Nutrition Fact or Fiction?

Answers to FAQ

Nutrition is an important part of patient outcomes during cancer treatment. There is a lot of information available as well as misinformation for patients and staff in the news, from well-meaning friends and online. "Nutrition Fact or Fiction" will help to provide evidence-based information to clarify some of this misinformation. We will add to the list monthly, but please feel free to contact me to ask additional questions you have.

September Fact or Fiction: Foods to Boost Satiety

Have you ever eaten something and then are hungry a few hours later? You may not be eating food that help you feel more full. Some foods such as oatmeal, almonds and Greek yogurt for example can help with this.

Foods that are high in satiety tend to have more fiber, protein and healthy fats. All of these are digested more slowly so we feel full longer. These foods can also help to prevent blood sugar spikes followed by low blood sugar levels. Processed foods such as sugary boxed cereals, snacks and white bread or refined grains can lead to hunger pangs.

Here are a few foods to try to incorporate into your diet to help keep your appetite more even and may even help to decrease temptation and overeating:

Oatmeal: Research in the *Annals of Nutrition & Metabolism* showed that subjects who started their day with a bowl of oatmeal reported feeling less hunger and ate 31% fewer calories than those who ate the same number of calories in processed cereal. The satiety offered by oatmeal may be due to the high levels of soluble fiber. Soluble fiber turns into a gel-like substance in your stomach which slows down digestion and helps to keep you full for longer.

Eggs: An *American Journal of Clinical Nutrition* study found that people who ate two eggs for breakfast during a three month study reported less hunger and increased satiety after eating compared to those who consumed an egg-free meal. The egg diet had no detrimental impact on blood cholesterol. Eggs are high in protein that can help to reduce circulating levels of grehlin, a hormone that increases appetite. If you are at risk for heart disease, the American Heart Association recommends limiting whole eggs to 3 times/week. The white of the egg is unlimited and that is where the protein is.

Almonds: A *European Journal of Clinical Nutrition* study found that people who snack on almonds (just 1-1/2 ounces), experienced less hunger and desire to eat throughout the day. They didn't gain weight which may because they didn't feel hungry so ended up eating less overall. Nuts contain healthy fat, protein and fiber- all healthy ingredients to ward off hunger.

Beans: Legumes such as beans, lentils and peas were found to increase satiety by researchers at the University of Toronto. They provide a good source of protein

and fiber. These plant-based protein sources were found to be just as effective as animal protein in decreasing hunger.

Whole Grains: Whole grains have been shown to encourage satiety and reduce post-meal insulin levels compared to refined breads. Whole grains are high in fiber to help increase satiety.

Greek Yogurt: A study published in *Nutrition Journal* found that volunteers who consumed a high protein snack in the afternoon experienced less hunger later and consumed fewer calories at dinner than those who snacked on chocolate or crackers. The casein protein in yogurt (more in Greek than regular) can help to slow digestion which helps you feel full longer.

Avocado: Scientists at Loma Linda University, California, found that including about one-half of an avocado with a meal can reduce the desire to eat later on. Avocados are high in heart-healthy monounsaturated fat to decrease hunger.

Salmon: Including at least 25 grams of protein with meal can have a positive impact on appetite and weight loss. Fish such as salmon is a good choice to meet your protein needs and contains health omega-3 fats too.

Remember- Eating a variety of foods and balancing your diet is recommended to decrease the risk of many diseases.

August Fact or Fiction: Promising disease-fighting foods

There isn't one "perfect" food that provides all of the nutrients we need. Foods work together to provide the valance that is needed for the body to function. Diets that are high in vegetables, fruits, whole grains and other plant foods may reduce the risk of inflammation and disease. The Dietary Guidelines Advisory Committee looked at dietary patterns that prevent disease and the evidence showed that diets rich in vegetables and fruits such as the Mediterranean and vegetarian diets are linked to lower rates of chronic diseases.

Plant foods have been linked to improved health. Here are some to consider adding to your diet:

- Berries- All different berries- blueberries, black berries, raspberries, etc. to provide the phytochemicals that may help to reduce inflammation
- Broccoli- All cruciferous vegetables such as broccoli, Brussels sprouts, cauliflower, Bok Choy, cabbage, etc. have phytochemicals that can help to reduce inflammation and oxidative stress while providing benefits to reduce disease
- Fish- Omega-3 fatty acids in fatty fish have anti-inflammatory properties. The American Heart Association recommends eating at least two 3.5 ounce portions of fatty fish per week to help prevent cardiovascular disease
- Fermented Foods- Yogurt, kefir, sauerkraut, kimchi, tempeh and miso are all fermented food that support a healthy digestive and immune system.
- Garlic- The American Institute for Cancer Research (AICR) states there is probable evidence that garlic and other members of the allium family

such as onions, leeks, shallots, and scallions reduce the risk of developing some types of cancer

- Ginger and Turmeric- These spices contain anti-inflammatory, analgesic properties.
- Green Tea- Green tea contains a phytochemical called epigallocatechin gallate (EGCG) which has been shown to have some anti-inflammatory and anti-cancer effects.
- Shitake Mushrooms- In human studies, these mushrooms have shown anti-cancer and immune-boosting properties and may lower cholesterol
- Nuts- May be helpful for cardiovascular function, healthy blood sugar and weigh control.

Remember- no one food can provide you with everything your body needs. Eating a variety and incorporating some of these foods that may have extra health benefits is recommended.

July Fact or Fiction: Foods that may help to reduce inflammation

Inflammation from an injury such as a broken foot is obvious, but chronic low-grade inflammation can be harmful to your health. Many studies have been underway to determine which foods may help to reduce this inflammation.

Try incorporating some of these into your daily diet:

1. Broccoli: A cruciferous vegetable which is linked to lowering inflammation according to a study in the *Journal of the Academy of Nutrition and Dietetics.* Other cruciferous vegetables contain the antioxidants which may be linked to this benefit. Try adding foods such as broccoli, Brussels sprouts, kale, cauliflower and foods from the cabbage family to your diet.

2. Wheat Berries: The *American Journal of Clinical Nutrition* study found that eating whole wheat which contains the antioxidant, polyphenol can lower inflammation. Add cooked wheat berries to vegetables, soups, stews and salads.

3. Extra Virgin Olive Oil: Olive oil contains oleocanthal, a compound that has properties similar to ibuprofen for decreasing inflammation. Olive oil is very versatile as an all-purpose oil.

4. Beans and Legumes: Eating more beans and legumes such as lentils, black or other dried beans may reduce inflammation. They contain soluble fiber, vitamins and minerals that may work together to reduce inflammation.

5. Salmon and other fatty fish: Contains omega-3 fatty acids that can lower inflammation. Try to eat fatty fish 2-3 times/week.

6. Grapefruit and other citrus fruits: These contain flavonoids, an antioxidant that can help to lower inflammation. Try to eat a citrus fruit daily.

7. Brazil Nuts and other Nuts: Contain healthy fats, vitamins and minerals that are associated with reducing inflammation. Try adding them to salads, cereal or just eat them as a snack.

8. Turmeric: Curcumin is the active ingredient in turmeric that contains high amounts of antioxidants to reduce inflammation. It also provides the yellow color of the spice. It can be used to season vegetables, soups, and protein foods

such as fish and chicken. Its antioxidants are best released when the spice is cooked with olive oil and some black pepper.

9. Cultured Products: Foods such as yogurt provide beneficial bacteria which may help to inhibit inflammation. Try eating one serving per day and don't forget to provide the probiotics with food (prebiotics) such as undigestible fiber from fruit or vegetables.

No "ONE" food will be the miracle food, but eating a variety of foods will help to provide a balanced diet to maximize your health.

June Fact or Fiction: The Top 20 Worldwide Fitness Trends

Each year, the ACSM (American College of Sports Medicine) conducts a survey of wellness professionals to predict the top fitness trends for the upcoming year. These are not necessarily recommendations, but simply trends that can be used to predict business. Finding the right fit for the individual to promote health and fitness should be the priority.

These are the top 20 for this year. How many do you know about?

#1- High-intensity Interval Training (HIT): There are concerns about the injury rate of participants, but it remains popular. Workouts provide maximum calorie

burn and conditioning in a short amount of time. Newer formats are being developed that focus on lower impact and more accessible for more exercisers.

#2- Group Fitness Classes: General classes, not specific specialty classes

#3- Wearable Technology: Smart watches, activity trackers

#4- **Body Weight Training**: Exercises using one's weight with no equipment

#5- Strength Training: Using weights or equipment to build strength

#6- Educated, certified and experienced fitness professionals: Relying on trained professionals

#7- Yoga: Multiple styles to attract a variety of participants; instructional DVDs and online videos make it accessible

#8- Personal Training: Develop program for an individual's needs and goals

#9- Older Adult Fitness Programs: Growth of an aging population with encouragement from health care professionals to encourage exercise as we age

#10- Functional Fitness: Training your muscles to work together and prepare them for daily tasks

#11- **Exercise and Weight Loss:** Staying fit and losing weight

#12- Exercise is Medicine: Exercising may be a form of keeping your body healthy

#**13- Group Personal Training**: Combination of group fitness and personal training

#14- Outdoor Activities: Becoming more active outside and developing fitness

#15- Flexibility and Mobility Rollers: The biggest jump in the rankings! Rollers use to be used by physical and massage therapists but are now available for general use

#16- Licensure or Fitness Professionals: The only new trend! Some states requiring licensure for professionals

#17- Circuit Training: Body conditioning or endurance training or resistance training using high intensity training

#18- Wellness Coaching: Helps to make positive and lasting changes to your health

#19- Core Training: Gaining power, strength and stability

#20- Sport-specific Training: Determines athletes' strengths and opportunities for improvement

May Fact or Fiction- Using the Right Oil

Different oils have different characteristic with unique benefits depending on what you are using it for. Some have a unique flavor while others hold up better

at high temperatures. Choosing the best one for you will depend on what you are using it for and how it fits in with the rest of your daily food choices.

Using certain oils for their flavor has become more popular recently. Choosing the right oil can enhance the flavor of what you are cooking. Some people have concern over the best oil to use at higher temperature. Some oils do hold up to high temperatures better than others.

Oil starts to degrade once it reaches its smoke point. The smoke point is the temperature at which the oil starts to smoke, or burn, and release harmful chemicals that also give a bitter flavor and odor. You want to always cook below an oil's smoke point. The smoke point is followed by the flash point- that's when the oil catches on fire.

Other factors to consider with oil is rancidity and oxidation. When an oil is oxidized, the fatty acids break down into small molecules which give the rancid smell. The more unsaturated an oil is, the more susceptible it is to becoming oxidized. It is recommended to stored at room temperature and be purchased in smaller quantities. A gallon may be a good deal, but if it isn't used and spoils, you may be wasting money and have to throw it out.

Oxidative stress which is the excess of free radicals caused by oxidation, may cause damage to DNA increasing the risk of illness including cancer. But your oil is unlikely to become oxidized when you are cooking at home in a frying pan or wok because of the amount of time you are cooking and the temperature you would be cooking at. Every oil naturally contains vitamin E which is an antioxidant which helps to protect it from oxidation.

Below is a short review of some of the popular oils.

Canola Oil has very little flavor. It's good for an all-purpose oil. It used to be processed using chemicals but that has changed so it is a safe oil to use. It's considered to have a medium smoke point (400 degrees F). It's made up of mostly polyunsaturated fatty acids which helps to lower LDL (bad) cholesterol.

Coconut Oil comes in both refined and unrefined forms. Refined has a mild coconut scent and flavor with a smoke point of 400 degrees F. Unrefined has a stronger flavor and a lower smoke point of 350 degrees F. It is a saturated fat and the American Heart Association recommends limiting this, so use coconut oil as part of your daily saturated fat allotment.

Corn Oil is an odorless, neutral-flavored oil. It is good to use when you want other flavors to predominate. Corn oil has a high smoke point of 450 degrees F.

