



Nutrition News

Feeding the world with knowledge



September 2016

Refuel with Bananas

Sucrose Sugar Helps Replenish Energy Stores Post-Exercise



If you've been following the Dole Nutrition News for a while, you're probably already packing bananas in your gym bag. Dole research has found bananas are a top fuel for endurance athletes and that eating bananas during long-distance events may even help your muscles recover more quickly. Now, a 2016 study published in the *Journal of Applied Physiology* finds snacking on bananas after your event may hold benefits too.

Researchers from the Netherlands and the UK wanted to see which kind of carbohydrate was best for post-race recovery—glucose (the simplest form of sugar) or sucrose (a sugar made up of glucose and fructose). Fifteen male cyclists completed two energy-depleting rides on different days. Afterwards, they drank a beverage containing either glucose or sucrose every 30 minutes for five hours. During recovery researchers measured liver glycogen (stored energy) to see how quickly it was replenished.

After drinking the sucrose beverage, liver glycogen was replenished about twice as quickly compared with the glucose beverage. Not only that, athletes reported fewer complaints—nausea, stomach aches, burping—after drinking the sucrose. This difference could hold great benefits for athletes who have another competition on the calendar—enough stored fuel for an estimated three to five minutes of additional strenuous exercise during the next race. “During long duration exercise, the glycogen stored within the liver drops to low levels,” explains Dr. David Nieman, exercise physiologist at the North Carolina Research Campus. “The liver glycogen must be restored quickly in order for the athlete to put in another hard workout the following day.”

The good news for fruit enthusiasts: Bananas provide sucrose—nearly 3 grams in a medium banana, plus about 6 grams each of glucose and fructose. You'll also get potassium, vitamins C and B6, manganese and plenty of antioxidant compounds.

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That's far more than any sports drink can offer and for a fraction of the cost!

"Eating bananas that are high in sucrose during the first several hours of recovery is an excellent strategy," according to Nieman. Time to stock up on bananas!

Breakfast for Better Grades

Eating Breakfast May Help Improve Test Scores



Dig out the notebooks and sharpen the pencils: School is back in session. While doing homework and studying hard can never be undervalued, there may be another strategy for helping your kids reach the top of the class: providing a healthy breakfast.

In a study published in *Public Health Nutrition*, researchers from the UK questioned about 4,500 students in Wales ages 9 to 11 years about the foods they ate in one day and whether or not they ate breakfast. Researchers then linked children's dietary information to their standardized test scores. Eating breakfast was associated with higher test scores, and the best academic performance came after eating healthy foods like fresh fruit. This could have to

do with glycemic index, the rate at which sugar is released from the blood. Breakfast foods with a lower glycemic index have more fiber (think a sweet bowl of berries instead of a donut) and release energy more steadily throughout the morning, which could have a positive effect on cognitive functioning.

An empty stomach is no way to start the school day, and eating breakfast can bring more than just good grades. A 2014 study in the *Journal of the Academy of Nutrition and Dietetics* found eating a nutritious breakfast can play a role in maintaining a healthy BMI as well as help with meeting daily nutrient requirements and achieving overall health.

Anything is better than nothing on the breakfast table, but starting the day with nutritious food can be convenient for parents and fun for kids with these simple tricks:

- Do the work the night before and have a portable breakfast waiting in the morning. In a jar, combine ½ cup rolled oats with 1 cup almond milk and place in the refrigerator overnight. Add cinnamon, fresh fruit, chopped nuts or honey to taste, or try our recipe for [Wake Up Oats](#).
- Pre-portion cut fruit into plastic baggies and keep in the freezer to make for speedy smoothie assembly. Try one banana, one cup of berries, and one cup of pineapple per pack and blend with one cup of liquid (like almond milk, yogurt or water) when you're ready for breakfast.
- Prepare large batches of breakfast bars or whole wheat muffins on the weekend to have on hand all week long. Our [Banana Bran Breakfast Muffins](#) are great for busy weekday mornings.
- Keep on-the-go options on hand. Stock the fruit bowl full with bananas, apples, oranges, and other portable fruits, and have a supply of single-serve nuts and yogurts for those last-minute breakfast mornings.
- Make breakfast fun! Our [Breakfast Banana Split](#) sounds like dessert to kids but is actually a wholesome morning meal the whole family will enjoy.

