



Inside

- Matcha Tea for Health.** This green tea is the perfect match for healthy habits. **2**

- Update: St. John's Wort for Depression.** Though it has mental health benefits, use caution with this herb. **3**

- Dairy Fats Debate.** *EN* tells you the facts on low-fat versus full-fat. **4**

- The Best Kombucha Brews.** Our comparison of popular kombucha drinks guides you to the best. **5**

- Turmeric Buzz.** This vibrant spice has good health potential. **6**

- Water Toxicity.** Protect your health with safe drinking water. **7**

- Papaya Power!** Turn to this flavorful, nutritious fruit. **8**

Just In

Sugar Industry Downplays Role in Heart Disease

The sugar industry downplayed the dangers of sugar consumption, suggesting instead that dietary fat and cholesterol are to blame in heart disease, researchers say. The study, using historical documents and materials from the 1960s, suggests the Sugar Research Foundation (now the Sugar Association) kept early warning signs that sucrose consumption was a risk factor for coronary heart disease under wraps. Though sugar control policies are now actively promoted, added sugars are inconsistently linked to CHD (the leading cause of death, globally) risk, supporting the need to question food industry-funded studies, which may be potentially self-serving, according to the researchers. [EN](#)

JAMA Internal Medicine, September 2016

New Year, New Diet Habits

Adopt these 4 healthy dietary habits for the new year.

This is the season to make resolutions for a better new year, and diet remains one of the most popular lifestyle changes. But instead of plunging into diet plans that preach unsustainable restriction, it's better to touch up your menu with easy-to-follow tweaks that can make a big impact on your health. These research-backed diet fixes will make this year a nutritional winner.

HEALTHY HABIT #1: Eat More Plant Protein. It's a good idea to think beyond beef for your protein fix. Data of nearly 132,000 people were included in a 2016 study in *JAMA Internal Medicine* that found that people with higher intakes of plant proteins experienced a lower risk of death, particularly from heart disease, than those with higher intakes of animal proteins, especially in the form of processed red meats.

"This benefit can likely be explained by higher intakes of certain nutrients, fiber and antioxidants that occur when you eat more plant-based proteins," says Lisa Young, PhD, RD, adjunct professor of nutrition at New York University. Young says it's not necessary to eschew meat and dairy completely, but she believes lentils, beans, tofu, tempeh, and nuts should play a starring role in your diet.

HEALTHY HABIT #2: Swap Carbs for Fat. No longer should we consider fat as the dietary bogeyman. A 2016 *PLOS Medicine* study found that substituting about 100 calories of unsaturated fats, like those found in nuts, olive oil, and fatty fish, for 100 calories of carbohydrates in a daily diet can improve blood sugar control, protecting against diabetes. For every five percent of calories that were switched from carbohydrates or saturated fats to mono- or poly-unsaturated fats there was nearly a seven percent reduction in heart disease risk. "The key is to swap out some of the processed carbs in your diet, such as white pasta and baked goods, with these healthy fat sources," Young says. "Just adding more fat to an unhealthy diet won't do you much good." And don't throw caution to the wind and load up on bacon. Harvard



Choose more plant proteins, such as beans and lentils.

scientists showed that replacing five percent of calories from saturated fats with equivalent energy from unsaturated fats lowered risk of death by 27 percent.

HEALTHY HABIT #3: Embrace the New. Oats for breakfast and salmon for dinner are healthy choices, but try making 2017 about exploring new tastes. Two studies published in the *Journal of Nutrition* found that people who consumed a greater variety of healthy foods tended to have less body fat and a lower risk of metabolic syndrome (a cluster of risks associated with heart disease) than those who ate a more monotonous diet. Greater dietary diversity may make it easier to stick with a healthy eating plan because it will be more exciting. And the more healthful foods you introduce into your diet the less room there is for nutritional landmines.

HEALTHY HABIT #4: Go Slow. In today's fast-paced lifestyle it's all too easy to dine and dash, but data show that eating in a flash could hinder slim-down efforts. Research in the *Journal of the Academy of Nutrition and Dietetics* reported that people who ate a lunch meal in nine minutes took in an average of 88 more calories, and felt less full an hour afterwards, than those who ate at a 22-minute pace. "Eating at a slower pace gives you a better chance of sensing fullness so you're less likely to overeat," says Young, who encourages habits that force you to eat mindfully, such as taking smaller bites, putting down your utensils after each bite, and thoroughly chewing your food. [EN](#)

—Matthew Kady, MS, RD



EDITOR

Sharon Palmer, RDN

CONTRIBUTING EDITORS

Carrie Dennett, MPH, RDN
Esther Ellis, MS, RD
Mathew Kadey, MS, RD
Gale Maleskey, MS, RD
Marsha McCulloch, MS, RD
Heidi McIndoo, MS, RD
Matt Ruscigno, MPH, RD
Sharon Salomon, MS, RD
Judith Thalheimer, RD
Kaley Todd, MS, RD
Lori Zanteson

GROUP DIRECTOR

Diane Muhlfeld

EDITORIAL ADVISORY BOARD

Nancy Clark, MS, RD, CSSD,
*Sports Nutrition Services LLC,
Newton, MA*

Isobel Contento, PhD,
*Coordinator, Program in Nutrition,
Teachers College, Columbia University,
New York City*

Jo-Ann Heslin, MA, RD,
*Nutrition Consultant, NRH Nutrition
Consultants, Inc., New York City*

Bonnie Taub-Dix, MA, RD,
*Nutrition Consultant,
New York City and Long Island*

B Environmental Nutrition (ISSN: 0893-4452) is published monthly by Belvoir Media Group, LLC, 535 Connecticut Avenue, Norwalk, CT 06854-1713; Robert Englander, Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial Director; Philip L. Penny, Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation. www.environmentalnutrition.com. ©2017 Belvoir Media Group, LLC. Postmaster: Send address corrections to Environmental Nutrition, PO Box 8535, Big Sandy, TX 75755-8535.