Grapeseed Oil has been gaining popularity. It has a light flavor that is good for salad dressings. It has a smoke point of 445 degrees F. It does become rancid more quickly so it is recommended to store it in the refrigerator.

Olive Oil comes in several varieties. Extra virgin has a strong olive flavor. Unprocessed is best used as a vinaigrette or finishing oil. It has a lower smoke point of 325 degrees F. Pure olive oil is a combination of refined and extra virgin

oils. It is filtered and has a neutral taste, flavor and color with a smoke point of 465 degrees F. It's a great all-purpose oil.

Peanut Oil is recommended for deep frying. It has a high smoke point of 450 degrees F with a light, nutty flavor. It's great for Asian flavors and for stir-frying.

April Fact or Fiction

Keeping Food Safe

Food safety is designed to help prevent foodborne illness. The main culprits are pathogenic microorganisms that get into the food supply through poor personal hygiene, not keeping food at the proper temperature, leaving food out at improper temperatures for too long, and cross-contamination. Knowing what to do can help to minimize or prevent illness.

It is estimated that about 20% of foodborne illness outbreaks result from foods that were consumed at home. Improper food storage, handling and preparation are what lead to illness. A study that analyzed 14 common kitchen items for the presence of 4 microorganisms including E coli, Salmonella, Listeria and fungi (yeast and mold) found the most microorganisms were found in refrigerator vegetable and meat drawers, blender gaskets, can openers, rubber spatulas and food storage containers with rubber seals.

The microorganisms were found on kitchen equipment and tools that come in regular contact with potentially hazardous foods including meat, poultry and seafood. It is important to clean kitchen appliances and apply safe food practices. Many cases of foodborne illness come from produce including fruits,

vegetables and nuts. These foods are usually consumed raw and can come in contact with contaminated surfaces.

Cleaning Tips

- Refrigerator drawers: Remove the drawer and empty it. Wash with warm water with mild dish detergent and rinse. If the drawer has an odor, wash with 1- 2 tablespoons of baking soda mixed with a quart water.
- Blender gasket: Unplug blender, take all pieces apart and wash
- Can opener: Place in dishwasher if possible or wash with warm soapy water, then rinse
- Rubber spatula: Wash in dishwasher if possible after every use. Hand wash with warm soapy water, then rinse. If it's a 2-piece spatula, separate the handle from the spatula before cleaning
- Food storage containers: Use the dishwasher if possible, otherwise wash by hand making sure to clean the area around the seal and any grooves

Microorganisms of Concern

- *E coli 0157:H7:* Consuming only a small amount of this bacteria can result in hemorrhagic colitis. Symptoms include diarrhea which often becomes bloody, abdominal cramps and in severe cases, kidney failure. It is linked to ground beef and produce. To prevent illness, cook foods until they are a minimum of 155 degrees F.
- *Salmonella:* Consuming only a small amount can cause illness. Symptoms include diarrhea, abdominal cramps, vomiting and fever. Foods commonly associated with this bacteria are poultry, eggs, dairy products and produce. To prevent illness, cook eggs and poultry to at least 145 degrees F for eggs and 165 degrees F for poultry. Prevent cross-contamination using separate cutting boards, bowls and utensils for raw and cooked foods. It is not recommended that you wash poultry in the sink.
- *Listeria monocytogenes* are a different type of bacteria that grow in cool, moist environments. Immunocompromised individuals are more susceptible along with pregnant women. Foods most commonly linked to this bacteria are raw meat, unpasteurized dairy, ready-to-eat foods including deli meat, hot dogs, pate and soft cheeses. To prevent this illness, cook foods well and avoid cross-contamination. High-risk populations should be encouraged to avoid unpasteurized food products.
- *Fungi: Mold and Yeast* are transported by air, water or insects. They are visible to the naked eye but they can also have branches that go deep into the food that you can't always see. Consuming these can cause allergic and respiratory reactions. They can also produce toxins in some cases. Molds prefer warm temperatures but can grow in refrigerators and on salty as well as sweet foods.

Preventing Illness

- **Avoid Cross-contamination:** Wash cutting boards and anything that raw foods touch before using them for something else. Cutting boards with a lot of scratches and crevices should be replaced. When storing food in

the refrigerator, place raw meats on the bottom and ready-to-eat and cooked foods should be near the top

- **Control Time and Temperature:** The temperature danger zone is between 41 degrees F and 135 degrees for food stored for more than 4 hours. Refrigerate foods when bringing them home from the store. Defrost food in the refrigerator in advance overnight. Cook foods to the proper temperature and refrigerate promptly within 2 hours. Leftovers should be tossed after one hour when the temperature is 90 degrees F or above.
- **Good Personal Hygiene:** Washing hands is the number one way to prevent food contamination. Remember to wash after using electronic devices, using the restroom and performing other tasks such as taking out the garbage. People with illness such as diarrhea, vomiting with sore throat or fever should avoid handling food.

Bottom Line: When in doubt, throw it out!

March Fact or Fiction

Fiber Facts

Definitions:

Dietary Fiber is nondigestible soluble and insoluble carbohydrates and lignin that are intrinsic and intact in plants.

Functional Fiber is isolated or synthetic nondigestible carbohydrates determined by the FDA to have physiological effects that are beneficial to human health.

Manufacturers are trying to make packaged foods more healthful so they have been adding beneficial nutrients to help improve the nutrition profile of certain foods. Foods like cereal, oatmeal and baked goods can have added fiber. Some groups are concerned that these synthetic added fibers don't provide the same nutritional benefits as the fiber found naturally in whole plant sources. In 2016,

the FDA finalized the definition of fiber. The definition states which fiber can and can't be included in the "dietary fiber" on the Nutrition Facts Label.

"Intrinsic" fiber is naturally occurring in plants such as vegetables, whole grains, fruits, cereal bran and flours. These meet the criteria for the new definition. It is considered intact because it hasn't been removed from the plant. These include:

- Beta-glucan soluble fiber which is oat bran fiber which can be added to smoothies and other foods
- Psyllium husk which is mostly soluble fiber extracted from husks of the Plantago ovata seeds. It's found as an ingredient in cereals, baked goods and ice cream
- Cellulose gum is a soluble fiber added as an ingredient in breads, pancakes, crackers and frozen breakfast items
- Guar gum is a soluble fiber extracted from the endosperm of guar beans and is found in some coconut and almond milks, cheeses, instant puddings, gluten-free baked goods, and in fiber supplements
- Pectin is a soluble fiber isolated from the cell walls of fruits and vegetables. It can be found as an added fiber in foods such as jams, jellies, and dairy products
- Locust bean gum is a soluble fiber from the seeds of the carob tree that is found in foods such as breads, sauces and cereals
- Hydroxypropyl methylcellulose is a soluble fiber commonly found in many gluten-free foods

Added fibers- fibers that have either been isolated from the food source and added to other foods, are considered synthetic. They can be called dietary fiber on food labels if they meet the criteria for "beneficial physiological effect to human health". The commonly used Isolated and Synthetic Nondigestible Carbohydrates that don't meet the new fiber definitions are: alginate, apple fiber, bamboo fiber, cellulose gum, corn hull fiber, cottonseed fiber, galactooligosaccharides, gum acaia, inulin, oligofructose, karaya gum, oat hull fiber, pea fiber, polydextrose, potato fibers, pullulan, rice bran fiber, resistant starches (corn, wheat, maize), soluble corn fiber, soy fiber, sugar beet fiber, sugar cane fiber, wheat fiber, xanthan gum, and xylooligosaccharides.

The average fiber intake for Americans is only about 16 g and the recommendation is to get 28 grams/day. The FDA continues to evaluate possible benefits of different types of fiber so classifications may change. There is some work going on to determine if the current definitions and foods that are not considered to be fiber are valid.

Bottom Line

The 2015-2020 Dietary Guidelines for Americans recommend that we meet nutrient needs through healthful eating patterns with nutrient-dense foods. In some cases, fortified foods and dietary supplements may be useful in providing

one or more nutrients that otherwise may be consumed in less than the recommended amounts. Eating whole, plant-based foods is best!

February Fact or Fiction

Gut Reaction: Probiotics

FAQ: Are Probiotics Good for You?

Probiotics can make vague claims like “supports digestive health” but what does that mean? Probiotics are live microorganisms that may provide benefits according to the World Health Organization.

Some of the bacteria are added to foods to ferment them like sauerkraut, pickles, komcucha and kimchi but have no proven benefits. The strains they can contain may vary considerably. Other foods that have bacteria may or may not be beneficial and it’s difficult to tell since the Food and Drug Administration doesn’t require companies to say which strain is added.

Every strain of bacteria has different properties with specific functions. Some may help with digestive issues such as IBS, constipation or diarrhea. Strains such as Lactobacilli and Bifidobacteria may help with GI infections. L rhamnosus has been shown to help some people with “traveler’s diarrhea”. Research is underway to see if probiotics can help protect against Diabetes and Obesity.

Finding the one that is beneficial for certain conditions takes some label reading.

- Look for products that have been tested or patented on humans successfully and have live, active cultures.
- Try for at least 1 billion CFU (colony forming units).
- Check for expiration dates.
- Time released capsules may survive better, thus offering more benefits.
- Look for storage instructions. Some need to be refrigerated.
- Combine foods and supplements. Supplements usually have higher concentrations of probiotics and are more stable

The probiotics in foods produce helpful by-products like lactic acid and butyrate so by consuming the probiotic in the food, you will benefit from the bacteria and the by-products. If you can’t consume enough probiotics in food, supplementing may be appropriate.

Foods such as chips, chocolate and trail mixes that advertise that they contain probiotics are probably not the best choice to obtain what you really need each day. Probiotics need a controlled environment to survive which may be

compromised in snack food, weakening the probiotics potential. These foods aren't regulated for the amount of probiotics they actually consume.

Bottom Line:

- Try to eat cultured products such as yogurt, Kefir, Kimchi, or sauerkraut.
- Supplement with live, active cultures- read the label to make sure you know what you are getting
- Probiotics might theoretically cause infections that need to be treated with antibiotics, especially in people with underlying health conditions.

January Fact or Fiction

New Year, New Options

There are always new products available on the market. These are some of the unique products out there if you are looking for something different!

