

CORE FOOD PLAN

Comprehensive Guide





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Why the Core Food Plan?

The Core Food Plan (CFP) is designed for those who are interested in:

- Core principles of healthy eating
- Health maintenance
- Disease prevention
- Awareness of one's relationship with food

The CFP is a first step on your journey towards healthier eating and is designed to encourage eating in a way that will nourish and energize you. It is based on current research on what and how people should eat to be healthy and live long. It takes elements from the Mediterranean diet and the hunter-gatherer approach (sometimes referred to as "Paleo" diet), focusing on low- glycemic carbohydrates. The food plan can be easily changed to suit personal preferences and health needs. It is available in vegetarian and vegan versions and can accommodate foods from virtually any culture.

In this Comprehensive Guide, you will learn about how this food plan can work for you. You will be provided with answers to questions you may have as you start to follow this food plan.

We call this a "core" food plan because it gives you the foundations for eating that will carry you throughout your life. The CFP uses the basic principles of "food as medicine" to support your health goals and improve your relationship with food.



Features of the Core Food Plan

This food plan was created by a team of Functional Medicine physicians and nutrition professionals to help you eat a balance of healthy, whole foods that support optimum health.

■ Foundational eating plan: This plan starts you on your journey to better health. It will help you meet daily needs for the macronutrients: protein, fats, and carbohydrates. It supplies all the necessary minerals, vitamins, and phytonutrients, along with adequate fiber and fluids. It helps you choose a wide variety of quality foods over each day of meals. Healthy snacking is encouraged.

The CFP is appropriate for children, adults of all ages, and pregnant women. Foods are grouped into categories. You may be given recommended numbers of servings from each category each day. The number of meals and snacks may be changed each day to help you distribute the day's allotment of food in the way that best meets your needs.

- Focus on whole foods: Whole, plant-based foods help ensure that you get enough fiber and phytonutrients. This plan can be adapted for meat-eaters, vegetarians, and vegans. The CFP can also be modified to meet the needs of athletes, for weight loss or gain, for blood pressure control, and to exclude dairy, gluten, or any foods to which you are allergic, intolerant, or sensitive.
- Eat clean and organic: Eating "clean" food helps to reduce toxin exposure. Our food supply has become compromised by the addition of artificial colorings, flavorings, additives, and preservatives. Pesticides, insecticides, and herbicides are also found in conventionally-grown (nonorganic) produce, whole grains, nuts, seeds, and legumes. One of the biggest nutritional problems is the amount of synthetic sweeteners in highly processed foods. Eating a "clean" diet—avoiding nonorganic, processed foods—can increase your liver's ability to eliminate toxins. These are all reasons why the CFP promotes eating organic foods to lower toxic burden in the body.
- Adequate quality protein: Protein is necessary to repair cells and make new ones, support muscle growth, maintain lean muscle mass, and stabilize blood sugar and insulin levels (which also helps to control hunger). Every cell in the human body contains proteins: they are the building blocks of life. Choices for protein on the CFP are moderately lean and include both animal and plant foods. Choosing protein from grass-fed and free-range animals and poultry is encouraged for omnivores. Such "clean" protein is not just lower in toxins but also higher in omega-3 fatty acids than is protein from corn-fed and caged animals and poultry. Eat protein at every meal and snack.







Features of the Core Food Plan

■ Balanced quality fats: Balancing your dietary fat intake is a first-line approach to minimizing inflammation in the body. Anti-inflammatory strategies include the following: (1) eliminate trans fats (typically found in processed foods); (2) decrease intake of saturated fats and omega-6 fats from animal sources; and (3) increase intake of omega-3—rich fats from fish and plant sources. Dietary fats and oils play a significant role in the risk of many chronic diseases. The emphasis on fat-free foods in the latter part of the 20th century led only to weight gain, because the fat in processed products was replaced with refined sugar. Refined sugars convert to body fat too and can increase levels of blood fats called triglycerides.

Our general guideline is that it is better to replace saturated fat with unsaturated (liquid) fats rather than with refined carbohydrates. There are many types of saturated fats, and they have different effects on the body. In the CFP, healthy sources of saturated fat have been included, such as coconut oil and butter from grass-fed cows. Anti-inflammatory fats from foods like fish, leafy greens, nuts, certain oils, and seeds are also featured in the CFP.

■ **High in fiber:** The average individual living in a Western country who eats mostly processed food gets only about one-third of the fiber they need every day. Eating the whole, relatively unprocessed foods listed in the CFP will give you more dietary fiber. Fiber is found in plant-based foods like whole grains, nuts, legumes, vegetables, and fruits. It is a form of carbohydrate that the body doesn't digest, so it "fills you up" and helps you to feel less hungry without eating a lot of calories.

There are two types of dietary fiber, each with different benefits. *Insoluble fiber* can be found in the bran (outer coat) of vegetables and whole grains. This type of fiber acts like a bulky "inner broom," sweeping out debris from the intestine and helping the intestines move food along. The other type of fiber, called *soluble fiber*, attracts water and swells, creating a gel-like mass. The soluble fiber in foods like oat bran, barley, nuts, seeds, beans, lentils, peas, and some fruits and vegetables slows down digestion. Soluble fiber is also found in supplements that contain psyllium. The gel helps trap toxins and other undesirable substances (including cholesterol and other dietary fats) so that you can excrete them. It also provides "food" for healthy bacteria in the digestive tract. We suggest that you aim for at least 5 grams of fiber per serving or a total of 25 to 35 grams of dietary fiber per day.







Low in simple sugars: Sugars contribute a significant portion of calories to the American diet, particularly through sugar-sweetened beverages, refined grains, and desserts. Added sweeteners are also present in processed foods such as salad dressings, frozen meals, soups, and condiments. Sodas, fruit drinks, tea and coffee when sweeteners are added, energy/sports drinks, and flavored milks are sources of empty calories. The result of all these added sweeteners has been a substantial increase in the incidence of type 2 diabetes in younger people, laying the groundwork for obesity and the development of heart disease.

