




Chapter 1 • Nutrition Basics

Why Do We Call Food "Primary Medicine"?

What we eat – and are able to absorb – plays a fundamental role in our long-term health and in our ability to protect from and heal illness. Increasingly, scientists, researchers and health providers are recognizing this link between diet and health.

When you stop and think about it, this comes as no surprise. For tens of thousands of years, humans and our pre-human ancestors evolved interdependently with the plants, fungi and animals we found in our immediate environments. We learned how to make foods digestible through cooking and various forms of fermentation, but beyond that foods were as close to their whole form as possible. Only in the past hundred years have highly processed and chemically created foods become part of our diets. In our busy lives, we are turning more and more to "convenience" and take-out foods – many of which would be unrecognizable to our ancestors and are also unrecognizable to our bodies.

"Human beings, after all, do not eat solely to live, they wish that life to be as long and as agreeable as possible. This quest for longevity has led humankind to seek benefits from food that are greater than nutritional value alone; food was the only available resource that could have positive effects on health and prolong existence. Therefore it should not be surprising that the history of medicine is bound up with that of food and diet; food, for a very long time, was humanity's only medicine."

– Foods to Fight Cancer

There is no one explanation for the epidemic of disease that we see happening all around us. Longer life spans, stress, lack of exercise and pollution in our environment all probably have a part to play. But the radical change in our eating habits and the stress this puts on our bodies is clearly one of the keys.

In *Foods to Fight Cancer*, scientists Richard Beliveau and Denis Gingras claim that 70 percent of all cancers can be avoided by factors that are under our control – by changing our diets, quitting smoking, maintaining a healthy weight and avoiding drugs and excess alcohol. Rather than thinking of cancer – and heart disease and diabetes – as something you don't have control over, we encourage you to discover that you can have enormous impact on your health by the choices you make every day.

> *Most American diets fall into one of two broad categories: "Western" or "prudent." The prudent diet is a nutritionist's dream. People in this category tend to eat [primarily] fish, poultry, cruciferous vegetables (i.e. cabbage and broccoli), greens, tomatoes, legumes, fresh fruits, and whole grains. They skimp on fatty or calorie-rich foods such as red meats,*

eggs, high-fat dairy products, French fries, pizza, mayonnaise, candy, and desserts.

The Western diet is the prudent diet reflected in a carnival mirror. Everything is backwards: Red meat and other fatty foods take the forefront, while fruits, vegetables, and whole grains are pushed aside. In addition to fat and calories, the Western diet is loaded with cholesterol, salt, and sugar. If that weren't bad enough, it's critically short on dietary fiber and many nutrients – as well as plant-based substances (phytochemicals) that help protect the heart and ward off cancer. –"What's Wrong with the American Diet?"

The foods available to us today range widely in their effect on our health – from strongly supportive to virtually toxic. When we eat things that our body doesn't recognize (chemically created "low fat" foods for example), or too much of something that our body isn't used to from an evolutionary perspective (such as a lot of refined white sugar), it disturbs our body's balance. Valuable energy is spent trying to process and eliminate these foods and we lack the nutrients and phytochemicals we need for healthy functioning.

Eating a plant-based, whole foods and organic diet is the foundation for long-term health – this is why, at The Ceres Community Project, we call these foods "primary medicine".

This doesn't mean that you have to stick to a diet of organic brown rice and collard greens to be healthy! Our bodies are amazingly resilient and have the capacity to process some amount of refined sugars, alcohol, preservatives and so on. If you are basically healthy, sticking to the 80/20 rule will probably work for you – 80 percent of your diet coming from organic, plant-based whole foods and 20 percent not quite that nutrient-dense. If you are not at optimum health, however, we encourage you to eliminate most if not all of those foods that don't actively support your body – that includes all processed and refined foods, sugar in all its forms, alcohol and foods containing chemical preservatives.

As you'll discover in the recipes that follow, eating for health also doesn't mean that you have to sacrifice taste. At The Ceres Community Project we believe food must be beautiful, delicious *and* nutritious in order to be truly nourishing. Body, mind, soul and spirit are inextricably connected. When we feed our souls, our bodies are nurtured as well.

Here are a few facts about our current eating habits and their effect on our health:

- Americans in 2000 ate an average of 2,700 calories a day, up 24.5% or 530 calories per day from 1970. That equates to an additional 56 pounds of body weight per person per year.
- The increase comes from refined grains (9.5%), fats and oils (9.0%) and sugar (4.7%).
- The average American is eating 152 pounds of refined sugar per year – that's equivalent to more than 1 cup per person per day.
- Only 11% of Americans are eating the recommended 5 to 9 servings per day of fruit and vegetables – and this includes dried fruit and 100% fruit juice, potato chips and French fries, ketchup, pizza sauce and iceberg lettuce.
- More than half of our meals are now eaten away from home.
- 66% of adults are overweight and 27% are obese. One-third of all children are overweight.
- Estimates are that by 2012, one in three children will be diabetic.
- Cancer now affects one in three people before the age of 75 and one in four will die from complications caused by the disease.
- 52.5% of all deaths in the United States – from heart disease, cancer and diabetes – are directly related to the combination of poor nutrition, obesity and inactivity.
- An estimated one-third of the 565,650 cancer deaths expected in 2008 – or 188,000 – are believed to be directly related to diet, overweight or obesity, and/or physical inactivity.

Beyond the Physical Food-Health Connection

There is another way of looking at the food we eat that has nothing to do with how nutritious it is for our bodies, but might contribute just as much to our wholeness and long-term vitality. Food is our most fundamental connection to both ourselves and the world around us.