Mediterranean Nutrition Bars

Mediterra who makes nutrition bars released some new options of their Savory and Yogurt & Oats lines. Flavors include: Kale, Apple, Quinoa & Almonds and Kale, Pomegranate, Quinoa & Almonds. They have 5 grams of fiber and 6 grams of protein. The yogurt and oats flavors are Lemon & Walnuts and Fig. All varieties are non-GMO, gluten-free and kosher. Savory bars are also vegan. www.mediterranutrition.com

Frozen Meals Available

Lean Cuisine has 4 new meals that are Asian and Italian cuisines including Garlic Sesame Noodles with Beef, Mango Chicken with Coconut Rice, Roasted Garlic White Bean Alfredo and Spicy Penne Arrabbiata. Each dish has at least 15 grams of protein, except the penne arrabbiata which contains 8 grams. www.leancuisine.com

Goat Milk Products for Toddlers

Kabrita products- Intended for babies and toddlers age 12-24 months. They are shelf-stable in spouted pouches and include goat milk-based formula and baby foods. Flavors include Berry, Mango Peach, and Banana Vanilla. They are produced without antibiotics, growth hormones, or preservatives and are non-GMO and free from artificial colors or flavors. www.kabritausa.com

Spice Blends

Just Spice has 12 new spice blends to add to their 20 unique seasonings. The new varieties include Berry Yogurt, Blossom Mix, Chicken, Clean Eating Allrounder,

Flavors of India, Hash Brown, Herbs de Provence, Pasta Alfredo, Ranch Dressing, Sweet Love, Tofu and Vegetable. http://justspices.com

Heat-and-Eat Quinoa

Ancient Harvest introduced a new line of Heat & Eat Organic Quinoa. It comes in a microwavable pouch and is ready in 90 seconds. Varieties include Quinoa with Sea Salt, Quinoa with Chickpeas and Garlic, and Quinoa with Lentils and Garlic. Each dish has 8-11 grams of protein per serving with 2 servings per pouch. They are gluten-free, vegan and non-GMO. www.ancientharvest.com

Higher-Protein Plant-Based Milks

Dream is a maker of plant-based milks, yogurts and frozen treats. They have a new higher protein almond and coconut milk. Their Ultimate Almond is made with 20 g almonds which is 4 times more than their regular almond milk. It has 5 grams of protein per 8 oz and is available in Original, Vanilla and Unsweetened. Dream Boosted Almond and Coconut based beverages have 10 grams of pea protein, 1,300 mg omega-3's, calcium and vitamins A, B12, C, D and E added. www.dreamplantbased.com

Plant-Based Protein Bites

Enjoy Life Foods has a new product called ProBurst Bites. Each truffle-like bite has 6-7 g plant-based protein. They're available in Cinnamon Spice, Mango Habanero, Cranberry Orange, and SunSeed Butter. They are allergy- friendly, gluten-free, non-GMO. https://enjoylifefoods.com

New Fruit Bites

KIND has new Fruit Bites made from only fruit with no added sugars. Each 0.6-oz pouch contains one full serving of fruit. Flavors include Strawberry Cherry Apple, Mango Pineapple Apple and Cherry Apple. www.kindsnacks.com

Quinoa Pasta

Pereg is a maker of gluten-free grains, flours, spices and other grain products. They have a new Quinoa pasta made with quinoa flour, potato starch and egg whites. It is available in a variety of shapes and is a good source of fiber and protein. www.pereg-gourmet.com

Cauliflower-Based Pizza Crusts

Cauliflour Foods has a cauliflower pizza crust for their Original Italian and Sweet Red Pepper pizzas. The crust is made with cauliflower, mozzarella cheese, eggs, herbs and seasonings. There is a plant-based crust too made from cauliflower, almond flour, flax meal, olive oil, tapioca starch, herbs and seasonings. All are gluten-free, corn-free and the plant-based is vegan. www.cauliflourfoods.com

High-Protein Skyr

Skyr is a yogurt-like product from *Icelandic Provisions*. It is made from Heirloom Skyr Cultures and is available in plain, vanilla, blueberry with bilberry, strawberry with lingonberry, peach with cloudberry, raspberry and coconut. All varieties

contain 15-17 g protein, 6-12 g sugar and 110-144 kcal per 5.3 oz serving. www.icelandicprovisions.com

Portion Control Clip

PortionPros introduced the Portion Clip and Portion Paw which are clips for bags and containers with a measuring cup attached. It can be used for items such as nuts, cereals grains, pastas and snacks and measures out ¼ cup, ½ cup and 1 cup portions. The Portion Paw is designed for pet food and measures 1/3 cup, 1/2 cup and 1 cup. www.portionclip.com

Waffles Made with Veggies

Garden Lites, maker of frozen vegetable bites, vegetable entrees, Superfood Veggie Cakes and muffins blended with vegetables has new waffles, Homestyle and Blueberry that are blended with butternut squash and carrots. They are gluten-free, dairy-free, peanut-free and tree nut-free. www.gardenlites.ocm

Beet Products

Beetology has beet beverages including Beet + Berry, Beet + Cherry, Beet + Lemon + Ginger, Beet + Tropical Juice and Beet + Veggie Juices. They also carry packaged whole red beets, red baby beets, red julienned beets and whole red beets. All are gluten-free. http://kayco.com/brands/beetology210

December Fact or Fiction

Spice of Life

Spices have been used for a long time to add flavor to foods. Some studies suggest they may be beneficial in protecting us from some diseases. Ginger, Cinnamon and Curcumin will be discussed here.

Ginger

Ginger has been studied for its help with nausea and vomiting from motion sickness and cancer chemotherapy. One study had 13 volunteers with a history of motion sickness spin in a large drum for 15 minutes! The volunteers who took 1000 mg of ginger an hour beforehand, had less nausea and recovered more quickly than those taking a placebo. (Am. J. Physiol. Gastrointest. Liver Physiol. 284:G481, 2003)

Another study found that among 99% of pregnant women who were experiencing morning sickness, those who took 125 mg of ginger 4 times/day for 4 days, reported less nausea than those taking a placebo. They did note that the effect seemed to decrease after the second day. (Aust. N. Z. J. Obstet. Gynaecol. 43: 139, 2003)

In a study of 576 cancer patients, mostly breast cancer patients, those who took 500 mg of ginger every day for 6 days starting 3 days before chemo, had less severe nausea during the first 24 hours of treatment than those who took the placebo. (Support Care Cancer 20: 1479, 2012)

Finding a good quality ginger supplement is sometimes difficult. Consumer Labs testing showed that one in three products tested contained lower levels of the active ingredients than listed on the label. Ginger ale doesn't really contain enough ginger to make a big difference. Ginger tea may be a good alternative. To

make your own tea, grate a thin slice of ginger the size of your thumb from knuckle to tip and steep in boiling water for 10-15 minutes.

Cinnamon

Cinnamon has been studied as a potential help for managing blood sugar. A Cochrane Collaboration (Cochrane Database Syst.Rev. 12: CD 007170, 2012) reviewed 6 studies looking at whether cinnamon supplements could lower fasting blood glucose levels in people with type 2 diabetes. The pills were no more effective than a placebo.

Some other studies looked at if cinnamon could lower A1c. The Office of Dietary Supplements of the National Institute of Health reviewed nine cinnamon trials. Cinnamon lowered A1c more than a placebo, but the studies that were mostly done in Pakistan, Iran and India, were small and of poor quality. The A1c drop was also very small. (J. Acad. Nutr. Diet. 116:1794, 2016)

High quality cinnamon supplements are also difficult to find. Consumer Lab found the active ingredients varied by more than 100 fold among the products reviewed.

Curcumin

Curcumin is the compound in turmeric that makes the yellow color in curry powder. There are claims that it can boost your brain and memory, relieve aches and pains, and protect your cells from oxidation, but is this true?

Curcumin doesn't really get into the cells since it is rapidly cleared in digestion so the blood levels are relatively low. High doses of curcumin given to mice did help to clear the plaque in Alzheimer's disease, but the evidence wasn't there in human studies. (Alzheimers Res. Ther. 4: 43. 2012)

There is work being done to develop a formula of curcumin that is better absorbed. Adding black pepper to it keeps the body from clearing curcumin as quickly. Note: high doses of curcumin can interfere with the metabolism of some drugs.

Other studies showed slightly better cognitive skills in patients who received 400 mg/day for 1 month of curcumin supplements (J. Psychopharmacol. 29: 642, 2015) and another study taking 2,000 mg/day showed improved blood flow through the arteries which may lower the risk of stroke and heart failure. (Aging. 9: 187, 2017)

Curcumin supplements tested also showed discrepancies in what was on the label versus what the bottle contained so it is difficult right now to promote supplements.

Bottom Line

Using ginger, cinnamon and curcumin in cooking is recommended if you like the flavors. There may be some benefits to taking larger amounts, but studies aren't

consistent and some large amounts can interfere with medications and possibly cause other side effects.

November Fact or Fiction

FAQ: Fruits and Vegetables: Which are best- Frozen, Fresh, Canned, Raw, or Cooked?

Adapted from Nutrition 411

People often ask if cooking or canning compromises the nutrition of vegetables and fruit. Usually "fresh is best", but when fresh isn't available, frozen and canned fruits and vegetables are the next best choice.

Many other considerations should be given to storage time of fresh produce, cooking method, and even how fruits and vegetable are eaten and paired with other herbs, spices and foods. All of these play a role in the bioavailability nutrients are and how nutritious that produce really is.

How Fresh is Fresh Produce?

The word "fresh" may mean produce delivered by a local farmer the same day as purchased, but not always. Frequently, the produce in the grocery store was picked from the tree or pulled from the ground weeks, if not months ago. As soon as produce is separated from its source of nutrition (e.g. branch, vine, ground), its own nutrient composition begins to degrade, so even "fresh" produce has lost nutrients by the time it finds its way into a consumer's refrigerator.

Tender produce with a high-water content degrades quickly, while sturdier, lower-water produce maintains nutrients for a much longer time. In addition, produce that is hand-picked will degrade more slowly than produce which is mechanically harvested. There is rarely any type of produce that provides its maximum nutrient content from farm to plate unless you have your own garden and consume the produce right after picking.

Nutrient Loss

Foods containing Vitamin C and the B-vitamins are at the greatest risk for losing nutrients. Vitamin C is water soluble which is more sensitive to light, heat and oxygen, so limiting these will help to retain nutrients.

In a review of several studies that examined vitamin C levels after cooking fresh, frozen, and canned carrots, peas, corn, beets, green beans, spinach, and broccoli, researchers found the greatest losses when the vegetables are canned. According to their research, vitamin C can decrease by 10% to nearly 90% (depending on the vegetable) during the canning process, *but* there is no further loss after canned vegetables are reheated or cooked. The greatest loss appears to be in canned carrots (88%) and peas (73%). Canned beets lose only 10% of their vitamin C content. Freezing produce has much less of an effect on vitamin C loss, as long as temperatures are maintained consistently well below freezing.

In the same study, researchers found that vitamin C content is also affected after storing fresh produce for a few weeks in the refrigerator, with spinach having the greatest loss, and broccoli the least (Rickman et al, 2007).

When it comes to maintaining water-soluble vitamins, the cooking method and the amount of surface area exposed to heat and moisture is also important. Quick cooking times, lower heat, and less water all result in less loss of vitamin C and the B vitamins. In addition, the less surface area exposed to heat, light, and water, the lower the losses.

Protecting Phytochemicals

In addition to vitamins, produce has a range of phytochemicals that are affected by various cooking methods. Polyphenolic compounds in produce are found largely in the skins, so fruits such as peaches, pears, apricots and apples provide less of these compounds after they are peeled for cooking or processing. Produce that is frozen with the skin on, does not suffer any significant loss of phenolic compounds.

Cruciferous vegetables (broccoli, cauliflower, Brussels sprouts, cabbage family) contain glucosinolate compounds such as sulforaphane, which have anticancer effects. These compounds become bioavailable when plant tissues in vegetables such as broccoli or cauliflower broken down as with chewing or chopping, but because they are water soluble, and sensitive to high heat, quick cooking methods such as steaming or microwaving (or eating them raw) will preserve more of these compounds.

Some Nutrients Benefit from Cooking!

Produce such as carrots, peaches, apricots, tomatoes and leafy greens also provide fat soluble vitamins, and when considering changes in nutrient content that result from cooking and canning, those fat-soluble vitamins are a different story. Many studies show that these vitamins and compounds, especially the carotenes, are much more stable, with only approximately a 10% loss even when stored in the refrigerator for more than 2 weeks. In some produce, nutritional value is even enhanced with heat, and some of these vitamins may become more bioavailable.

Studies on fruits and vegetables what are high in beta-carotene, lycopene, and lutein, such as carrots, squash, tomatoes, peaches, and apricots, indicate that cooking and canning increases the amounts of these nutrients that are absorbed by the body.

Tomatoes are an excellent example of a plant whose antioxidant profile is enhanced after cooking. Studies indicate that heat processing, including canning, increases antioxidant activity, and bioavailable lycopene. In a study that compared lycopene and total antioxidant levels in canned, processed tomatoes, researchers found that levels were significantly higher in processed tomatoes, even after 30 minutes of processing time. In fact, total antioxidant activity increased as the processing time increased (Dewanto et al., 2002). Cooked tomatoes, as well as sweet potatoes and spinach also contain higher levels of vitamin E than their fresh or raw counterparts (Rickman et al., 2007).

