



Dole Diet Center

Fathers And Folate

Artichokes, Spinach, Broccoli & Brussels Sprouts for Dads-to-Be



Father's Day is the time to show our appreciation for dad—and if you were fortunate to be born without birth defects, dad's diet may deserve some of the credit.

A lot of attention is focused on the role of folic acid in women's diets to prevent birth defects. But new basic research published in the journal *Nature Communications* constitutes the first study to show that the folate status of the father, not just the mother, could be equally critical in predicting healthy pregnancy outcomes. Scientists from McGill University found that male mice with folate-deficient diets had as much as a 24% increase in birth defects, including severe facial and skeletal malformations. As lead researcher Sarah Kimmins observed, "Our research suggests that fathers need to think about what they put in their mouths, what they smoke and what they drink and remember they are caretakers of generations to come."

Where can would-be dads find foods with relatively high folate content? Start in the produce aisle, and load up on spinach, broccoli, beets, Brussels sprouts, and artichokes. Beans are also top sources of folate, with one cup of lentils providing 90%, pinto beans 70%, black beans and navy beans 60% (foods which, as we learned in last month's newsletter, also reduce LDL "bad" cholesterol levels). Moreover, such plant foods are bulwarks against obesity, which in and of itself reduces the bioavailability of folic acid.

Men looking to increase fertility as well as overall health may also want to consider:

- Loading up on red fruit such as watermelon, guava and tomatoes – all high in the carotenoid antioxidant lycopene found to help previously infertile men impregnate their wives.
- Including more fish in the diet, as omega-3 fatty acids were found to increase sperm count in one basic study.
- Limiting meat and full-fat dairy, found to correlate with poor sperm quality.

Banana Selfie Boomerang

Favorite Fruit Better for Eating than as a Social Statement



Last month our favorite fruit took center field—not for its delicious taste or nutritious properties—but rather as a social statement against racism. On April 28th, Brazilian born full-back Dani Alves was on the field playing for Barcelona when pelted with a banana. The gesture was specific—more than an extension of the eons old tradition of throwing fruit to register displeasure at a performance—and unfortunately not a reflection of a trend towards

Hot News



GOT GAME?

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PINEAPPLE BBQ CHICKEN

healthier eating habits in the stands.

So what are we to make of this banana brouhaha?

Team sports—especially soccer and football—incite raging passions. Indeed, passions run so high for serious soccer devotees that game days were found to actually spike heart attacks among countrymen when their national teams are on the field. Unfortunately, sometimes those passions can spill over into ugly racial ire. However, one unintended consequence of the incident and its fallout was more people eating more fruit – in this case bananas, with all their healthy fiber, potassium, and vitamin B6. Regardless of whether banana selfies are an effective way to protest racism, banana snacks are undoubtedly an effective way to refuel the body. As our own Dole Nutrition Research Lab has confirmed, bananas are a natural, nutritionally superior and more cost-effective alternative to popular, additive-filled sports drinks. Looking for a different, thirst quenching way to enjoy bananas? Try this delicious Banana Lassi from our *International Banana Cookbook*.

E-Cigs Safe?

Formaldehyde Levels Equivalent to Tobacco Smoke



What began as a smoking cessation tool and cigarette alternative, electronic cigarettes—or e-cigs—have become a booming business and popular trend. Originally, just a cigarette-shaped device for nicotine delivery, they now run the gamut from disposables to fancy glass-crafted “tank style” devices aficionados fill with a dizzying array of nicotine or nicotine-free flavors at one of the many “vapor bars” popping up across the country.

Here’s how they work: A drag on the device activates release, or heating up, of liquid nicotine, which can then be inhaled, generating a vapor cloud that looks similar to a cigarette puff. But are these battery-operated gizmos safe? Research has yet to catch up with the runaway craze for haze, but two recent studies provide cause for concern.

Scientists from the Roswell Cancer Park Institute in Buffalo, NY, looked at the risk of “second hand” e-cigarette smoke and the accuracy of product labels. Their two soon-to-be-published studies in the peer-reviewed journal *Nicotine and Tobacco Research* examined a handful of carcinogens, including cancer-causing formaldehyde in tank-style e-cigarettes, the kind that vaporizes liquid nicotine quicker and more intensely than other e-cigarettes. The first study found that release of toxins intensified as the electrical energy output increased from 3.2 to 4.8 volts, suggesting users might be exposed “to the same, or even higher, levels of carcinogenic formaldehyde as tobacco smoke.”