Regular Subscription Rates:
\$39 in U.S., \$49 in Canada
(U.S. \$ only). Single copy, \$5.

Subscriptions, change of address and customer service:
www.environmentalnutrition.com/cs.
Environmental Nutrition,
PO Box 8535, Big Sandy, TX
75755-8535 or 800-829-5384.

Reprints for publication and web posting available. Contact Jennifer Jimolka, Belvoir Media Group, 203-857-3144.


Special written permission is required to reproduce, by any means, in whole or in part, the material contained herein. This newsletter is not intended to provide advice on personal health matters. Consult a qualified health care provider.

Ask the EN Experts

Top Priority 2017: Cut Your Food Waste

More and more people put sustainability at the top of their list of concerns when it comes to the food supply. Yet one of the most powerful tools for lowering your impact on the planet is simple, and within your reach: just cut down on how much food goes into your trashcan. According to the National Resource Defense Council, about 40 percent of all food produced in the U.S. goes to waste. About one-fourth of our fresh water goes to producing wasted food, not to mention all of the fertilizers, pesticides, fossil fuels, and land dedicated to producing food that will never be eaten. Even all of that decomposing food in landfills makes a significant contribution to greenhouse gases.

So, for this year's resolution for better health, why not cut food waste for the sake of the planet? Here are our top tips:


- ▶ **Shop your refrigerator** before going to the supermarket to buy more food. Use the "first in, first out" principal.
 - ▶ **Put one day on the menu to "use it up."** Make a soup with leftover vegetables, grains, and proteins; or create a smorgasbord with all of those leftovers dishes from the week.
 - ▶ **Always take leftovers home from restaurants,** refrigerate them, and use them up the next day.
 - ▶ **Remember that "use-by" dates usually refer to best quality,** not food safety.
 - ▶ **Freeze foods** if you won't have time to eat them before they expire.
 - ▶ **If you must toss kitchen scraps, compost them** and use them as fertilizer in your garden.
- For more ideas on how to cut your food waste, visit www.choosemyplate.gov/lets-talk-trash. 

— Sharon Palmer, RDN, Editor EN

Fake Olive Oil; Matcha Tea Brews Benefits

Q *Is it true that extra virgin olive oil can be fake?*

A Unfortunately, you can't always rely on what the label says about your olive oil. While extra virgin olive oil (EVOO) is the finest, least refined category of the olive oils, research has found that almost 80 percent of imported EVOO sold in the U.S. may be diluted with substandard oils or contain artificial coloring, flavor and aroma. Since more than 95 percent of olive oil consumed in the U.S. is imported, lawmakers are trying to crack down on this problem.

But, until tighter standards are set, being a smart consumer is key to avoiding the olive oil scam. When looking to buy real EVOO, do not buy "light" olive oil or a blend, which is not extra virgin quality. Look for EVOO in dark bottles to prevent sun oxidation, with a harvesting date marked on the bottle. Stay clear of super cheap bottles, as a higher price typically means the oil is of higher quality. If possible, try a sample before purchasing—real EVOO should have a fruity, peppery taste. Another solution is to purchase EVOO produced from California with the California Olive Oil Council (COOC) seal, which certifies that the olive oil is extra virgin grade, grown in California, and from the most recent harvest. 


—Kaley Todd, MS, RDN



The COOC seal indicates the olive oil is extra virgin and grown in California.

Q *Is matcha tea something I should include in my diet?*

A Matcha is a Japanese-style green tea made from tea leaves that are ground into a fine powder, which is then dissolved into hot water or milk. This contrasts from most teas, in which the leaves are steeped in hot liquid and then removed. Though matcha tea dates back over 900 years and has a long tradition in Zen Buddhism, it has gained significant popularity recently as it is included in 'tea lattes' in coffeehouses, other flavored drinks, including beer, and even foods, such as breads and desserts.

The health benefits of green tea, such as heart health and cancer protection due to its high antioxidant content, are well known and largely accepted, so it follows that matcha tea also has benefits. Green tea contains significant amounts of catechins, an antioxidant in the flavonoid family that also includes isoflavones found in soy and anthocyanins in blueberries. One study found that matcha tea had more than three times the catechin content of the next highest green tea, which is impressive. But another study found that catechin content varied greatly by manufacturer and batch. So, while matcha can be a healthy part of one's diet, it's still important to have varied sources of antioxidants from whole foods. 

—Matt Ruscigno, MPH, RD

Write to us if you have a question. We'll answer those of most interest to our readers. We regret, however, that we cannot personally respond. Send to: Environmental Nutrition, P.O. Box 5656, Norwalk, CT 06856-5656. Phone: 800-829-5384 Fax: 203-857-3103 e-mail: customer_service@belvoir.com www.environmentalnutrition.com, (click on "Contact Us")

Update: St. John's Wort and Depression

This herb may help depression, but it can have potentially serious side effects.