In an Oregon State University study on canned versus fresh peaches, researchers determined that overall, levels of vitamin A, total carotenoids, vitamin E, and antioxidants, as well as vitamin C, total phenolics, and folate were comparable to fresh peaches. In fact, although the nutrients levels diminished at first with processing, they later stabilized, and the canned peaches had statistically significantly higher levels of vitamin C, antioxidants and folate, and very similar levels of all other nutrients measured (Durst and Weaver, 2013).

Maximizing Benefits

In addition to altering the cooking method to maximize nutrients in fruits and vegetables, serving them with certain seasonings will enhance the absorption of certain vitamins, minerals, and beneficial compounds in plant foods, and provide synergistic benefits. Some examples include:

- Adding a source of fat, such as olive oil, avocado, shredded coconut, nuts or seeds when serving foods rich in fat-soluble vitamins such as tomatoes, carrots, kale or other leafy green vegetables, peaches, apricots or mangos to enhance the absorption of vitamins
- Serving folate-rich foods such as spinach, asparagus, and broccoli along with lean meats, poultry, fish or eggs (sources of vitamins B6 and B12) to enhance the synergistic effects of these vitamins on reducing homocysteine levels
- Squeezing fresh lemon or other vitamin C-rich citrus juice over spinach or other leafy greens, or serving them with strawberries or sweet peppers to enhance the bioavailability of non-heme iron
- Combining turmeric root with ground black pepper to improve the bioavailability of the compound curcumin
- Using the cooking liquid from vegetables to make a broth for soups or stews to maintain any leached nutrients

The Bottom Line

Consume as much variety as possible, not only in produce choices, but also in cooking methods, and recipes that incorporate different produce combinations as well as spices and seasonings. Try both raw and cooked vegetables in recipes and meals and throughout the day. Cook vegetables in their whole form whenever possible. Canned and frozen produce are excellent sources of nutrition that can be incorporated into meal planning.

October Fact or Fiction

Acrylamide- What is it and what are the risks?

Acrylamides are chemicals that can be found in food that have been shown to cause cancer in animals and to be possibly carcinogenic to humans. It typically

forms in food when asparagine, a naturally occurring amino acid, combines with natural or added sugars when the food is cooked at high temperatures.

When starchy foods are baked, fried or roasted at high temperatures, a chemical reaction takes place called the Maillard Reaction. This helps to provide flavors and aromas and contributes to the browning of food.

According to "Cancer.gov": studies in rodent models have found that acrylamide exposure poses a risk for several types of cancer. However, the evidence from human studies is still incomplete. The National Toxicology Program and the International Agency for Research on Cancer consider acrylamide to be a "probable human carcinogen," based on studies in laboratory animals given acrylamide in drinking water. However, toxicology studies have shown differences in acrylamide absorption rates between humans and rodents.

While the studies don't prove acrylamides are carcinogenic, it might make sense to try to cut down. The amount of acrylamide can be lowered by adding asparaginase, an enzyme that breaks down the asparagine or add calcium. Processing at lower temperatures also reduces the amount of acrylamide.

How can you cut down on the acrylamide?

- Fried potatoes have the most acrylamide. Roasted have less and baked are even lower. Microwaved and boiled potatoes have none.
- Roasted nuts have more acrylamide, especially if they are roasted at higher temperatures. Raw nuts do not contain acrylamide.
- Golden yellow toast and potatoes have less acrylamide than brown.
- Sweet potato chips are higher in acrylamide than regular potato chips. Baked sweet potatoes are fairly low.
- Store potatoes in a cool dark place but not the refrigerator. The cool temperatures turn some of the potato's starch into sugars which cause more acrylamide to form

Bottom Line: don't be overly concerned with acrylamides at this point, but be mindful of your food choices and focus on an overall healthy diet.

September Fact or Fiction

Juicing & Cancer

Is Juicing good for a cancer-fighting diet?

Juicing is the process of separating the juice from the pulp of fruits, vegetables and plant foods. It is a great way to *add* more servings of vegetables and fruits to an already-healthy diet. However, it might not be the best way for meet basic needs because juicing reduces the amount of fiber you get from the vegetables and fruit and concentrates the sugars. It also doesn't provide a balance of nutrients as juice by itself is low in protein.

For patients in active treatment who are having chewing, swallowing, or digestive problems, or are struggling with excess weight loss due to cancer and it's treatment, juicing may be a good option for getting valuable nutrients into your body. Another possibly better option would be to blenderize vegetables and fruits to make healthy "smoothies." Adding a protein source such as a protein powder or nut butter will help to balance it out.

If you already eat five or more servings of colorful, whole vegetables and fruits per day, then juicing to boost intake of these foods further can be a healthy option. A serving ranges from one-half to one cup of chopped vegetables or fruit.

You can make the best by choices by doing the following:

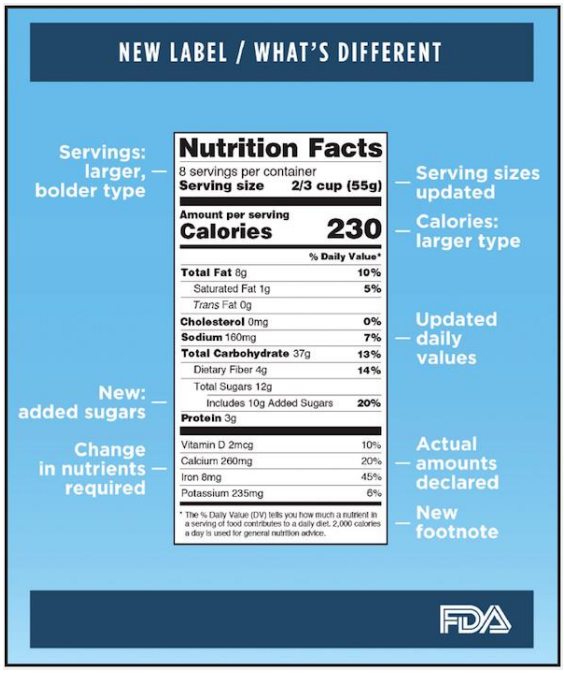
- *Focus on vegetables.* Include more vegetables than fruits. Fruit sweetens it up but adding more vegetables will balance out calories to make a healthier drink. Try juicing one carrot, a chunk of cucumber, a small beet, a piece of ginger, and a small apple.
- *Drink what you'd eat.* Juice concentrates nutrients and calories. It takes four to six large carrots to yield eight ounces of carrot juice. Most people wouldn't eat this many carrots in a sitting. Juice similar quantities to what is eaten
- *Add protein.* Balance the juice with protein and fat. Protein balances out the carbohydrates in the juice, and fat helps your body absorb fat-soluble nutrients from the juice. Either eat something with protein like yogurt with your drink or add protein to the drink.
- *Try a variety.* Get creative with your juicing to avoid concentrating a few specific nutrients. Choosing a variety will give the greatest variety of nutrients possible. You can even juice items you might throw away, such as broccoli stems.
- *Add crucifers.* Cruciferous vegetables include broccoli, kale, chard, bok choy, kohlrabi, Brussels sprouts, cauliflower, watercress, collard and mustard greens, turnips, radish, daikon root, and arugula. These foods are beneficial but even healthful foods can be bad for health if eaten in excess. Having one to two serving of cruciferous vegetables per day is associated with decreased risk of several types of cancer and no adverse effects.
- *Use raw and cooked in your daily meal plan.* Both have benefits and vary in nutrients that are absorbed. Cooking can enhance the absorption of some nutrients and eating them raw will provide other nutrients so choosing a both cooked and raw will help to provide a variety of nutrients. Don't rely on juicing for all of your servings of any one particular food, or you miss out on vital nutrition.

FAQ August 2017: Interpreting Food Labels

The Nutrition Facts Label got a Makeover!

There is a new focus on added sugars and nutrients that can affect your health – for better or for worse. There is growing evidence on how diet affects the risk of chronic health conditions, so eating as healthy as you can is important. One of the first steps is to know what you are eating!

The Nutrition Facts Label:



Getting to Know the Label:

- Number of calories per serving and calories are big and bold to make sure consumers see the information.
- "Serving Size" in line with reality: a pint of ice cream is labeled as having 3 rather than 4 servings. Caution: this reflects the amount that people typically eat, not necessarily what they should eat!
- Added sugars are on the label, and refer to table sugar, honey, syrups and sugars from concentrated fruit or vegetable juices. The FDA advises to get < 10% of the daily calories from sugar.
- Why worry about added sugars? The foods high in sugar can contribute to weight gain and obesity and is linked to heart disease risk along with other chronic diseases.

Tricky Labels:

Consider peanut or other nut butters. Plain peanut butter or almond butter from brands like Jif, Skippy and Peter Pan are fairly healthy providing protein, healthy fats and usually only 1-2 grams of sugar.

Specialty butters like Nutella or MaraNatha Caramel Almond Spread can contain 10-11 grams of added sugar. That's about 2 ½ teaspoons out of the six-teaspoon daily added sugar limit for women or the nine-teaspoon max for men. Justin's almond butter is a healthier choice having only 1 gram of sugar per serving.

Chocolate and hazelnut spreads like Nutella sound healthy, but they're not
Nutella has more added sugar (five teaspoons) and palm oil than nuts! Peanut butter's saturated fat (2 to 3 grams in two tablespoons) is balanced by its cholesterol-lowering unsaturated fat (12 to 14 grams). Nutella's sat fat (4 grams) isn't balanced because of the high amount of palm oil it contains and low actual Hazelnut content.

Other Label Claims

Sodium intake is a concern for some people. The American Heart Association says most healthy people can have 2,300 mg daily. There are some sneaky sources of sodium. About 75% of the sodium most people get comes from restaurant meals and packaged foods such as soup, frozen meals, salad dressing, cold cuts, bread, cereal and cottage cheese. Check labels to see what you're actually getting. What does the low-salt claim mean? The definitions according to the Food and Drug Administration mean:

Very Low Sodium: 35 mg of sodium or less per serving
Low Sodium: 140 mg of sodium or less per serving
Reduced Sodium: at least 25% less sodium than the regular product
Light in Sodium or Lightly Salted: at least 50% less than the regular product
How to specialty salts fit in? All salt has the same amount of sodium but because the granules are bigger in some salts like sea salt and kosher, you get more flavor and can use less. Specialty salts like Himalayan pink salts have minerals, but it is such a tiny amount, it doesn't really provide any health benefits.

"Natural" might make you think that the product is a better choice and more wholesome, but the term has no set definition on labels. It may mean "non-GMO" or "unprocessed" but it might not! Ignore the term and choose products with whole foods as their first ingredient. The less processed, the better.

"No Added Sugar" items can still mean there are simple sugars in a concentrated form from fruit juice or fruit purees. Your body absorbs these quickly. A better choice in a beverage would be water, seltzer, or unsweetened coffee or tea. It's better to eat whole fruits instead of juices when possible.

"Healthy" means the product is lower in fat, cholesterol and sodium but could still have a lot of sugar! Read the ingredients list on the package to make sure you know what you are getting.

"Whole Grains" doesn't necessarily mean the product is made of all whole grains. It can still have refined grains with less fiber and minerals. Look for "100% whole grain" on the packaging and make sure "whole grain" is the first ingredient listed.

"Pesticide Free" means that the product is free of synthetic herbicides, insecticides and fungicides, however this term is not regulated by the USDA, so items may still contain small amounts. *Certified Organic, USDA Organic* and *100% Organic* labels do indicate the food was grown without synthetic pesticides but can have naturally grown substances for pest control. There are no guarantees the product is free of pesticide residue though, so always be sure to wash produce under running water.

"GMO Free" means the food does not use any genetically modified ingredients. Labels are required to list this information. Choosing GMO-free foods is a personal choice. The FDA has concluded that GMO foods are as safe as ones without. Foods that typically contain GMO's are: corn, soy, yellow summer squash, zucchini, papaya, alfalfa, and sugar beet.

The Bottom Line

So keep reading those nutrition labels, but remember that limiting processed foods is the higher and more important goal. Strive for whole, fresh foods whenever possible!