BONUS: Help your kids eat healthy all day long by [packing an A+ lunch box](#)! Get our tips for packing a safe, nutritious and delicious midday meal.

Celebrate Whole Grains

Whole Grains Linked with Longevity



September is Whole Grains Month and a reminder that most of us aren't eating enough of these healthful foods. The 2015 Dietary Guidelines recommends adults eat about three to five servings (a serving is one slice of bread or ½ cup cooked pasta or rice) per day and we recommend making all your grains whole if possible. What makes these foods so special?

Whole grains pack a whole lot of nutrition because they're, well, *whole*. Unlike refined grains, which have been milled down to just the endosperm, whole grains contain all the natural components of the grain seed: the bran, endosperm and germ. The bran and germ pack dietary fiber, iron, and B vitamins, and all this goodness is removed during refining.

Research shows eating whole grains like brown rice, quinoa and farro can mean a whole lot of benefits for health. A 2016 review from Harvard looked at 14 different studies on whole grains including 786,076 participants. Overall, people who ate the most whole grains saw a 21% cardiovascular disease risk reduction compared with those who ate the least. Each additional two to three servings of whole grains per day were also linked with a 21% to 32% drop in diabetes risk.

Adding more whole grains to your diet is easy with a few simple swaps. Make sandwiches on whole wheat bread (whole wheat should be the first ingredient on the label), opt for brown rice, and try whole wheat pasta instead of white counterparts. Feeling more adventurous? Ancient grains are becoming more widely available than ever. Try spelt, millet, barley, freekeh, bulgur, sorghum, amaranth, or buckwheat in recipes you'd normally use rice.

Our [Greens and Beans Fiesta Burrito Bowl](#) is a flavorful dish made with brown jasmine rice—a crowd pleasing dish for both kids and adults. For more tasty ideas check out our [Great Grains](#) guide.

Ode to Raspberries

Raspberry Phytochemicals May Benefit Health



In the world of nutrition research blueberries often steal the spotlight but this month we're letting raspberries shine. They're likely just as good for you as other berries, but they haven't been as widely studied. A 2016 review from Illinois Institute of Technology reminded us how sweetly nutritious red raspberries are and why we should be adding more raspberries to our plates.

Let's start with the basics: Raspberries provide one of the best fiber-per-calorie deals in the store. Just 100 calories worth of the berries packs 12.5 grams of fiber—that's half of the daily value! They're also an excellent source of vitamin C and manganese and a good source of vitamin K. Let's not forget taste:

Raspberries get their deliciously sweet flavor with just 5 grams of natural sugar per cup.

Now let's dig a little deeper. Red raspberries get their beautiful color from phytochemicals, compounds known to be beneficial to human health. The primary compounds in red raspberries are anthocyanins (which bring the red color and account for about 25% of raspberries' antioxidant power) and ellagitannins. Both of these compounds and other phytochemicals in red raspberries may help in lowering risk for heart disease, diabetes, obesity and Alzheimer's disease.

Most research on berries has been basic (not in humans) but the evidence in the lab has been highly compelling. Raspberry phytochemicals have been shown to decrease oxidative stress, inflammation and cell damage, improve endothelial function, and lower blood pressure, all of which can lower risk of cardiovascular disease. Lab work suggests ellagic acid, somewhat unique to red raspberries, can help in managing diabetes by increasing insulin and lowering blood sugar. Scientists have also found red raspberry extract can protect brain cells from injury.

There are so many ways to add raspberries to your diet—in salads and smoothies, on oatmeal or yogurt or even in desserts. Our [Cocoa Raspberry Banana Mug Cake](#) is a decadent treat made with wholesome ingredients, an indulgence you can feel good about savoring!

How to Build an Entrée Salad

Tips for Creating a Nutritious and Balanced Salad as a Meal



Salads can make a light appetizer or side, but when it comes to meal a simple salad may not be enough. Or there's the flipside: Restaurant salads that pack enough calories for the day. Whether it's a bagged lunch for school or a quick weeknight meal, here is your roadmap to a perfectly balanced entrée salad:

Start with a green base. Spinach and baby kale are among the most nutrient-dense options, but kids may prefer the milder taste of Romaine or butter lettuce. Even the oft-dismissed iceberg offers 25% of daily vitamin K per serving, so choose whichever green your palate is craving that day and pile it into your bowl.