The herb St. John's wort has a 2,000-year tradition of use for depression, pain, and insomnia. It started to become popular in the late 1990s, when studies showed the herb worked as well as antidepressants (selective serotonin reuptake inhibitors, or SSRIs) at treating mild-to-moderate depression. St. John's wort also had fewer of the typical side effects seen with SSRIs, such as drowsiness, nausea, or dry mouth. The herb acts like an antidepressant because it has two main active ingredients, hypericin and hyperforin, which inhibit the reuptake of serotonin, dopamine, and noradrenalin (norepinephrine). Allowing these mood- and energy-boosting neurotransmitters to linger in nerve synapses is what makes antidepressants work.

St. John's Wort Concerns. The use of this herb has dropped off—sales figures for 2015 are about half what they were in 2012—as newer research showed St. John's wort interacts with many different types of drugs, including contraceptives,

anticoagulants, anticonvulsants, antiretrovirals, and some cancer therapies. It can also interact with antidepressants, causing a build-up of serotonin that can lead to high body temperature, agitation, and even seizures. Research also shows that the herb, especially the component hypericin (most, but not all, St. John's Wort formulas contain a standardized extract of hypericin)


Meeting Quality Standards

Testing of St. John's wort products by ConsumerLab.com in 2016 found that, of the 10 products selected for testing, 60 percent failed to meet quality standards. They did not contain listed or expected minimum amounts of hypericin, one of the active ingredients in St. John's Wort. Those brands that met quality standards: **Standard Process MediHerb St. John's Wort** (ConsumerLab.com's Top Pick); **Nature's Way Perika**; **Shaklee MoodLift Complex**; and **Gaia Herbs St. John's Wort Flower Buds, and Tops**.

Brands that didn't make the cut: NOW, Planetary Herbal, Swanson, Vitacost, The Vitamin Shoppe, and Whole Foods.

can cause sun sensitivity at higher doses (2-4 grams a day.) This can result in not just a bad case of sunburn but increased risk for cataracts, as hypericin builds up in the lens of the eyes. Quality is also an issue. Recent testing by ConsumerLab.com reveals problems with meeting stated label amounts of active ingredients (see "Meeting Quality Standards").

The Bottom Line. St. John's wort works for mild to moderate depression, but interacts with many drugs, may cause sun sensitivity, and has quality control issues. Use the criteria below for the safe use of this herb.

- Choose a brand that passed the ConsumerLab.com test (see "Meeting Quality Standards").
- Stick with a lower dose that is less likely to cause sun sensitivity. Most clinical trials have used St. John's wort extract standardized to 0.3 % hypericin content, with the most common dose being 300 mg three times daily for up to six weeks.
- Be extremely careful if you are taking other drugs, including antidepressants. Talk with your doctor about possible herb/drug interactions. 

—Gale Maleskey, MS, RD

© Mariah | Dreamstime.com



Get Cooking with Cocoa Powder

Cocoa powder is the most healthful form of chocolate in your kitchen.

The cocoa plant is named *Theobroma*, "food of the gods," and rightfully so. Research reveals there's health potential in cocoa beans, the bitter fruit that is the source of chocolate. Cocoa powder has been used medicinally for at least 500 years; perhaps it's time you followed this health tradition in your kitchen, too.


Cocoa Bean Health Bonus. Of particular interest are the special flavonoid compounds cocoa beans contain: flavanols and flavonols, which have antioxidant and anti-inflammatory properties. Research has documented heart health benefits of cocoa, and now new studies support additional advantages, including cognitive and vascular benefits and increased insulin sensitivity, according to a systematic review published in *Nutrition Reviews*. Another study, published in the *Journal of Nutrition*, suggested regular cocoa consumption

had positive effects on facial wrinkles and elasticity.

Benefits in the Powder. Cocoa powder is made from the cocoa bean, which is fermented, dried, and ground into paste. Once the cocoa butter is removed from the paste, the unsweetened cocoa powder remains. One tablespoon contains 12 calories, 2 grams (g) of fiber, 4% Daily Value (DV, based on 2000 calories per day) of iron, 7% DV of magnesium, and 10% DV of copper and manganese. Unsweetened cocoa powder has more flavonoids than sweetened cocoa powder or any chocolate bar because it has the least amount of processing and has no added ingredients compared to milk chocolate and even dark chocolate, which contain extra ingredients, such as sugar and milk fat.

Cooking with Cocoa. Unsweetened cocoa powder is a great addition to many dishes.

Try these ideas for cocoa inspiration.

- ▶ **Add a smoky, earthy flavor to savory dishes** with cocoa powder, such as Mexican mole sauce, black bean soups, or chili.
- ▶ **Mix cocoa powder with balsamic vinegar and olive oil** to enhance traditional balsamic vinaigrette.
- ▶ **Add a spoonful of luscious cocoa powder to your morning porridge** along with fruit, cinnamon, and nuts.
- ▶ **Stir cocoa powder into breads**, such as muffins, pancakes, waffles, and quick-breads for added flavor.
- ▶ **Dust your next cup of coffee**, glass of milk, or bowl of yogurt with cocoa powder.
- ▶ **Blend cocoa powder into a healthy, indulgent smoothie** along with bananas, berries, nuts, and seeds.
- ▶ **Try this delicious, nutrient-rich snack:** Cocoa powder, chia seeds, and a drizzle of honey stirred into a scoop of cottage cheese. 

