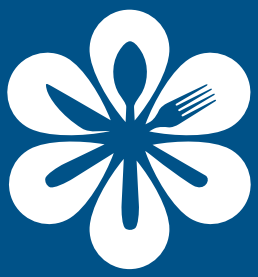
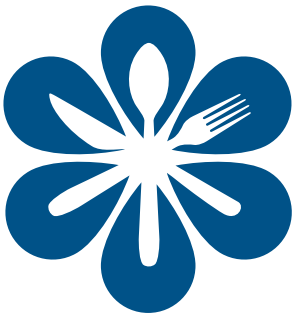


CORE FOOD PLAN

Comprehensive Guide

IFM®

Version 3



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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 towards healthier eating and is designed to encourage eating in a way that will nourish and energize the body. It is based on current research on what and how people should eat in order to live long, healthy lives. It takes elements from the Mediterranean diet and the hunter-gatherer approach (sometimes referred to as the "Paleo" diet), and encourages eating low-glycemic carbohydrates.

This food plan can be easily changed to suit personal preferences and health needs. It is available with vegetarian and vegan modifications, and can accommodate foods from virtually any culture. This Comprehensive Guide provides tools and information that will make it easy to tailor the food plan based on individual needs. In addition to plan details, this guide answers many questions that might arise when beginning a new food plan.

We call this a "core" food plan because it lays the foundations for eating well that will carry an individual throughout life. The CFP uses the basic principles of "food as medicine" to support an individual's health goals and improve his or her 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 individuals learn to eat a balance of healthy, whole foods that support optimum health.

- **Foundational eating plan:** This plan starts individuals on a journey to better health. It allows people to meet daily needs for the macronutrients: protein, fats, and carbohydrates. It also supplies all the necessary minerals, vitamins, and phytonutrients, along with adequate fiber and fluids. On this plan, individuals can choose from a wide variety of high-quality foods to incorporate into meals each day. Healthy snacking is encouraged.

  The CFP is appropriate for children, adults of all ages, and pregnant women. The plan can also be easily adapted for meat eaters, vegetarians, and vegans alike. It can also be modified to meet the needs of athletes, achieve weight loss or gain, control blood pressure, and exclude dairy, gluten, or any foods to which one is allergic, intolerant, or sensitive. Foods are grouped into categories. In some cases, a practitioner may recommend a number of servings to consume from each category every day. The number of meals and snacks may be changed each day to help distribute the allotment of food in a way that best meets individual needs.

- **Focus on whole foods:** Whole, plant-based foods are an important source of fiber and phytonutrients. Dietary fiber is critical for proper health and digestion. Fiber binds to toxins and excess hormones and helps the body excrete them. Fiber is also the preferred food of the cells that line the digestive tract. Phytonutrients are plant-based compounds with a wide range of antioxidant and anti-inflammatory health benefits. These compounds give fruits and vegetables their deep hues, and phytonutrient-rich foods can often be identified by their color. (For example, the phytonutrient beta-carotene is found in yellow-orange foods like carrots, winter squash, cantaloupe, and papapa.)

- **Promotes 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 (non-organic) 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 non-organic, processed foods—can increase the liver's ability to eliminate toxins and lower the toxic burden in the body. For these reasons, the CFP promotes eating organic foods.

Features of the Core Food Plan

- **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. Given its vital role in bodily functions, protein should be included with every meal and snack.

- **Balanced quality fats:** Balancing 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 also convert to body fat 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, unprocessed foods listed in the CFP will provide the body with 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 consuming it makes the body feel more full without eating a lot of additional calories.