The second study found that 47% of the tiny particles created by e-cig vapor can reach the shallowest parts of the lungs, possibly creating, or aggravating, respiratory diseases such as asthma or bronchitis.

Both studies conclude that concentrated heat can change the make-up of e-liquids, invent new ones, and cause implications for the user and passers-by. While more research is needed, initial findings indicate that “vaping” may not be as victimless as fans would like to believe.

If you are trying to quit smoking, e-cigs are not necessarily a harmless alternative, and if you are just picking up the habit for fun, consider that nicotine in and of itself constricts blood flow. For a better way to replace bad habits with good ones, picking up a piece of fruit can put you on the path to better health in several ways. Choosing low-calorie, high-fiber produce over empty-calorie junk food will help you avoid the weight gain some quitters fear when going cold turkey. Whereas cigarettes deplete the body’s stores

of vitamin C, most fruits and veggies will help you replenish this important free-radical scavenging antioxidant.

Nutrition News Desk

Got Game?

Youth Baseball Strikes Out On Nutrition



More than 44 million U.S. children participate in organized sports, and that number has been on the rise. Also on the rise: childhood obesity rates. What gives? While you are encouraging your children's pursuit of team sports activities in the hopes of supporting their physical fitness, the food environment surrounding such sporting activities may work at cross purposes, by encouraging consumption of sugary, fattening junk food.

The study published in *Childhood Obesity* observed players (boys 8 to 11 years of age) and families at a baseball field in northwest North Carolina for a total of 12 games. 72% of team snacks consisted of high-calorie foods such as candy, burgers, fries, and cookies—and more than half of drinks were sugar sweetened. The concession stand supplied 89% of the food consumed. Translate this into practice and game nights, especially with participation in multiple sports teams, means unhealthy fare is replacing family dinners. Not only will this yield a caloric surplus—well in excess of energies likely expended during sports—but also a nutrition deficit, as family dining times correlate with better nutrient intake. **In other words, participating in sports may paradoxically reinforce obesity trends rather than reverse them.**

Obviously, the answer is not to curb kids' involvement with such games which can be a prime opportunity for physical exercise. Rather, parents should place equal attention on the healthy eating aspect of such activities, dialoguing with sports leagues to provide more nutritious choices, organizing with other families to “pot luck” healthy homemade foods, and toting along easy-to-grab fruit snacks. We love these delicious recipes from the Dole Kids' Cookbook:

- Slamming Salmon Burgers
- Berried Treasure Yogurt Cups
- Magical Pink Dip
- Naturally Sweet Sunrise Pizzas
- Banana Top Pops
- Golden Adventure Mix

Meat Lovers Beware

Heme-Iron Consumption from Red Meat Increases Heart Disease by 57%



As we launch into the season of backyard barbecues, we need to temper our carnivorous appetites with what we know about the health consequences of excess meat consumption. For example, earlier research found that consumers who ate the most processed meat were 67% more likely to develop pancreatic cancer. As little as one small hot dog or four pieces of bacon a day translates to up to a 38% increased risk of stomach cancer, another study found.

But on the flipside, red meats provide an easily bioavailable source of iron dubbed “heme-iron.” which supports the formation of hemoglobin, a blood protein that carries oxygen from the lungs to the rest of the body. Moreover, certain components of red meat also help otherwise less bioavailable “non-heme iron” from plants become more easily absorbed by the human body. Fifteen percent of pre-menopausal women fall short on iron, while pregnant women and toddlers are also at high risk of deficiency, which may manifest in a lack of energy, difficulty in maintaining body temperature, and impaired immune response. Among pregnant women, iron deficiency may result in premature deliveries and low birth weights. A study from the University of Rochester demonstrated a significantly higher prevalence of iron deficiency in obese children, demonstrating the link between nutrition deficiencies and obesity. So, understandably many, women in particular, increase meat consumption in order to avoid anemia and its attendant health problems.