—Esther Ellis, MS, RD, LDN

Turmeric Buzz

This colorful spice contains potent health-promoting compounds.

The turmeric plant (*Curcuma longa* or *Curcuma domestica*) is a relative of ginger grown in India and Indonesia. This yellow-orange spice not only gives curries their rich color, it also has been used as a medicinal herb for thousands of years. Research on some of the chemical compounds in turmeric is finding a wealth of potential health benefits, but does turmeric itself live up to the hype?

The Benefits. Cooking with turmeric can increase the healthfulness of your foods. Adding turmeric when cooking yellow, orange and green leafy vegetables, for example, may minimize the loss of beta-carotene. Beta-carotene is a precursor to vitamin A, which is good for vision and eye health, a strong immune system, and healthy skin and mucous membranes. And using turmeric when marinating meats could help reduce cancer risk: Studies show that including turmeric in your marinade can reduce the level of potential cancer-causing compounds created when meat is cooked at high temperature, such as when grilling, broiling, or deep-frying.

But most of the buzz around turmeric is centered on that fact that it's the best food source of a compound called curcumin. "Curcumin is the compound in turmeric that gives it its bright yellow hue," says Rachael Hartley, RD, LD, CDE. It has been shown to block enzymes in the inflammatory pathways, potentially fighting inflammation at the

Turmeric Supplements

Turmeric supplements are available as capsules, teas or liquid extracts. While there have not been enough human studies to prove these supplements are effective, they are considered safe for most adults.

Dosage:

Dosage of turmeric extract or curcumin supplements used in studies varies widely. For those interested in trying supplements, the Arthritis Foundation suggests 400-600 milligram (mg) capsules three times a day (or one-half to one gram of powdered root, up to 3 grams per day) for osteoarthritis, and 500 mg twice daily for rheumatoid arthritis.

Source: National Institutes of Health Office of Dietary Supplements; Arthritis Foundation


Safety:

- High doses or long-term use of turmeric may cause indigestion, nausea, or diarrhea.
- In animals, high doses of turmeric have caused liver problems. No cases of liver problems have been reported in people.
- Avoid if you take blood thinners such as warfarin (Coumadin), are about to have surgery, are pregnant, or have gallbladder disease.

molecular level, and it's being actively studied for relief of swelling and pain in both osteoarthritis and rheumatoid arthritis. Curcumin is also a powerful antioxidant, and lab and animal studies have reported that curcumin inhibits cancer at multiple stages of development, although we don't yet know how that might work in the body. The anti-inflammatory and anti-oxidant effects could help reduce heart disease risk, and this potent turmeric component also may help keep the lining of veins and arteries healthy and reduce cholesterol levels.

The Limits. Most research has been done using curcumin, not turmeric itself. But turmeric is only two to six

percent curcumin by weight, so the levels of curcumin in turmeric are not nearly as high as the doses tested in most studies. Plus, curcumin is poorly absorbed and metabolized. Supplements, in the form of liquid extracts, capsules and teas, provide higher doses of curcumin, and appear to be safe (see "Turmeric Supplements"), but there have been a limited number of good studies done in humans to date, so the jury is still out on how all of these potential benefits will really impact our health.

Upping Intake. While we wait for more conclusive research, one thing is sure... you can't go wrong by adding turmeric to your diet. "The spice's earthy, almost gingery flavor is not overpowering, and you'll find you can work it into a lot more than just curry," says Hartley. "I mix it into tomato sauce, creamy pasta sauces, smoothies and soups." To maximize the curcumin you get from eating turmeric, be sure to add some black pepper: Piperine, a natural substance in black pepper, enhances the absorption of curcumin by 2000 percent. You can find turmeric powder in the spice aisle of any market, and it's increasingly available as whole rhizomes and in teas. While it may not be the cure-all some say it is, turmeric definitely has health benefits, and it's delicious! 

—Judith Thalheimer, RD



Turmeric contains the health-promoting compound curcumin.

© Kenishiroie | Dreamstime.com

Spiced Turmeric Carrot Smoothie

- ¾ c carrot juice
- ½ c non-fat plain Greek yogurt
- ¼ c plain almond milk
- ¼ tsp turmeric
- ¼ tsp cinnamon
- ¼ tsp nutmeg
- ¼ tsp ginger
- ½ tsp finely ground black pepper

1. Combine all ingredients in a blender.
2. Blend until smooth.

Makes 1 serving

Nutrition Information Per Serving: 164 calories, 1 grams (g) fat, 0 g saturated fat, 26 g carbohydrate, 13 g protein, 6 g dietary fiber, 216 milligrams sodium.



© Antonigravante | Dreamstime.com

Sip Kombucha Well



Look for kombucha made with less sugar

You may just be seeing it on your grocery store shelves recently, but kombucha has been around for more than 2,000 years. For most of its existence, kombucha was brewed at home, but in the last two decades companies have begun mass producing it, making it readily available

to everyone. Kombucha is a very simple beverage made from a combination of tea and sugar, juices for added flavors, and the magic ingredient: A “scooby” (symbiotic colony of bacteria and yeast), which promotes fermentation of sugar and develops its sour, fizzy taste.

