

Diabetes News



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Eat a Rainbow: Functional Foods and Their Colorful Components

Have you ever heard that it is important to “eat a rainbow” of foods? This may be a good way to think about your diet because numerous functional foods can be recognized and grouped together by their color. Functional foods are foods or dietary components that may provide a health benefit beyond basic nutrition. Examples can include fruits and vegetables, whole grains, fortified or enhanced foods and beverages and certain dietary supplements. This winter, dive into the color of the various functional foods listed below and unlock the health benefits that may already be on your plate. An easy way to get more functional foods on your plate is to fill half of your plate with some of the colorful fruits and vegetables mentioned below.

Orange/Red. Whether you think of a blazing fire or an early morning sunrise, orange and red are two of the most vibrant colors in the spectrum. Orange foods such as carrots, pumpkin, sweet potatoes, squash, and cantaloupe, include a plant compound known as carotenoids. Carotenoids include beta-carotene, which is converted into vitamin A in the body. Vitamin A has many roles within the body: it helps support the function of white blood cells (which is important for a healthy immune system), promotes bone growth, and helps to regulate cell growth and division. Vitamin A and two other types of carotenoids, lutein and zeaxanthin, are also important for healthy vision. Also a carotenoid, lycopene is found in red foods such as tomatoes and tomato products, watermelon, and grapefruit. The main benefit of lycopene is the maintenance of prostate health.

Green. No, you don't have to drive a hybrid or tend to your own victory garden. By simply adding more green vegetables to your menu, you can proudly say, 'I'm going green!'

Try new veggies such as bok choy, mesclun, turnip greens, kale, or watercress while revisiting some old favorites like broccoli, collard greens, romaine lettuce, and spinach. This will put

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Simple Steps to a Clean & Healthy New Year

Information from the American Cleaning Institute

1. **Get a Flu Shot.** While flu season starts to peak in November, the heaviest months for flu are December through March. It takes about two weeks after vaccination for the antibodies that provide protection against influenza infection to develop in the body. The Centers for Disease Control and Prevention (www.cdc.gov) recommends that all Americans 6 months of age and older should get a flu shot each year.
2. **Wash Your Hands.** According to the CDC, the single most important thing we can do to keep from getting sick and spreading illness to others is to clean our hands. Critical handwashing times include:
 - Before *and* after preparing or eating food
 - Before *and* after tending to someone who is sick
 - Before *and* after treating a cut or wound
 - After using the toilet
 - After changing diapers or cleaning up a child who has used the toilet
 - After blowing your nose, coughing or sneezing
 - After handling an animal or animal waste
 - After handling garbage
3. **Spread the Word, Not the Germs.** Help others learn the importance of handwashing for good health. Make sure the water is water, the soap lathers and you wash your hands for 30 seconds.
4. **Cover Your Coughs and Sneezes.** "Droplet spread" is a major culprit in spreading cold and flu germs. Cough or sneeze into a tissue, then throw it away. If there's no tissue in reach, bend your arm and cough or sneeze into your elbow. The idea is that people are less likely to touch each other's arms than each other's hands. But no matter what cover-up you use, promptly wash your hands.
5. **Keep Food Preparation Surfaces Clean.** This includes countertops, cutting boards and utensils. Use the appropriate cleaning product for each surface to help remove bacteria that can cause food-borne illnesses. Use a disinfectant cleaning product to kill those bacteria. Clean these surfaces thoroughly and often.
6. **Donate Handwashing Supplies.** The MLK Day of Service is a great way to celebrate Dr. Martin Luther King, Jr.'s birthday on January 17th. The goal is to "Make It a Day On, Not a Day Off" by getting involved in community service that helps solve social problems and tangible needs. Homeless shelters and food banks are always in need of handwashing and cleaning supplies.



Lesser Known Complications of Diabetes, Part 2

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The last newsletter discussed the relationship between diabetes and hearing loss, periodontal disease, and dementia. This article briefly summarizes the links between diabetes and liver disease, female sexual function, bone health, and cystic fibrosis. It contains suggestions for caring for individuals with these complications.

