

Cooperative Extension

Coffee, Coffee, Coffee!

A Primer for the Taste and Health Conscious

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The cultivation of coffee started on the Arabian Peninsula, spreading to Java, now known as Indonesia, in the early 17th century. By the late 17th century, coffee made its way to Europe and to the new world. Fast forward to today where Starbucks has set the tone for our current robust coffee culture.

There are many species of coffee plants, but the most important species to the coffee industry are Arabica and Robusta. *Coffea arabica* or Arabica coffee is considered mild and fine and as a result, it brings the highest prices of coffee, making up 70% of the world's coffee production. *Coffea canephora* or Robusta coffee is primarily used in blends of coffee and instant coffee. It has a distinctive taste and 50-60% more caffeine than Arabica coffees. As caffeine itself is quite bitter in taste, Robusta has a more bitter taste, often resulting in a cheaper price.



The flavor and aroma that we associate with coffee is created by the roasting of the beans. Unroasted beans contain coffee's acids, protein, and caffeine, but not its taste or aroma. The roasting process leads to the release of the coffee oil caffeol, known as the essence of coffee. This is the taste that is enjoyed when drinking coffee. Caffeol can easily be damaged by moisture, light and oxygen, so coffee is at its best 4 to 24 hours after roasting. Ideally, it is best to store whole beans in an airtight glass jar in a dark place where they will stay "fresh" for about 5 days.

To brew the perfect cup of coffee, there are a few things to keep in mind. First, be sure that all equipment is thoroughly cleaned between brewing. Any residue of coffee grinds can lead to a bitter taste. Use cold, fresh and filtered or bottled water and choose coffee beans as soon after they are roasted as possible. The size of the grind is also very important to the taste of the coffee. Bitter coffee may be a result of the beans being too finely ground and a flat coffee taste may be due to them being too coarsely ground. When you're ready to brew, the rule of thumb for the ratio of coffee and water is one to two tablespoons of ground coffee to taste for every six ounces of water.

If you love coffee, and drink a lot of it, you may have wondered if it is, or is not, beneficial to your health. Research on coffee consumption is ongoing, but to date has resulted in both possible health benefits as well as some potential health risks. Possible health benefits include a decreased risk of certain types of cancer. According to the American Institute for Cancer

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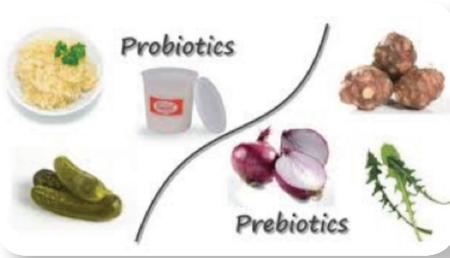
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Probiotics vs Prebiotics - What's the Difference?

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There are thousands of species of bacteria that are located inside of your gut. There are good and bad bacteria. The good bacteria help our bodies digest food and absorb nutrients, and they produce several vitamins including folic acid, niacin, and vitamins B6 and B12. The good bacteria also serve as a protector of infection and disease. Bad bacteria can be from different viruses or infections. Bad bacteria may grow more rapidly when taking an antibiotic. The food you eat plays an important role in terms of bacteria found in your gut. For example, a high-sugar and high-fat diet influences the gut bacteria negatively, allowing harmful species to overgrow. Also, chemical residues and

antibiotics may also disrupt the balance in your gut bacteria. Probiotics and prebiotics work together to promote a balance between good and bad bacteria in your gut. Even though the terms sound similar, they play different roles in your health.

What is a probiotic? Probiotics are the good bacteria naturally found in the gut. These active cultures help change and repopulate intestinal bacteria to balance gut flora. The most common probiotics found in dietary supplements and foods include Lactobacillus species like yogurt and kefir (sour-tasting milk made from cow's milk fermented with certain bacteria), miso (made from fermented rye, beans, rice or barley) and tempeh (fermented grain made from soybeans). Bifidobacterium species like sauerkraut, pickled vegetables, and kimchi (an Asian form of pickled sauerkraut that is spicy and sour) are all probiotics.