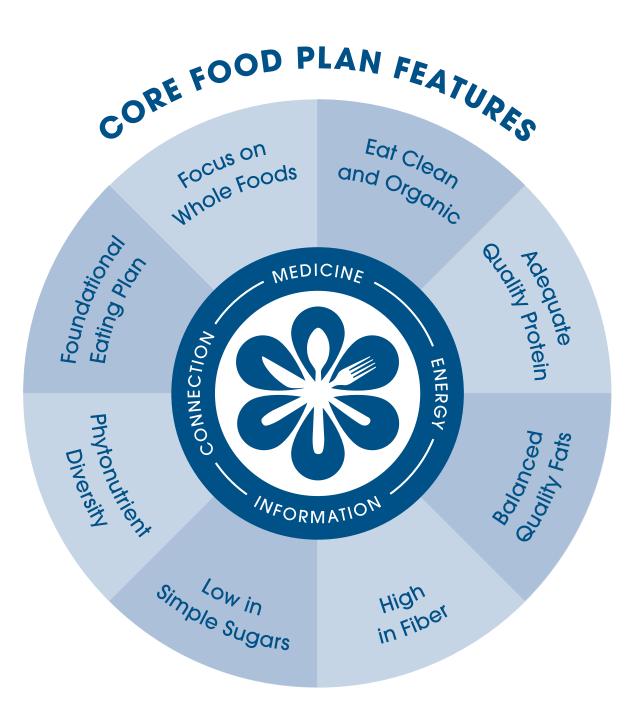
The CFP limits added sweeteners to help you reduce cravings for more sweets. Removing sweeteners also helps to minimize inflammation and prevent dramatic surges in blood sugar and insulin, helping to stabilize blood sugar levels. Sweeteners do not all have the same effect on your body. Some have a very gentle effect (low glycemic), while others lead to cravings (higher glycemic). With this in mind, on a daily basis use no more than 1-3 teaspoons of the following lower glycemic sweeteners: barley malt, brown rice syrup, blackstrap molasses, maple syrup, raw honey, coconut sugar, agave, lo han, fruit juice concentrate, and erythritol. Stevia is also well tolerated by most people, but is keep in mind that it is a high-intensity herbal sweetener that requires no more than a pinch for maximum sweetness. Overall, most sweeteners perpetuate a need for sweet-tasting food and make it difficult for you to enjoy the natural sweetness in all fruits and certain vegetables. Just because these sweeteners are okay to use does not mean you can go overboard!

Label reading is necessary to detect added sugars. Natural and artificial sweeteners listed on food labels that you want to be sure to avoid include the following: aspartame, brown sugar, cane sugar, caramel, confectioner's sugar, corn syrup, corn syrup solids, date sugar, Demerara sugar, dextrose, evaporated cane juice, fructose, fructose syrup, glucose, high fructose corn syrup, invert sugar, NutraSweet[™], maltitol, maltodextrin, maltose, mannitol, sorbitol, Splenda[™], sucrose, turbinado sugar. Remember that eating whole foods should be your focus when following the IFM Core Food Plan; if you are not eating processed foods then you won't have to worry about added sugars and will be able to enjoy the natural sweetness of a low-glycemic piece of fruit!

■ Phytonutrient diversity: Plant ("phyto") foods contain thousands of compounds that communicate with your cells and change how your body functions. Many of these compounds haven't yet been fully identified and classified. At this time, we know that there are about 10,000 of them. We may eat only a small amount of some every day, yet they can have dramatic effects in the body. Several of them, like the bitter compounds in arugula and other green leafy vegetables, the resveratrol in grapes and red wine, and the astringent compounds in green tea, appear to be beneficial for health. Some phytonutrients may help regulate blood sugar, lower LDL cholesterol, and get blood pressure back into a healthier range. Include colorful plant foods in each meal and snack to make eating more appealing while providing the body with an abundance of critical nutrients and phytonutrients. The CFP encourages eating a variety of phytonutrient-rich fruits and vegetables every day by challenging you to eat six different colors of plant foods daily



(red, orange, yellow, green, blue-purple, and tan/white)!



The CFP is a whole-foods way of eating that allows for balanced meals. The food list gives you a "snapshot" of healthy foods to choose every day. It suits all eating styles, with vegetarian or vegan options. Refer to the CFP given to you by your healthcare provider as you read along in this Comprehensive Guide.

This section of the Comprehensive Guide is organized by category of food. Your healthcare practitioner may provide you with a set amount of calories to eat each day. You can plan for this amount by selecting specific foods within each of the different categories each day. Calorie counting is usually only needed for a while to help you understand portion sizes and learn how to balance your choices of protein, fat, and carbohydrate-rich foods. The calorie level set by your healthcare practitioner is based on your age, gender, size, and activity level. As you become more practiced in following the CFP, you'll rely less on a calorie amount and more on the quality of foods. Once you know how to get the right balance of quality protein, fat, and carbohydrates in your meals, you won't need to do calorie counting anymore.





Proteins: Plant and Animal Sources

The two key words to remember when choosing plant and animal proteins are lean and clean. As Michael Pollan puts it in his book, *Food Rules*, **"Eat animals that have themselves been well fed."** Grass-fed beef, wild-caught fish, and meat and eggs from free-range poultry are all excellent sources of protein and healthy fats.

For plant proteins, the best choice is a complete protein from organic sources. A complete protein is one that has all of the amino acids that are essential to human health. Soy is a complete protein. However, much of the domestically grown soy today is a "genetically-modified organism" or GMO. Because the long-term effects of eating GMO foods are not known, the CFP recommends choosing soy that is 100% organic, which by definition means no GMO ingredients. Choose quality soy in stir-fry, spreads, and dips or eaten as edamame. Fermented soy provides protein as well as beneficial bacteria. Examples of fermented soy foods are miso soup, tempeh, and natto. If you choose to avoid soy, there are alternate plant protein sources in the form of protein powders as well as in other sections of the CFP including: legumes, dairy & alternatives, and nuts & seeds.





Quick Tip: Remember to avoid GMO ingredients by choosing 100% organic for both plant and animal proteins whenever possible. When choosing foods that may not be organic, look for 'Non-GMO' on the label.

Rule of thumb for portions of protein foods: There are approximately 7 grams of protein per serving listed in the CFP (e.g., 1 ounce of lean meats, fish, and cheese; 1 egg; ½ cup of tofu). A serving of protein for a meal is best understood by using the average-sized human hand. The palm of your hand is about the serving size (3–4 ounces) for meat and fish. The size of a fist (approximately ¾–1 cup) is the serving size for plant-based proteins like tofu, tempeh, or edamame, or dairy proteins like cottage cheese.

Vegetarian options: The protein section of the Vegetarian CFP is divided into plant proteins as well as lacto, ovo, and pescatarian food options to accommodate individual preferences.