When we eat, we take in the energy of the cosmos formed over 14 billion years into the immense complexity of the plant and animal kingdoms… and that energy becomes us. Human existence stands on the evolutionary shoulders of the plants, beginning with the single-celled organisms that figured out how to take sunlight and turn it into energy. This giant leap – what we now call photosynthesis – changed the oxygen content of Earth's atmosphere and ultimately allowed for the development of mammals and eventually the human species.

Plants continue to be the only organisms that can grow directly from the combination of water and sunlight. All other species are dependent on them in some form for their existence – and we humans are ultimately the most dependent.

For the past four or five hundred years, we have held the false and damaging notions of human separateness and superiority. As scientific understanding broadens, we have come to realize our absolute connection and dependence on the rest of creation. Today, there is a growing conversation among scientists, cosmologists and spiritual leaders about what contribution humans might play in and for the larger whole of life. What is the role of humans? One suggestion, offered by Professor Brian Swimme, is that humans bring the capacity to reflect and celebrate life's magnificence, that it is our job to sing the praises of the rest of creation.

"Think about it! When you breathe, you breathe the creations of a star. All the life you will live is possible because of the gifts of that star. Your life has been evoked through the work of the heavens…The air we breathe, the food we eat, the compounds out of which we are composed: all are creations of the supernova.

When we deepen our awareness of the simple truth that we are here through the creativity of the stars, we begin to feel fresh gratitude. When we reflect on the labor required for our life, reverence naturally wells up within us. Then, in the deepest regions of our hearts, we begin to embrace our own creativity. What we bestow on the world allows others to live in joy."

– Brian Swimme,
The Universe is a Green Dragon

When we realize that we are literally given life through the gifts of the plant worlds, we come to food from a new and deeply grateful place. We understand that human life is possible because of the enormous creativity of plants over millions of years. When we walk through a farmers' market, we are touched by the abundance and generosity of the earth. When we sit down to eat, we understand that the food on our plate is the result of billions of years of the universe's unfolding, and that we, just like the plants and animals, are intricately interwoven into that creation.

What we eat becomes *us*. When we eat with awareness of the gift food is, we locate ourselves in the immense mystery of the creation. Gratitude springs naturally from this place and our lives are deepened and enriched by the knowing that we, too, have a place at the table.

The Basics: Plant-Based, Whole Foods, Organic

If you pay attention to the news, it might seem like you need a Ph.D. to figure out how to eat. The truth is, it's actually quite simple. We'll explore some of the details in the sections that follow, but if you remember this simple phrase you'll be at least 90 percent of the way there: *plant-based, whole foods, organic*. What is so important about these three concepts?

A *Plant*-Based Diet Is the Key

While no single nutrient or food can protect against diseases such as cancer, plant foods contain the minerals, vitamins and phytochemicals that seem to interact to provide extra support for good health. The American Institute of Cancer Research recommends that at least ⅔ of your plate be filled with vegetables, fruits, whole grains and legumes – the plant foods.

A second benefit of a predominantly plant-based diet is that it helps protect against weight gain – a contributing factor for many health conditions. Plant foods are low energy dense, low calorie foods.

Rather than focus on a small number of plant foods, your best bet is to eat a wide variety of vegetables, fruits, grains and legumes including foods from the following categories:

- cruciferous vegetables including broccoli, cauliflower, Brussels sprouts and cabbage;
- dark leafy greens like kale, chard, collard greens, romaine lettuce and bok choy;
- deep orange and red vegetables like butternut and other winter squashes, yams, tomatoes, and red, yellow and orange bell peppers;
- fruits such as blueberries, red grapes, strawberries and raspberries, and citrus fruits such as oranges, lemons, limes and grapefruit;
- whole grains such as brown rice, millet, quinoa, barley, buckwheat, oats and amaranth;
- legumes such as lentils, split peas, aduki beans, navy beans, black beans, kidney beans and garbanzo beans.

Eat the rainbow every day and you'll include foods with a broad range of nutrients in your daily diet.

"The range of healthful nutrient intake is broad, and foods from the earth, tree, or animal can be combined in a seemingly infinite number of ways to create diets that meet health goals. The attention paid to single nutrients, to individual foods, and to particular diseases distracts from the basic principles of diet and health… you are better off paying attention to your overall dietary pattern than worrying about whether any one single food is better for you than another."

– Marion Nestle, *What to Eat*

The *Whole* Is Greater than the Sum of the Parts

In our overly scientific age, we've spent an enormous amount of time and energy trying to identify specific nutrients that can protect against disease. Today, scientists are starting to question this approach. The chemical constituents of plants are extremely complex. Garden thyme, for example, contains 38 different antioxidants that we know of. We are a long way from understanding how these components work together to produce a certain result, but we are beginning to realize that the whole is greater than the sum of the parts.

Here's one example from researchers at the University of Idaho:

> *Preliminary research had indicated that beta-carotene, vitamins C and E and selenium were key dietary nutrients in the protection against several cancers. Later research showed that carotenoids (not beta-carotene specifically) and vitamin C may provide protection. However, when these conclusions were tested by supplementing the diet with these specific nutrients, provided singly or in combination, the results were not clear.*
>
> *To single out the nutrient(s) most researched, or most easily measured, or best known as an antioxidant of choice against cancer is a mistake. The present evidence makes it appropriate to conclude that foods rich in antioxidants and bioactive compounds, mainly fruits and vegetables, protect against cancer. The effect of the whole food is more powerful than the effect of a specific dietary nutrient.*

Eating foods that are as close to their whole state as possible provides the greatest potential for capturing this synergistic effect.

"When the health of one link of the food chain is disturbed, it can affect all the creatures in it. When the soil is sick or in some way deficient, so will be the grasses that grow in that soil and the cattle that eat the grasses and the people who drink the milk."