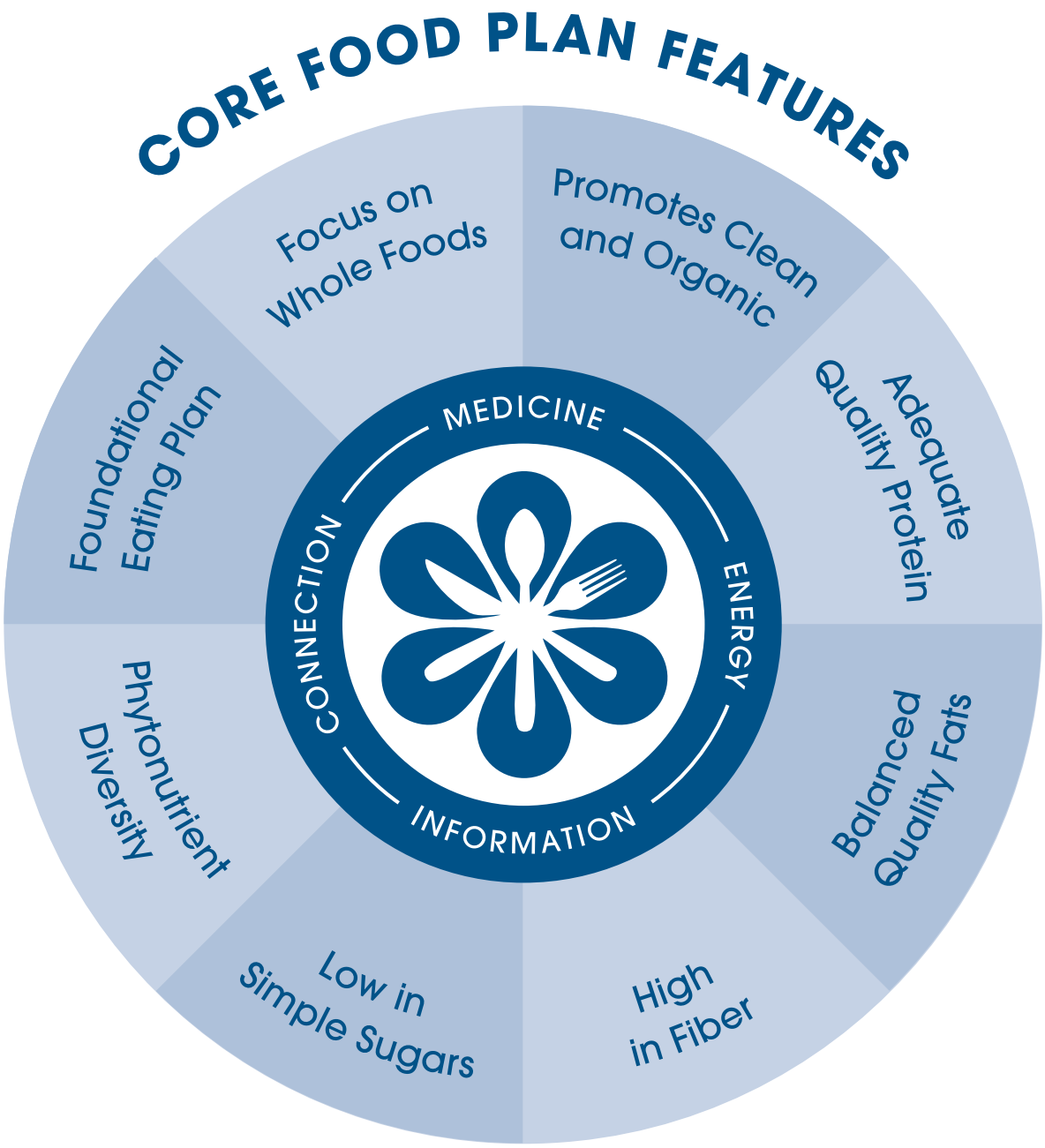
  There are two types of dietary fiber, each with different benefits. ***Insoluble fiber*** can be found in the bran (outer coat) of vegetables and whole grains. This type of fiber acts like a bulky "inner broom," sweeping out debris from the intestine and helping the intestines move food along. The other type of fiber, called ***soluble fiber***, attracts water and swells, creating a gel-like mass that slows down digestion. The gel helps trap toxins and other undesirable substances (including cholesterol and other dietary fats) so that the body can excrete them. It also provides "food" for healthy bacteria in the digestive tract. Soluble fiber is found in foods like oat bran, barley, nuts, seeds, beans, lentils, peas, and some fruits and vegetables. It is also found in supplements that contain psyllium. Individuals should aim to consume at least 5 grams of fiber per serving of food, 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 (T2D) in younger people, laying the groundwork for obesity and the development of heart disease.

  The CFP limits added sweeteners to help 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 the body. Some have a very gentle effect (low glycemic), while others lead to cravings (higher glycemic). With this in mind, no more than 1 to 3 teaspoons of the following lower glycemic sweeteners should be used daily: 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 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 to enjoy the natural sweetness in all fruits and certain vegetables. Thus, approved sweeteners should be enjoyed in moderation.

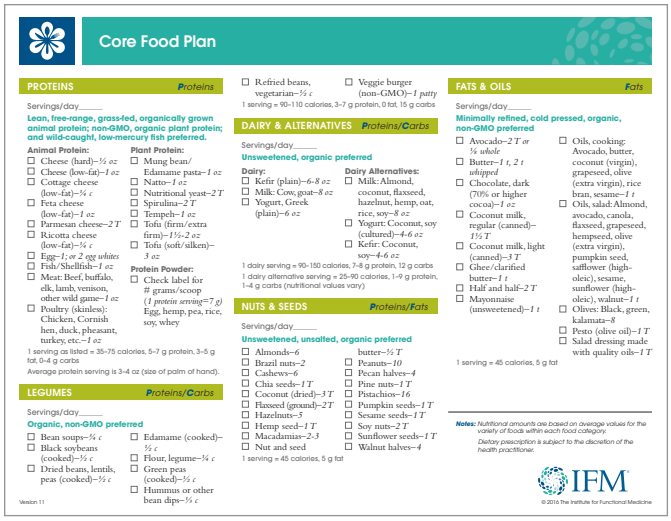
  Label reading is necessary to detect added sugars. Natural and artificial sweeteners to be avoided appear on food labels as different names, including the following: aspartame, brown sugar, cane sugar, caramel, confectioner's sugar, corn syrup, corn syrup solids, date sugar, Demerara sugar, dextrose, evaporated cane juice, fructose, fructose syrup, glucose, high fructose corn syrup, invert sugar, NutraSweet™, maltitol, maltodextrin, maltose, mannitol, sorbitol, Splenda™, sucrose, and turbinado sugar. Eating whole foods should be the focus when following the IFM Core Food Plan; removing processed foods reduces the worry about exposure to added sugars and will make the natural sweetness of a low-glycemic piece of fruit more enjoyable.

- **Phytonutrient diversity:** Plant ("phyto") foods contain thousands of compounds that communicate with the cells in the body and change how it functions. At this time, about 10,000 of these compounds have been identified, but many thousands of others haven't yet been fully identified or classified. 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. Colorful plant foods should be included 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 individuals 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 provides a "snapshot" of healthy foods to choose every day. It suits all eating styles, with vegetarian or vegan options. Additionally, healthcare providers may make other recommendations based on an individual's specific dietary needs.

This section of the Comprehensive Guide is organized by category of food. In some cases, healthcare providers may choose to recommend daily calorie amounts for an individual based on his or her age, gender, size, and activity level. These amounts can be met by selecting specific foods within each of the different categories each day. Calorie counting is usually only needed initially to help individuals understand portion sizes and learn how to balance choices of protein, fat, and carbohydrate-rich foods. As one becomes more practiced in following the CFP, the quality of foods—rather than calorie amounts—will become more of a priority. Once balancing quality protein, fat, and carbohydrates in meals becomes intuitive, there will be no need to count calories.