Try these easy ideas to begin eating lean and clean protein sources (select only those that follow your way of eating—omnivore or vegetarian/vegan).

- Have lean animal protein at each meal and snacks to keep blood sugar stable and help you feel full.
- If you eat red meat, make sure it is from free-range sources and choose the lean loin, tenderloin, or flank cuts.
- Plan ahead: prepare several servings of poultry, lean meats, fish, or veggie burgers on weekends to save preparation time during the week.
- Use omega-3-rich eggs from free-range hens as a quick protein source for meals or snacks.
- Add organic whey or vegan protein (e.g., soy, pea, rice, or hemp) powders to smoothies, cooked cereals or other recipes.
- Use organic tofu or tempeh in a colorful vegetable stir-fry.

Legumes

Legumes are considered a **combination food** on the CFP as they contain hearty amounts of both **protein** and **carbohydrates**. These plant proteins have been a staple food in many cultures for thousands of years and are often a key ingredient in delicious ethnic dishes from around the world. Legumes contain quality protein and fiber, yet have very little fat. Additionally, they are rich in the nutrients of B vitamins, potassium, and magnesium. They are a perfect way to get both quality protein and complex carbohydrates that will help you feel satisfied and keep your blood sugar stable.

Vegetarian or **vegan** eaters must understand that the protein content from legumes, seeds, nuts, and grains usually lacks one or more of the essential amino acids. By combining different foods (for example, legumes or seeds/nuts with rice or grains), a complete set of amino acids can be obtained. It is not necessary to eat these complementary foods at the same meal, just at some point on the same day if possible.





Quick Tip: Most prepared hummus is made with simple ingredients (ground garbanzo beans, sesame tahini, olive oil, garlic, and lemon) and is readily available at your grocery store. However, it's also easy to make from scratch using organic dried or canned garbanzo beans. If using dried beans, soak the beans overnight to shorten the cooking process, soften the beans, and decrease gas-producing carbohydrates. If using canned legumes, rinse first to reduce the salt content before making hummus. You can also add them to salads or soups. Lentils typically do not need to be soaked, making them easy to cook from dried beans.

Try these easy ideas to begin eating more legumes:

- Spread hummus on a tortilla or in place of mayonnaise on a sandwich.
- Use hummus as a dip for vegetables or organic corn chips for a healthy snack.
- Add black beans or red kidney beans to salads and soups.
- Eat edamame as a snack.
- Combine beans with quinoa or rice and a rainbow of vegetables for a tasty salad.

Dairy and Dairy Alternatives

Dairy and dairy alternatives are considered a **combination food** on the CFP as they contain all three macronutrients: **protein, carbohydrate,** and **fat.** Although milk and other dairy products have long been a staple of Western diets, there is controversy as to whether dairy products are appropriate food for humans. Similarly, there's controversy as to whether modern processing decreases the digestibility and potential nutritional value of dairy products; some argue that raw, unprocessed forms of dairy from cows, goats, or sheep raised on organic pastures are more appropriate (but still should be consumed only in moderate amounts). There is also concern about the potential for commercial dairy products to contain antibiotics, hormones, and residual pesticides and herbicides from the foods the animals consume.

Some choose to avoid all dairy foods because of a dairy sensitivity or for ethical reasons. The CFP provides a separate list of dairy alternatives. The CFP encourages choosing organic dairy products along with dairy alternatives such as organic soy, rice, almond, hemp and coconut milks, kefirs, and yogurts. Plain yogurt is the healthiest form of dairy and provides extra protein. If using alternative milks, be careful to choose those labeled 'unsweetened'. The coconut milk in this category is the boxed or watered variety. The coconut milk in the fats category on the CFP list is the canned variety, which is much higher in fat. When buying any canned product, be sure to select only those labeled "BPA-free" to avoid toxins from plastic.



Quick Tip: Yogurt and kefir from fermented dairy and dairy alternatives are also a rich source of beneficial bacteria that support gastrointestinal health. Try to include sources of fermented foods often. When purchasing these products, choose organic, plain varieties whenever possible.

Try these easy ideas to begin eating healthy dairy/dairy alternatives:

- Use almond, hemp, or coconut milk in smoothies and soups.
- Use plain yogurt and kefir as a healthy base for dips and sauces, as a standalone snack, or as a topping for fruits.

Nuts & Seeds

Like legumes and dairy, nuts and seeds are also considered a **combination food**. They are an excellent source of **healthy fat** and **protein**—as long as they are not covered with sugar or salt! They are also packed with fiber, key minerals (like magnesium, selenium, and zinc), and fat-soluble vitamins like vitamin E. Small amounts of raw or roasted nuts and seeds added to meals and snacks can be a part of a healthy diet.



Quick Tip: Nuts and seeds are good plant sources of protein. Peanuts (technically a legume but usually thought of as a nut) tend to be the most pesticide-laden. Choose organic peanuts and peanut butter whenever possible. For nut butters in general, be sure they have no added sugars or fats. Remember that nuts and seeds need to be combined with complementary foods to provide a complete protein for vegetarians and vegans.

Caution: If you are allergic to nuts, avoid them entirely. Often those allergic to nuts can tolerate seeds as a source of healthy fat, fiber, and protein. Hemp, chia, sunflower, and sesame seeds all provide a rich source of healthy fats and protein. If you have diverticulitis, avoid all nuts and seeds, but consider smooth nut and seed butters as listed on the CFP food lists.

Try these easy ideas to eat nuts and seeds each day:

- Purchase quality raw/low-heat-roasted nuts and seeds for snacks, to sprinkle onto salads or soups or to put in smoothies.
- Spread 1–2 tablespoons of nut or seed butters on celery or an apple for a healthy snack.
- Add 1 tablespoon ground flaxseed or chia seeds to your favorite smoothie or mix into unsweetened applesauce.
- Spread 1–2 tablespoons nut or seed butters on a rice cake and top with fresh fruit.
- Drizzle tahini (sesame seed butter) over vegetables or add to hummus as part of a savory meal or snack.

Fats & Oils

Eating high-quality, minimally-processed, organic fat and oils is of utmost importance. Fats are not only used for energy, but are needed in the membrane around every cell in your body. A minimum of four servings per day of fats/oils with two servings of nuts is suggested on the CFP. Please note the serving sizes in this section; they are very small, which may take some getting used to!