– Michael Pollan,
"Unhappy Meals"

Organic Food: Better for Us and the Planet

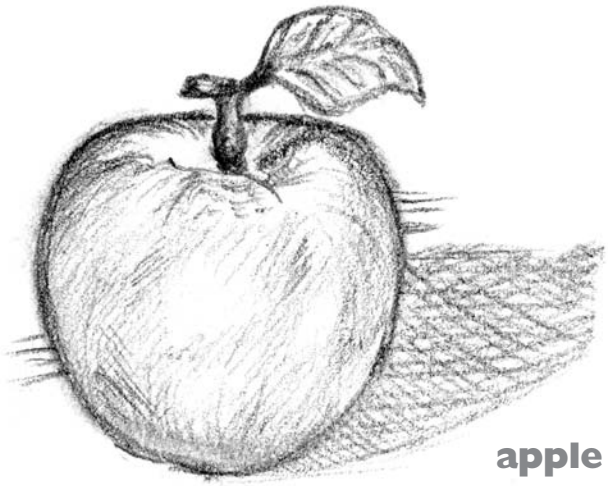
While the data on the nutritional content of organic versus conventional produce is not completely in, a number of important studies indicate that organic produce packs a greater nutritional punch than conventional produce given similar growing conditions, freshness and storage.

A four-year study funded by the European Union compared a number of crops grown side by side on a 725 acre site near Newcastle University in England. The study results showed 20 to 40 percent higher levels of antioxidants in organic versus conventional wheat, tomatoes, potatoes, cabbage and lettuce. Various studies of conventional versus organic produce at the University of California at Davis have shown higher levels of antioxidants, polyphenols, Vitamin C and some minerals in everything from sun-dried tomatoes to kiwis.

Even if the research is as yet inconclusive, these results make sense. Organic growers focus on maintaining soil health. Healthier soil rich in nutrients seems likely to translate into more nutrient-dense plants. Plants grown in healthy soils have the capacity to develop compounds that fight predators and disease. These compounds are passed on to us when we eat the vegetables, and help us in similar ways to resist infection and illness.

Beyond that, pesticide and herbicide use has enormous consequences for the health of the interconnected web of life that makes up our planet. If the planet isn't healthy, our long-term health clearly suffers as well. Pesticides have been linked to diseases from cancer to Parkinson's. For the sake of all of us, we encourage you to purchase organic foods whenever possible.

Making the change to a healthier diet starts with these three simple ideas. Eat a diet made up primarily of whole foods. Have at least ⅔ of your plate be plant foods such as vegetables, grains, beans and fruit. Choose organic foods whenever possible. If you keep these concepts in mind, and slowly but surely move your diet in these directions, you'll be on your way to better health.



apple

The American Institute of Cancer Research's Ten Recommendations

In November 2007, the World Cancer Research Fund (WCRF) and the American Institute of Cancer Research (AICR) published their *Second Expert Report on Food, Nutrition, Physical Activity and the Prevention of Cancer*. The study includes the following eight recommendations:

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day.
3. Avoid sugary drinks. Limit consumption of energy-dense foods (particularly processed foods high in added sugar, or low in fiber, or high in fat).
4. Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to 2 for men and 1 for women a day.
7. Limit consumption of salty foods and foods processed with salt (sodium).
8. Don't use supplements to protect against cancer.

And these two recommendations for special populations:

9. It is best for mothers to breastfeed exclusively for up to 6 months and then add other liquids and foods.
10. After treatment, cancer survivors should follow the recommendations for cancer prevention.

Simple and Satisfying: How To Nourish Yourself During Treatment with Almost No Cooking

Supporting our body through what we eat is relatively simple when we are well but becomes a bigger and more important challenge when we are dealing with a critical illness. Illness changes how our energy is used, effects our appetite and ability to eat, and adds nutritional demands. When we are ill and healing from a serious illness, every bite counts.

During a serious illness, the loss of vital energy may be one of the most difficult obstacles we face. Our store of energy is what allows us to do the physical, emotional and mental activities we aspire to during our waking day. Pain associated with illness can further deplete our reserves as the body seeks to repair itself.

How can you feed yourself well during those times – days, weeks or perhaps longer – when you have absolutely no energy? If you have enough money and a good quality grocery store in your neighborhood, you may be able to purchase a healthy array of ready-to-eat prepared foods. If you are blessed with friends and family nearby, they may be able to help by cooking some or all of your meals for you.

If you are like many of our clients, however, you have no extra money and very little support. In this section, we want to give you some suggestions for how to get the most nourishment with the least amount of work if you are ill and fending for yourself.

Here's a simple plan to use as a guideline.

Basic Weekly Plan

1. **Make a batch of Immune and/or Chicken Bone Broth.** Broth requires almost no chopping – most vegetables can be simply cut in two or three pieces and covered with water. It cooks unattended for 2 to 4 hours and you have a high-quality source of nutrition that you can sip either warm or cold.

   Immune Broth (page 186) is a potassium rich vegetable broth that is alkalinizing for the body. Chicken Bone Broth (page 187) includes organic bones that are cooked with vinegar or lemon juice for 12 to 24 hours to help draw out the marrow, creating a broth that is protein-rich.

2. **Cook 2 cups of a grain of your choice.** Soak the grain overnight, and then cook the grain using Immune Broth or Chicken Bone Broth instead of water (perhaps from your freezer if you've been able to make some at an earlier time), or purchased vegetable or

chicken broth. Add a piece of kombu (see Sea Vegetables, page 34) to add minerals and make the grain even easier to digest.

This will give you about 5 cups of a whole grain enhanced with the nutrients from the broth and sea vegetable. If you use a chicken broth, you'll have some added protein. Making the grain will take five minutes or less to start and then will cook virtually unattended for 15 to 40 minutes (depending on the grain you choose). A rice cooker with a timer will allow you to walk away and be assured that your grain will not burn.