Core Food Plan

PROTEINS *Proteins*

Servings/day_____

Lean, free-range, grass-fed, organically grown animal protein; non-GMO, organic plant protein; and wild-caught, low-mercury fish preferred.

Animal Protein:
- ☐ Cheese (hard)–½ oz
- ☐ Cheese (low-fat)–1 oz
- ☐ Cottage cheese (low-fat)–¼ c
- ☐ Feta cheese (low-fat)–1 oz
- ☐ Parmesan cheese–2 T
- ☐ Ricotta cheese (low-fat)–¼ c
- ☐ Egg–1; or 2 egg whites
- ☐ Fish/Shellfish–1 oz
- ☐ Meat: Beef, buffalo, elk, lamb, venison, other wild game–1 oz
- ☐ Poultry (skinless): Chicken, Cornish hen, duck, pheasant, turkey, etc.–1 oz

Plant Protein:
- ☐ Mung bean/ Edamame pasta–1 oz
- ☐ Natto–1 oz
- ☐ Nutritional yeast–2 T
- ☐ Spirulina–2 T
- ☐ Tempeh–1 oz
- ☐ Tofu (firm/extra firm)–1½-2 oz
- ☐ Tofu (soft/silken)–3 oz

Protein Powder:
- ☐ Check label for # grams/scoop (*1 protein serving=7 g*) Egg, hemp, pea, rice, soy, whey

1 serving as listed = 35-75 calories, 5-7 g protein, 3-5 g fat, 0-4 g carbs

Average protein serving is 3-4 oz (size of palm of hand).

LEGUMES *Proteins/Carbs*

Servings/day_____

Organic, non-GMO preferred
- ☐ Bean soups–¼ c
- ☐ Black soybeans (cooked)–½ c
- ☐ Dried beans, lentils, peas (cooked)–½ c
- ☐ Edamame (cooked)–½ c
- ☐ Flour, legume–¼ c
- ☐ Green peas (cooked)–½ c
- ☐ Hummus or other bean dips–½ c
- ☐ Refried beans, vegetarian–½ c
- ☐ Veggie burger (non-GMO)–1 patty

1 serving = 90–110 calories, 3–7 g protein, 0 fat, 15 g carbs

DAIRY & ALTERNATIVES *Proteins/Carbs*

Servings/day_____

Unsweetened, organic preferred

Dairy:
- ☐ Kefir (plain)–6-8 oz
- ☐ Milk: Cow, goat–8 oz
- ☐ Yogurt, Greek (plain)–6 oz

Dairy Alternatives:
- ☐ Milk: Almond, coconut, flaxseed, hazelnut, hemp, oat, rice, soy–8 oz
- ☐ Yogurt: Coconut, soy (cultured)–4-6 oz
- ☐ Kefir: Coconut, soy–4-6 oz

1 dairy serving = 90–150 calories, 7-8 g protein, 12 g carbs

1 dairy alternative serving = 25–90 calories, 1–9 g protein, 1–4 g carbs (nutritional values vary)

NUTS & SEEDS *Proteins/Fats*

Servings/day_____

Unsweetened, unsalted, organic preferred
- ☐ Almonds–6
- ☐ Brazil nuts–2
- ☐ Cashews–6
- ☐ Chia seeds–1 T
- ☐ Coconut (dried)–3 T
- ☐ Flaxseed (ground)–2T
- ☐ Hazelnuts–5
- ☐ Hemp seed–1 T
- ☐ Macadamias–2-3
- ☐ Nut and seed butter–½ T
- ☐ Peanuts–10
- ☐ Pecan halves–4
- ☐ Pine nuts–1 T
- ☐ Pistachios–16
- ☐ Pumpkin seeds–1 T
- ☐ Sesame seeds–1 T
- ☐ Soy nuts–2 T
- ☐ Sunflower seeds–1 T
- ☐ Walnut halves–4

1 serving = 45 calories, 5 g fat

FATS & OILS *Fats*

Servings/day_____

Minimally refined, cold pressed, organic, non-GMO preferred
- ☐ Avocado–2 T or ⅛ whole
- ☐ Butter–1 t, 2 t whipped
- ☐ Chocolate, dark (70% or higher cocoa)–1 oz
- ☐ Coconut milk, regular (canned)–1½ T
- ☐ Coconut milk, light (canned)–3 T
- ☐ Ghee/clarified butter–1 t
- ☐ Half and half–2 T
- ☐ Mayonnaise (unsweetened)–1 t
- ☐ Oils, cooking: Avocado, butter, coconut (virgin), grapeseed, olive (extra virgin), rice bran, sesame–1 t
- ☐ Oils, salad: Almond, avocado, canola, flaxseed, grapeseed, hempseed, olive (extra virgin), pumpkin seed, safflower (high-oleic), sesame, sunflower (high-oleic), walnut–1 t
- ☐ Olives: Black, green, kalamata–8
- ☐ Pesto (olive oil)–1 T
- ☐ Salad dressing made with quality oils–1 T

1 serving = 45 calories, 5 g fat

Notes: *Nutritional amounts are based on average values for the variety of foods within each food category.*

Dietary prescription is subject to the discretion of the health practitioner.