People have become fearful of eating fats in general because they are known to be high in calories and so thought to be fattening. A diet that is low in fat is not satisfying, and cravings can result in overeating. Fats stay in the stomach longer, helping you to feel satisfied for a longer period of time. Current research is confirming that healthy fat and cholesterol are not the cause for many of the diseases of inflammation that are rampant in the Westernized world; rather, the problem is too many processed fats and refined grains and sugars.

Quick Tip: Avoid overly refined forms of trans (hydrogenated) fats and oils that are in margarine and processed foods. If the label lists "partially hydrogenated fat" of any type on the ingredient list, do not eat the food. Store-bought salad dressings often contain poor-quality fats and added sugars.

Choose the oils listed on the CFP as anti-inflammatory, minimally-processed, omega-3-rich, monounsaturated, and beneficial. Use them in small amounts in your meals and snacks. Opt for organic whenever possible. Look for "extra virgin" on the label when purchasing olive oil. Use olive oil when cooking over low heat. Use unrefined sesame, grapeseed, sunflower, or coconut oil for baking and cooking over medium to high heat. Flax and walnut oils can be used for homemade salad dressings. Small amounts of butter from grass-fed cows can provide a natural source of Vitamin K, which helps you absorb Vitamin D for strong bones and optimal immune function.

Try these easy ideas to use healthy fats each day:

- Store olive oil away from heat in a dark-tinted glass bottle; drizzle it on a fresh salad or use when sautéing vegetables.
- Buy avocados when they are hard and firm. Let them ripen on your counter for a few days then transfer to the refrigerator, ready to slice over eggs, salads, soups, or a turkey sandwich. Or, make fresh guacamole to spread on foods or use as a dip for vegetables.
- Snack on colorful black, green, and purple olives (rinse them before eating to reduce sodium content). Or add olives to your favorite salads
- Limit beneficial saturated fats to approximately one or two servings per day.
- Choose organic extra-virgin coconut oils, or coconut milk in cans or cartons.
- A small amount of dark (70% or greater cacao) chocolate can be part of a healthy eating plan.

Non-Starchy Vegetables

Healthy eating is not all about cutting back. Most people need to **add more fruits** and vegetables to their diet. Set a goal of a minimum of 5–9 servings per day with an emphasis on non-starchy vegetables. For every 2–3 fruits, eat 6–7 servings of green and non-starchy vegetables. Think variety and color; aim to eat a rainbow of colorful foods each day. Emphasize the cruciferous vegetables, such as kale, Brussels sprouts, broccoli, and cabbage, which contain an abundance of phytonutrients. Enjoy the benefits of the thousands of healthful compounds in plants that can lower your risk of cancer, heart disease, diabetes, and other chronic diseases. Both the quality of your vegetables (fresh



and organic when possible) and the method of preparation are important. Raw and lightly steamed is preferred, but you can sauté at low/moderate temperature in olive oil, or use butter and coconut oil for higher temperatures.

The CFP will give you ideas for eating vegetables you may not have tried before and how to get 9 to 12 servings per day. One serving of non-starchy vegetables is ½ cup cooked vegetables or 1 cup raw greens. Your goal is to see how many different colors and varieties of vegetable choices you can eat each day. Aim for a rainbow of color and variety for good health!

Quick Tip: Green leafy vegetables include kale, collards and other greens, cabbage, bok choy, Swiss chard, arugula, spinach, and the many varieties of lettuce. The deeper the color, the more nutrients the greens contain.

Try these easy ideas to begin eating an abundance of non-starchy vegetables:

- Try adding greens to smoothies, egg dishes, and soups for flavor and color.
- Use greens as alternatives to tortilla wraps or buns.
- Use a variety of greens and colorful vegetables to make salads, topped with lean proteins and healthy fats like olive oil, avocados, seeds, and nuts.
- Take time to clean and prep vegetables right after purchase, then store in glass containers in the refrigerator so they are ready to eat at a moment's notice.

Starchy Vegetables

Starchy vegetables such as sweet potato, yam, winter squash, parsnips, pumpkin, and beets are rich in colorful phytonutrients, but cause blood sugar to rise more rapidly than the non-starchy vegetables do. Those with blood sugar imbalances (e.g., diabetics or those with metabolic syndrome) must be particularly careful to limit intake of these starchy foods. Only 1–2 servings per day from this category is recommended for these individuals The CFP separates the starchy from the non-starchy vegetables so that you can make appropriate selections for blood sugar balance.



Quick Tip: Starchy vegetables add nutrients and fiber and are helpful in thickening soups and stews. Purée all or some of the cooked starchy vegetables and stir back into soup for this purpose. Starchy vegetables are tasty when drizzled with olive oil, tossed with garlic and various spices, and roasted. Sweet potatoes or yams are delicious baked with no additional oils; beets can be roasted, peeled, sliced, and drizzled with balsamic vinegar.

Fruits

Fresh raw fruit, ripe and in season, is an easy and delicious way to consume a variety of important phytonutrients, antioxidants, vitamins, minerals and soluble fiber. Most fruits have a high water content (often 80–95 percent) so this may help with hydration. As with starchy vegetables, many fruits can raise blood sugar rapidly and should be eaten in moderation by those with metabolic issues. It is helpful to eat fruit with some form of protein and fat, such as nuts, to help decrease any rise in blood sugar. Use your hand when estimating a serving of fruit: one serving of fresh fruit is about the size of a small fist. The CFP suggests 2–3 servings of fruit per day.



Quick Tip: Fresh raw or frozen fruit (no sugar added) can be included with breakfast, eaten as a snack, added to smoothies, or made into healthy desserts.

Try these easy ideas to begin eating a rainbow of fruits each day:

- Add ½ cup of fresh blueberries to a bowl of warm steel-cut oats.
- Add fruit to any smoothie or Greek yogurt cup to add color and flavor.
- Fruit is easy to transport and the perfect snack when complemented by a small handful of nuts or seeds.

Grains

Whole grains provide protein, fiber, and a host of essential vitamins and minerals. A true whole grain has had hardly any mechanical processing. As a result, it contains all the nutrient-rich parts of the grain, including the bran, germ, and endosperm. Much of the fiber and protein is removed when a grain is refined, leaving only the endosperm and starch. The starchy part of a grain is what raises blood sugar (i.e., has a higher glycemic index). Some Functional Medicine practitioners find that their patients have fewer symptoms when they go off grains or when they switch to gluten-free grains (like rice, millet, and quinoa). However, the CFP lists all whole grains. If your practitioner tells you which grains to eat, please follow their guidance. Some argue that genetic modification of wheat, corn, and soybeans may affect the health effects of these grains. These claims have yet to be scientifically investigated. We advise that you observe how any of the foods, including grains, included in this plan, make your body feel and whether they give you symptoms.