3. **Make a batch of muesli.** Pour an equal amount of plain whole milk, non-dairy milk, kefir, or yogurt over some regular rolled oats and put it in the refrigerator. Let it sit overnight and then eat small amounts at a time with nuts, seeds and/or a bit of fruit. Adding a mashed banana or a bit of unsweetened applesauce will sweeten the muesli without sugar. (See recipe on page 60.)
4. **Use your blender to make smoothies.** Start with a dairy or non-dairy milk, kefir or coconut milk. Add whey or rice powder for added protein, a green powder, lecithin (which helps improve liver and gallbladder function and supports the health of cells) and fruit. See pages 67 and 68 for a few basic smoothie recipes.
5. **Add a few vegetables** – here's a list of cooked and raw vegetables that require almost no preparation:
   - Baked sweet potatoes, yams or regular potatoes
   - Baked acorn, butternut or other winter squash
   - Raw carrots, celery, cherry tomatoes, tiny asparagus spears, red, yellow or orange sweet peppers, cucumbers, romaine lettuce, spinach, arugula.
6. **If you are eating chicken or fish**, bake a small piece in the oven just until it is cooked through. Cool slightly, refrigerate and eat small amounts daily either warm or cold.

If you have a bit more energy, you might include the following:

7. **Make a miso soup** using Immune Broth, Chicken Bone Broth or a purchased broth as a base. The simplest recipe is to heat the broth, take it off the heat and stir in miso to taste. You can also add some washed and sliced greens, or about any other vegetable you have on hand. Cook the vegetables in the broth until they are tender, take it off the heat and stir in miso to taste. Including a bit of sea vegetable such as arame, wakame or crumbled nori, will add even more nutrition.
8. **Steam or roast 3 to 5 cups of vegetables** and put them in smaller containers to heat as you like. (See Basic Vegetable Cooking on page 50.)
9. **Make a soup or stew in a crockpot.** Here are three suggestions for simplicity, balanced nutrition and digestibility:

Tip

Add nut butter, tahini or (purchased) guacamole or hummus to the raw or cooked vegetables along with a few whole grain crackers or bread and you have a nourishing snack with good quality protein, fats and carbohydrates in every bite.

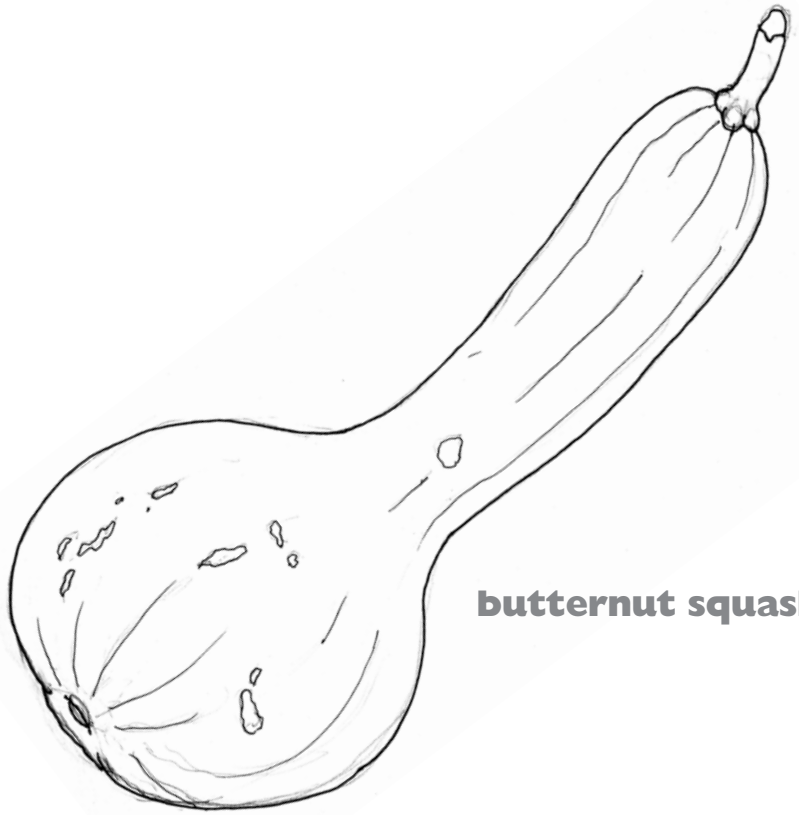
"We have forgotten what really nourishes us, and when we fail to connect with things, life becomes empty and deadening. To see food merely as fuel or stuff is impoverishing. Enlightenment or realization in Zen is sometimes referred to as 'attaining intimacy'. It is to actually touch and know through and through, to digest and grow. We cannot be more intimate than we are with food; it becomes us."

– **Ed Brown,**
Tomato Blessings and Radish Teachings

- Fennel Carrot Congee (page 188)
- Kitchadi Plus (page 126)
- Split Mung Dahl (page112)

Building your physical energy takes time. Getting into a few new daily habits can help. Remember:

- When your appetite is low, take small meals and focus on foods that pack a nutritional punch.
- Eat the colors of the rainbow for the maximum nutritional benefit.
- Drink often. Include broths and teas that nourish the body with minerals and helpful herbs along with plenty of pure water.
- Add condiments to your meals such as soaked nuts and seeds, nutritional yeast, goji berries and sea vegetables.



butternut squash

Understanding Sweeteners

Humans are born with the desire for sweet flavors. Mother's milk is sweet and it is the natural sugars in the milk that support the growth and development of the young child. Sweetness comes in many forms, however, and some are significantly better for our bodies than others. How we eat sweet foods also makes a difference in how we process them and hence their impact on our health.

The most important recommendation is to eat whole rather than refined foods. Whole grains, legumes, fruits and vegetables are healthy carbohydrates that provide a balance of whole sugars, fiber and, in some cases, protein. The complex nature of these foods means that we can digest them without a rapid rise in blood sugar.