What is a prebiotic? Prebiotics are non-digestible food ingredients such as dietary fiber found in vegetables, fruits, and legumes that stimulate the growth of bacteria. They are the good bacteria promoters and serve as the food for probiotics. One of the things your good gut bacterium does with prebiotic fiber is create a short-chain fatty acid, butyrate. Butyrate has been extensively studied and has been shown to have anti-inflammatory effects inside the large intestine.

What is a synbiotic? A synbiotic is a combination of probiotics and prebiotics. Let's take a look at the health benefits of each. Probiotics may help to aid in digestion, strengthen immunity, help in weight loss, reduce inflammation, and even protect against gum disease and colon cancer. Prebiotics may improve gastrointestinal health, increase calcium absorption, and immune function. Synbiotics may be useful for early prevention or treatment of allergic diseases. Overall incorporating foods that contain probiotics and prebiotics provide you with the right balance of bacteria, which in turn helps to create a healthier you!

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Food Sources

Probiotics



Fermented dairy products like yogurt, kefir, buttermilk, aged cheeses (Gruyere, Gouda, Parmesan, and Cheddar), fermented vegetables like kimchi and sauerkraut, fermented soy products such as miso and tempeh.

Prebiotics



Whole grains like oatmeal, flax seed, barley, berries, bananas, legumes, beans, onions, garlic, leeks, asparagus, and honey.

Synbiotics

Any combination of the above two sources

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Probiotics: Where Do We Stand? Marcason, Wendy Journal of the Academy of Nutrition and Dietetics, Volume 113, Issue 10, 1424

Escott-Stump, S., Raymond, J. L., & Krause, M. V. (2012). Krause's food & the nutrition care process. St. Louis, MO: Elsevier/Saunders.

<https://authoritynutrition.com/probiotics-and-prebiotics/>

Food Truck Frenzy:

The Good News and Bad News about Mobile Food Vendors

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While you are walking around a city, school campus, or street fair, you may be noticing long lines in front of large brightly decorated trucks. More food trucks are appearing at urban sites and parks all around the country. Food trucks provide ample variety for consumers and have the potential to increase access to nutritious foods in vulnerable urban communities. Along with numerous pros that come along with the convenience and variety of food trucks, there are also cons that consumers should be aware of. Those concerns revolve around the issues of cleanliness, food safety, healthfulness of the food, and portion size.

Food trucks must go through initial inspection before they are given permits. A Center for Disease Control and Prevention study identified critical risk factors among food trucks that contribute to foodborne illness, making them more likely to fail health inspections. The top issues cited were lack of hand washing or no hand washing, improper food temperatures, cross contamination between raw foods and ready-to-eat foods and inadequate or no sanitation solution for sanitizing surfaces. Lack of water also results in the inability to wash produce.



Aside from the cleanliness concerns, most food trucks don't serve meals that meet the Food and Drug Administration's nutrition labeling criteria for designation as a "healthy" food. Per serving, qualifying food items would need to be low in fat (3 grams or less) and saturated fat (1 gram or less), contain limited amounts of sodium and cholesterol, and provide 10% of the daily value for vitamin A, vitamin C, iron, calcium, protein, or fiber. A number of cities provide incentives through preferential permits to vendors which provide healthier choices or locate their trucks in neighborhoods lacking access to fresh, unprocessed foods. New York City seeks to address the disparity in access to healthful food by designating a greater number of Green Cart permits in neighborhoods with historically low access to fresh fruits and vegetables. A Green Cart is one selling exclusively whole, uncut, and unprocessed produce. Kansas City's Department of Parks and Recreation allows vendors to sell in the city's parks, provided that their food complies with explicitly defined nutrition guidelines. Other city food trucks like those in San Francisco focus on sustainability. Be on the lookout for these vendors when choosing a place to eat. Ultimately, it is up to consumers to decide what options are healthiest for them.

To avoid overeating at food trucks, apply the same recommendations that you'd follow when eating at a sit-down restaurant to cut back on unnecessary calories and less healthy additives. Go with family or friends and share meals. That way you can eat smaller portions while trying a variety of foods. Hand held foods like tacos, gyros and wraps are popular food truck options. They can incorporate all of your basic food groups. Choose corn tortillas instead of flour and whole grain wraps as healthier alternatives. When you do decide on a wrap or sandwich, grab a fork and plate and eat the nutrient-filled inside and less of the wrapping. That way you'll be able to taste all the flavors and feel the textures of your foods while cutting back on extra calories. Choose lean protein (e.g. chicken, tofu, fish or lean beef) that's grilled, broiled, roasted, or baked rather than fried. Ask for sauces on the side.