Liver Disease. The liver is one of the body's most important organs in metabolism. Sometimes, fat accumulates in liver cells. Fatty liver developed in the absence of alcohol consumption is called Nonalcoholic Fatty Liver Disease (NAFLD). It can progress to a form of hepatitis, nonalcoholic steatohepatitis (NASH), and cirrhosis. Cirrhosis results in the loss of liver function and, in advanced stages, requires a liver transplant.

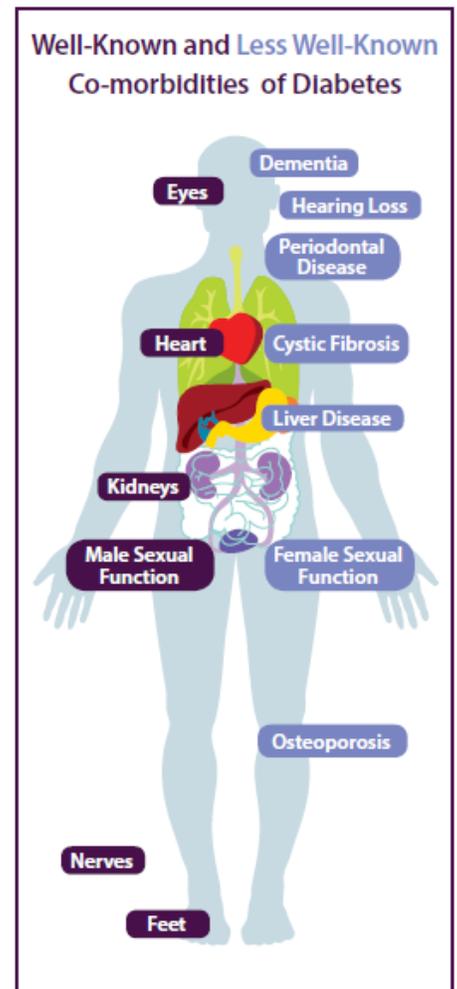
Approximately 30% of the general population has NAFLD. People with diabetes are at increased risk. 44% of those who have type 1 diabetes, and 50%-70% of those who have type 2 diabetes, have NAFLD. The development of NAFLD is not fully understood, but it is related to insulin resistance and oxidative stress. People with diabetes need to be aware that they may have NAFLD, even if their liver enzymes are within normal levels. It significantly increases their risk of cardiovascular disease. They can reduce the risk of NAFLD by:

- Doing at least 150 minutes of moderate-intensity physical activity every week.
- Losing at least 7%-10% of body weight.
- Increasing the amount of omega-3 fats eaten and minimizing foods and drinks high in fructose.

Female Sexual Function. About 10%-30% of females who do not have diabetes, and 50% of women with diabetes, experience some form of female sexual dysfunction (FSD). Women who have diabetes experience

urinary tract infections, painful intercourse, and vaginal dryness more often. Sexual complications may negatively affect a woman's diabetes self-care and the emotional support she receives from her partner. FSD results from psychological, as well as physical, issues. Women who have diabetes and FSD should be assured that their experiences are similar to many women who do not have diabetes. They may benefit from using over-the-counter vaginal lubricants and seeing a gynecologist for evaluation. Recent research supports that women with type 2 diabetes may experience greater sexual satisfaction and less dryness and pain when following the Mediterranean diet. If marital stress is a problem, counseling may also help. A positive, supportive relationship can enhance a woman's satisfaction and quality of life.

Bone Health. People with type 1 diabetes are over six times more likely to have a hip fracture than those without diabetes. Type 1 diabetes is associated with reduced bone mineral density (BMD). Type 2 diabetes is associated with normal or even increased BMD. However, people with either type of diabetes experience a higher incidence of bone fracture than those without diabetes, regard-



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you well on your way to the recommended 5 servings of fruits and vegetables per day. Dark green vegetables are a functional food component powerhouse! Included in the long list of nutrients found in these veggies are potassium, dietary fiber, folate, vitamin A, vitamin E, and vitamin C.