Numerous health claims have been made about this beverage, including its ability to treat cancer, diabetes, hair loss, and more. However, the research is more cautious: Some studies show promising potential health benefits, while others don’t support benefits at all. While kombucha may not be the cure to the world’s ills, it does offer some health potential. Like other fermented foods, kombucha contains probiotics, which are good bacteria also found in your body. Including probiotics in your diet can nourish your gut’s population of bacteria, promoting a healthy digestive and immune system.

Helpful Hints. Here are some things to keep in mind the next time you’re craving some of that sweet-sour refreshment.

- ▶ **DIY.** It’s fairly easy to make kombucha yourself, which allows you to add any personal flavors you prefer, and save a great deal of money (some brews fetch up to \$6 for a bottle). Just brew a tea and sugar mixture, add some pre-made kombucha (this acts as your “starter”), and the scooby (you can get this from a kombucha-making friend, buy it online, or make it yourself). You can find step-by-step instructions for making scooby and kombucha at www.thekitchn.com.
- ▶ **Some like it sweet.** If dietary sugar is a concern, check the nutrition label before choosing which kombucha brand to bring home. Some are fairly low in sugar, while others have the equivalent of 3 teaspoons of sugar in an 8-ounce serving.
- ▶ **Drinking and driving?** As a natural result of fermentation, kombucha contains a small bit of alcohol—usually not more than one percent. Drinking it should not impair driving or cause other problems, however it’s important to be aware of this if you have to avoid alcohol for specific reasons. **EN**

—Heidi McIndoo, MS, RD



Kombucha Nutritional Comparison

✓ = **EN's Picks.** As with all EN comparisons, this is only a sampling of products. Picks contain no more than 4 g of sugar.

KOMBUCHA DRINKS	Serving Size*	Calories	Total Fat (g)	Carbs (g)	Sodium (mg)	Sugar (g)	Protein (g)
Búcha Blood Orange	8 oz	47	0	12	0	12	0
Búcha Grapefruit Sage	8 oz	47	0	12	0	12	0
Búcha Guava Mango	8 oz	47	0	12	0	12	0
Búcha Raspberry Pomegranate	8 oz	47	0	12	0	12	0
Búcha Verbena Rose	8 oz	47	0	12	0	12	0
Búcha Yuzu Lemon	8 oz	47	0	12	0	12	0
✓ GT's Classic Gingerade	8 oz	30	0	7	10	2	0
✓ GT's Classic Third Eye Chai	8 oz	30	0	7	10	2	0
✓ GT's Classic Synergy Cosmic Cranberry	8 oz	30	0	7	10	2	0
GT's Classic Synergy Maqui Berry Mint	8 oz	35	0	8	10	5	0
✓ GT's Enlightened Multi-Green	8 oz	35	0	7	10	2	1
✓ GT's Enlightened Original	8 oz	30	0	7	10	2	0
✓ GT's Enlightened Synergy Black Chia	8 oz	75	3	8	10	4	2
✓ GT's Enlightened Synergy Strawberry Serenity	8 oz	35	0	8	10	4	0
✓ High Country Blueberry Ginger	8 oz	15	0	0	0	2	0
✓ High Country Cinnamon	8 oz	15	0	0	0	2	0
✓ High Country Grape	8 oz	15	0	0	0	2	0
✓ High Country Tropical Fruit	8 oz	15	0	0	0	2	0
✓ High Country Turmeric Beet	8 oz	15	0	0	0	2	0
KeVita Lavender Melon	8 oz	35	0	8	20	8	0
KeVita Mango Habenero	8 oz	35	0	8	20	8	0
KeVita Pineapple Peach	8 oz	35	0	8	20	8	0
KeVita Raspberry Lemon	8 oz	35	0	8	20	8	0
KeVita Tart Cherry	8 oz	35	0	8	20	8	0
Kickin' Kombucha Blackberry Coolcumber	8 oz	25	0	6	0	6	0
Kickin' Kombucha Blueberry Mojito	8 oz	30	0	7	0	7	0
Kickin' Kombucha The Goodness	8 oz	40	0	9	0	10	0
Kickin' Kombucha Straight Up	8 oz	25	0	6	0	6	0
Kickin' Kombucha Vanilla Lemongrass	8 oz	25	0	6	0	6	0
Kombucha Wonder Drink Essence of Lemon	7 oz	50	0	13	0	12	0
Kombucha Wonder Drink Essence of Peach	7 oz	50	0	13	0	12	0
Kombucha Wonder Drink Niagara Grape	7 oz	50	0	13	0	12	0
✓ Kombucha Wonder Drink Raw Japan	11 oz	12	0	2	15	2	0
✓ Kombucha Wonder Drink Raw Tibet	11 oz	13	0	2	1	2	0
Kombucha Wonder Drink Traditional	7 oz	50	0	13	0	12	0
Reed's Culture Club Coconut Water Lime	8 oz	50	0	12	10	11	0
Reed's Culture Club Cranberry Ginger	8 oz	50	0	12	10	11	0
Reed's Culture Club Goji Ginger	8 oz	50	0	12	10	11	0
Reed's Culture Club Hibiscus Ginger Grapefruit	8 oz	50	0	12	10	11	0
Reed's Culture Club Passion Mango Ginger	8 oz	50	0	12	10	11	0

Note: oz=ounce, g=gram, mg=milligram, carb=carbohydrates. Source: product websites. Note: All products contained zero grams saturated fat or fiber, thus these were not reported in chart. *Based on 8-oz serving size, except for products packaged in irregularly portioned containers.