While most people don't think of these foods as sweet, chewing them thoroughly will release their natural sugars. Many people discover that as they eat more whole foods, they begin to lose their desire for refined sweet treats.

Processed sugars like high fructose corn syrup and refined white sugar create a strain on the liver. The body cannot function correctly with excess sugar in the blood stream. The liver produces insulin to store the sugar in the body's tissues. Eating sugar frequently leads to an overload on the liver and an acidifying reaction in the blood. Many researchers now believe that a diet high in sugar leads to an inflammatory response in the body and an aggravation of many disease processes.

All Sugars Are Not Created Equally: The Glycemic Index vs. The Glycemic Load

Processed sugars are simple molecules that can flood the system with sugars. The body, needing to respond, creates high levels of insulin to capture the sugars and store them in the tissues. The *Harvard Women's Health Watch* reports:

> *…Not all carbohydrates act the same. Some are quickly broken down in the intestine, causing the blood sugar level to rise rapidly. Such carbohydrates have a high glycemic index (GI). Because rapidly rising blood sugar levels have various adverse effects, we advised eating plenty of fruits and non-starchy vegetables and few high-GI carbohydrates, such as refined grains and starches. We also endorse a food pyramid where fruits and non-starchy vegetables, not refined grains, occupy the bottom tier. The purpose of this advice is to reduce overall glycemic load (GL).* –"Glycemic Load, Diet and Health"

About Honey

Honey is not recommended for children under one year of age due to the risk of infant botulism. For everyone else, using raw unheated honey is best as heating honey destroys the healthy enzymes, vitamins, and amino acids that it contains. If a recipe calls for honey and is going to involve heat, substitute brown rice syrup, maple syrup or turbinado sugar.

"The supermarket crammed with its thousands of brightly colored packaged offerings is a mirage: if you could wave a wand and break everything down into its constituent ingredients, a pool of high-fructose corn syrup would fill half the store. Real food really does taste better."

– Bill McKibben, *Deep Economy*

Tip

For people with cancer, the greatest issue with sugars is that cancer cells have extra insulin receptors; they love sugar and grow quickly in its presence. Our recommendation is that people with cancer avoid all refined sugars, limit their sugar intake dramatically, and choose whole unprocessed sugars such as those listed below.

The glycemic load (GL) is a relatively new way to measure the impact of carbohydrate consumption that takes the glycemic index (GI) into account, but gives a fuller picture than does the GI alone. A GI value tells you only how rapidly a particular carbohydrate turns into sugar. It doesn't account for how much of that carbohydrate is in a serving of a particular food. You need to know both facts to understand a food's effect on blood sugar. That is where the GL comes in.

A carrot, for example, has a GI of 47 – quite high – yet the GL is only 2. The reason for the difference is that your body's glycemic response is dependent on both the type AND the amount of carbohydrate you consume. That carrot includes a lot of fiber. The "net carbohydrates" after the fiber is accounted for is quite low, hence the low GL.

The GL is also affected by the other foods you eat with that carrot. Sautéing the carrot in a bit of olive oil or eating it with a small amount of chicken will reduce the GL even further because the fat and protein slow the release of the sugars even more.

If a food has a low GI it will always have a low GL. But foods that have an intermediate or high GI may surprise you – their GL can range from very low to very high, and you can influence this by how you prepare the food and what you eat with it.

Making Healthy Choices

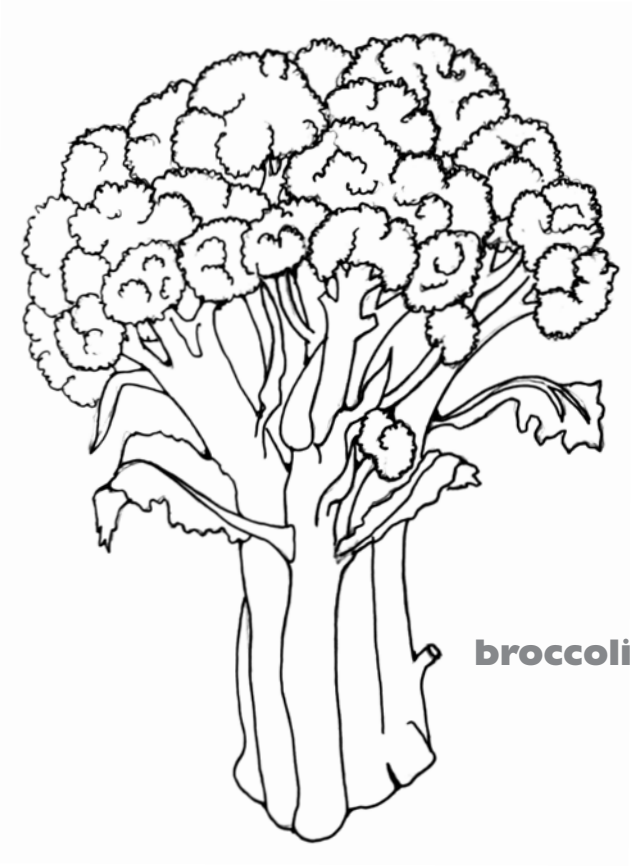
Excess blood sugar levels are implicated in a wide range of disease processes including diabetes, heart disease and cancer. While everyone benefits from reducing the amount of processed sugars and simple carbohydrates in their diets, for those who are ill this may be critical.

If you want to include some sweet treats in your diet, here are our recommendations:

1. **Eliminate all refined sugars from your diet including white and brown sugar, fructose, and all forms of corn syrup.** Be aware that corn syrup is lurking in many processed foods. If you purchase any prepared/processed foods, please read the labels carefully.
2. **Stick with whole fruits.** Whole fruits include fiber which slows the release of sugars into the blood. Fruits also include a wide range of vitamins and minerals. Avoid tropical fruits like bananas and mangoes that are higher in sugar. Berries are safest.
3. **Experiment with stevia.** Stevia is an herb that has been used as a sweetener by the Guarani Indians of Paraguay for hundreds of years. The leaves of the stevia plant can be 30 times sweeter than sugar yet the body does not metabolize

the glycosides from the stevia leaf so there is no impact on blood glucose levels.