Add more nutrition, in the form of fruits and vegetables. Aim for about one cup total (more for some adults, maybe less for some kids) and try to vary the colors so you get a mix of nutrients. Crunchy orange carrots bring vitamin A, while juicy red tomatoes bring the antioxidant lycopene. "I use leftover roasted vegetables from dinner in my salads for lunch the next day," says Jenn LaVardera, MS RD, dietitian for Dole. "Roasting vegetables transforms the taste and texture. Cauliflower, Brussels sprouts, broccoli and sweet potatoes are some favorites." For a little sweetness, add some fruit—berries or segments of citrus like orange or grapefruit work well in salads.

Choose a lean protein, such as chicken, tuna, salmon or a vegetarian source like quinoa or tofu. "To build a hearty entrée salad, try adding beans," advises Chef Mark Allison, Director of Culinary Nutrition for Dole. "Beans are high in fiber and are packed with antioxidants. They're good for the waistline, may aid in disease risk reduction, and add creamy texture." Keep portion sizes in check: Poultry and fish should be the size of a deck of cards (3 ounces), while a serving of beans or quinoa is ½ cup.

Pick healthy fats, like avocado, olives, nuts, seeds or a little feta cheese. Fat promotes satiety and can even increase

the amount of fat-soluble nutrients—including vitamins A and K—your body absorbs. Just don't go overboard! You want roughly one ounce of fat total: about a quarter cup of nuts or cheese, six large olives, or a quarter of a large avocado. If you are using an oil-based dressing, you'll have some fat there too, so you would want to add a little less.

Dress it up! A simple drizzle of olive oil and a squeeze of lemon juice allows the flavors of the salad to come alive in your bowl, but you can certainly get more creative too. Infused oils and balsamic vinegars are great investments, or make your own dressing at home. Check out [dole.com](https://www.dole.com) for some of our favorites.

Need a little more inspiration? Our [Viva Verde Veggie Salad](#) starts with DOLE® Power Up Greens™ Baby Kale and adds red bell pepper and jicama, black beans and quinoa for protein, avocado for healthy fat and Salsa Verde Vinaigrette to tie it all together.

Learn to Run, Run to Learn

Sustained Aerobic Exercise May Benefit Brain Cells



Read any fitness publication these days and you're sure to hear about HIIT—high intensity interval training. [We've covered it too.](#) HIIT can be an efficient way to burn calories and improve physical fitness, but it's not the only way to get in a workout. Research published in *The Journal of Physiology* suggests moderate-paced endurance exercise may be beneficial to your brain.

Scientists from Finland looked at the effect of exercise on adult hippocampal neurogenesis (AHN), a process that makes the brain cells needed for learning. In the lab, rats engaged in endurance running, HIIT or weight training. Analysis showed levels of these brain cells were much higher in rats that did endurance

running—weight training and HIIT seemed to have little effect on the AHN process.

The link between endurance running and AHN may stem from more than just the exercise itself. The longer someone runs, the more likely he or she is to encounter new environments that stimulate the brain. Even on a treadmill, the brain could be primed to expect a change of scenery. This makes sense—we've previously discussed how an hour's stroll through the countryside can boost cognitive recall by nearly 20%.

So what does this mean for your exercise routine? We recommend including a variety of workouts each week, such as endurance, HIIT, weight training, yoga, or Pilates. You'll reap the benefits that come with each form of exercise, and most experts agree variety is exciting for both the muscles and brain.

FEATURED RECIPE

Breakfast Banana Split

Ingredients:

- 1 cup plain low-fat Greek yogurt
- 1 teaspoon vanilla extract
- 4 DOLE® Bananas, cut in half lengthwise
- ¼ cup granola
- 1 teaspoon chia seeds (optional)
- 2 tablespoons semi-sweet chocolate chips
- 1 cup DOLE Raspberries or DOLE Blueberries
- 2 tablespoons almond butter
- 2 tablespoons almond milk
- 1 tablespoon maple syrup



Makes: 4 Servings

Prep Time: 10 minutes

Directions:

1. **STIR** together yogurt and vanilla, in small bowl.
2. **ARRANGE** 2 banana halves on each plate and top with yogurt mixture. Sprinkle granola, chia seeds, chocolate chips and raspberries over yogurt.
3. **WHISK** together almond butter, milk and maple syrup, until smooth. Drizzle over banana splits.

EDITORIAL TEAM

Dole Nutrition Institute / Lead Editor: Nicholas Gillitt, PhD

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