Tip: Stay away from food trucks that don't look clean and organized. Try to notice if the person who is making the food is wearing gloves and is not also handling money.

Tip: Frequently, food trucks don't use many ingredients in their food due to the lack of space available. If you like something, ask how it was made and try making healthy variations of it at home!

Food trucks give you the perfect opportunity to try new foods. Healthy foods are trending now! Don't miss your chance to try them. Just remember there are no regulations enforcing food trucks to follow so choose small to moderate portion sizes. It is your responsibility to be an alert consumer. To find New Jersey mobile food vendors and their descriptions, visit www.njfta.org/members.

References:

Tester et al. (2010). An analysis of public health policy and legal issues relevant to mobile food vending. *American Journal of Public Health*, 100(11), 2038-2046.
Vanschaik Faw, B. & Tuttle, J.L. (2014). Mobile food trucks: California EHS-Net study on risk factors and inspection challenges. *Journal of Environmental Health*, 96(8), 36-37.
Available at: <https://www.cdc.gov/nceh/ehs/docs/jeh/2014/april-food-trucks.pdf>

Healthy Meals: Planning for Success

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Eating healthy may seem daunting and overwhelming at first, but it actually isn't difficult to start eating that way today. Most often when you hear the words "meal planning", you probably think it is a difficult process that requires a lot of effort to implement in your daily life. Many of us don't have a lot of experience with menu planning, so it may seem like an overwhelming task. Regardless of these different misconceptions, meal planning really comes down to a few simple steps. These steps can lead to a healthier life for you and your family.

The first step for planning meals is to take a look at what you currently have in the pantry, refrigerator and freezer. Without knowing what is available, you may miss ingredients when you are shopping which will make it more difficult at mealtime without the ingredients you need. Start your meal planning with the largest meal that your family eats. In many households, this meal is dinner with the center of the plate coming from meat or other animal sources. For health and environmental reasons, the Harvard School of Public Health started "Meatless Mondays" with the goal of eliminating animal protein from American diets on Mondays. This allows for many grain, dairy and vegetable protein options for the main and side dishes.

Try choosing some new vegetables that are brightly colored due to their phytochemical content. These red, orange, green, purple vegetables provide valuable health benefits if they are dark in color. Choose a variety of vegetables when menu planning. Buying vegetables and fruits in season from your local Farmer's Market gives you a fresh product. Include frozen or canned vegetables and fruit in your meal planning in winter months. Pre-washed salads have really increased our ability to eat raw vegetable greens regularly. Salads are a very flexible part of our meal that allows us to add fruit, nuts or vegetables like sliced peppers or tomatoes to the salad bowl.

There are many options when you plan the carbohydrate content of your meal. Other than pasta and rice, there are new staples in the grocery aisle such as quinoa, bulgur, amaranth, millet, and teff. Plan to consume mainly whole-grains since they are high in fiber and are part of an overall healthy diet. At least half of the grains we consume should be whole grains.

The American Heart Association recommends we consume fish twice a week, as this may help to lower cholesterol levels. Some recommendations may be more expensive to follow on a regular basis. To keep food costs reasonable, plan to purchase food when it is in season and usually less expensive. Add some higher priced food items to the menu along with foods the family likes. Make sure the menu also allows the opportunity to try new foods. If budget is a concern, meals can be planned around weekly supermarket specials, and by using coupons and other store discounts, as much as possible.