4. Use sweeteners that are minimally processed and made from whole foods in very small quantities. If you are going to use a refined sweetener, choose barley malt, brown rice syrup, Barbados molasses, sorghum molasses, maple syrup, honey, date sugar, or unrefined cane juice. These sweeteners are less processed than other forms of sugar and include minerals, enzymes, vitamins and fiber. Because they are somewhat more complex, they are processed more slowly and hence keep insulin levels more stable.



Demystifying pH

Everything that we eat or drink, when digested, can be looked at in terms of pH, a measure of the acidity or alkalinity of a given substance. The body's blood pH needs to be slightly basic with an optimal pH value of 7.36. This is tightly regulated in a process called acid-base homeostasis. What does this have to do with health?

Eating a diet high in foods that are acid-forming puts stress on the body and acid blood conditions are believed to be one cause of the chronic inflammation that is linked to a wide range of diseases. When the body becomes acidic it seeks out alkalizing minerals such as potassium, calcium, and magnesium to buffer the system. Without enough minerals in the system to buffer a consistent condition of acidity, the nerves and bones will eventually give up their minerals. If the body stays in an acidic state, nutritional deficiencies, disease, inflammation, infection, and osteoporosis may take hold. What can you do to create the optimal alkaline environment?

While the body must maintain a blood pH of 7.36, the good news is that you don't need to carry an Acid-Alkaline Chart around to make informed choices about what to eat and what to avoid. Removing sugar and refined foods from your diet and increasing the amount of plant based whole foods will automatically support a healthy acid-alkaline balance in your body.

Avoid the most acidic foods – white sugar, processed/refined foods such as white flour, pastries, fried foods, cereals and alcohol.

Increase alkaline foods – vegetables, fruits, sprouts, *presoaked* beans and grains, and super-alkaline foods such as umeboshi plums, sea vegetables and miso.

Fats Dos and Don'ts

Fats are essential to maintaining good health. Every cell in our body is surrounded by a layer of fat. When that fat layer is healthy and intact, we can utilize nutrients more effectively and cell communication is more efficient. Fats are the carriers of the fat-soluble vitamins, Vitamin A, D, E, and K. They support the health of our bones, eyes, hair, weight management, nervous system, blood, immune system, and brain function. In fact over 65 percent of the brain is composed of fats! The hormones and hormone-like substances that are created from fats regulate many body systems including the endocrine system.

Our body's first choice of energy to burn is fats as they offer more calories per gram than protein or carbohydrates. Fats satiate our appetites and help us to moderate the digestion of sugars. How do we choose fats that are healthy and which fats do we need to avoid?

Most processed and fast foods are produced with fats that have been highly processed, sometimes using chemicals and often heated to a point where they are denatured. When fats used as cooking oils – like safflower oil or other vegetable oils – are processed with heat they become oxidized. This removes the vitamin E and changes the composition of the fat to a form that our cells do not recognize. One of the most important steps you can take in improving your health is to avoid processed and fast foods, and refined or heat-processed oils.

> *Many nutrition experts believe that before we relied so heavily on processed foods, humans consumed omega-3 and omega-6 fatty acids in roughly equal amounts. But to our great detriment, most North Americans and Europeans now get far too much of the omega-6s and not enough of the omega-3s.* [The ratio now may be as high as 25:1 rather than 1:1.eds.]
>
> *This dietary imbalance may explain the rise of such diseases as asthma, coronary heart disease, many forms of cancer, autoimmunity and neurodegenerative diseases, all of which are believed to stem from inflammation in the body. The imbalance between omega-3 and omega-6 fatty acids may also contribute to obesity, depression, dyslexia, hyperactivity and even a tendency toward violence.*
>
> *. . . you can cut down on omega-6 levels by reducing consumption of processed and fast foods and polyunsaturated vegetable oils (corn, sunflower, safflower, soy, and cottonseed, for example). At home, use extra virgin olive oil for cooking and in salad dressings. Eat more oily fish or take fish oil supplements, walnuts, flax seeds, and omega-3 fortified eggs.*
>
> – Dr. Andrew Weil

Fats to Avoid

- Hydrogenated fats, trans-fats, and interesterified fats (the newest manufactured fat that is modified to be more stable) found in processed foods like frozen waffles, cereals, baked goods, donuts, pastries, crackers, salad dressings, margarine, shortening, mayonnaise, and fried foods.
- Fried foods from most restaurants and all foods fried at high temperatures. Sautéing foods at a medium heat with coconut oil, ghee or olive oil is fine.
- Most polyunsaturated fats, especially refined vegetable oils such as canola oil, sunflower oil, safflower oil, peanut oil and corn oil.
- *Excessive* consumption of saturated fats such as butter, heavy cream, lard and animal fats.

Fats to Include

Include these three types of healthy fats in your daily diet:

- Monounsaturated fats such as cold-pressed olive oil or sesame oil, almonds and avocados.
- Polyunsaturated fats (omega 3 and 6's) from fresh cold-water fish, fish oils, flax or chia seeds, and olive oil. These fats are the most unstable and are damaged by heating or processing. Be sure to choose cold-pressed oil. Refrigerate nuts and seeds, and then eat them raw or freshly ground. The exception is chia seeds which are very stable and do not need to be refrigerated.
- A *small amount* of high quality saturated fats including organic butter and cream, organic whole milk products, organic cheese, coconut oil, and clarified butter or ghee.