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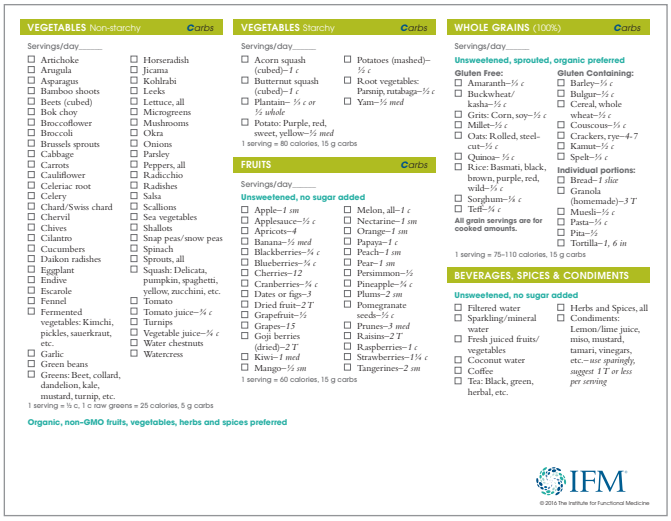

VEGETABLES Non-starchy *Carbs*

Servings/day_____
- ☐ Artichoke
- ☐ Arugula
- ☐ Asparagus
- ☐ Bamboo shoots
- ☐ Beets (cubed)
- ☐ Bok choy
- ☐ Broccoflower
- ☐ Broccoli
- ☐ Brussels sprouts
- ☐ Cabbage
- ☐ Carrots
- ☐ Cauliflower
- ☐ Celeriac root
- ☐ Celery
- ☐ Chard/Swiss chard
- ☐ Chervil
- ☐ Chives
- ☐ Cilantro
- ☐ Cucumbers
- ☐ Daikon radishes
- ☐ Eggplant
- ☐ Endive
- ☐ Escarole
- ☐ Fennel
- ☐ Fermented vegetables: Kimchi, pickles, sauerkraut, etc.
- ☐ Garlic
- ☐ Green beans
- ☐ Greens: Beet, collard, dandelion, kale, mustard, turnip, etc.
- ☐ Horseradish
- ☐ Jicama
- ☐ Kohlrabi
- ☐ Leeks
- ☐ Lettuce, all
- ☐ Microgreens
- ☐ Mushrooms
- ☐ Okra
- ☐ Onions
- ☐ Parsley
- ☐ Peppers, all
- ☐ Radicchio
- ☐ Radishes
- ☐ Salsa
- ☐ Scallions
- ☐ Sea vegetables
- ☐ Shallots
- ☐ Snap peas/snow peas
- ☐ Spinach
- ☐ Sprouts, all
- ☐ Squash: Delicata, pumpkin, spaghetti, yellow, zucchini, etc.
- ☐ Tomato
- ☐ Tomato juice–¾ c
- ☐ Turnips
- ☐ Vegetable juice–¾ c
- ☐ Water chestnuts
- ☐ Watercress

1 serving = ½ c, 1 c raw greens = 25 calories, 5 g carbs

Organic, non-GMO fruits, vegetables, herbs and spices preferred

VEGETABLES Starchy *Carbs*

Servings/day_____
- ☐ Acorn squash (cubed)–1 c
- ☐ Butternut squash (cubed)–1 c
- ☐ Plantain– ⅓ c or ½ whole
- ☐ Potato: Purple, red, sweet, yellow–½ med
- ☐ Potatoes (mashed)–½ c
- ☐ Root vegetables: Parsnip, rutabaga–½ c
- ☐ Yam–½ med

1 serving = 80 calories, 15 g carbs

FRUITS *Carbs*

Servings/day_____

Unsweetened, no sugar added
- ☐ Apple–1 sm
- ☐ Applesauce–½ c
- ☐ Apricots–4
- ☐ Banana–½ med
- ☐ Blackberries–¾ c
- ☐ Blueberries–¾ c
- ☐ Cherries–12
- ☐ Cranberries–¾ c
- ☐ Dates or figs–3
- ☐ Dried fruit–2 T
- ☐ Grapefruit–½
- ☐ Grapes–15
- ☐ Goji berries (dried)–2 T
- ☐ Kiwi–1 med
- ☐ Mango–½ sm
- ☐ Melon, all–1 c
- ☐ Nectarine–1 sm
- ☐ Orange–1 sm
- ☐ Papaya–1 c
- ☐ Peach–1 sm
- ☐ Pear–1 sm
- ☐ Persimmon–½
- ☐ Pineapple–¾ c
- ☐ Plums–2 sm
- ☐ Pomegranate seeds–½ c
- ☐ Prunes–3 med
- ☐ Raisins–2 T
- ☐ Raspberries–1 c
- ☐ Strawberries–1¼ c
- ☐ Tangerines–2 sm

1 serving = 60 calories, 15 g carbs

WHOLE GRAINS (100%) *Carbs*

Servings/day_____

Unsweetened, sprouted, organic preferred

Gluten Free:
- ☐ Amaranth–⅓ c
- ☐ Buckwheat/ kasha–½ c
- ☐ Grits: Corn, soy–½ c
- ☐ Millet–⅓ c
- ☐ Oats: Rolled, steel-cut–½ c
- ☐ Quinoa–½ c
- ☐ Rice: Basmati, black, brown, purple, red, wild–⅓ c
- ☐ Sorghum–¼ c
- ☐ Teff–¼ c

Gluten Containing:
- ☐ Barley–⅓ c
- ☐ Bulgur–½ c
- ☐ Cereal, whole wheat–½ c
- ☐ Couscous–½ c
- ☐ Crackers, rye–4-7
- ☐ Kamut–½ c
- ☐ Spelt–½ c

Individual portions:
- ☐ Bread–1 slice
- ☐ Granola (homemade)–3 T
- ☐ Muesli–½ c
- ☐ Pasta–½ c
- ☐ Pita–½
- ☐ Tortilla–1, 6 in

All grain servings are for cooked amounts.