What color are the vegetables and fruits on your plate? What type of grain is on your plate? These are all important questions to think about when planning menus and food shopping. Varying our meals not only helps our body's health, but also provides a time to experience new recipes and new foods. If we focus on eating that meal



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A typical meal plan for a week

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Protein	Fish	Meatless Monday	Chicken	Fish	Beef	Veal	Shrimp
Cuisine	Mexican	Italian	Indian	Caribbean	American	Middle Eastern	Chinese
Vegetable	Cabbage, Avocado	Spinach, Broccoli	Cauliflower, Sweet Potato	Avocado, Asparagus	Zucchini, Squash	Okra, Tomato Sauce	Peppers, Broccoli
Starch	Whole Grain Tortilla	Whole Grain Pizza Dough	Brown Rice	Wild Rice with Quinoa	Mashed Sweet Potatoes	Rice Pilaf	Whole Grain Pasta
Meal	Pan Seared Cod, Taco with guacamole, and Pico De Gallo	Garden Vegetable Pizza with Pesto and Parmesan	Chicken Biryani with Roasted Cauliflower	Blackened salmon with mango salsa	Herb crusted steak with mashed sweet potatoes	Middle Eastern Okra and rice pilaf	Shrimp stir fry with vegetable Lo Mein

What's in a Word? Healthy vs Nutritious

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We often hear the term “healthy” on food packages, in wellness campaigns, and in everyday talk, but what does it actually mean?

According to the Merriam-Webster dictionary, the term healthy is defined as “having good health: not sick or injured; showing good health”; or “good for your health”. But how does that definition actually apply to what the average person consumes? Using the term “nutritious” when talking about food can be helpful and easier to understand than using the word “healthy” which is a broad term. The word “nutritious” is defined as “consuming substances that a person’s body needs to be

healthy and grow properly” or “promoting good health and growth”.

All foods contain nutrients that affect our bodies throughout the lifespan. These basic nutrients are: carbohydrates, protein, fat, vitamins, minerals and water.

Carbohydrates are found in the fruit, vegetable, grain, and dairy food groups. This nutrient is the main fuel source our bodies need daily. Carbohydrates include: starch, sugar and fiber. The most common and frequently misunderstood form of carbohydrate is sugar. All starches and complex sugars break down into glucose, a basic form of sugar. Fiber from whole grains, legumes, vegetables and fruit is not very digestible and helps to move food through the intestines to prevent constipation and also to help normalize blood sugar and blood cholesterol levels.

Protein is found in animal and plant sources. It comes from meat, fish, eggs, beans, nuts, and dairy products along with some vegetables and grains. The main function of protein is to build our muscles, skin, hair, nails, blood, bones, enzymes, hormones, and allow vitamins to function.

Fats are equally important in the diet because they provide fuel for the body along with providing padding for organs in the body along with controlling hormones. Meat, dairy, and some vegetables and grains provide fats in the form of oil and solid fats including unsaturated and saturated fats. Saturated fats come from meat, eggs, poultry, fish, and dairy. Excessive amounts of saturated fats in the diet have been linked to chronic diseases such as heart disease. Unsaturated fats commonly come from plant foods and consist of oils, which contain monounsaturated and polyunsaturated fatty acids. Many also include omega-3 fatty acids (either fish or plant sources) and have been linked to reducing risks of chronic diseases.

Vitamins, minerals, and water are also essential nutrients, meaning they are necessary for the body to function properly. These nutrients come from eating a variety of foods from each of the food groups and by drinking plenty of water. Each nutrient plays a different role in the body from boosting the immune system to building strong bones, but they work together to help maintain your health.

By understanding the terms “healthy” and “nutritious” and the difference between them, will help you to apply this knowledge to your own eating habits.

Healthy Meals: Planning for Success - *continued from page 4*



together as a family or sharing the meal with a friend, it will become an enjoyable, fun experience for everyone. Research has shown that when families eat meals together, they generally consume more vegetables and fruits and less fast food. This provides social, as well as, health benefits.

Finally don't forget dessert. Dessert is the perfect time to bring in those brightly colored fruits that are rich in phytochemicals. Berries are a rich source of antioxidants, bananas are high in potassium, and you can't go wrong with fruit whether it is fresh or frozen. Frozen fruit is great for making smoothies.

By choosing the right cuisine, meal planning can be a simple activity that can be enjoyed. Planning the food around a certain cuisine, such as Italian, Mexican, Indian, or others can add herbs and spices, or other new savory flavors to your family meals. Creating new menus outside of your comfort zone may be a bit challenging at first, but will allow you to take the time to try new recipes when you have more free time. With new meal planning and meal preparation skills, you can prepare tasty, healthy meals for your family.

