to improve success and health outcomes. Here are a few simple tips for getting more zzz's:

- Maintain a regular sleep schedule. Go to bed at the same time each night and get up at the same time each morning.
- Lighten up your dinner. Research links heavy, high-fat evening meals with increased sleep disruption and less REM (deep) sleep.
- Remove electronics from the bedroom. Exposure to light from computers and smart phones suppresses melatonin, a hormone that promotes drowsiness.
- Avoid caffeine and alcohol close to bedtime.

# FEATURED RECIPE

## Charred Summer Salad

### *Ingredients:*

- 2 cups DOLE® Cauliflower, cut into florets
- 2 cups DOLE Broccoli, cut into florets
- 2 DOLE Carrots, sliced diagonally
- 2 cups cubed watermelon
- 2 cups cubed fresh DOLE Tropical Gold® Pineapple
- 2 peaches, quartered
- 4 DOLE Strawberries
- 2 tablespoons olive oil
- 1 teaspoon curry powder
- 2 heads DOLE Romaine Lettuce, cut in quarters lengthwise
- Grilled Banana-Cilantro Pesto (recipe below)
- 1/8 cup crumbled feta cheese



- Serves:* 6
- Prep Time:* 30 minutes
- Cook Time:* 10 minutes

### *Directions:*

1. Heat grill to high heat. Randomly slide cauliflower, broccoli, carrots, watermelon, pineapple, peaches and strawberries onto skewers. Lightly brush with olive oil and sprinkle with curry powder.
2. Grill skewers 5 to 7 minutes or until charred and softened. Move skewers to an area of the grill to stay warm. Grill romaine lettuce 4 minutes or until charred.
3. Chop romaine and transfer to serving platter and season to taste with salt and pepper.
4. Remove vegetables from skewers and arrange over romaine; spoon on Grilled Banana-Cilantro Pesto (recipe below) and sprinkle with feta. Serve either warm or room temperature.

### *Grilled Banana-Cilantro Pesto:*

With peel on, place 1 DOLE Banana on grill. Grill about 10 minutes or until peel is completely blackened. Cut banana in half, lengthwise, and scoop out fruit into blender. Discard peel. Add 1/3 cup sliced DOLE Green Onions, 1 cup fresh cilantro leaves, 1 tablespoon lime juice, 1 tablespoon grated lime peel, 2 teaspoons curry powder and 1 garlic clove. Cover; blend until smooth. For thinner consistency, add water, one tablespoon at a time, to desired consistency.

# EDITORIAL TEAM

Dole Nutrition Institute / Lead Editor: Nicholas Gillitt, PhD

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