1 serving = 75–110 calories, 15 g carbs

BEVERAGES, SPICES & CONDIMENTS

Unsweetened, no sugar added
- ☐ Filtered water
- ☐ Sparkling/mineral water
- ☐ Fresh juiced fruits/ vegetables
- ☐ Coconut water
- ☐ Coffee
- ☐ Tea: Black, green, herbal, etc.
- ☐ Herbs and Spices, all
- ☐ Condiments: Lemon/lime juice, miso, mustard, tamari, vinegars, etc.–*use sparingly, suggest 1 T or less per serving*

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Proteins: Plant and Animal Sources

The two key words to remember when choosing plant and animal proteins are lean and clean. As Michael Pollan writes in his book, Food Rules, **"Eat animals that have themselves been well fed."** Grass-fed and pasture-raised 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 (GMO). Because the long-term effects of eating GMOs are not known, the CFP recommends choosing soy that is 100% organic, which by definition includes no GMO ingredients. High-quality organic soy foods like soybeans (edamame) and soy sauce can be included in stir-fries, spreads, sauces and dips. Additionally, fermented soy provides protein as well as beneficial bacteria. Examples of fermented soy foods are miso soup, tempeh, and natto. For those who avoid soy, alternative, non-soy plant proteins include protein powders, legumes, nuts, seeds, dairy products, and dairy alternatives.

Quick Tip: 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: *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 typical serving size of animal protein for a meal (3 to 4 ounces) is about the same size as the palm of an average-sized human hand. The size of a fist (approximately ¾–1 cup) is the serving size for plant-based proteins like tofu, tempeh, or edamame, as well as dairy proteins like cottage cheese.*

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

Tips for eating lean and clean protein sources include:

- Eating lean animal protein at each meal and snack to promote satiety and keep blood sugar stable
- Consuming lean cuts of red meat (lean loin, tenderloin, and flank cuts) from free-range sources
- Using omega-3-rich eggs from free-range hens as a quick protein source for meals or snacks
- Using 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 nutrients like B vitamins, potassium, and magnesium. They are a perfect way to get both quality protein and complex carbohydrates that will promote satiety and keep 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 preferred, but not necessary, to eat these complementary foods at the same meal. However, complementary foods should be consumed 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 beans, rinse first to reduce the salt content before making hummus. You can also add canned beans to salads or soups.

Tips for eating more legumes include:

- Spreading hummus on a tortilla, or in place of mayonnaise on a sandwich
- Using hummus as a dip for vegetables or organic corn chips for a healthy snack
- Adding black beans or red kidney beans to salads and soups
- Eating edamame as a snack
- Combining 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 due to dairy sensitivities or ethical reasons. For these individuals, the CFP provides a separate list of dairy alternatives. The CFP encourages choosing organic dairy products and organic 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. Only milk alternatives labeled 'unsweetened' should be used. The coconut milk in this category is generally the boxed or watered variety. The coconut milk in the fats category of the CFP list is the canned variety, which is much higher in fat. When buying any canned products, only those labeled "BPA-free" should be purchased in order to avoid exposure to toxins.

Quick Tip: Yogurt and kefir from fermented dairy and dairy alternatives are also a rich source of beneficial bacteria that support gastrointestinal health, and these foods should be consumed often. Organic, plain varieties of these products are the best choices to consider.

Tips for incorporating healthy dairy/dairy alternatives into meals include:

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

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, so it's important to choose organic peanuts and peanut butters whenever possible. In general, any nut butters consumed while following the CFP should have no added sugars or fats. For vegetarians and vegans, nuts and seeds need to be combined with complementary foods in order to provide a complete protein.

Caution: *Individuals with nut allergies should 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. Those with diverticulitis should avoid all whole nuts and seeds, but might consider smooth nut and seed butters as listed on the CFP food lists.*

Tips for incorporating nuts and seeds into meals and snacks include:

- Consuming high-quality, low-heat-roasted nuts and seeds as a snack or sprinkled on top of salads, soups, and smoothies
- Spreading 1 to 2 tablespoons of nut or seed butters on celery or an apple
- Adding 1 tablespoon of ground flaxseed or chia seeds to your favorite smoothie or unsweetened applesauce
- Spreading 1 to 2 tablespoons of nut or seed butter on a rice cake and topping with fresh fruit
- Drizzling tahini (sesame seed butter) over vegetables or 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 the 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 be challenging for some.**

People have become fearful of eating fats in general because they are known to be high in calories and, as such, are 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 found in margarine, store-bought salad dressings, and other processed foods. If the label lists "partially hydrogenated fat" of any type on the ingredient list, the food should not be eaten.

Oils listed on the CFP are anti-inflammatory, minimally-processed, omega-3-rich, monounsaturated, and beneficial. These oils should be used in small amounts in meals and snacks, and should be organic whenever possible. Look for "cold-pressed", "expeller-pressed", "unrefined" and "extra virgin" on labels 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 the body absorb Vitamin D for strong bones and optimal immune function.

Tips for incorporating healthy fats into meals each day include:

- Drizzling olive oil on a fresh salad or sautéed vegetables
- Making fresh guacamole to spread on foods or use as a dip, or slicing ripened avocados over eggs, salads, soups, or a turkey sandwich
- Adding black, green, and purple olives to salads, or eating them as a snack (rinsed before eating to reduce sodium content)
- Limiting beneficial saturated fats to approximately one or two servings per day
- Choosing organic extra-virgin coconut oil and BPA-free canned coconut milk
- Consuming a small amount of dark chocolate (at least 70% cacao)

Non-Starchy Vegetables

Healthy eating is not all about cutting back. Most people need to **add more fruits and vegetables** to their diet. A **minimum** of 5 to 9 servings of fruits and vegetables should be consumed per day, with an emphasis on non-starchy vegetables. For every 2 to 3 fruits, a total of 6 to 7 servings of non-starchy and green vegetables is the goal. Another goal is to aim for variety and color by eating 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. The thousands of healthful compounds in plants can lower the risk of cancer, heart disease, diabetes, and other chronic diseases. Both the quality of vegetables (fresh and organic when possible) and the method of preparation are important. Raw and lightly steamed is preferred, but vegetables can also be sautéed at low or moderate temperatures, and stir-fried at higher temperatures. When cooking at higher temperatures, oils with higher smoke points should be used. These oils include avocado oil, and sesame oil. When cooking at low or moderate temperatures, those with low to medium smoke points (olive oil, butter, ghee, coconut oil) are more suitable.