Blue, Purple, Crimson, Brown. It may seem like a stretch to group these colors together, but humans have been doing it for centuries! Before conventional methods of dyeing fabrics, berries and teas were used to color the finest hand-woven fabrics for royalty. Now that these foods are no longer needed to color clothing, foods that are blue, purple, crimson, and even brown are gaining popularity due to the fact that they contain flavonoids. Berries, cherries, red grapes, red wine, dark chocolate, cocoa and some teas are good sources. Flavonoids are beneficial to our health because they may contribute to the maintenance of proper brain function and blood flow.

Tan. Tan is not usually the most exciting color in the spectrum, but tan colored foods still come packed with many health benefits. Whole wheat breads, cereals, and pastas that are higher in fiber are usually tan in color. The insoluble fiber found in wheat bran, corn bran, fruit and vegetable skins, and whole grains may contribute to the maintenance of a healthy digestive tract and reduce the risk of some types of cancer. Another type of dietary fiber is called beta glucan. This component can also be found in tan foods such as oat bran, oatmeal, oat flour, barley, and rye. Beta glucan-containing foods may reduce the risk of coronary heart disease.

White. Just because a food is white, doesn't mean that it isn't nutritious. In fact, white foods such as low-fat (1%) or fat-free milk, yogurt, and some cheeses are packed with vitamin D, calcium, and phosphorus. These vitamins and minerals aid in bone health and may help us maintain a healthy body weight. Yogurt also contains probiotics, which are bacteria that confer a health benefit, like promoting digestive health or supporting immune function. The Dietary Guidelines for Americans recommends getting three servings of dairy products every day.

Yellow. When you think of yellow foods, fat may not be the first to come to mind, however, after considering butter, margarine, olive oil, and vegetable oil, yellow is a common thread! Recent dietary guidance recommendations suggest that the type of fat that you consume can affect your health in various ways. While it is important to consume a diet that is low in saturated and trans fats, certain types of unsaturated fats such as linoleic acid (an omega-6 fatty acid) and linolenic acid (an omega-3 fatty acid) are essential for life and have to be consumed through the diet. These fats are important for proper growth in children, healthy skin, and to help regulate cholesterol. Fat is also needed for transport and absorption of fat-soluble vitamins A, D, E, and K, as well as carotenoids.

Research continues to tout the benefits of omega-3 fatty acids to help reduce the risk of heart disease and promote brain health and vision. Two examples of omega-3 fatty acids include eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Oily fish from cold waters, such as salmon, mackerel, tuna, and trout are especially rich in EPA and DHA. You can also find DHA and EPA in certain fortified foods and beverages and dietary supplements.



Just by remembering to “eat a rainbow,” you can increase your intake of nutrients and healthful food components. So, the next time you reach for one of the above mentioned foods, remember that it is not only bursting with color and flavor but that it also contains a component that may improve your health.

Information from the Food Insight Newsletter.

Website: www.foodinsight.org

less of BMD. There are many theories for this, but no specific guidelines have been issued for screening for fracture risk in patients with diabetes. Here are some recommendations for people with diabetes:

- Learn about the risk for fractures and osteoporosis.
- Follow the guidelines for adequate intake of calcium and vitamin D given in this table by the National Osteoporosis Foundation.
- Maintain adequate blood sugar control. The development of other diabetes complications (e.g., impaired eyesight, decreased balance related to neuropathies, cardiovascular problems) can increase the risk of falls and subsequent fractures.
- Avoid other risk factors for osteoporosis, such as smoking and excessive alcohol intake.
- Follow the general population guidelines for BMD screening:
 - All women older than 65 years should have a DEXA scan to measure BMD.
 - All men older than 70 years should have a DEXA scan to measure BMD.
 - Younger postmenopausal women with higher risk factor profiles should also be evaluated.
 - Men ages 50–69 years with higher risk profiles should also be evaluated.