The average person requires about 30% of their diet to be from healthy fats. To meet this goal, include some of these foods in your diet each day:

- Nuts such as almonds, walnuts, Brazil nuts, pecans and cashews
- Seeds including sunflower, sesame, pumpkin, flax, chia and hemp
- Avocados
- Organic whole, and if possible raw, dairy: butter, milk, yogurt, kefir andcheese
- Organic eggs

About Interesterified fat

Interesterified fat refers to a type of oil where the fatty acids have been moved from one triglyceride molecule to another. This is generally done in order to modify the melting point, slow rancidification and create an oil more suitable for deep frying or making margarine with good taste and a low content of saturated fatty acids.

- Sustainably caught cold water fish. Good choices that are low in mercury and high in omega 3 oils include sardines, wild caught Alaskan salmon and pollock, and wild caught herring and trout from Lake Superior
- Organic coconut products: coconut milk, oil, meat and butter
- Oils: cold-pressed organic olive oil, sesame oil, coconut oil, ghee, evening primrose oil and borage oil

What Kind of Fat for What Use?

- Oils like borage, flax, and evening primrose are best when used for salad dressings, but should not be heated.
- Olive oil is also most nourishing when unheated. If used for cooking, keep the heat low to medium. Do not let the oil reach the smoking point as this indicates that the oil is burning, changing the molecular structure and releasing free radicals which have been positively linked to cancer and other disease processes.
- Sesame oil is an excellent choice for cooking at medium heats. It has a lovely fragrance and a nutty flavor and also makes delicious salad dressings and marinades.
- For cooking at high heat, choose either coconut oil or ghee, a clarified butter which has a light, lovely taste. Neither of these oils needs to be refrigerated (unless the temperature is very warm) as they stay solid at room temperature and are very stable fats. Use them for frying, sautéing and baking, but note that coconut oil will add a coconut flavor to your dish.

Remember that fats need to be cared for so they don't go rancid. Store nuts, seeds and liquid oils in glass containers in the refrigerator or freezer.

Your body needs fats for energy and to maintain health. Replacing processed and trans-fats with the fats found in organic whole foods such as coconut, avocado and nuts is an important step in building a foundation of health.

The Secrets of Mushrooms

Mushrooms have been treasured as remedies for disease and as natural health supplements for thousands of years. In many Asian countries, supplementation with mushrooms is considered standard practice for patients undergoing chemotherapy and radiation. An increasing number of Western studies are supporting these claims for the benefits of mushrooms.

A few of the most potent – and most studied – varieties of mushrooms include reishi, cordyceps, maitake and shiitake. Most mushroom varieties are considered to be adaptogens – substances that help the body adapt to stress, support normal metabolic functions, and help restore balance. When the Chinese Olympic athletes were accused of using drugs to enhance their performance, it was actually cordyceps mushrooms that were responsible for their incredible stamina.

A growing body of research is supporting the use of mushrooms in both cancer prevention and in reducing the side effects of traditional cancer treatments. The combination of active ingredients in mushrooms seems to maximize the body's immune response which is vital to recognizing and eliminating tumor cells. A 2005 study by Cancer Research UK noted, "These compounds have been shown to be safe when taken over long periods of treatment and significantly, these compounds appear to reduce the adverse effects of radiation and chemotherapy."

In general, mushrooms work to facilitate the body's movement towards health. If you are not allergic to them and enjoy their flavor and texture, we suggest that you include two or three servings of a variety of mushrooms in your weekly menus.

Let's take a closer look at four different varieties of mushrooms.

Reishi is an immune enhancer which activates macrophages and interleukin production, natural killer T cells and tumor necrosis factors, and has anti-tumor, anti-viral, anti-inflammatory, antioxidant, cholesterol-reducing, and anti-fatiguing properties. It can protect the liver and help with detoxification. As an adaptogen, reishi supports all the major systems of the body when and where it is needed.

Reishi mushrooms are extremely woody and hence are inedible. Dried, sliced mushrooms are best simmered in stocks to release their nutritional value. Reishi is also available in supplement form.

About Reishi Mushrooms

Please note that reishi mushrooms should not be used for one or two days following treatment. Although research indicates that reishi may be effective in minimizing the side effects of chemotherapy and radiation, it may also interfere with these treatments.

Maitake are good sources of vitamins B_2, C, D and niacin, magnesium, potassium, amino acids, fiber and a polysaccharide, beta 1.6-glucan, that stimulates the immune system and lowers blood pressure. Maitake is known for its anti-tumor properties, especially against prostate, breast and colorectal cancer as well as lung cancer. It has been shown to lower or moderate glucose levels in the blood, and may help reduce bronchial infection. Maitake can be taken with chemotherapy and radiation and may help to both enhance the effectiveness of the treatments and reduce their side effects.

Maitake, also called "hen of the woods," can be sautéed and used in cooking. Florence Fabricant, the food editor of the *NY Times* says maitakes are "quite meaty, with a delicately nutty flavor." Maitake is also available in supplement form.

Shiitake mushrooms enhance the immune response of the natural killer T cells and interferon. Shiitake may act as an anti-viral agent, oxygenate the blood, and tone the liver. It may also reduce cholesterol levels. The cell wall of the shiitake mushroom contains a sugar known as lentinan. This protein-free polysaccharide has been shown to stimulate macrophages and help activate the lymphocytes and other immune cells.

Shiitakes are available fresh or dried in most grocery stores and Asian markets and can be used in any recipe calling for sliced, sautéed mushrooms. Sautéing a mixture of shiitake and white or cremini mushrooms together will reduce the amount of oil needed. Add sliced, sautéed shiitakes to miso soup, make Mushroom Barley Soup with a mixture of shiitake and other mushrooms, or add sliced shiitakes to stir-fries.