The CFP will help individuals formulate a strategy for eating 9 to 12 servings of vegetables per day. One serving of non-starchy vegetables is equal to ½ cup cooked or raw vegetables. The exception is raw greens, for which one serving is equal to 1 cup. The goal is to see how many different colors and varieties of vegetables a person can incorporate into meals each day.

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

Tips for incorporating non-starchy vegetables into meals include:

- Adding greens to smoothies, egg dishes, and soups for flavor and color
- Using greens as alternatives to tortilla wraps or buns
- Creating the base of a salad with a variety of greens and colorful vegetables, and topping it with lean proteins and healthy fats
- Taking time to clean and prep vegetables right after purchase, then storing them 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 appropriate selections can be made 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. When estimating serving sizes, it is important to remember that one serving of fresh fruit is about the size of a small fist. The CFP suggests 2 to 3 servings of fruit per day.

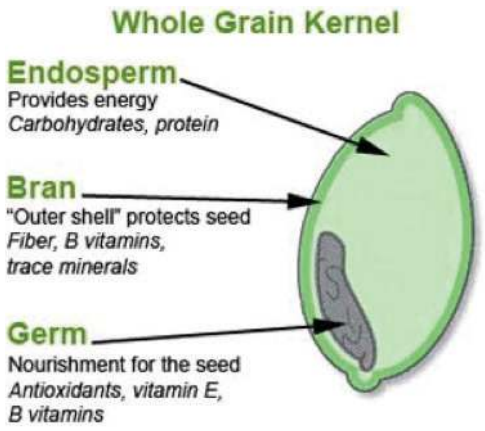
Quick Tip: Fresh raw or frozen fruit (no sugar added) can be included with breakfast, eaten as a snack, added to smoothies, or made into healthy desserts.

Tips for eating a variety of fruits each day include:

- Adding ½ cup of fresh blueberries to a bowl of warm steel-cut oats
- Topping any smoothie or Greek yogurt cup with fresh fruit to add color and flavor
- Pairing a serving of fruit with a small handful of nuts or seeds for a perfect portable snack

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). The CFP lists all whole grains as acceptable, but individuals should follow their practitioners' specific recommendations for grain consumption. Some argue that genetic modification of wheat, corn, and soybeans may impact the health effects of these grains. These claims have yet to be scientifically investigated, but individuals are advised to observe how any of the foods included in this plan, including grains, make their bodies feel or react.



(diagram source: www.elements4health.com)

The CFP suggests minimizing grains in the daily diet, with no more than 1 to 2 servings per day for most individuals (unless a practitioner states otherwise). The food plan also recommends eating only organically-grown, non-GMO whole grains. For individuals who want to limit or avoid exposure to gluten, grains are separated into two categories: gluten-free grains and gluten-containing grains.

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 ⅓ to ½ cup, about the size of a 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. Any of these grains can be used in combination with oats–or in place of oats—to make a tasty hot cereal.

Tips for incorporating appropriate amounts of whole grains into meals include:

- Dipping organic blue corn chips into hummus, guacamole, or fresh salsa
- Substituting whole-wheat pasta with quinoa, brown rice, or corn pasta to avoid gluten
- Topping a brown rice cake with almond butter and fresh fruit for a snack
- Making hot cereals with quinoa and amaranth on cold mornings

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. However, total avoidance isn't always possible. Reading and understanding food labels can help people limit unwanted additives. Additionally, additives can be avoided altogether when making healthier versions of condiments at home using common ingredients like herbs and spices.

Herbs are the fresh leaves of edible plants. Common herbs include cilantro, parsley, rosemary, oregano, and thyme. When herbs are dried, they are referred to as spices. Spices are edible and aromatic, and can come from a plant's root, stem, bark, bud, leaves, flower, fruit, or seed. Spices provide high levels of phytonutrients that help fight disease. When buying spices, fillers (like sugar, maltodextrin, gluten, artificial colors, preservatives, or synthetic anti-caking agents) should be avoided. Ideally, spices should be stored in glass containers, rather than plastic, to avoid exposure to toxins. Organically-grown herbs and spices are preferred whenever possible.

Both herbs and spices can give meals a boost of flavor, which will make it easier to avoid additive-laden condiments. In addition to the flavor and taste they provide, herbs and spices are often medicinal, too.

Preferred condiments:

- Apple cider, rice, and balsamic vinegars
- Bragg Liquid Aminos™
- Coconut aminos
- Herbamare™
- 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

Many herbs and spices have medicinal properties. Some common medicinal herbs and spices include basil, cardamom, cayenne, cinnamon, cloves, cumin, dry mustard, fenugreek, garlic, ginger, oregano, rosemary, thyme and turmeric. Additionally, healing properties have been observed in 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, with most blends containing coriander, cumin, fenugreek, red pepper, and turmeric.

When buying and storing herbs and spices, follow these tips:

- Avoid buying large quantities in bulk; purchase only what you will use within a few months. Store bulk herbs and spices in airtight glass or tin containers, and throw out old herbs and spices.
- Buy herbs and spices in their fresh, dried, whole, cracked, coarsely ground, and finely ground forms.
- Store herbs and spices in a cool, dark place. Exposure to heat, light, and moisture will accelerate the loss of flavor. High temperatures can also cause spices to cake or harden and change or lose color.
- To increase shelf life, close containers tightly after using, and don't store spices near the stove. With proper storage, ground spices will keep for about a year and whole spices for up to 2 or 3 years.
- To test for freshness, rub between fingers and sniff for aroma.