Dairy Fat Debate

What's best, low-fat or full-fat dairy products? EN weighs in on the science.

Is butter back? Should you be adding cream to your coffee and eating full-fat yogurt? Studies have long supported the benefits of dairy for promoting health, including healthy bones and blood pressure, and helping to reduce the risk of cardiovascular disease and type 2 diabetes. And newer research suggests that those benefits can come from a range of dairy products that includes fat-free, reduced fat, and whole fat dairy.

Whole Fat Dairy Science. Full-fat dairy has been on the “avoid or limit” list for years, because it contains saturated fat. However, nutrition researchers are taking a closer look at whether *all* types of saturated fat increase the risk of diabetes and cardiovascular disease, or if it depends on which foods it comes “packaged” in.

“Whenever trying to narrow in on the health effects of certain foods, especially a food as complex and nutrient-dense as milk, it is hard to determine just what it is that is driving the effects,” says Mickey Rubin, PhD, vice president of nutrition research for the National Dairy Council. “Aside from the well-known nutrients in dairy, such as calcium and potassium, dairy fat alone is made up of hundreds of different types of fatty acids.”

Mario Kratz, PhD, MS, a faculty member and nutrition researcher at Fred Hutchinson Cancer Research Center and the University of Washington in Seattle, coauthored a 2013 systematic review in the *European Journal of Nutrition* that concluded that evidence doesn't support the idea that full-fat dairy contributes to risk of obesity, cardiovascular disease



A range of dairy products may fit into a healthful eating pattern—despite their fat content.


or type 2 diabetes. Kratz says that some of the fats in milk—including some of the saturated fats—may have beneficial effects, either alone or together. “I think the data do suggest that there are differences between full-fat and low-fat dairy, and that full-fat dairy may be more beneficial,” he says.

Is Butter Really Back? What about butter, the full-fat dairy food that generates the most headlines? A study published in June with the provocative title, “Is butter back?” found that butter is *neutral* for health. In other words, a little may be fine, but a lot isn't better, especially if it displaces fats with established health benefits, like olive oil. While butter may be better than the old trans fat-laden margarines, clinical trials show that it does raise blood cholesterol.

“Even if now we're turning around the story a little bit, I think we shouldn't go too far in the other direction,” Kratz says. “It's not OK to eat limitless amounts of isolated fats such as butter just because research suggests that consuming a bit of dairy fat in the form of whole milk or cheese may not be such a bad thing.”

Low Fat Dairy, Lower Calories. Even though researchers are starting to look more closely at whole foods rather than isolated nutrients, it's not yet clear why different saturated fat-rich foods might have different health effects. That's one reason why, pending further research, many experts continue to recommend lower-fat forms of dairy. Another is calories. One cup of nonfat Greek yogurt has about 135 calories, while it's full-fat counterpart has about 215 calories.

The Dietary Guidelines for Americans recommends three cups of dairy per day; one cup translates as 8 ounces (oz) of milk, yogurt or soymilk, or 1.5 oz of natural cheese. Marian Neuhouser, PhD, RD, president of the American Society for Nutrition and a member of the most recent Dietary Guidelines Advisory Committee, says that current dairy intake is too low, and that lower-fat forms of dairy are the best ways to get the beneficial nutrients in dairy without exceeding calorie needs. “If someone chooses to use, say, full-fat milk in their latte, they need to decide where those calories are going to come from. Where are they going to take out the extra calories?”

Alexandra Caspero, MA, RD, CLT, dietitian and owner of DelishKnowledge.com, says she doesn't encourage people who prefer lower-fat dairy to switch to full fat, but that from a culinary perspective she prefers full-fat dairy for flavor, body and satisfaction. “With the full-fat versions, you typically end up using less and the taste can't be beat.” In the end, it's all about balancing your diet—for good health and taste. 

—Carrie Dennett, MPH, RDN

Making Smart Dairy Choices

- **If you enjoy full-fat dairy**, stick to less processed forms, such as plain yogurt and natural cheese, and limit foods like ice cream and pizza, which often come packaged with excessive sugar and refined carbohydrates.
- **If you love butter**, use it sparingly where it adds the most flavor, but turn to more healthful fats for most of your culinary needs, like olive oil for cooking or avocado on toast.
- **Consider full-fat dairy part of your overall saturated fat “budget”** and follow the advice of the 2015-2020 Dietary Guidelines for Americans to keep saturated fat below 10 percent of total calories, or 20 grams for a 2,000-calorie diet.

How to Drink Water Safely

Water is vital for life, but you should consider testing its purity and safety.

“Don’t drink the water,” is not a warning typically heard in the U.S. Yet some of us may be drinking water that could cause harm. Major issues with contaminants, such as lead or bacteria, make news headlines, but more subtle issues may go undetected. Taking time to get informed about the water in your home is important for your health and safety.

Where to start? Review the annual water quality report sent by your local public water utility (check with your local provider or get a copy at epa.gov/ccr). “The water in one community could be vastly different from that of another community,” says Kristi Pullen Fedinick, PhD, a staff scientist in the health program at the Natural Resources Defense Council (NRDC) in Washington, D.C. “Even the water in the house down the street could vary from yours, especially when it comes to contaminants like lead.”

If you suspect an individual household problem, you can get your water tested, either by your local water supplier or from a certified testing lab listed at epa.gov/dwlabcert. Fees vary depending on the specific contaminants you’re measuring.