FAQ July

Specialty vinegars has become a new trend that often replaces salt and pepper as a seasoning. Vinegar is a byproduct of the fermentation of any liquid containing starch or sugar such as fruits, berries, honey, syrups, grains and coconut. The word vinegar comes from the French word "vin aigre" which translates to "sour wine".

Vinegar takes on the flavor of the food it comes from. Newer versions and infusions made with herbs and spices are becoming very popular and add a nice flavor to a variety of foods. Favorite flavors include apple cider, garlic, herb-infused, raspberry, cranberry, lemon and fig.

Vinegar is low in calories. Its consistency can range from thin and sharp to sweet and syrupy. It doesn't need to be refrigerated due to its high acidity. For best quality, it should be consumed within 2 years. Some common uses for vinegar include:

- Soak fish in water and vinegar before cooking to enhance the sweetness of the fish and help the fish to retain its shape
- Place peeled potatoes in a bowl with vinegar and water to keep the potatoes from discoloration
- Create vinaigrettes or marinades by mixing with oil

Vinegar Varieties and Descriptions

Vinegar	Description
Balsamic	Made from whole grapes + stems; dark, intense flavor to complement fruit and meat; authentic balsamic has an authenticity stamp
Champagne	Created from the yeast sediment + Champagne remaining in the neck of the bottle during sparkling wine production; light + sweet complements berry salads and French white sauces
Chinese Black	Known as *Zenjiang*; rice-based tastes similar to soy sauce mixed with balsamic vinegar; dark vinegar going through an extensive production of aging for a rich, smoky and sweet flavor which is great for stir-frying vegetables
Chinese Red Rice	Slightly salty in flavor with a distinct tang and tartness due to the mold from the red rice yeast; works well with Chinese fish and noodle dishes or sweet and sour
Cider	The most versatile vinegar made from fermented apple juice or cider; sold filtered and unfiltered; ideal for salad dressings and marinades; preserves foods well
Japanese	Known as *Komezu;* Light color, made from rice or sake deposits; mellow and mild flavor; used for pickling ginger and vegetables such as cucumber, cabbage, daikon
Red Wine	Full-bodied; great with red meats, red vegetables, dark sauces and gravies; better vinegars are aged for at least 6 months in oak casks
Rice	From the fermentation of sugars in rice; very light in color with a clean and delicate flavor similar to cider vinegar; doesn't alter the appearance of food
Sherry	Fermented in oak casks until it becomes a full-bodied, brownish-colored vinegar with a hint of raisin flavor; tastes like a cross between red wine and balsamic vinegars; ideal with red meats, soups, stew and casseroles
Vietnamese Rice	Known as *Giam Bong;* Spicy and sour, used in Vietnamese dipping sauces and Hoisin sauce; used as a finisher or topping in Pho and in pickling
White Distilled	Fermented from grains; tangy, tart taste; strong flavor; used in pickling, tenderizing meats, poaching eggs, making buttermilk and as a household cleaner

June FAQ

Fish is a popular cuisine for many people. Omega-3 fatty acids found in fish, docosabexaenoic acid, or DHA and eicosapentaenoic acid, or EPA, help to maintain the flexibility of artery walls and control inflammation. The American Heart Association recommends having at least two 3.5 ounce servings of cooked fish each week to get the health benefits. Fish is a good source of lean protein. Fatty fish also contains vitamin D which is sometimes a difficult nutrient for some people to consume.

Some people are concerned about the safety of eating fish. Methylmercury is the most common organic form of mercury, a naturally occurring metal. Methylmercury is produced by microscopic organisms in the soil and water. Traces of this can be found in most fish, but levels are typically higher in older, larger, predatory fish. High exposure to

methylmercury, a neurotoxin, is tied to brain and nervous system problem, especially in fetuses, infants and young children.

The EPA and FDA issued advice on fish safety on January 18, 2017: The updated advice cautions against seven types of fish that typically have higher mercury levels: tilefish from the Gulf or Mexico, shark, swordfish, orange roughy, bigeye tuna, marlin and king mackerel. General recommendations are to eat a variety of fish.

Some common questions about fish, especially tuna, are found below:

1. What is the difference between albacore (white) tuna and canned light tuna?

Albacore, or white tuna, is larger and lives longer than fish usually used for canned light tuna. Canned light tuna can be a mix of a variety of smaller tuna species such as skipjack.

2. Is canned light tuna okay?

Yes, it is considered one of the "best choices" list established by the EPA and FDA and is fine to eat 2-3 servings per week.

3. What about albacore tuna?

Albacore tuna or "white tuna" usually contains 3 times more mercury than canned light tuna. It is considered to be on the "good choices" and can be eaten once a week.

Try a new variety of fish!

Alaskan Wild Salmon	Arctic Char
Atlantic Mackerel	Sardines
Anchovies	Oysters
Rainbow Trout	Canned Light Tuna
Mussels	Rockfish
US Catfish	

Check the Monterey Bay Aquarium Seafood Watch website for best choices: seafoodwatch.org. Regional advisories can be found at http://fishadvisoryonline.epa.gov/General.aspx.

May FAQ: "Beanefits"- The Benefits of Beans

"Beans" often refer to dried beans, peas, lentils and other legumes (or pulses) are a "trending". Why? There are many nutritional benefits to consuming these foods. They contain fiber, protein, potassium magnesium, folate and iron and are low in saturated and trans fat.

Bean Benefits:

High in plant-based protein

- ✓ Eating beans instead of red meat (beef or pork) can help to lower your risk of colorectal cancer, heart disease and type 2 diabetes
- ✓ Replacing animal protein with plant-based protein can also help to fight climate changes

High in fiber

- ✓ Promotes regularity
- ✓ Beans are a more concentrated source of fiber since they have less water than fruits and vegetables
- ✓ Most beans have about 6-7 grams of fiber per half cup; most fruits and vegetables contain 1-3 grams per half cup; recommended intakes are for 25-30 grams of fiber per day
- ✓ Contains soluble fiber which can help lower cholesterol and blood glucose

Helps to lower Cholesterol and Blood Sugar

- ✓ Beans lower LDL ("bad") cholesterol and blood sugar
- ✓ The gummy, soluble type of fiber binds to cholesterol and blood sugar to lower these in the blood

Helps to lower blood pressure and may help to prevent Type 2 Diabetes

- ✓ Beans are a good source of potassium which can help regulate blood pressure
- ✓ Beans are a good source of magnesium which is needed to help prevent diabetes

The Downside of Beans

- ➢ Beans contain a carbohydrate called oligosaccharides that our digestive enzymes can't break down
- ➢ This causes fermentation in the gut which causes gas

Preventing Bean "Side Effects"

- ➢ Cook beans thoroughly or use low sodium canned beans that are well rinsed.
- ➢ Draining the thick liquid from cooked or canned beans and rinsing well removes much of the oligosaccharides contained in the liquid.
- ➢ Try Beano which is an enzyme that breaks down oligosaccharides.
- ➢ Introduce beans slowly.
- ➢ Black beans are often less gassy for people. Try adding 1-2 tablespoons/day to a salad until your body gets more use to the beans.

Ways to incorporate more beans into your diet:

- ❖ Use canned beans! Go for lower sodium varieties and rinse well
- ❖ Add to salads, soups, stews and pastas
- ❖ Try out some of the new convenience bean products:

Unseasoned Beans- ½ cup	Calories	Sodium (mg)	Protein (g)	Fiber (g)

Simply Balanced Black Beluga Lentils (Target)	120	0	9	4
365 or Stahlbush Island Farms Organic (Whole Foods)	100	0	7	6
Red Lentils	170	5	11	5
13 Foods	120	10	7	9
Eden Organics	110	25	7	6
Seasoned Beans				
Better Bean	160	260	8	6
365 Organic Spicy Black	110	280	7	6
Cuban Style Black (Trader Joe's)	100	370	6	6
Refried Beans				
Eden Organic	100	180	7	7
Amy's Organic light in Sodium	420	210	8	6
Pacific Organic Black	130	300	7	8
Indian Bean Entrees				
Jyoti Dal Makhani	90	300	5	2
Jyoti Masala Chhole	200	310	6	5
Bean Pasta (2 oz dry)				
Trader Joe's Organic Black Bean Rotini	200	0	14	15
Ancient Harvest POW! Lentil	200	0	14	7
Explore Cuisine Organic Lentil	190	0	12	3
Modern Table	190	20	14	4

April FAQ- Go Green!

The month of April celebrates Earth Day on April 22 with a focus on caring for the planet. There are several ways you can help to improve the planet's health by making changes in your diet. Choosing more whole, minimally processed plant foods can help to lower your eco-impact. (Adapted from Environmental Nutrition April 2017).

1. Start Meatless Monday. Raising livestock and bringing meat to market creates significant amounts of greenhouse gases. Try healthy meatless options such as lentils, beans of tofu as your source of protein.

2. Choose Sustainable Fish and Seafood. There are plenty of "greener" choices when it comes to fish and seafood. Fish and seafood are great protein choices, are low in saturated and trans fats and provide healthy omega-3 fatty acids. Try salmon, rainbow trout and other fish and seafood. To check out what the best sustainable sources are, go to seafoodwatch.org.

3. Make your Kitchen Efficient! Did you know a plug-in electric kettle is about twice as efficient as boiling water in a kettle or on the stove top? With a plug-in kettle, the heat

is in direct contact with the water for fast boiling. Pressure cookers are also another good way to decrease energy usage. Try cooking rice, dried beans and whole grains in a pressure cooker to decrease your energy usage.

4. Stay Hydrated with Tap Water and BYOC. Americans consume a lot of water in plastic bottles each day. These bottles require large amounts of oil and water to manufacture and require transportation and disposal waste. Use tap water in a reusable bottle to reduce waste. Try installing a water filter such as Zerowater if you are concerned about water quality. BYOC (Bring Your Own Container) includes bringing your own tote to the grocery store, but consider bringing your own container when purchasing from bulk bins to help decrease plastic waste.

5. Use Fewer "Single Serving" Packaged Foods. The packaging for single serving snacks and foods can contribute to landfill waste as many of these packages are not recyclable. Try package-free foods or use larger packages and divide up into smaller reusable containers. Be sure to recycle anything that is recyclable.

6. Buy Locally-Grown. Buying foods that are grown locally often enhances the nutrient content, taste and is more economical. Freezing fresh produce that is in season for later use can cut down on food waste caused by transporting out-of-season foods over long distances from farm to table.

7. Choose Fair Trade. Certified Fair Trade indicates that farmers practiced more sustainable agricultural methods including pesticide use and burn land clearing techniques.

8. Simplify your Diet. Try eating one-ingredient foods and those with less processing more often. These tend to use less energy to produce. Think potatoes instead of potato chips, brown rice instead of rice cakes, whole oranges instead of orange juice.

9. Compost! Composting scraps like egg shells and bananas diverts food waste from landfills which generates methane gas. Municipal and individual programs are available, including composting inside as well as outside. Plus- free fertilizer for your garden!

10. Plan Ahead. Plan your meals for the week! Look at what you have in the refrigerator and pantry that should be used sooner than later. This can help reduce what you need to buy and cut down on waste.

March FAQ- Anthocyanins

Anthocyanins- What are they and are they good for you?

Anthocyanins

- Compounds contained in plants
- Phytochemical that are part of the flavonoid family
- Naturally occurring chemical compounds in plants that help to fight off invaders and disease
- More than 1600 identified
- Known for their colorful pigments- orange, red, purple, blue
- Protect cells from free radical damage

Where do anthocyanins fit

in the flavonoid family?