Whole Grain Kernel Endosperm Provides energy Carbohydrates, protein Bran "Outer shell" protects seed Fiber, B vitamins, trace minerals Germ Nourishment for the seed Antioxidants, vitamin E, B vitamins

(diagram source: www.elements4health.com)

The CFP suggests minimizing grains in the daily diet, with no more than 1-2 servings per day for most individuals (unless your practitioner tells you otherwise). The food plan also recommends eating only organically-grown, non-GMO whole grains. You will see that gluten-free grains are listed separately from the gluten-containing grains so that those who want to limit or avoid gluten can do so.

Quinoa is an ancient gluten-free plant grown mainly for its seeds. It's not technically a member of the grass family like other grains; in fact, it is a relative of beet and spinach. Because it can be used much like rice and cooked cereals, it's commonly included as a grain for practical use. Quinoa is high in the minerals magnesium and calcium, rich in fiber, and has each of the amino acids needed by humans for making proteins. It's often described as a "super food" because of its nutritional density.

Quick Tip: A serving size of most cooked grains like pasta, oats, rice, or quinoa varies from $\frac{1}{2}$ cup, about the size of your cupped hand. Explore the variety of ancient grains (millet, teff, amaranth, spelt, faro, or quinoa) that have been around for centuries and provide fiber, protein, and essential nutrients. Try combining them with oatmeal for a tasty hot cereal, substituting half the oatmeal with one or more of these grains.

Try these easy ideas to begin eating a variety of whole grains in controlled amounts:

- Try organic blue corn chips with hummus, guacamole, or fresh salsa.
- If avoiding gluten, try a quinoa, brown rice, or corn pasta in place of whole-wheat pastas.
- Spread almond butter on a brown-rice cake and top with fresh fruit for a snack.
- Quinoa and amaranth can make wonderful hot cereals on a cold morning.

Condiments, Herbs, and Spices

Most modern condiments, like teriyaki sauce, ketchup, barbeque sauce, and glazes, have quite a bit of sugar, salt, and preservatives added. It is usually best to avoid them entirely as they provide no needed nutrients. Always read labels. It is possible to make your own versions that are healthier.

A spice is edible, aromatic, and has been dried from a fresh herb. It comes from a plant's root, stem, bark, bud, leaves, flower, fruit, or seed. Herbs are usually leaves used fresh (when dried, as noted, they become a spice). Spices provide high levels of phytonutrients that help fight disease. When it comes to buying a spice, avoid fillers (e.g., sugar, maltodextrin, gluten, artificial colors, preservatives, or synthetic anti-caking agents). Ideally, buy spices in glass, rather than plastic, containers to avoid toxins.

Use herbs and spices to give flavor and make your meals tasty. Experiment with fresh or dried herbs and spices in your food preparation. Adding this extra flavor will help you to avoid unhealthy condiments. In addition to the flavor and taste they give, herbs and spices are often medicinal, too. Organically-grown herbs and spices are preferred whenever possible.





Preferred condiments:

- Apple cider, rice, and balsamic vinegars
- Bragg Liquid AminosTM
- Coconut aminos
- HerbamareTM
- Homemade or store-bought, low-sodium and organic broths (vegetable, chicken, beef)
- Kosher or unrefined sea salts
- Lemon/lime juice
- Miso (if soy is tolerated)
- Mustards
- Organic ketchup
- Peppercorns
- Red chili paste
- Salsa without added sugars
- Tahini
- Wasabi
- Wheat-free tamari

Top Medicinal Herbs and Spices

These herbs and spices have medicinal healthy properties: Basil, cardamom, cayenne, cinnamon, cloves, cumin, dry mustard, fenugreek, garlic, ginger, oregano, rosemary, thyme and turmeric. Also, black pepper, bay leaves, caraway, celery seed, cloves, ginger, green cardamom, mustard seed, nutmeg and (dried) onion. Curry powder is a blend of spices that varies from geographic region to region. Many of the components of curries are anti-inflammatory. Most blends contain coriander, cumin, fenugreek, red pepper, and turmeric.

Tips for buying herbs and spices:

- If you buy spices in bulk, store them in air-tight glass or tin containers. Don't buy large quantities, only what you will use within a few months. Throw out old spices and herbs.
- You can buy herbs and spices in their fresh, dried, whole, cracked, coarsely ground, and finely ground forms.
- Store in a cool, dark place. Heat, light, and moisture will accelerate loss of flavor. High temperatures can cause spices to cake or harden and change or lose color.
- Don't let them sit around the stove. Close container well after using.
- With proper storage, ground spices will keep for about a year and whole spices for 2–3 years.
- To test for freshness, rub between fingers and sniff for aroma.





Ways to include more herbs and spices in your eating:

- Add brewed tea to smoothies.
- Combine finely chopped garlic and basil to extra-virgin olive oil and lemon juice as a salad dressing. Dry or Dijon mustards are a tasty addition to many dishes.
- Add fresh herbs such as cilantro, chives, basil, or mint to salads or sandwiches.
- Sprinkle cumin or fennel seeds in soups or salads.
- Marinate lean meats in curry powder or curry pastes.
- Sprinkle cinnamon and nutmeg over oatmeal or wholegrain toast for breakfast, a cup of steamed soymilk, even on vegetables (e.g., green beans).
- Add fresh parsley or chives to scrambled eggs.
- Stew fruits with a cinnamon stick and a vanilla pod.
- Steep lemongrass, ginger, or mint in hot water.
- Add freshly grated garlic to mayonnaise.
- Add fresh or dried herbs to your favorite pasta dish.
- Add spices to ghee (clarified butter), honey, oils, or salt.



Beverages

Drink clean, filtered water throughout the day. How much you need will depend on your size (see the Quick Tip below). Broths, herbal teas, and other decaffeinated beverages are also good choices. Limit your intake of alcohol, caffeinated beverages, and sugared beverages as they tend to be dehydrating and raise your cortisol and blood sugar levels. Staying hydrated helps rid your body of toxins, builds resilience to stress, enhances your metabolism, and gives you a feeling of fullness.