Lead. This infamous toxin that impairs brain function gets into drinking water when it comes into contact with lead in pipes or lead solder that holds water pipes together. “Water utilities typically add a chemical that coats pipes, and that coating allows the water to pass through without interacting with lead in pipes,” Fedinick says. “The reason Flint, Michigan, recently had high levels of lead in the water is because the city switched to a water source that was inadequately treated, which caused the protective chemical coating on lead pipes to break off, allowing the water to come into direct contact with lead.”

The tricky thing with lead is you can’t see, taste, or smell it. “The only way to know if there’s lead in your water is to get it tested,” Fedinick says. “A number of local water utilities offer free or low cost testing for lead, or you can send water to a certified lab for testing.”

Getting Purer Water

“Look for filters that provide the most protection at a price that makes sense for you,” Fedinick says. Check the website of NSF International (info.nsf.org/Certified/DWTU/) to find out if the filter you’re considering is certified to remove the contaminants you’re concerned about. The Environmental Working Group (ewg.org) also provides a water filter buying guide. Here are two common approaches, although there are hundreds of products available.

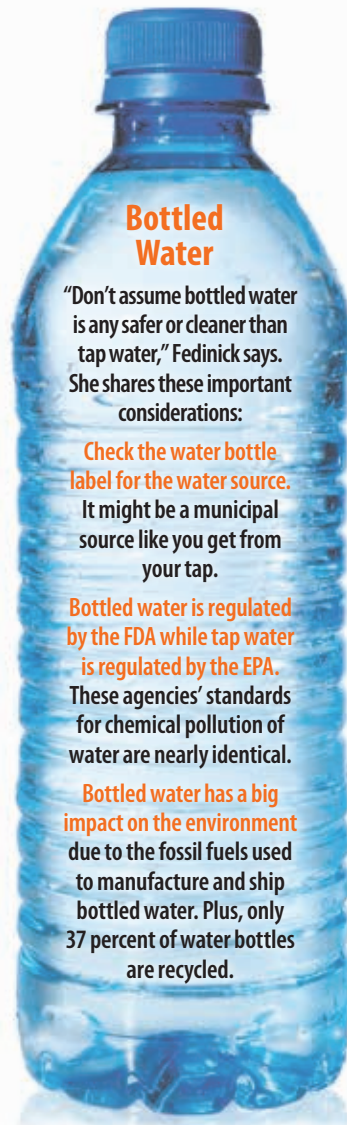
Adsorption: Uses a medium such as activated carbon to latch onto and remove contaminants. Some mainly remove chlorine, while others also remove chloramines, disinfection byproducts, pesticides, industrial pollutants, and lead. Adsorption is used in everything from pitchers to whole house filtration units.

Reverse osmosis: Uses semipermeable membranes to eliminate many substances not removed by adsorption and is the only NSF-certified way to reduce nitrates and fluoride. Most cost effective to use for drinking water. Commonly available as under-sink units.



Investigate how safe your tap water is.

© Jurisam | Dreamstime.com



Bottled Water

“Don’t assume bottled water is any safer or cleaner than tap water,” Fedinick says. She shares these important considerations:

Check the water bottle label for the water source. It might be a municipal source like you get from your tap.

Bottled water is regulated by the FDA while tap water is regulated by the EPA. These agencies’ standards for chemical pollution of water are nearly identical.

Bottled water has a big impact on the environment due to the fossil fuels used to manufacture and ship bottled water. Plus, only 37 percent of water bottles are recycled.

Disinfection. “Chlorine and chloramine are added to water to kill disease-causing pathogens,” Fedinick says. “One of the downsides is that the chemicals themselves can change the taste and smell of water.” Another concern with disinfectants is that they can combine with organic matter, such as minuscule bits of leaves that get into water, and create disinfection byproducts. These compounds slightly increase the risk of bladder cancer. The EPA limits levels of disinfection byproducts in public water, and annual water quality reports list the amounts of these contaminants (most commonly trihalomethanes and haloacetic acid).

Other contaminants. “Drinking water contaminants can vary widely based on where you live and the activities happening there,” Fedinick says. “So, consider likely contaminants before getting specific testing.” For example, if you live in a farming community, your water might have higher amounts of nitrates and pesticides. In an industrial area, contaminants might include benzene or toluene. And many cities add fluoride to water (as a dental protectant), which some people prefer to remove.

“The best way to ensure you’re getting clean, healthy water is to be an informed consumer,” Fedinick says. “Don’t dismiss annual water quality reports, and seek individual testing if you have private well water (which isn’t regulated by the EPA).” **EN**

—Marsha McCulloch, MS, RD

Papaya Power!

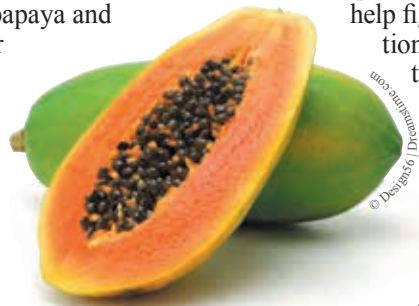
The folklore. Cut into a papaya and behold the spectacular shades of sunset in the tropics—rich pink, deep orange, and glowing yellow. A favorite tropical repast, it's no surprise this fruit is native to warm, humid southern Mexico and Central America. Ancient Mayans, who both ate the fruit and

used it to heal skin problems, called the papaya tree, "tree of life." The papaya is also said to have cured Christopher Columbus' crew of their digestive problems. With a long list of folk medicines and cures to its name, this sweet, buttery-textured fruit is ripe with vitamins, minerals, and health-protecting plant compounds.

