



Nutrition News

Feeding the world with knowledge

Fruits & Veggies:
More Matters
Month



September 2017

Chill Out

Frozen fruits and vegetables help Americans achieve nutrition goals



Are you looking for healthy, affordable and convenient options to help increase your fruit and vegetable intake? If you're like most Americans, the answer is most likely, "YES!" Squeezing in the recommended 5-9 servings was a challenge, but now the goal is 10 servings a day! New research presented at the Experimental Biology 2017 meeting shows that people who eat frozen fruits and vegetables

are much closer to reaching their fruit and veggie goals!

In reviewing data from the *National Health and Nutrition Examination Survey* (NHANES) from 2011-2014, the study found that consumers of frozen fruits and vegetables not only ate more total fruits and vegetables than consumers of fresh, canned or dried produce only, but they also had significantly higher intakes of key nutrients like potassium, dietary fiber and calcium (AKA nutrients of concern because low intakes are associated with health concerns like obesity and heart disease). And as if that weren't enough, adult consumers of frozen fruits and vegetables also had significantly lower BMI than non-consumers!

Frozen fruits and vegetables are brimming with other benefits too. They're prewashed and packed within hours of harvest, helping to preserve nutrients, and they're available in easy to open, re-sealable packaging helping us save time and reduce waste! Interestingly, the study also revealed that those with low income consumed less frozen produce despite their overall lower cost, revealing a blind spot in consumer awareness for these frozen gems.

Filling your day with produce is easy—here are some suggestions for a fast frozen fix:

Breakfast: Warm frozen blueberries as a topping for oatmeal or toast with peanut butter

Snack: Combine frozen berries with low-fat yogurt for a quick pick me up

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Featured Recipe



- **Vivacious Veggie Frittata**

Lunch: Stir fry frozen veggies and top with a scrambled egg and steamed frozen edamame

Snack: Combine frozen mangoes and 100% orange juice to blend up a delicious smoothie

Dinner: Sauté frozen mixed vegetables and frozen onion with garlic, herbs and olive oil and serve with brown rice pasta

Drink: Add frozen fruit in place of ice to cool down your iced tea or sparkling water

And a good ol' everyday favorite—frozen bananas! Once the bananas are speckled, peel and place in a freezer bag and freeze for a future banana bread or smoothie. Try a [Blueberry Ginger Smoothie](#) or [Banana Chia Seed Bread](#).

Smart Choices for College Students

Dining hall intervention encourages fruit, vegetable and water



Anyone who has gone off to college has heard of the ominous “Freshman 15”. Although average weight gain is questionable, it can’t be denied that the first year of college is a crucial period for weight gain for most underclassmen living on campus. Though collegiate food options have certainly improved over the years to offer a variety of nutritious options including salad and fruit bars, students cite the overwhelming availability of food as cause for additional pounds. In an effort to improve cafeteria eating habits, researchers from the University of Toronto and Memorial University of Newfoundland conducted a study to see whether nudging nutrition messages could increase fruit, vegetable and water intake.

The cross-sectional study, published in the *Journal of Nutrition Education and Behavior*, took place on the University of Toronto Campus. Student choices were recorded on six occasions, before and after education and messaging were put in place; on each occasion between 368 and 510 students visited the dining hall. Physical Activity Calorie Equivalent (PACE) labeling, which illustrates the minutes of jogging required to burn the calories in different beverages offered, was hung to encourage students to choose water instead of sweetened beverages. Additionally, posters were hung in select prominent locations to promote fruit and vegetable consumption. The researchers found that after the PACE labeling was posted, water purchases increased by 11% and visits to the fruit and salad bars increased 6% and 12% respectively.

Making healthy choices away from home doesn’t have to give you the blues. Here are some other strategies for navigating the campus (or any!) cafeteria:

1. Visit the salad bar often, but take caution with bacon, cheese and dressing which can add major calories
2. Snag an apple for an afternoon snack
3. When enjoying the occasional slice of pizza, keep portions small and opt for veggie toppings and sides

Some dorm staples to keep on hand for a quick breakfast or lunch include whole grain wraps (about 100 calories), your favorite nut butter and bananas—roll up and enjoy! Easy and satisfying! Try Dole’s spin with this [Fruity Breakfast Burrito](#).