Tips for including more herbs and spices in your meals include:

- Adding brewed tea to smoothies
- Making a simple salad dressing by combining extra-virgin olive oil, lemon juice, finely chopped garlic, and basil
- Adding dry or Dijon mustards to dishes for a flavor boost
- Topping salads or sandwiches with fresh herbs such as cilantro, chives, basil, or mint
- Sprinkling cumin or fennel seeds in soups or salads
- Marinating lean meats in curry powder or curry pastes
- Sprinkling cinnamon and nutmeg over oatmeal, whole grain toast, a cup of steamed soymilk, or vegetables (e.g., green beans)
- Adding fresh parsley or chives to scrambled eggs
- Stewing fruits with a cinnamon stick and a vanilla pod
- Steeping lemongrass, ginger, or mint in hot water
- Adding freshly grated garlic to mayonnaise
- Adding fresh or dried herbs to your favorite pasta dish
- Adding spices to ghee (clarified butter), honey, oils, or salt

Beverages

Staying hydrated helps rid the body of toxins, builds resilience to stress, enhances metabolism, and promotes satiety. Everyone should drink clean, filtered water throughout the day, but an individual's recommended intake will depend on his or her weight (see the Quick Tip below). In addition to water, broths, herbal teas, and other decaffeinated beverages are good choices. Alcohol, caffeinated beverages, and sugary beverages should be limited, as they tend to dehydrate the body and raise cortisol and blood sugar levels.

Quick Tip: To determine an individual's hydration needs, calculate body weight in pounds and divide in half. The resulting figure is the number of ounces of water to consume each day. For example, an individual who weighs 128 pounds should consume at least 64 ounces of water (8 eight-ounce cups) each day (128 ÷ 2 = 64). Note that fruits and vegetables count as an additional source of water.

Tips for enhancing hydration status include:

- Adding a slice of lemon or lime or a splash (about an ounce) of 100% natural pomegranate, cherry, or cranberry juice to a 32–ounce water bottle twice a day, for a total of 64 ounces of liquid.
- Keeping 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.
- Exploring 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 a wide variety of high-quality, whole, and mostly 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, or fuel to perform the required work in every cell of the body. Every cell, tissue, and organ needs fuel to function. A person's quality of life is largely based on how well their body can work, move, and act. By providing the body with fuel of the highest quality, we ensure that our bodies are able to function well and keep all of the body systems optimized.

What does the body use for energy? Macronutrients—protein, fats, and carbohydrates (known collectively as PFC)—and micronutrients—minerals, vitamins, and phytonutrients (known collectively as MVP)—all of which are derived from food and help your body perform its best.

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 carbohydrates (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; it is also a source of information for the body. With every bite taken, food has the ability to turn on or off genes that control disease risk, lifespan, and metabolism. Certain foods can impact blood sugar, or even trigger allergic reactions, inflammation, or autoimmune responses. Food has the potential to provide the body with what it needs to function at its best level. If the body isn't given the right information, it won't work well, and an individual's health may decline. If too much food is taken in—or if the food gives the body the wrong instructions—a person can become simultaneously overweight and undernourished, and can increase their risk of developing many different diseases.

For example, choosing to eat clean food that is organically grown and not sprayed with chemicals helps reduce the number of toxic substances in the body and gives the body the best information to signal health. Fresh organic or unsprayed food has many health benefits, namely that it has more minerals, vitamins, and phytonutrients. For these reasons, it's important to focus on buying food at local farmers' markets, and to look for the label, "organic" or "locally grown" on produce.

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 share meals with our communities, and our ethnic backgrounds determine what and how we eat. Food is used for celebration and ceremony, and to honor and enjoy traditional cultures. Through the process of eating with others, we can also practice mindfulness and intention.

Eating mindfully involves the following:

- Becoming knowledgeable about portion sizes, balancing meals with healthy nutrients, and actively managing food cravings through awareness
- Developing an appreciation for the path of food—from soil to table—and becoming aware of the benefits of plant-based foods
- Eating a variety of colors and flavors to get the full spectrum of healthy compounds from food in every meal
- Taking time to enjoy meals with others when possible, and avoiding eating while working, commuting, or watching TV
- Chewing 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 with 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 we truly are what we eat! The key is making an effort to choose nutrient-rich foods that send the right healthy signals to the body for positive gene expression and optimal health. Eating high quality foods can have a positive influence on the 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 high-quality food is a way to invest in and manage health now. Buying organic food is less expensive than the inevitable health challenges that will arise from eating a nutrient-poor diet. Investing in health now will help prevent the loss of time, money, and energy spent on drugs, surgery, and other procedures later. 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 to minimize exposure to pesticides, insecticides, hormones, antibiotics, irradiated food, herbicides, and GMOs. This can be done, in part, by consuming organically-grown food whenever possible. 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 published annually by 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 certified organic label 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.

To further reduce the risk of 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 to 4 ounces (about the size of an average human palm) of protein at each meal, but people with higher energy needs (e.g., athletes and pregnant or nursing women) will need more protein in each meal. Recommendations for protein vary 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 food routines should be changed daily. Instead of eating eggs every day for breakfast, choose alternatives that will help supply the body with a diverse array of nutrients.

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

There are several variations of vegetarianism supported in this plan:

- VO **Ovo-vegetarians** include eggs, but avoid all meat, poultry, fish, and dairy products.
- VL **Lacto-vegetarians** include dairy products, but avoid all meat, poultry, fish, and eggs.
- VOL **Ovo-lacto-vegetarians** include eggs and dairy products, but avoid all meat, poultry, and fish.
- P **Pescatarians** add fish to any of the above variations.
- VE **Vegan**s omit ALL animal products, including honey.

Additionally, the CFP includes separate food lists for vegetarians and vegans.

How does a vegetarian get adequate protein?