The Facts. The papaya (*Carica papaya L.*) is a tree-like plant with palm-like leaves and flowers like small white plumeria. Oblong or pear-shaped, wrapped in a thin, tough skin of green, yellow or orange, the melon-like fruit's smooth, juicy flesh surrounds a cluster of small, black seeds. The most common varieties are Hawaiian—small (about one pound) and pear-shaped with orange or pink flesh, and Mexican—up to 15 inches and 10 pounds with yellow, orange or pink flesh that's less sweet than Hawaiian. One-cup serves up 144% Daily Value (DV) of antioxidant vitamin C, 31% DV of eye-protecting vitamin A, as well as powerful phytochemicals beta-carotene and lycopene, the source of papaya's rich color.

The Findings. Antioxidant-rich papaya may help improve aging skin, according to a study published in *Experimental and Therapeutic Medicine*, 2016. A fermented papaya preparation improved skin antioxidant capacity and signs of aging skin (including skin moisture, brown spots and elasticity) more effectively than an antioxidant cocktail containing trans-resveratrol, vitamins C and E, and selenium. Papaya's antioxidant potential is being studied in lab and

animal studies for its ability to help control blood glucose in patients with type 2 diabetes, and to help fight inflammation and oxidation to protect against cancers (*Mutation Research*, 2014).



The bright colors of papaya are calling cards for beta-carotene and lycopene.

The Finer Points. Early summer and fall are peak season for papaya, but they are available year round. Hawaiian

papaya is ripe when it's mostly yellow, while the Mexican variety will be green-yellow with shades of orange. They will give to gentle pressure and should be free of bruised or wrinkled areas. Refrigerate ripe fruit up to three days. Peel and scoop out seeds. Fill the hollow with fresh or frozen yogurt topped with nuts or granola for a satisfying breakfast or dessert. Enjoy papaya drizzled with lime juice, added to salads and smoothies, or try them as a vegetable—baked, boiled, or stuffed. [E!](#)

—Lori Zanteson

Notable Nutrients: Papaya

1 c (140 g), raw, cubed

Calories: 55	Vitamin C: 87 mg (144% DV)
Dietary fiber: 3 g (10% DV)	Folate: 53 mcg (13% DV)
Vitamin A: 1531 IU (31% DV)	Potassium: 360 mg (10% DV)

Note: c=cup, g=gram, IU=International Unit, mg=milligram, mcg=microgram, DV=Daily Value, based on 2,000 calories/day

Papaya Ambrosia with Ginger Dressing

$\frac{3}{4}$ c yogurt, plain	1 papaya, peeled, seeded, and cut in chunks
$\frac{1}{4}$ c walnuts or almonds, finely chopped	1 c seedless grapes, halved
1 tsp honey	1 pear, cored and cut in chunks
1 tsp fresh ginger, minced	

1. In a small bowl, stir together the yogurt, chopped nuts, honey, and minced ginger.
2. Combine papaya, grapes and pear chunks; spoon dressing over. Toss lightly to combine.
3. Chill a few hours before serving.

Makes 6 servings

Nutrition Information Per Serving: 104 calories, 3 grams (g) fat, 15 g carbohydrate, 3 g protein, 2 g dietary fiber, 17 milligrams sodium.

Recipe adapted courtesy Frieda's Produce

• Gluten-Free Diet Fad on the Rise.

The number of Americans following a gluten-free diet tripled in five years, yet those diagnosed with celiac disease hasn't changed, research shows. The study, which included more than 22,000 participants, led researchers to estimate that about 1.76 million people have celiac in the US, and about 2.7 follow a gluten-free diet even though they don't have celiac disease, indicating the diet may be a fad. A gluten-free diet is therapy for celiac disease, but many choose the diet because they think it's healthier.

(*JAMA Internal Medicine*, September 2016)

• Berries May Lower Risk of Diabetes.

Eating berries, which naturally contain anthocyanins (compounds rich in antioxidant action), may reduce risk of type 2 diabetes by 15-18 percent, according to a Chinese meta-analysis. The studies analyzed intake of dietary anthocyanin or berry intake and diabetes risk. Dietary anthocyanin consumption was linked to a 15 percent reduced risk of diabetes, while berry intake was associated with an 18 percent reduced risk. In addition, for every 7.5 mg/day of dietary anthocyanin, and every 17 g/day of berry intake, diabetes risk dropped by 5 percent.

(*European Journal of Clinical Nutrition*, August 2016)

• Business Diet Harms the Heart. Social business meals, which are based on eating out, snacking on the run, highly processed foods, sweet drinks, red meats, and alcohol, raise the risk for developing heart disease, researchers say. The study compared the impact of this eating plan with two others—the Mediterranean diet (rich in fruits and vegetables), and the Western diet (high in red meats and refined grains)—on 4,000 healthy adults. Arterial clogging tests show business dieters had significantly worse cardiovascular risk profiles.

(*Journal of the American College of Cardiology*, August 2016)

In Coming Issues ...

• Food Pairings for Health.

Combinations of foods may increase their benefits.

• Alternative Pastas in the Market.

Gluten-free and pulse pastas are on the rise.

• Understanding Alcohol and Cancer Risk. Our scientific update will guide you to the healthiest lifestyle choices.