Bonus: Visiting the salad bar helps nourish gut bacteria, preparing to fend off food borne illness, helping to ensure a sick-free semester!

Sleep for a Healthy Weight

Poor sleep patterns are linked with overweight and obesity



Have you gotten your bedtime routine in check yet? In July we talked about how lack of sleep directly effects appetite and even food choices, and new research shows that those who don't get enough zZ's are prone to be overweight or obese and have other red flags when it comes to metabolic health.

The study published in *PLOS One* reviewed links between amount of sleep, diet and weight as well as other measurable markers including blood pressure, lipid profiles, glucose, thyroid function and waist circumference. In addition to initial measurements and a lab workup, the 1,615 participants reported on sleep duration and kept a daily food diary, providing a snapshot for investigators to analyze.

Researchers from the Leeds Institute of Cardiovascular and Metabolic Medicine and the School of Food Science and Nutrition (West Yorkshire, England) found that adults who slept on average six hours a night had a waist measurement that was 1.2 inches (3cm) greater than those who slept nine hours each night. And another thing, researchers noted that short sleepers had lower HDL (High Density Lipoprotein) levels. HDL is also known as the “healthy” cholesterol. One of its main functions is to absorb LDL (Low Density Lipoprotein) or “lousy” cholesterol and sweep it away to be flushed from the body, a protective benefit against conditions like heart disease. Not good news for our nocturnal friends.

Having trouble getting to sleep and staying asleep? This may seem obvious, but be sure to omit any caffeine including coffee, tea and colas after 12 noon. If that doesn't work, you may want to try meditating or drinking a cup of herbal tea to help wind down. According to The Sleep Foundation, a small snack, with a combo of carbohydrate and protein before bed can help make tryptophan more available to the brain, in turn, causing sleepiness—but it has to be small! Anything more than 200 calories doesn't qualify as a snack and can contribute to weight gain. Need a bedtime snack idea? Try this [Banana peanut spread](#) on whole grain crackers or half an English muffin.

Herbs and Spices Pump Up Vegetable Intake

How seasonings contribute to vegetable selection at lunchtime



The struggle is real! Kids aren't the only ones that need coaxing to eat their veggies. According to the most recent dietary guidelines, teenagers have the most improving to do but adults also need a big a push. More than 90% of Americans just don't eat enough veggies- is it because they're perceived as bland? Could seasonings help serve up more servings of vegetables at lunchtime?

Researchers at the University of Illinois took on the task of enticing adults (752 in total) to eat more vegetables by offering two versions, one unseasoned (steamed) and the other seasoned with herbs and spices. Participants who purchased a hot lunch were offered vegetables at no additional cost and everyone who ate in the café was asked to complete a survey that included questions regarding food preferences, eating habits and willingness to pay for vegetable side dish. Over a three week period, investigators found that people who infrequently ate vegetables at

lunch were 1.5 times more likely to select seasoned vegetable vs unseasoned.

It was also interesting to note that of café goers- men were significantly more likely to choose vegetables with seasoning. Also, it was noted that regular veggie eaters in the café were more likely to choose the steamed option.

Research has shown that those of us that do eat vegetables regularly do so more frequently at dinner, making breakfast and lunch easy targets for adding just one more serving a day. Start slow—habits won't change overnight, but if you can find a few staple recipes to add to your lunchbox repertoire, you'll be one step closer to getting there.

Try these [Sunflower Crunch Pockets](#) and [Nicoise Salad Jars](#)—they're easy to make in advance and a portable way to pack in your veggies wherever you find yourself lunching.

Lutein for Learning?

Lutein may help protect against cognitive decline



If it seems like spinach and avocados have been getting all the love lately—it's because they have! The buzz goes way beyond staying physically fit; we're talking about staying cognitively fit too! New research out of the University of Illinois suggests that people who had higher lutein stores had neural responses that were more on par with younger individuals than with peers.