There are 5 “subclasses” of flavonoids, each with unique plant compounds and beneficial effects. These are some commonly consumed food sources of each type:

Flavonols: Black tea, onions, apples

Flavan-3-Ols: Bananas, blueberries, peaches

Flavones: Parsley, peppers, celery

Flavanones: Oranges, lemons, tomatoes

Anthocyanins: Blueberries, strawberries, cherries

Consuming a variety of colorful fruits and vegetables is best as each color provides specific phytochemicals. NHANES 2007-2010 (National Health and Nutrition Examination) showed Americans in every age group are not eating enough colorful fruits and vegetables to meet the recommendations of the 2015-2020 Dietary Guidelines for Americans.

What about frozen fruits and vegetables?

- Freezing fruits and vegetables can maximize their nutrient retention
- Research has shown that vitamins, minerals, dietary fiber, and phenolic compounds such as anthocyanins are well- conserved in frozen fruits and vegetables compared to fresh

How much is recommended?

For adults following a 2,000 calorie healthy eating pattern:

1-1/2 cups of vegetables

and

2 cups of fruit per day

It is better to eat the food itself to get your anthocyanins because food contains a mixture of phytochemicals and some nutrients we might not even know about that may contribute to health. Consuming the mixture provides more benefits than isolating one nutrient or ingredient. Whole foods are preferred over dietary supplements with isolated anthocyanin compounds as they are linked to reduced risk of chronic diseases. Nutrient-dense foods that are balanced with natural plant compounds including vitamins, minerals and dietary fiber offer an optimal health advantage.

February FAQ- Is Chocolate Good for You?

February is a big month for chocolate! It is projected that 60 million pounds will be purchased this year for Valentine's Day, but Halloween and Easter both have even more sales!

Many people ask if there are any health benefits of chocolate as well as what are some of the differences among milk, dark and white chocolate.

Chocolate is derived from the fruit pods of the cacao tree. The beans are fermented, dried, roasted and cracked after they are removed from the pods. The nib is what is left and is ground to extract some of the cocoa butter. This is the fat that makes the chocolate creamy. Chocolate liquor is what is left- a combination of cocoa solids and cocoa butter.

Differences in chocolate varieties:

Milk Chocolate:

- Contains at least 10% chocolate liquor and 12% whole milk

Dark Chocolate:

- Contains at least 35% chocolate liquor
- Cocoa butter and sugar varies by manufacturer

White Chocolate:

- Has no cocoa solids or cocoa powder, so technically isn't chocolate!
- Contains sugar, cocoa butter, milk and soy lecithin

One ounce of dark chocolate that contains 60%-69% of pure cocoa provides 162 kcal, 11 g total fat, 6 g saturated fat, 15 g carbohydrates, and 2 g protein. It also provides 19% DV of manganese, 17% DV copper, 12% DV of magnesium, 10% DV of iron and small amounts of phosphorous, potassium, zinc, selenium and calcium. Chocolate, especially dark chocolate, contain flavanols. Flavonoids are a group of plant metabolites thought to provide health benefits through cell signaling pathways and antioxidant effects. The cocoa bean is rich in the antioxidant theobromine which helps reduce inflammation and may help lower blood pressure.

But is chocolate healthy?

Some studies have found health benefits in chocolate.

- A 2015 study published in the journal ***Heart,*** researchers found that habitual chocolate consumers had a lower risk of coronary heart disease and stroke compared to subjects who didn't eat chocolate.
- Another study published in 2015 ***The American Journal of Clinical Nutrition*** suggested that drinks containing cocoa flavanols may reduce age-related cognitive dysfunction.
- A 2005 study published in the journal ***Hypertension*** found that the flavonols in dark chocolate increased nitric oxide, which improved insulin sensitivity and blood flow and lowered blood pressure.

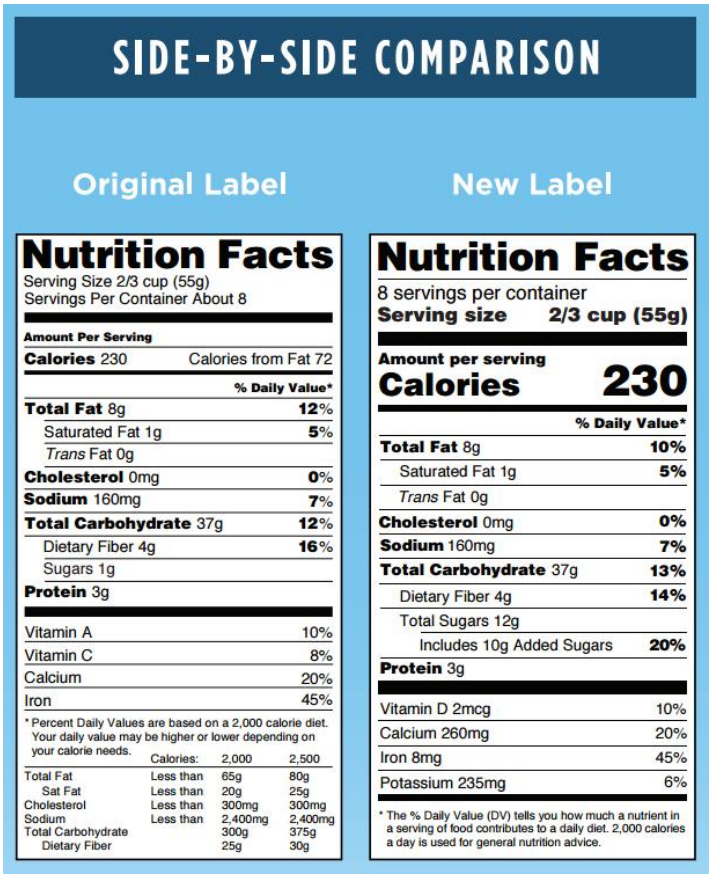
Although chocolate, especially dark chocolate, contains some nutrients, it is high in calories. If someone wants to include chocolate in their diet, they should choose at least 60%-70% dark chocolate and limit it to 1 oz maximum per day.

January FAQ

New Nutrition Facts Labels Coming!

So what's in a label? It is reported that only 35% of shoppers read nutrition facts labels. Making the labels easier to read with updated information may help to increase that number so people can make more informed decisions.

In May of 2016, the FDA announced the new Nutrition Fact Label for packaged food. This label reflects new scientific information including the link between diet and chronic diseases such as obesity and heart disease. This is a side-by-side comparison of what the label looks like now and the new label.



Some of the highlights of the new label include:

- Increased type size for calories, servings per container and serving size.
- The actual amount and percentage daily value (DV) of vitamin D, calcium, iron and potassium.
- Footnote change to better explain percentage daily value: "The % Daily Value tells how much a nutrient in a serving of food contributes to a daily diet. 2000 calories a day is used for general nutrition advice."

- Updated information about nutrition science as reflected in the 2015-2020 Dietary Guidelines for Americans (DGA). This includes added sugars in grams and % DV to be included on the label.
  (It is difficult to meet nutrient needs while staying within calorie limits if you consume more than 10% of your total daily calories from added sugar.)
- Total fat, saturated fat and trans fat is still required. Calories from fat is removed because research shows the type of fat is more important than the amount.
- DV for nutrients like sodium, dietary fiber and vitamin D are updated per the Institute of Medicine and 2015 DGA.
- Serving sizes are adjusted to what people are actually eating instead of what they should be eating.
- Package size affects what people eat, so for packages where there is 1-2 servings such as a 15-ounce can of soup, the calories and other nutrients will be required to reflect what is actually normally eaten- the whole can of soup.

The new guidelines are required to be in place by July 26, 2018, but many companies have implemented the changes already.

December 2016

December FAQ

Essential Oils- a promising complementary therapy

Essential oils have been used for centuries to treat a variety of conditions- from lack of mental clarity to depression and indigestion. Some practitioners today use combinations of traditional medicine and current scientific evidence to offer patients an alternative.

Essential oils are extracted from the seed, peel, bark, flower or stem of aromatic plants. The oils are usually inhaled or applied topically. A few are ingested as enteric-coated capsules. One theory of how they work is that the molecules from vaporized essential oils bind with olfactory receptors in the nose, sending signals to the brain that change the way the body perceives pain and stress.

Many essential oils are on the GRAS (Generally Recognized as Safe) list by the Food and Drug Administration. However, there are no standard protocols for using them or for dosing. Purity can be of concern so finding a good source that isn't contaminated with heavy metals or other impurities.

Essential oils can cause skin irritation so it is recommended to apply them to the heel of the foot where skin is less likely to be irritated. Oils that taken orally are coated to prevent gastrointestinal upset.

Essential oils show promise in food science and technology.

- Oregano and mint: may inhibit the growth of fungi in corn.
- Oregano: has antimicrobial properties and can act as an anti-parasitic to inhibit the growth of intestinal parasites when taken orally.
- Bitter Orange and Tea Tree Oil are antifungals shown to treat athlete's foot

- Lavender has been shown to be effective as a soothing scent but also when blended with rosemary, thyme and cedarwood oils, improved hair growth in patients with alopecia. Lavender may also improve canker sore healing time and when taken by mouth, improved anxiety and sleep in patients with mild to severe anxiety.
- Peppermint oil when taken by mouth, was effective at reducing abdominal pain, distension and flatulence associated with Irritable Bowel Syndrome. Applying it topically may relieve tension headaches.
- Ginger Oil when applied to wrists prior to anesthesia, reduced postoperative nausea and vomiting in about 80 percent of patients.

There is more research underway! Thieves oil, a blend of cinnamon, clove, lemon and eucalyptus is purported to cleanse the air, boost the immune system and keep off germs during cold season. This needs more research!

Essential oil therapy offers an alternative to some conditions, but before incorporating it into practice, make sure it is safe for you. When used appropriately, essential oils may have a positive effect on people's well-being

November 2016

Popular Milk Comparisons

Is drinking milk bad for you?

See attached handout

October 2016

Time for Tea!

About Tea:

- **Comes from the Camellia Sinensis plant**
- **Has antioxidants that may help to prevent cell damage and disease**
- **<u>Concentrated sources in powders and extracts may have too many antioxidants so are not recommended during treatment but drinking 2-3 cups of green tea/day is considered safe. Matcha Powder is not recommended during treatment due to its higher antioxidant levels.</u>**

<u>Tea is classified in Three Varieties</u>:

- Green: steamed, baked or pan heated to prevent oxidation, thus remaining green. Contains polyphenols and theanine
- Oolong: partially fermented
- Black: fully fermented

Green has the highest antioxidants- epigallocatechin-3 gallate (EGCG) to prevent free radical formation. This is lost in black and oolong teas.

<u>What are Free Radicals</u>?

- Produced by oxidation/reduction reactions
- Has unpaired electron making it highly reactive
- Searches for the "missing" electron taking it away or oxidizing it from somewhere else
- Oxidized free radicals may cause tissue damage at the cellular level contributing to aging, cancer, cardio-vascular, and other diseases

Why do we want Antioxidants?