Small Steps to Improve Health and Wealth

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People don't have problems any more. They have "issues" and some of these issues (e.g., obesity, diabetes, lack of savings, and high debt) affect their health and personal finances. The Cooperative Extension Small Steps to Health and Wealth™ (SSHW) program encourages people to make positive changes to simultaneously improve both areas of their lives. Below are specific steps:

- ▶ **Convert Consumption Into Labor** - Mix Research how many hours of exercise, gardening, house cleaning, or other physical activity are needed to burn off a certain number of calories. A comparable financial example is "converting spending into labor" by calculating how many hours of work are needed in order to buy something.
- ▶ **Meet Yourself Halfway** - To lose weight, decrease portion sizes by one-half. For example, eat one cookie instead of two. A comparable financial example is to reduce spending on "discretionary" expenses such as meals eaten away from home, lottery tickets, clothing, and food. Don't cut out spending on these items completely but spend less than you do now. Plans to change are more likely to succeed when people don't feel "deprived."
- ▶ **Downsize Eating and Spending** - Buying less food saves calories and cuts costs. For example, eat lunch portions or appetizers at restaurants and/or take food home for another meal. Household spending can also be downsized. Simply figure out ways to purchase items for less (e.g., thrift shops) or buy fewer of them.
- ▶ **Say No to Super-Sizing** - No matter how much of a "deal" upgrading a meal's size may be, don't be tempted. Rather, eat fewer calories by ordering smaller portions. Ditto for non-food spending such as "buy three and save" offers when you only need one item. Avoid "deals" that require you to spend more to "save" more.
- ▶ **Track Eating and Spending** - Most people don't know how many calories they consume daily or how many dollars they spend monthly on "incidentals" such as snacks, beverages, children's expenses, and gifts. One of the best ways to increase awareness of current practices is to record foods eaten and dollars spent for a typical month or two. Then analyze relationships between eating, spending, and emotions and make needed adjustments.
- ▶ **Compare Yourself with Recommended Guidelines** - A nutrition example is body mass index (BMI). A BMI of 18.5 to 24.9 is considered healthy, 25 to 29.9 overweight, 30 to 39.9 obese, and 40+ morbidly obese. A comparable financial example is a person's consumer debt-to-income ratio, which is calculated by dividing monthly consumer debt payments (e.g., credit card bills, car loans, and student loans) by monthly take-home (net) pay. The recommended consumer debt-to-income ratio is no more than 15% to 20%.
- ▶ **Start Small** - Simple behavior changes, such as drinking a small can of soda instead of a large bottle (or, better still, water!) or using less butter and salad dressing, can help people lose weight. Three examples of small financial changes are saving a dollar a day, plus pocket change, in a jar, adding \$1 a day (about \$30 monthly) to the minimum monthly payment on a credit card, and completing the 30-Day \$100 Savings Challenge.
- ▶ **Follow Nutrition and Personal Finance Standards** - People often understand portion sizes better when they are compared to common objects. Three ounces of meat is the size of a deck of cards and one cup of rice or pasta looks like a tennis ball. A common standard for personal finances is saving three to six months expenses for emergencies. This means an emergency fund of \$6,000 to \$12,000 for a household that spends \$2,000 a month.
- ▶ **Control Intake and Outgo** - For weight loss and improved health, this means reducing the calories you consume, increasing exercise to burn off more calories, or doing both. For improved finances and positive cash flow, increased income, reduced expenses, or doing both, are the keys to success.



For additional ideas about strategies to improve health and personal finances, visit the SSHW web site at <http://njaes.rutgers.edu/sshw/>.

For a personalized assessment of personal health and financial management practices, take the *Personal Health and Finance Quiz* at <http://njaes.rutgers.edu/money/health-finance-quiz/>.

Food Safety During Pregnancy: What you need to know!

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Pregnancy is an exciting time of anticipation in a woman's life. The best way to meet the mothers and the baby's nutritional need are to eat nutritious and healthy foods.