What makes this study different is that the researchers chose to work with 60 young adults ages 25-45 vs other studies that chose to work with older adults that were already experiencing cognitive decline. Removing the aging variable allowed them to determine more accurately how diet effects cognition (since younger people are more homogeneous as a group) and further hypothesize ways to keep mental decline at bay.

Researchers measured lutein in the participants' eyes before measuring neural activity in the brain while they performed a specific task that measured attention. In addition to having quicker neural responses, investigators reasoned that those with higher lutein levels had protective characteristics as well. The group was encouraged by the findings and is running further trials with hopes of understanding how more lutein in the diet relates to cognitive performance as well as learning and memory.

Lutein is a carotenoid that is more commonly known to support eye health. It accumulates in brain and eye tissue where it filters blue wavelengths to keep eye cells healthy, also slowing diseases like age-related macular degeneration and cataracts. Unfortunately, lutein isn't a nutrient that the body can make more of on its own which makes eating foods like kale, spinach, avocado, eggs and broccoli very important. Try this [Vivacious Veggie Frittata](#) for more brain power.

Toddler Traits and Food Trial

Infants with inhibited personalities are more likely to resist new foods



Do you have a mealtime dilemma on your hands? Finicky food preferences from toddlers and sometimes teenagers are something we've just come to expect, and not only when it comes to vegetables. One study found that 46% of preschoolers were picky eaters and 40% remained that way for two more years. A study published in *Child Development* last month set out to see if response to new foods was related to whether someone is innately attracted to or wary of new or unfamiliar things, in this case—new toys.

Researchers observed 136 pairs of mothers and infants at 6 and 12 months of age. During each visit they played with new toys and tried a new food. The last visit was 6 months later, where children were encouraged to explore a room that was furnished with new and unfamiliar objects. Results were consistent in that babies that had a positive response to new toys at 6 months also tended to react positively to new foods; and similarly those that resisted new toys were hesitant when faced with a new food. Their reaction to new foods at 12 months of age was also a good predictor of how they would engage with new toys at 18 months.

These findings are based on temperament which is established on a sliding scale from exuberant to inhibited. Exuberant people tend to be more adventurous with new foods, while inhibited individuals are more shy or reserved. Penn State Professor Cynthia Stifter explains that temperament effects almost every aspect of our lives in that it's a unique way that we see the world.

That said—don't lose hope! Just because we're born at a specific place on the temperament scale doesn't mean we can't change our behavior. Remember the power of persistence. It often takes children 8-10 exposures to a new food to even try it, never mind like it. Don't focus on every bite they take. Encourage them to try all new foods, after all, how will they know if they like it, if they haven't even tried it! It also doesn't hurt to create a positive environment where they feel like eating fruits and vegetables and other new foods is accepted and not something you do because mom told you so.

Here are some kid-friendly favorites that can help make mealtime more manageable: [Dole Kids with Almond Toast](#) and [Hoot Owl Sandwiches](#).

FEATURED RECIPE

Vivacious Veggie Frittata

Ingredients:

- 1 medium red potato, cut into ½-inch cubes
- 1 cup DOLE® Red Onion, chopped
- 2 cloves garlic, minced
- 4 oz DOLE Baby Portobello Mushrooms, sliced
- 1 pkg (5 oz) DOLE Organic Super Spinach, coarsely chopped
- ½ cup roasted red pepper, chopped
- 6 large eggs
- 1 teaspoon salt
- ¼ teaspoon ground black pepper
- Salsa for garnish (optional)



Makes: 6 Servings

Total Time: 50 Minutes

Directions:

1. **PREHEAT** oven to 350°F
2. **HEAT** 10-inch nonstick oven proof skillet over medium heat; coat generously with cooking spray. Add potato, onion and garlic; sauté until onions are translucent, about 4 to 5 minutes. Add mushrooms, cook an additional 4 minutes. Add baby greens; cook until just wilted, about 1 to 2 minutes. Stir in roasted red pepper; season with salt and pepper. Remove pan from heat.
3. **WHISK** together eggs in medium bowl. Pour over vegetable mixture. Bake 30 to 35 minutes or until frittata is puffed and lightly browned. Let stand 10 minutes before slicing. Serve with salsa, if desired.

EDITORIAL TEAM

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