Quick Tip: An easy way to remember how much water to drink each day is to take your desirable weight in pounds, divide in half, and drink that number in ounces as your daily water goal. Remember that fruits and vegetables are an additional source of water. If you weigh 128 pounds or more, you'll want to aim for at least 64 ounces (8 cups) each day.

Try these easy ideas to enhance your hydration status each day:

- Add a splash (about an ounce) of 100% natural pomegranate, cherry, or cranberry juice and lemon or lime to a 32—ounce water bottle twice a day to reach 64 ounces per day.
- Keep a variety of herbal and green teas available to provide variety in taste and nutrients. Studies suggest that approximately 3 cups of green tea daily is good for metabolism and cardiovascular health.
- Explore kombucha teas, which are made by fermenting green or black tea. Be aware of the sugar content, which can vary by recipe.

What are the core principles of healthy eating?

Functional Medicine starts with food. Food is energy, medicine, and connection. The basic principle of this CFP is that eating high-quality foods and getting a variety of whole, plant-based foods is truly powerful medicine that improves health and hinders the development of disease.

How is food used as energy?

Foods give us calories, fuel to perform the required work in every cell of your body. Every cell, tissue, and organ needs fuel to function. The quality of your life is largely based on how well you can work, move, and act. You are only as good as the foods you provide to your body as raw materials. Good food in means good fuel to run and keep your body systems optimized.

What does your body use for energy? Macronutrients; protein, fats, and carbohydrates (PFC) and micronutrients: minerals, vitamins, and phytonutrients (MVP) are all derived from food and help your body to perform at its best. Your healthcare provider will assess and modify your diet to give you all of these nutrients.



Carbohydrates and protein provide 4 calories of energy per gram, while fat yields more than double that at 9 calories per gram. Our bodies digest the food we eat by mixing it with fluids (acids and enzymes) in the stomach. When we eat, the carbohydrate (both simple sugars and complex starches) in that food break down into glucose. The stomach and small intestines then absorb the glucose and release it into the bloodstream. Once in the bloodstream, the glucose can be used immediately for energy or stored to be used later. Protein is a longer-lasting form of energy because it is broken down more slowly. Protein is primarily used as energy when total calorie intake is too low and energy cannot be immediately obtained from carbohydrates. Fat is primarily used to store energy, held as a reserve in the body until needed.

How is food used as information?

Food is not just calories you take in; food also provides information to your body in every bite you take. It has the ability to turn on or off genes that control disease risk, lifespan, and metabolism. Certain foods can even trigger allergy reactions or impact blood sugar, inflammation or autoimmune responses. It has the potential to give you what you need to function at your best level. If you don't get the right information, your body won't work well and your health may decline. If you eat too much food, or the food you eat gives your body the wrong instructions, you can become overweight while at the same time undernourished, and at risk for the development of many different diseases.

For example, choosing to eat clean food that is organically grown and not sprayed with chemicals helps to reduce the toxic substances in your body and give your body the best information to signal health. Fresh organic or unsprayed food has many health benefits because it has more minerals, vitamins, and phytonutrients. Look for the label, "organic" or "locally grown" and focus on buying at farmers' markets when available.

Improving food choices can have a significant impact on health and disease:

- Poor quality food can cause disease by not providing enough nutrients.
- Foods with the right kinds of nutrients can help to heal and reverse the path of chronic disease.

How is food used as connection?

Food is central to our social interactions: we typically eat in community and our ethnic backgrounds determine what and how we eat. Food is used for celebration and ceremony and to honor/enjoy traditional cultures. Through the process of eating with others, we can also bring in mindfulness and intention.

Eating mindfully involves the following:

- Becoming knowledgeable about portion size and balancing your plate with healthy nutrients), including awareness about managing food cravings
- Developing an appreciation of your food's path from soil/farm to table and becoming aware of the benefits of plant-based foods.
- Eating a variety of colors and flavors to get the fullspectrum of healthy compounds from food in every meal.
- Taking time to enjoy meals with others when possible (avoid eating while working, commuting, or watching TV).
- Chewing your food thoroughly to improve digestion.
- Finding pleasure and joy in cooking, eating, and tasting while making healthy choices.



How is food used as medicine?

The Western diet has large nutritional gaps because of the abundance of food of poor nutritional quality. As a result, chronic diseases are rampant. Healthy whole foods can be just the medicine the body needs to reverse many of these diseases. Nutrigenomics, a new science that studies the impact of food choices on gene expression, is proving that you truly are what you eat! The key is making an effort to choose nutrient-rich foods that send the right healthy signals to your body for positive gene expression and optimal health. Eating high quality foods can have a positive influence on your body and may even help to reverse disease. Think of the CFP as a foundation for healthy eating that lays out the principles for a healthy life.

Are organically grown foods really that important to buy? They seem expensive.

The short answer is that eating good food is managing your health now. It's less expensive to make good choices now, rather than wait until your health changes and forces you to spend time, money, and energy for surgery, drugs, and other procedures. There are thousands of man-made chemicals present in the environment; while scientists learn more about their association with disease, it only makes good sense for you to minimize your exposure to pesticides, insecticides, hormones, antibiotics, irradiated food, herbicides, and GMOs. You can do this, in part, by buying organically grown food, especially animal-based foods. While this may be more expensive, as noted above, the negative health effects from these toxins could be more expensive in the long run. Scientists at the Environmental Working Group (EWG), a non-profit organization focused on protecting public health and the environment, have suggested that even small doses of pesticides and other chemicals can have long-term health consequences that begin during fetal development and early childhood.

Buying foods in season from local sources may keep the costs down. Make purchase decisions according to the annual "Dirty Dozen" and "Clean 15" lists of the EWG (www.ewg.org).

Nonorganic meats and dairy may be the sources most heavily contaminated with hormones, pesticides, and herbicides. Organic beef, chicken, and poultry are raised on 100% organic feed and never given antibiotics or hormones; in addition, their meat is never irradiated. Organic milk and eggs come from animals not given antibiotics or hormones and fed 100% organic feed for the previous 12 months.

Less use of antibiotics may also help avoid the development of antibiotic resistance, a serious health problem today. Free-range eggs come from hens that are allowed to roam, but they are not guaranteed to be organic.

The Organic Seal of Approval on a food guarantees that there has been no usage of genetically modified crops or sewage sludge as fertilizer. The latter is not only healthier but helps to reduce toxic runoff into rivers and lakes and the subsequent contamination of watersheds and drinking water.