- Molecules that can safely interact with free radicals or seek out and neutralize free radicals
- EGCG is a strong antioxidant and thought to be more powerful than both vitamin C
  (100 x), vitamin E (25 x) and Resveratrol (2 x)

Active Ingredients in Tea:

- Polyphenols: phytochemical that gives the astringent taste to green tea
- Tannins, phenol, polyphenol and flavonoids
- Catechins- a polyphenol that is high in green tea; EGCG- a powerful antioxidant (1 cup of green tea provides more antioxidant activity than broccoli, spinach, carrots or strawberries)
- Flavonoids- plant pigments that may protect against infection
- Theanine- Amino acid in Sencha tea that has a tranquilizing effect

Japanese versus Chinese Teas

- Japanese is steamed, not pan fired which may preserve more antioxidants
- Can re-brew to decrease caffeine content
- Gyokuro is considered to be the finest green tea

Type of Tea	Grade	Polyphenol %	Caffeine %	Theanine %	Free AA Mg/100 g	Total N %
Gyokuro	Medium	13.4	3.1	1,480	2,730	5.48
Matcha	High	6.5	3.85	2,260	5,800	6.36
	Medium	6.2	3.51	1,790	4,610	5.85
	Low	6.5	3.23	1,170	3,400	5.38
Sencha	High	14.7	2.87	1,280	2,700	5.48

	Medium	13.3	2.8	1,210	2,180	5.35
	Low	14.5	2.77	612	1,460	4.45

Teas to Try

Tea Variety	Characteristics	Temp of water	Time to brew
Sencha	Green tea- classic from Shizuoka, Japan. Milder flavor, less caffeine Fresh tea leaves that are dried prior to being oxidized Rich, broth texture, refreshing aroma. Rounded finish that coats the palate, sweet flavor reminiscent of tender steamed vegetables and fresh seaweed High in antioxidants,	170	2 min
Matcha	Young, shade-grown gyokuro tea leaves create matcha. Leaves are plucked before they can oxidize, then laid flat to dry. Veins are removed and the leaves are ground in granite mills until they become powder. Concentrated powder offers more health benefits with higher amounts of antioxidants.	170	2 min
White	Picked and dried with no oxidation. They are the least processed of all varieties.	180	3-5 min

	Have a delicate, light-bodied character and low caffeine content.		
Lemon Grass	Not a Tea! Herbs with a delicate lemon flavor and hint of sweet ginger	212	5-10 min

September 2016

<u>Juicing- Good or Bad?</u>

Juicing is often recommended as the best way to get all the nutrients you need, boost your immune system and or as a detox or cleanse. But is it really?

Juicing extracts water and nutrients from the pulp (fiber) of fruits and vegetables creating a nutrient dense beverage with vitamins, minerals and phytonutrients. The fiber is extracted so nutrients including fructose (sugar) are absorbed more quickly.

It doesn't cause or cure cancer! We encourage people to get their nutrition from more whole foods when possible. Recommendations are to eat 5-9 servings of vegetables and fruits focusing more on the vegetables than fruits (80% vegetables and 20% fruits). When someone is unable to eat this much, supplementing with a juice may be beneficial. Start with the whole vegetables or fruit aiming for 5 servings, then supplement with small amounts of juice.

Pros:

- Juicing does provide a beverage high in vitamins, minerals and phytonutrients which may be helpful to patients who are unable to consume the fully .recommendation of fruits and vegetables or have to limit their fiber intake.
- May be helpful in patients who need to gain weight.

Cons:

- Juicing does provide a beverage that is usually high in carbohydrate and sugar depending on what is used. You may be surprised at how many extra calories you consume in juice.
- It doesn't contain fiber and most people need fiber! Recommendations are to get 25-35 grams of fiber/day. Fiber can help you feel full.
- Claims that juicing will detox or cleanse your system are not supported by research. The liver and kidneys take care of that naturally!

It doesn't cause or cure cancer. Juicing isn't any healthier than eating whole fruits and vegetables. It may be a way to add fruits and vegetables if you don't eat the recommended amount or a way to try a new vegetable you wouldn't normally eat. Overall though, we encourage people to get their nutrition from more whole foods when possible.

Tips:

- Limit the amount you juice to what you would normally eat. 4-6 ounces is considered a serving
- Focus on vegetables more
- Use a variety
- Don't overdo cruciferous vegetables (broccoli, cauliflower, cabbage, Brussels sprouts, etc) as too much may block absorption of minerals and create nutritional imbalances
- Balance out the juice with added protein. Try adding yogurt or peanut butter (remember nut milks like almond or cashew milk are LOW in protein)
- Make sure to wash fruits and vegetables well, especially if you are immune-compromised. Commercial juices should be pasteurized
- Try adding the pulp extracted from juicing to other foods such as soups or breads
- Try doing a blenderized drink (smoothie) instead to get the benefits of the fiber and add a source of protein to balance it out. Blenderize the entire vegetable or fruit for a larger volume with fiber in it so nutrients are absorbed more slowly and makes you feel full longer if weight gain is not desired.
- What about products like Juice Plus? This product doesn't really have the same benefits of eating the whole vegetables and fruits which is what is recommended.

August 2016- There's an APP for That! Nutrition and Exercise APPS were sent in a separate attachment

July 2016

Protein Sources for Vegans

Adequacy of Protein and other Nutrients for Vegan Diets

It can be very easy for a vegan diet to meet the recommendations for protein with careful choices. The RDA recommends that we take in 0.8 grams of protein for every kilogram of weight. This equates to about 0.36 grams of protein per pound. People with cancer may need additional protein- 1-1.2 g/kg. If we use an average of 1 g protein/kg, a person weighing 160 pounds (72.7 kg), this person would need about 73 g protein each day.

Nearly all vegetables, beans, grains, nuts and seeds contain some protein. Fruits, sugars, fats, and alcohol do not provide much protein. The ideas of having to combine certain proteins to get a “complete protein” is obsolete.

Vitamin B12 is from animal sources, so supplementation may be needed. There are no reliable food sources of Vitamin B12 except for enriched foods such as non-dairy milks, nutritional yeast and other prepared foods may be an option. Otherwise, a B12 supplement is recommended.

Omega 3 fatty acids are mostly in fish but many foods have trace amounts or omega 3’s that can add up. Recommendations for omega 3’s range 2- 4 grams (200-400 mg) per day. Food sources include:

Food	Portion	Mg of Omega 3’s
Flaxseed	1.5 Tbsp	4500
Walnuts	1.5 Tbsp	1800
Tofu	1/3 cup	181
Raw Spinach	1.75 ounces	70
Hazelnuts	0.6 cups	87

Food Sources and Supplemental Protein for Vegan Proteins

Food	Amount	Grams of Protein
Tempeh	1 cup	41
Seitan	3 ounces	31
Soybeans, cooked	1 cup	29
Wheat Germ	1 cup	26
Lentils, cooked	1 cup	18
Tricale Flour	1 cup	17
Whole Wheat Flour	1 cup	16
Black Beans, cooked	1 cup	15
Mung Beans	1 cup	13.6
Veggie Burger	1 cup	13
Fava Beans	1 cup	12.6
Chickpeas, cooked	1 cup	12
Veggie Baked Beans	1 cup	12
Pinto Beans, cooked	1 cup	12
Kamut	1 cup	11
Black-eyed Peas, cooked	1 cup	11
Potato Flour	1 cup	11
Tofu, firm	4 ounces	11
Teft	1 cup	10

Lima Beans, cooked	1 cup	10
Wheat Bran	1 cup	9
Pigeon Peas	1 cup	9
Quinoa	1 cup	9
Tofu, regular	4 ounces	9
Bagel	3 oz (medium)	9
Peas, cooked	1 cup	9
Textured Vegetable Protein (TVP), cooked	½ cup	8
Sprouted Wheat	1 cup	8
Peanut Butter	2 Tbsp	8
Veggie Dog	1 link	8
Whole Wheat Pasta, cooked	1 cup	8
Almonds	¼ cup	8
Soy Milk, plain	1 cup	7
Peanuts	1 oz	7
Soy Yogurt, plain	6 oz	6
Millet	1 cup	6
Japanese Sobo Noodles	1 cup	6
Bulgar, cooked	1 cup	6
Couscous, cooked	1 cup	6
Sunflower Seeds	¼ cup	6
Buckwheat Groats	1 cup	6
Whole Wheat Bread	2 slices	5
Oats	1 cup	5
Cashews	¼ cup	5
Almond Butter	2 Tbsp	5
Brown Rice, cooked	1 cup	5
Spinach, cooked	1 cup	5
Cornmeal	1 cup	4.4
Spirulina	1 Tbsp	4
Broccoli, cooked	1 cup	4
Beet Greens	½ cup	4
Potato	1 ned 6 oz	4
Barley	1 cup	3.6
Farina	1 cup	3
Sugar Snap Peas	½ cup	2.6
Mung Beans, sprouted	½ cup	2.6
Hubbard Squash	½ cup	2.5
Asparagus	½ cup	2
Mushrooms	½ cup	1-2.5
Pumpkin Seeds	1 Tbsp	2
Corn	½ cup	2
Miso	1 Tbsp	2
Mustard Greens	½ cup	1.6
Sesame Seeds	1 Tbsp	1.6

Flax Seeds	1 Tbsp	1.5
Kale	½ cup	1.25

Vegan Protein Powders

Protein powders may be used to increase the protein in your diet. These would replace animal-based protein powders like whey, casein, and egg. These animal proteins give you about 95-100% of their calories from protein. The following is a list of vegan protein powders and the amount of calories from protein:

- Soy Protein: 95%
- Pea Protein: 93%
- Bio Fermented Brown Rice Protein: 92%
- Brown Rice Protein: 80%
- Chlorella: 80%
- Buckwheat Protein: 80%
- Spirulina: 54%
- Hemp Protein: 45%

Meal Plans

The following are sample meal plans including the amount of protein provided:

Breakfast	Food	Protein (grams)
	6 ounces Soy Yogurt with Berries	6
	Bagel	9
	2 Tbsp Peanut Butter	8
Lunch		
	Quinoa Salad with 1 cup quinoa, ½ c black beans, ½ cup broccoli, ½ cup sugar snap peas + ½ cup mushrooms	24.8
	1 cup Soy Milk	7
Snack	¼ cup Almonds	8
	1 piece fruit	
Dinner	Veggie Burger on Whole Grain Bun	18
	Salad	4

Provides 85 g protein and you could add more veggies for even more protein!

June 2016

Increasing protein in the diet

Protein is an important nutrient, especially during cancer treatment. Protein is an essential nutrient in our bodies. It is made up "building blocks" called amino acids. These "building blocks" make up most of plant and animal tissue. Foods that contain protein help our body to build new cells and muscles. Inadequate protein can lead to skin breakdown, muscle breakdown, swelling of ankles, weakness, and decreased resistance to infection.

It is also important to eat enough calories. Eating too few calories may cause your body to use protein for energy instead of building and repairing tissue.

High biological value proteins are provided by **eggs, meat, fish, poultry, nuts, milk, yogurt and cheese.** There are many vegetarian/vegan alternatives too which we will look at next month. The following foods in portions shown provide about 6-8 g protein:

Meat (1oz)

Fish (1 oz)

Cheese (1 oz)

Milk (8 fluid oz)

Cottage Cheese (1/4 cup)

Tuna Fish (1/4 cup)

Egg (1)

Peanut Butter (2 Tbsp)

Nuts (1 oz or 1/3 cup)

SUGGESTIONS FOR INCREASING PROTEIN INTAKE

FOOD	SUGGESTIONS
Powdered Milk	Add 2-4 tbsp. to 1 cup whole milk to make it higher in protein. Use this in place of regular milk as a beverage or in milkshakes, puddings, custards, or other recipes that call for milk or water; stir powdered milk into cereals, potatoes, cream soups, gravies, sauces, pudding, scrambled eggs, casseroles, or even meatloaf.
Cheese	Melt on hamburgers, hot dogs, meat loaf, other meats, vegetables, tortillas, or scrambled eggs; add it to sandwiches; melt it into soups, sauces, casseroles, or mashed potatoes; use for snacks with fruit or on crackers; try cottage cheese in casseroles, egg dishes, or gelatin desserts; use it to stuff pasta shells or crepes; add to salads
Peanut butter	Spread on toast, sandwiches, or crackers; blend into milkshakes; swirl into ice cream, yogurt, or hot cereal; use as a dip for vegetables or fruit.
Eggs	Use to make French toast; add extra to pancake or cookie batter; hard-boiled eggs may be chopped and added to salads, vegetables, or casseroles; mix eggs with mayonnaise for a sandwich spread.
Instant Breakfast	Add to whole milk or shakes; stir into yogurt; mix into puddings. Carnation Instant Breakfast adds 130 calories per packet.
Nuts	Add to ice cream, pudding, muffins, or cookies, salads, and pasta sauces
Meats	Add meats to soups, omelets, casseroles, soufflés, sandwich fillings, cracker toppings, dips or stuffing; use chopped or ground meats or fish for individuals who do not eat or chew meats well.
Yogurt	Look for yogurt made from whole milk, which is higher in calories than low-fat yogurt; fruit-flavored, custard-style, or cream-style may also be higher in calories; use as a snack or dessert; may be added to fresh fruits; may be mixed with fruit gelatin and frozen to make Popsicles.
Beans, peas, and lentils	Add to soups and casseroles; use in dips and sauces
Tofu (all kinds)	Add to soup, salads, and sauces; can be used as a substitute for meat.