Yet, if you are turning to meat sources for higher iron content, be aware of new research which found a strong tie between heart disease and heme iron. The study from the Indiana University School of Public Health in Bloomington, looked at the connection between total iron consumption and heme and non-heme iron intake in 21 previous studies involving nearly 300,000 participants over about ten years. They found that heme iron consumption increased the risk for coronary heart disease by 57% versus no ill effect from non-heme iron, found in plant sources such as cooked spinach, green peas, dried figs, apricots, and beans (kidney, garbanzo and soy).

Heme iron in red meat is easily absorbed by the body. However, too much iron in the blood ultimately causes more damage in the arteries, the new analysis suggests. “Once absorbed, it may contribute as a catalyst in the oxidation of LDLs, causing tissue-damaging inflammation, which is a potential risk factor for coronary heart disease,” the researchers wrote in the journal article.

There are multiple ways for reducing red meat consumption in your diet:

Swear off meat for one day per week for 15% less saturated fat in your diet
Protect your heart with two 3-oz servings of fish a week—or try other non-meat sources such as clams, beans, lentils, spinach, chocolate, etc.

Bonus: Increase your iron absorption 28% by including prebiotic fiber (e.g., bananas, leeks, onions, asparagus) in your diet. Another healthy way to up iron absorption is to add more foods rich in vitamin C (e.g., peaches, kiwis, broccoli, pineapple).

Eat Fruit, Live Longer

Sugar from Whole Fruit Linked to Longevity—While Added Sugar Intake Doubles Heart Disease Death



It's hard to go on any Internet site without seeing a “Top Foods to Never Eat” pop-up blinking across your screen. Bananas are among the “banned” foods on the misplaced premise that fruit sugar increases belly fat. Such misleading anti-produce propaganda has some dieters limiting fruit. Instead, they may end up limiting their lifespan.

In a study recently published in *JAMA Internal Medicine*, researchers sought to find out how much added sugar U.S. adults consume by analyzing data from national health surveys between 1988 and 2010. Lead author Quanhe Yang and his colleagues examined the influence of lifestyle on outcomes of health of 31,000 men and women with an average age of 44, finding that sugars from whole fruits offered protection against heart disease morbidity—while added sugars have the opposite effect.

“Our findings indicate that most U.S. adults consume more added sugar than is recommended for a healthy diet,” the authors wrote. “A higher percentage of calories from added sugar is associated with significantly increased risk of [heart disease] mortality. To be specific, participants who consumed more than 25% calories from added sugars had an increased risk of 275% comparing to those who consumed less than 10% calories from added sugars.”

To date, studies have coupled the intake of sugar in processed or prepared foods—sugar-sweetened beverages, cream and dairy desserts, candy, and cereals—with the prevalence of cancer and other chronic diseases, including obesity, but this is the first study to “look at the total amount of added sugar and the association to cardiovascular disease death,” Yang says.

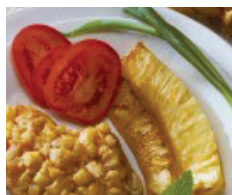
The American Heart Association recommends that added sugars should be limited to 25 grams or six teaspoons a day for women and 38 grams or nine teaspoons a day for men.

Featured Recipe

Pineapple BBQ Chicken

Ingredients

- 1 small fresh DOLE® Tropical Gold® Pineapple
- 3 tablespoons bottled barbecue sauce
- 2 tablespoons maple syrup
- 1 teaspoon Worcestershire sauce
- 2 cloves garlic, minced
- ¼ teaspoon salt
- ¼ teaspoon ground allspice
- ⅛ teaspoon cayenne pepper
- 3 boneless, skinless chicken breast halves



Serves: 3

Prep Time: 45 min.

Cook Time: 27 min.

Directions

1. Twist crown from pineapple. Cut pineapple lengthwise in quarters. Cut fruit from shells with knife, trim off core. Cut half the fruit into chunks and the remaining fruit into 6 spears.
2. Finely chop pineapple chunks in food processor or blender. Stir in barbecue sauce, syrup, Worcestershire, garlic, salt, allspice and pepper, until mixed.
3. Arrange chicken on broiler pan. Spoon sauce over chicken. Broil 6 inches from heat source 5 minutes. Add pineapple spears to pan. Spoon sauce over pineapple spears. Broil 20 to 22 minutes longer.

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