Other Considerations to Reduce Your Pesticide Intake:

- Wash produce BEFORE you peel it, so dirt and bacteria aren't transferred from the knife onto the fruit or vegetable.
- Peel the skin or remove outer layer of leaves of nonorganic produce like lettuce or onions.
- Remove surface pesticide residues, waxes, fungicides, and fertilizers by soaking the food in a mild solution of white vinegar or additive-free soap (pure Castile soap or biodegradable cleanser).
- Wash your hands for 20 seconds with warm water and soap before and after preparing fresh produce.
- Dry produce with a clean cloth or paper towel to further reduce bacteria that may be present.



How much protein is best for me to eat?

Typically, most people need to eat about 3–4 ounces (about the size of your palm) of protein at each meal, but people with higher energy needs (e.g., athletes and pregnant and nursing women) will need more protein in each meal. Recommendations vary for protein according to body weight and activity level. The quality of the protein is very important: lean, grass-fed, free-range, organically grown, non-GMO meat, poultry, and wild fish are all recommended for omnivores. Vegetarians should choose organic sources of soy and other legumes when possible, along with nuts and seeds.

How often is it okay to eat eggs?

Eggs are a high-quality source of protein. There has been an ongoing debate about eggs, particularly when it comes to heart disease, as originally it was thought that the cholesterol in eggs made blood cholesterol rise. We now know that it is fine for most people to eat eggs every day. The only caution is that some preliminary research suggests it may be better for those with type 2 diabetes to have fewer eggs (less than one egg per day). The CFP stresses variety, so change up your food routine daily. Instead of eating eggs every day for breakfast, make other choices to ensure that you get complexity and diversity in your food.

Are there vegetarian and vegan options for the Core Food Plan?

There are several variations of vegetarianism supported in this plan:

Ovo-vegetarians avoid all meat, poultry, fish, and dairy, but include eggs.

Lacto-vegetarians avoid all meat, poultry, fish, and eggs, but include dairy products.

Ovo-lacto-vegetarians avoid all meat, poultry, and fish, but do include eggs and dairy products.

Pescatarians add fish to any of the above variations.

Vegans omit ALL animal products, including even honey.

The CFP includes a food list for all types of vegetarians and vegans.

How does a vegetarian get adequate protein?

It is not difficult to have enough quality protein as a vegetarian or vegan if you are sure to include adequate amounts of legumes, whole grains, green leafy vegetables, seeds, and nuts. If you are a vegetarian who eats eggs and dairy products, adequate protein is even easier because these foods provide complete proteins (be sure you choose organic when possible). For a vegan, it is important to include some grains for the essential amino acid methionine, which is missing from beans and peas (legumes).

High-quality protein choices for a vegetarian might include, 1 egg (7 grams of protein), a typical serving of green vegetables (2–3 grams) with ½ cup organic soy product or other legumes (lentils–9 grams, edamame or green soybeans–6 grams and 1 cup of soy milk–7 grams). A vegan will have more of a challenge but still will be able to have adequate protein sources, if they have a solid understanding of complementary plant protein combinations as discussed in the protein and legume sections in this document.

I am a vegan and often will use some type of soy or other veggie burger for my protein source. What do I look for in a quality veggie burger?

While the IFM food plans suggest the use of whole, fresh foods that you might find in your local farmer's market or the outside aisles of your supermarket, there are times when you will need a quick and easy source of vegetarian protein. There are many healthy vegetarian burger type recipes available on the internet, so you might try making them from scratch, with fresh ingredients and storing for later use.

When buying a premade frozen veggie burger, look at the food label to be sure that whole organic, non-GMO ingredients with minimal additives are used. Many of the premade veggie burgers available in your grocery store contain unsuitable ingredients for a healthy diet, but there are some with quality sources and ingredients. Here is the ingredient list for a quality vegetable burger found in many grocery stores, made with all non-GMO ingredients:



"Carrots, onions, string beans, oat bran, soybeans, zucchini, peas, broccoli, corn, soy flour, spinach, expeller pressed canola oil, red peppers, arrowroot, corn starch, garlic, corn meal, salt, parsley, black pepper."

What is natto?

Natto is fermented soy beans, often eaten for breakfast in Japan. Some find it has a strange smell that is hard to get used to, but it is very nutritious. You might try adding natto to miso soup.

When do I eat plants raw and when do I cook them?

For the most part, you want a combination of raw and cooked foods in your diet. Raw foods are typically better to eat in the summer months as they are more "cooling" to the body, while cooked foods are best in the winter months when it is cold outside. People with digestion issues (e.g., lots of bloating, bowel movement problems, inflammation, gas, and pain) will often do better with more cooked plant foods than raw. You will also want to prepare plant foods according to what you want to get from them (see below).

Ask your healthcare provider or Functional Nutritionist for more information on phytonutrients. He or she may have materials that provide guidance about preparing and cooking fruits and vegetables. Here are some general guidelines:

- Carotenoids, found in red, orange, yellow, and green foods, are more readily absorbed when heated and eaten with some fat (e.g., cooked carrots with a drizzle of extra-virgin olive oil).
- Steaming or waterless cooking of vegetables preserves vitamins and other nutrients far better than boiling vegetables using water. Use as little water as possible and cook to the point at which the color of the vegetable becomes brighter and more vivid.
- Overall, steaming is the preferred method of cooking as it results in the biggest increase in antioxidant content.
- Avoid boiling any cruciferous vegetable (broccoli, cabbage, kale, arugula, etc.) as it may inactivate an enzyme called myrosinase that produces anti-cancer compounds.
- In general, cook only to the point of making the vegetables tender, not soft.
- Using heat, soaking, fermentation, and germination/ malting foods like seeds, nuts, and legumes can increase levels of nutrients.
- The beneficial antioxidant content increases in the following foods when they are cooked: carrots, spinach, mushrooms, asparagus, broccoli, cabbage, red cabbage, green and red peppers, potatoes, and tomatoes.
- Peeling away the skins of apples and cucumbers reduces their antioxidant content significantly.
- Don't presoak vegetables before cooking to make them soft, as you will lose nutrients in the water.



If the only way you can get more fruits and vegetables into your diet is to have them out of frozen packages, that is better than not eating them at all! Freezing foods will reduce flavor a bit. The final nutrient content will depend on the initial quality of the food before it was frozen. If the food was initially considered to be of high quality (i.e., organically grown and fairly fresh at the time of freezing), then you can expect that the final nutrient content will be mostly retained. Studies have shown that frozen blueberries can retain their phytonutrient content during freezing.