By including adequate amounts of legumes, whole grains, green leafy vegetables, seeds, and nuts into meals, vegetarians and vegans can easily eat enough quality protein. For vegetarians who eat eggs and dairy products, getting adequate protein is even easier, because these foods provide complete proteins. For vegans, 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 to 3 grams), ½ cup organic tofu or soy product (10 grams), legumes—such as lentils (9 grams), edamame or green soybeans (6 grams)—and 1 cup of soy milk (7 grams). Vegans will have more of a challenge, but will still be able to obtain adequate protein from food 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 found in local farmer's markets or the outside aisles of the supermarket, there are times when access to a quick and easy source of vegetarian protein will be necessary.

There are many healthy vegetarian burger recipes available on the internet, and these vegetarian burger patties can be made from scratch with fresh ingredients and stored 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 the grocery store contain unsuitable ingredients for a healthy diet, but there are some with well-sourced, high-quality 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. Although very nutritious, some find the odor and texture of natto a bit foreign or unappealing at first, making it an acquired taste. For added flavor and variety, natto can be added to dishes like brown rice bowls and miso soup.

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

For the most part, a combination of raw and cooked foods in the diet is preferred, and the most appropriate method of preparation will depend upon the desired benefit (see below). 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 digestive issues (e.g., lots of bloating, bowel movement problems, inflammation, gas, and pain) will often benefit more from cooked plant foods.

Healthcare providers and Functional Nutritionists can provide important information about phytonutrients, as well as instructional materials aimed at teaching individuals how best to prepare and cook fruits and vegetables. Here are some general guidelines:

- Steaming or waterless cooking methods help preserve the vitamins and other nutrients in vegetables far better than high-heat cooking methods like boiling. 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 boiling may deactivate an enzyme called myrosinase that produces anti-cancer compounds.
- In general, cook only to the point of making the vegetables tender, not soft.
- The nutrient content of foods like seeds, nuts, and legumes can be increased using certain preparation methods, including heat, soaking, fermentation, germination, and malting.
- Cooking increases the beneficial antioxidant content in the following foods: 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, but it does limit possible exposure to pesticides if the produce is not organically grown.
- Don't pre-soak vegetables before cooking to make them soft, as nutrients will be lost in the water.

Are frozen fruits and vegetables okay to eat?

While fresh fruits and vegetables are always preferable, frozen fruits and vegetables are acceptable when cost, time, or availability is an issue. Freezing foods will reduce flavor a bit, and 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 the final nutrient content will be mostly retained. Studies have shown that some foods, like blueberries, can retain their phytonutrient content after freezing.

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

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 9 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.

The goal of the CFP is variety—even in fat and oil choices. While extra-virgin olive oil is more of a "staple" oil—one to be used most frequently for salad dressings and low- to medium-heat cooking—coconut oil may also be used, especially when cooking at a higher heat, such as when stir frying. In general, though, it's not best to use high heat for cooking. A better way to cook 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. Additionally, the medium-chain fats are absorbed directly into the lining of the small intestine, making them a good choice for people with gastrointestinal issues. Coconut oil that is refined (like most other oils), however, is not healthy. It is best to use no more than 3 teaspoons (or 1 tablespoon) of coconut oil that is labeled virgin and organic. Coconut milk is also a wonderful way to add flavor to stir-fried foods, curries, and soups.

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 to refrain from added sweeteners as much as possible. The damaging effects from inflammation that sugar can have on the 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. When craving something sweet, low- to moderate-glycemic index fruits on the CFP are the best choices. 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 the hidden sugars in those products are not a concern. 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 avoiding very sweet foods, eating naturally sweet fruits like apples, berries, and oranges, can satisfy the cravings. Even using apple juice concentrate in cooking and baking will help. 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 (but are not limited to) the following: aspartame (NutraSweet®), sucralose (Splenda®), acesulfame-K (Ace K, Sweet One, Sunett®), and saccharin (Sweet N' Low®). More information on sweeteners can be found in 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 the brain by lowering blood pressure and opening up blood vessels. The phytonutrients in red wine, such as resveratrol, help to relax the 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. A healthcare practitioner familiar with an individual's health history can help determine whether moderate or occasional use of alcohol would be appropriate and consistent with health goals. For a generally healthy man, 1 to 2 glasses (5 ounces, or ⅔ 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. Another option is to eat foods 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, which may lead to feeling more wired and "on edge." For those sensitive to caffeine (most people know if they are), it can cause a fast heart rate and abnormal heart rhythms. On the other hand, coffee contains important phytonutrients like chlorogenic acid and caffeic acid, which may help the liver process blood sugar. Also, moderate consumption of up to 3 eight-ounce cups daily has been shown to be associated with lower rates of T2D. Needs, preferences, and sensitivities will vary from person to person, and healthcare practitioners should discuss these factors with individuals when designing a new diet and lifestyle plan. For those who enjoy the taste of coffee, a solution might be switching from caffeinated to decaffeinated coffee with no added sugar. A small amount of caffeine (5-50 milligrams) is found in decaffeinated coffee, so there would still be some effect. Another option would be to combine 4 ounces of caffeinated coffee with 4 ounces of decaffeinated coffee for a period of two weeks before switching entirely to 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 a typical cup of coffee, and it can be purchased in non-caffeinated varieties. Green tea contains anti-inflammatory and antioxidant phytonutrients. Drinking both green and black teas has been associated with a 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?

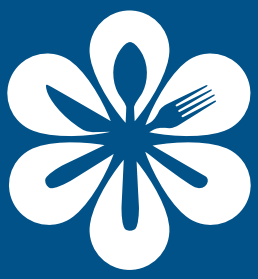
Miso is a traditional Japanese seasoning made by fermenting soybeans with other ingredients. While miso can be a soy protein source, it doesn't fit the macronutrient profile of other soy foods. It is best used as a condiment, as only a few tablespoons are considered to be a serving. Miso may be added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

The CFP represents a phytonutrient-dense and 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 what information is the most accurate. The World's Healthiest Foods 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 the questions not covered in this Comprehensive Guide.



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