*Higher risk profiles include smoking, low calcium intake, and inadequate physical activity.

Cystic Fibrosis. Approximately 1 in 3,500 children in the United States is born with cystic fibrosis (CF). Over the last 60 years, the life expectancy of people with CF has increased from less than 5 years to over 36 years. Now, almost half the people with CF in the United States are adults. The most common co-morbidity in people with CF is CF-related diabetes. It is because the cells that produce insulin thicken and scar. This type of diabetes is treated very differently than type 1 or 2 diabetes. Recommendations for people with CF who have gestational diabetes or pre-diabetes are also different than they are for the general population.

- The diagnosis of CF-related diabetes does not change the usual CF medical nutrition therapy recommendations. Standard medical nutrition therapy for cardiovascular disease is not recommended. People with CF usually need unrestricted calories, vitamin and mineral supplementation, and a high-sodium diet. Protein should not be restricted if nephropathy occurs.
- Maintain normal blood glucose. Insulin therapy has been shown to be superior to oral glycemic agents in people with CF.
- Women with CF and gestational diabetes may need oral supplements for adequate weight gain, and insulin should match carbohydrate intake instead of seeking to control blood glucose from calorie or carbohydrate restrictions.
- People who have CF and pre-diabetes should spread their carbohydrate intake throughout the day and choose nutrient-dense carbohydrates instead of empty-calorie carbohydrates. Exercise is recommended for overall health, but weight loss should be avoided.

From: Less Well-known Co-morbidities of Diabetes. *On the Cutting Edge*. Winter 2012, Volume 33, Number 6. *On the Cutting Edge* is a peer-reviewed publication by the Diabetes Care and Education dietetic practice group of the Academy of Nutrition and Dietetics.

Table. National Osteoporosis Foundation Nutrition Guidelines for Osteoporosis Prevention

Patient Group	Calcium	Vitamin D
Women (<50 years)	1,000 mg	400 to 800 IU
Women (≥50 years)	1,200 mg	800 to 1,000 IU
Men (<50 years)	1,000 mg	400 to 800 IU
Men (50 through 70 years)	1,000 mg	800 to 1,000 IU
Men (≥71 years)	1,200 mg	800 to 1,000 IU

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Delightful Pumpkin Apple Pie

For the Crust:

Ingredients:

1/2 c. old fashion oats	1/2 c. whole wheat flour
2 tbsps. brown sugar	1/2 tsp cinnamon
2 tbsp. olive or canola oil	1 tbsp. warm water

Directions: Have a 9-inch springfoam pan or 10-inch pie plate ready. In a medium bowl, combine oatmeal, flour, sugar and cinnamon. Add oil and water and mix well with fork until crumbly. Pat into bottom and part way up sides of an ungreased springfoam pan or pie plate.

For the Filling:

Ingredients:

2 cups cooking apples, peeled & thinly sliced	
1 egg white	1/8 tsp cloves
2 tbsps. brown sugar	2 tbsps. all purpose flour
1/2 tsp cinnamon	1/2 tsp ginger
2 cups pumpkin (not the pie filling)	

2/3 cup evaporated milk, shaken

1 large egg or 1/4 cup egg substitute

Brush beaten egg white over crust. Reserve remaining egg white. Let crust dry while preparing filling.

The egg brush will prevent a soggy crust. In a large bowl, combine apples, brown sugar, flour and cinnamon—blend well. Spoon into prepared pie crust and set aside. In same bowl, use a whisk to combine ginger, cloves, pumpkin, and milk—blend well. Pour pumpkin mixture over apples. Bake for 15 minutes at 425. Reduce the heat to 350 and bake for 30 to 35 minutes until knife inserted in center some out clean. Cool 30 minutes before serving. Store in the Refrigerator. Serves 8.

Calories: 163; Carbohydrate: 27g; Protein: 5g; Fat 5g; Cholesterol: 27 mg; Sodium: 38 mg; Fiber: 4 g.