There are some concerns with freezing because the blanching process during preparation may lead to some loss of vitamin C and B vitamins. Still, frozen foods are preferable to canned.

Nine servings of fruits and vegetables seem difficult to eat in one day. How can I do it?

Here is an example of how to include nine servings in an 1800-calorie diet:

- 2 servings (1 cup or 2 fruits) of fruits (servings may vary with different fruits)
- 2 servings of leafy greens (2 cups)
- 4 servings (2 cups) of other non-starchy vegetables
- 1 serving of starchy vegetables (½—1 cup)

Why are coconut oil and coconut milk on the Core Food Plan? I thought coconut was bad for my heart.

While we recommend that you think of extra-virgin olive oil as your "staple" oil—using it most frequently for salad dressings and low- to medium-heat cooking, coconut oil may also be used, especially when you are cooking at a higher heat, such as for stir-fries. Overall, it's not the best to use high heat for cooking. A better way is to steam the food and add the oil at the end. Coconut oil provides short- and medium-chain fats that can be quickly used by the liver and the intestine as an energy source. Coconut oil that is refined (like most other oils), however, is not healthy. It is best to use coconut oil that is labeled virgin and organic. You can use up to 3 teaspoons (1 tablespoon) per day. Coconut milk is a wonderful way to add flavor to stir-fried foods. Remember that the goal of the CFP is variety—even in fat and oil choices!



I don't see any sweeteners on the Food List. What can I use on the CFP as a sweetener?

For optimal health, It is best that you refrain from added sweeteners as much as possible, because the damaging effects from inflammation that sugar can have on your blood vessels and brain are long-lasting. In addition, high-intensity sweeteners can lead to blood sugar imbalances, increased calorie intake with subsequent weight gain, and continued cravings. If you are craving something sweet, choose from the low- to moderate-glycemic index fruits on the CFP. For example, eating an apple or having a handful of fresh blueberries can help to quell sugar cravings.

The CFP doesn't recommend processed foods, so you don't have to worry about hidden sugars in those products! There are no added sugars in fresh vegetables or fruits (note that dried fruits often do contain added sugars). Stevia, an herbal sweetener, may be used occasionally in small amounts (just a pinch) as it is an intensely sweet herb.

What do I eat when I am having cravings?

When you begin avoiding very sweet foods, stay close to nature by eating naturally sweet fruits like apples, berries, and oranges, even using apple juice concentrate in cooking and baking. It is best to avoid artificial (synthetic) sweeteners because they may have negative effects on metabolism and could lead food cravings. Artificial sweeteners to avoid include the following: aspartame (NutraSweet®), sucralose (Splenda®), acesulfame-K (Ace K, Sweet One, Sunett®), and saccharin (Sweet N' Low®). If you want more information on sweeteners, ask your healthcare practitioner for the "Sweeteners" handout.

What about drinking alcohol?

Drinking modest amounts of red wine may reduce cardiovascular risk. Research has suggested that alcohol can even improve blood flow to your brain by lowering your blood pressure and opening up your blood vessels. The phytonutrients in red wine, such as resveratrol, help to relax your blood vessels, increase good cholesterol, and bring blood sugar into balance. However, red wine is also a form of sugar and added calories and may not be good for everyone. Talk with your healthcare practitioner about this, as he or she knows your health history and can make a determination as to whether moderate or occasional use of alcohol would be appropriate and consistent with your health goals. For a generally healthy man, 1 to 2 glasses (5 ounces or 2/3 cup) of red wine (depending upon body weight) may be perfectly acceptable within a mealtime setting. Women may wish to have just one glass of wine no more than four times a week due to the association between breast cancer and increased alcohol consumption. You might instead include foods that are high in resveratrol, such as red grapes, dark chocolate, peanuts, and purple grape juice.



Do coffee and tea have any benefits?

Studies have shown that caffeine tightens blood vessels, causing short-term, unfavorable changes in blood pressure. Also, caffeine increases cortisol, a stress hormone, so it can make you more wired and "on edge." For those that are sensitive to caffeine (most people know if they are), it can cause a fast heart rate and abnormal heart rhythms. On the other hand, there are healthful phytonutrients in coffee, like chlorogenic acid and caffeic acid, which may help your liver to better process blood sugar. Moderate consumption of up to 3 cups (8 ounces = 1 cup) daily has been shown to be associated with lower rates of type 2 diabetes. Your particular situation needs to be evaluated and discussed with your healthcare practitioner. Perhaps a happy medium would be to choose decaffeinated coffee if you like the taste of coffee. Just remember that you don't want to be adding in sugar! Also note that there is a small amount of caffeine (5–50 milligrams) in decaffeinated coffee.

Coffee may be a good choice for some, but green tea may be a better drink for most people. It contains caffeine, but not as much as in typical cup of coffee, and it can be purchased in noncaffeinated varieties. Green tea contains anti-inflammatory and antioxidant phytonutrients. Drinking both green and black teas has been associated with reduction in the risk of heart disease and stroke by 10 to 20 percent. Three cups per day appears to be the best amount for the most benefit overall.

Why is miso on the condiment list?

Miso is a traditional Japanese seasoning made by fermenting soybeans with other ingredients. While miso can be a soy protein source, it doesn't fit the macronutrient profile of other soy foods. It is best used as a condiment, as only a few tablespoons are considered to be a serving. Miso may be added to soups or stir-fries.

Resources and Tools for Success

The CFP represents a phytonutrient-dense, balanced approach to healthy eating. It is beneficial for both health maintenance and disease prevention. To make the transition to this way of eating easier, we offer a number of other tools.

The following handouts are available from Functional Medicine healthcare practitioners to assist patients who are implementing the IFM Core Food Plan:

- Core Food Plan Food List
- Core Food Plan Vegetarian Food List
- Core Food Plan –Vegan Food List
- Core Food Plan Weekly Planner and Recipes
- Phytonutrient Spectrum Comprehensive Guide
- Phytonutrient Spectrum Foods

The internet has many helpful websites that explore all avenues of healthy eating principles. There is also much conflicting information, so it is important to know whose information is the most accurate. The website www. whfoods.com contains unbiased information about foods, nutrients, cooking for best nutrient preservation, and many other topics. It may help to answer many of your questions that may have not been covered in this Comprehensive Guide.