Next month we will provide information specific to vegan protein sources!

May 2016

Supplement Savvy Part II- Herbal Supplements

Herbal supplements are another popular Complementary and Alternative Medicine practice used by cancer patients. They have been used for over 3,000 years!

What are some of the potential benefits?

- Some herbal supplements can help to relieve side effects from treatment
- Some patients feel the herbals improve their quality of life

What are some of the concerns?

- The concentration of the active ingredients can vary depending on the plan, species, conditions in which the plant is grown and stored, what part of the plant is used and the preparation method used. All of these can affect potency and benefits
- Herbals are not regulated so there is no way of knowing exactly what is in the preparation
- Many herbals have not been studied to know if there are interactions with certain medications and chemotherapies which could lead to decreasing the effectiveness of these treatments
- Safety is a big concern which is why we generally tell patients to not take herbals without talking with the dietitian first

Herbal Supplements you may have been asked about or should know about. We don't recommend any herbal supplements without talking with the patient first and some that say "NOT RECOMMENDED" are considered dangerous.

Black Cohosh:

- alleviates menopausal symptoms
- no evidence that it is better than standard treatments
- does not appear to bind to estrogen receptors

Chaparral:

- NOT RECOMMENDED
- An antioxidant that alleviates pain and reduces inflammation
- Hepatotoxic

Echinacea:

- Stimulates the immune system
- Use with caution during treatment- counteracts with immunosuppressant agents
- Not recommended for use for > 8 consecutive weeks

Essential Oils:

- Reduce inflammation and pain
- Side effects of nausea, bloating and soft stool

- Primrose oil seems safe in doses pf 2.8 g/day or less
- Safe for aromatherapy or topical use per MD

Garlic:

- Reduces infection
- May affect platelet aggregation so not usually recommended to supplement during treatment
- Dietary sources/amounts are generally safe

Ginger:

- Reduces nausea and aids in digestion
- Interferes with warfarin and large doses may contribute to thrombocytopenia
- Small amounts may be used for temporary relief of nausea
- Dietary sources are generally safe

Ginseng:

- Immunomodulatory and helps fight fatigue
- High doses are associated with estrogenic effects
- Not recommended for use > 6 weeks

Green Tea Extract:

- Serves as an antioxidant
- 6-10 cups/day of tea appear to be safe; patients receiving Velcade should not drink green tea or take extracts
- Extracts should be avoided during treatment but drinking tea is safe

Hoxey Herbs:

- NOT RECOMMENDED
- Claims to help the body fight cancer
- No documented benefits

Kombucha Tea:

- NOT RECOMMENDED
- Stimulates the immune system
- Kombucha is susceptible to microbial contamination, acidosis, aspergillosis

Milk Thistle

- Protects the liver
- Considered to be safe for most patients

Pau d'arco:

- NOT RECOMMENDED
- Claims to fight cancer

- Toxic: induces nausea, vomiting, anemia and bleeding

Peppermint:

- Aids in digestion
- Safe for adults

Pokeroot:

- NOT RECOMMENDED
- Claims to help fight cancer
- Extremely toxic causing GI distress, decreased respiration and hypotension

Saw Palmetto:

- Manages BPH
- Increases estrogenic activity
- Safe for most adults

St John's Wort

- Treats depression
- Serves as an MAOI and may increase the metabolism of some drugs decreasing their effectiveness
- Not recommended for anyone taking antidepressants

Please feel free to refer patient questions about use of herbs during treatment to the dietitian.

Nutrition Fact or Fiction?

April 2016

Answers to FAQ

Nutrition is an important part of patient outcomes during cancer treatment. There is a lot of information available as well as misinformation for patients and staff in the news, from well-meaning friends and online. "Nutrition Fact or Fiction" will help to provide evidence-based information to clarify some of this misinformation. We will add to the list monthly, but please feel free to contact me to ask additional questions you have.

Supplement Savvy Part I- Vitamin, Mineral and other Non-herbal Nutritional Supplements

Vitamin and mineral supplementation is probably the most popular Complementary and Alternative Medicine practice. The big questions are is it effective and it is safe for patients undergoing active cancer treatment?

Are supplements needed?

- Eating a well-balanced diet is the best way to get all the vitamins and minerals you need.
- Studies have shown that getting nutrients from food is more beneficial from getting them from supplements.
- Supplements may be beneficial when a deficiency is identified and a person is unable to consume adequate amounts of the nutrient in food.

What are some of the concerns with supplement use?

- Supplements are not regulated so they may not contain what they say they do. This may cause problems with people undergoing some cancer treatments.
- High doses of antioxidants such as Vitamin A, C, E, selenium, beta carotene, zinc and coenzyme Q10 work to keep cells from oxidizing, neutralizing free radicals or breaking down which is the purpose of anti-cancer treatments. They may also have immune enhancing functions. Eating these antioxidants in food supplies more modest amounts and doesn't appear to interfere with treatment like the high dose supplements. Some studies have shown a decrease in effectiveness of chemotherapy and radiation therapy when antioxidant supplements are taken. The American Cancer Society recommends that people get antioxidants through food rather than supplements.

Which Supplements may be Safe?

The supplements that are generally safe to take during treatment include: (See attached handout)

Supplements that are safe during treatment	**Supplements to avoid while on treatment**
Calcium	Vitamins A, Beta Carotene, C, and E

Vitamin D	Selenium, Zinc
Magnesium	Omega 3's- Fish Oil
Probiotics	Coenzyme Q10
Iron (if prescribed by MD)	Multivitamin unless prescribed
	Curcumin

There are numerous supplements! The following is some of the supplements we recommend/don't recommend and why. Please talk to a dietitian about specific questions.

Coenzyme Q10- NOT RECOMMENDED

- An antioxidant the may interfere with certain chemo drugs and radiation treatment
- May cause nausea, diarrhea and decreased appetite
- Not recommended if on warfarin, theophylline, chemotherapy

Curcumin/Curcuminoids/Turmeric: NOT RECOMMENDED

- Polyphenol compounds in turmeric, the bright yellow spice used in Indian cuisine claim to decrease inflammation and promote anti-cancer activities in lab studies
- Lab studies showed dietary turmeric may inhibit anti-tumor effects of chemos such as cyclophosphamide, doxorubicin, and mechlorethamine
- Not recommended with GI disorders, warfarin, reserpine, indomethacin, norfloxacin, tacrolimus, drugs metabolized by CYP3A4 enzyme, CYP1A2 enzyme, CYP2A6 enzyme or transported by P-glycoprotein

Omega-3's (Fish Oil): NOT RECOMMENDED

- Have anti-inflammatory properties but have not been shown to prevent cancer
- May decrease risk of breast cancer but increase risk of prostate cancer
- Not recommended with NSAIDS, platinum-based chemos
- Fish oil may alter chemo activities and cause nausea, and loose stool

Multivitamin: NOT RECOMMENDED UNLESS PRESCRIBED BY PHYSICIAN OR DIETITIAN

- Nutrients should be obtained from food
- If a patient is unable to eat adequately, a multivitamin supplement may be appropriate

Selenium and Zinc: NOT RECOMMENDED

- Mineral antioxidants that may protect cells from breaking down which is the purpose of cancer treatments

Vitamin A, C and E: NOT RECOMMENDED

- Antioxidants that may protect cells from breaking down which is the purpose of cancer treatments

Calcium: APPROVED TO TAKE DURING TREATMENT

- Helps with bone strength when dietary sources are not adequate

Iron: APPROVED TO TAKE DURING TREATMENT IF PRESCRIBED BY PHYSICIAN

- To treat certain anemias when dietary sources are not adequate.

Magnesium: APPROVED TO TAKE DURING TREATMENT

- Safe to take and is important for muscle, nerve and enzyme function
- Some chemos can be magnesium-depleting

Probiotics: APPROVED TO TAKE DURING TREATMENT

- Helps to establish a healthy flora of bacteria in the gut to keep function more balanced

Vitamin D: APPROVED TO TAKE DURING TREATMENT

- Helps to promote bone strength
- Sometimes difficult to meet needs with dietary choices and sunlight

Choosing supplements can be a challenge!

General tips for choosing the right supplement include:

- Check with a dietitian, physician or pharmacist before using a supplement
- "Natural" ingredients do not mean that the product is safe. Some products may interact with medication and other supplements causing adverse side effects
- Read the label. The manufacturer should be able to show that the product passes tests for content potency, purity and uniformity.
- The label should have appropriate information. If the label is unclear or makes preposterous claims, it is unlikely the company follows good quality control procedures.

Bottom Line:

Vitamin and Mineral supplements are generally not recommended during treatment. Research examining the role of vitamin and mineral supplementation in cancer prevention has failed to consistently demonstrate a benefit. For patients having difficulty eating and are at risk for malnutrition, multivitamin/mineral supplementation may be appropriate under supervision.

Resources on Dietary Supplements

- http://www.mskcc.org/mskcc/html//11570.cfm – Herbs, Botanicals, Other
- http://ods.od.nih.gov/health_information/information_about_individual_dietary_supplements.aspx - Dietary Supplements Fact Sheets
- http://www.caring4cancer.com/go/cancer/nutrition/dietary-supplements - Dietary Supplements during Cancer Care
- http://naturaldatabase.com – Natural Medicine interactions that could be problematic for individuals receiving cancer treatment

Next Month: Supplements Part 2- Herbals and other Supplements

Nutrition Fact or Fiction?

March 2016

Answers to FAQ

Nutrition is an important part of patient outcomes during cancer treatment. There is a lot of information available as well as misinformation for patients and staff in the news, from well-meaning friends and online. "Nutrition Fact or Fiction" will help to provide evidence-based information to clarify some of this misinformation. We will add to the list monthly, but please feel free to contact me to ask additional questions you have.

1. Is Green Tea safe to consume during treatment? *There has been a recent change in the evidence for consuming green tea during treatment. Green tea is considered safe to consume unless you are on the chemotherapy treatment called "Velcade". Drinking tea is recommended rather than taking concentrated extracts or supplements.*

2. What are some healthy ways to increase calories and protein during treatment to prevent weight loss? *The dietitians recommend trying to eat as healthy as possible during treatment to provide the body with the nutrition needed to give the nutrients and energy to help get through treatment. We refer to the recommended choices as nutrient dense foods. When you are unable to eat all of the "healthy" foods recommended, you may need to modify what you are eating. We suggest small frequent meals with high protein content for most patients. This may include foods such as peanut butter, cheese, yogurt, milk, smoothies, eggs, nuts and adding extra protein such as whey protein powder and increasing healthy fats from foods such as olive oil or avocado to foods you consume. Taking nutrition supplements such as Boost, Ensure, or Carnation Instant Breakfast along with your own recipes for smoothies or shakes can help to make up for calories and protein missed when unable to consume adequate amounts of regular foods. We don't have to exclude other foods such as cookies and other snacks- It's about balancing out your diet the best you can with healthier choices making up most of your diet. Taking in enough calories and protein is a priority!*

3. What fluids count towards hydration? *Anything that is liquid at room temperature may count as a fluid including coffee, tea, the liquid in soup, juice, fluid in juicier fruits, ice cream milk and nutrition supplements like Boost or Ensure. It is an old myth that caffeine is dehydrating. Newer evidence-based studies show that pharmaceutical doses of caffeine given to people who don't usually consume caffeine may be initially*

dehydrating, but the body compensates for this within a few days. However, caffeine may not be recommended in large amounts as it may contribute to poor sleep and increased anxiety.