Both the mother and the fetus face a higher risk of foodborne illness as the woman's body undergoes hormonal changes and the unborn baby's immune system is still developing.

Many pathogens such as *E. coli*, *Salmonella*, *Campylobacter* and *Listeria monocytogenes* have been associated with foodborne illness, including cases in pregnant women.

Listeriosis is a disease caused by *Listeria monocytogenes* and it is of great concern to pregnant women and their babies because it can cause miscarriage, premature delivery, and/or serious sickness or death of the newborn.

Foods to avoid	Why	What to do
Homemade Raw cookie dough/Cake batter	May contain <i>Salmonella</i> or pathogenic <i>E. coli</i>	Bake the cookies or the cake, and don't lick the spoon or the bowl
Raw fish	May contain parasites and bacteria	Avoid raw fish sushi and cook all fish and shellfish to at least 145 °F
Unpasteurized (raw) milk and cheese	<i>Campylobacter</i> , pathogenic <i>E. coli</i> , <i>Listeria monocytogenes</i> and <i>Salmonella</i>	Drink only pasteurized milk and eat only cheese made from pasteurized milk
Bean sprouts	Pathogenic <i>E. coli</i> and <i>Salmonella</i>	Do not eat raw sprouts
Deli meats and hot dogs	<i>Listeria monocytogenes</i>	Avoid deli meats or cook to 165° F
Unwashed fruits and vegetables	Pathogenic <i>E. coli</i> and <i>Salmonella</i>	Wash all fresh produce in clean water

While awaiting the arrival the baby, special efforts to select and prepare foods are necessary to prevent the mother and the unborn baby from contracting foodborne illness.

1. Wash hands and surfaces

- Wash your hands with warm water for at least 20 seconds before cooking and after using the bathroom
- Wash fresh produce under running water
- Wash the lids of canned goods before opening



2. Don't cross-contaminate

- Separate raw meat in grocery bags and in the refrigerator
- Use a separate cutting board for raw meat

3. Cook foods to a safe temperature

- Buy a food thermometer
- Make sure food is cooked to recommended temperatures:

Ground Beef	160°F
Ham	140°F
Seafood	145°F
Hot dogs and luncheon meats	165°F

4. Refrigerate promptly

- Make sure your refrigerator temperature is 40° F or below
- Refrigerate meat within 1 hour of purchase
- Thaw meat in refrigerator and never at room temperature

For further information: Food Safety for pregnant women

<https://www.fda.gov/food/foodborneillnesscontaminants/peopleatrisk/ucm312704.htm>

Coffee, Coffee, Coffee!

A Primer for the Taste and Health Conscious - continued from page 1



Research, coffee consumption may result in a lower risk of endometrial and liver cancers and there is some less consistent research indicating possible protection against cancers of the mouth and colon and against cancer in general. Coffee, and caffeine in general, may provide a protective effect against neurodegenerative diseases such as Parkinson's and Alzheimer's and coffee consumption is also linked to a decreased risk of type 2 diabetes and protection against liver disease.

There are also some potential health risks to coffee consumption. An interesting effect of coffee on cholesterol has been known for some time. *Unfiltered* coffee has been found to significantly increase total cholesterol, low-density lipoprotein cholesterol (LDL) and triglycerides although moderate consumption of *filtered* coffee does not seem to increase this risk. There is also an increased risk of a heart attack or a stroke within an hour of drinking coffee, especially for those who are at risk and do not drink coffee on a regular basis.

Coffee is known to decrease absorption of iron during meals. For maximal iron absorption coffee should not be consumed with meals or iron supplements. Although the risk is not completely clear at this time, coffee may be associated with bone loss, low bone density or fractures and there is a possible connection between pregnancy loss and caffeine/coffee consumption. We know that sleep quality can be altered by caffeine, but the extent to which coffee consumption affects sleep is in need of further study. And finally, caffeine, along with other substances in coffee, may be associated with depression.

Overall, more studies are needed to confirm these risks and benefits, but evidence indicates that the benefits of drinking coffee do outweigh any potential risks at this time.

Learn more about coffee by visiting <https://njaes.rutgers.edu/functional-foods/podcasts.asp> to listen to the podcast *Coffee: Should it be your mug of choice?*