Cordyceps have immune enhancing properties as well as polysaccharides that inhibit tumors. Cordyceps may have positive effects on the cardiovascular and nervous systems. Studies confirm that cordyceps enhance aerobic capacity, reduce damage to cells caused by free radicals, and normalize immune function. In human studies, cordyceps have been found to prevent immunosuppression and help restore normal macrophage and natural killer (NK) cell activity.

Cordyceps are available as a powdered extract.

shiitake

Nutrient Dense Sea Vegetables

In recent years, sea vegetables – formerly called seaweeds – have become favorites in the whole foods arena. If you aren't already familiar with sea vegetables, you might be asking, "Why would anyone want to eat sea vegetables?"

The main reason is that sea vegetables provide a broad range of minerals that are bioavailable – readily available – to our bodies. Sea vegetables are an excellent source of iodine and vitamin K, a very good source of the B vitamin folate and magnesium, and a good source of iron and calcium, and the B vitamins riboflavin and pantothenic acid. In addition, sea vegetables contain good amounts of lignans, chlorophyll, protein, and phytonutrients with cancer-protective properties.

Lignans have been shown to inhibit angiogenesis, or blood cell growth, the process through which fast-growing tumors not only gain extra nourishment, but send cancer cells out in the bloodstream to establish secondary tumors or metastases in other areas of the body. In addition, lignans have been credited with inhibiting estrogen synthesis in fat cells as effectively as some of the drugs used in cancer chemotherapy. In postmenopausal women, fat tissue is a primary site where estrogen is synthesized, and high levels of certain estrogen metabolites are considered a significant risk factor for breast cancer. Research is also showing a link between low iodine levels and breast cancer. Sea vegetables with the highest iodine contents include bladderwrack and nori.

Incorporating sea vegetables into your diet is easier than you might think. Here are our favorite suggestions:

1. Whenever you cook grains, beans or soup stock, add a large piece of kombu. The minerals from the kombu will enhance the nutrient content of the dish and will also help make the beans or grains more disgestible and less gas producing
2. Keep a container of kelp or dulse flakes on the dinner table and sprinkle them on food instead of table salt. Grind kelp or dulse with toasted sesame seeds and sea salt to make gomasio, a traditional Japanese seasoning that boosts a double nutritional benefit. (see recipe on page 191)
3. Experiment with arame, a mild tasting, tender sea vegetable that looks like thin brown noodles. Easily rehydrated, it can be added to rice dishes, vegetable stir fries, rice noodles, and many other dishes.

"If a diet contains mostly foods poor in nutritional quality, or if it lacks protective foods such as fruits and vegetables, latent tumors will be in an environment favorable to their growth, and thus risk turning into mature tumors. . . On the other hand, if the diet is rich in a good variety of protective foods and only contains a quite small percentage of 'dangerous' foods, the microtumors fail to grow and the risks of developing cancer are therefore much lower."

– Foods to Fight Cancer

Here's a brief overview of the major types of sea vegetables available in the United States:

Kombu adds a deep easy flavor without tasting like the sea. As a member of the kelp family it has many uses including supporting the kidneys and thyroid function, and helping to check candida, anemia and edema. Kombu can be added to grains, legumes and soup stocks, or brewed as a tea. After cooking, remove the kombu, chop it finely and add it back into your dish.

Hijiki is a strand-like sea vegetable similar to arame but with a stronger, saltier flavor. Hijiki adds calcium, iron and iodine as well as B_2 and niacin to our meals. Bones, nerves, hormones and blood sugar are supported by eating hijiki. Hijiki can be used interchangeably with arame but requires brief cooking.

Arame has many of the same healing qualities as hijiki but has a milder flavor and more tender quality, making it a favorite among novice sea vegetable eaters! Eating arame without rehydrating it adds crunch and a bit of salty flavor to salads, grains or trail mix.

Nori is familiar to many as the wrapping for sushi. Nori is 48 percent protein by dry weight, and contains high levels of vitamins A, B_1 and niacin. Nori's mild flavor makes it easy to eat. Nori sheets can be toasted over a flame or in the oven and eaten as a crunchy snack. For even more flavor, first brush the nori with a mixture of sesame oil and tamari. Add nori flakes to miso soup or a favorite grain dish to boost the nutritional value as well as support healthy digestion.

Dulse is rich in iodine and manganese, which helps promote enzyme activity. It also contains carotenoids that help support our immune system. Dulse's high iron content (compared to other sea vegetables) means that it should be avoided by cancer patients as iron is an oxidizer, leading to the release of free radicals. Found at the market as flakes or strips, dulse can be added to foods instead of salt.

Wakame has a calcium content that rivals milk and is easier to absorb! It counteracts growths and tumors. Wakame promotes hair growth and healthy skin, and supports the body's energy. Having a full-bodied flavor, it can be added to soups, stews, vegetable dishes, grains and stir fries, or used in place of kombu for cooking beans and grains.

Sprouts for Health

Why sprout when you can eat the whole radish, cook the lentil, munch on the pumpkin seeds, or boil the groats? There are four good reasons to sprout beginning with their enormous nutritional benefits.

1. **Nutrition Powerhouses:** Sprouted seeds, legumes, nuts and grains are in their nutritional prime. Studies show that sprouts – the germinating seed of a plant – produce 10 to 500 percent more vitamins, minerals, proteins and enzymes. Eating sprouts gives you the most nutrient-dense form of that particular plant. Sprouting also predigests the phytate-containing seed coat which our stomachs cannot readily breakdown, helping to make sprouts easy on delicate digestive systems. Sprouting also changes legumes into vegetables, reducing the gas and bloating that may occur when eating foods like lentils and garbanzo beans.
2. **Economical:** Sprouts provide high levels of nutrition at a low cost and in minimal space. Considering our economic times this is good news! Buying ¼ cup of seeds yields seven to ten times the volume of edible food stuff in a nutrient-dense form. All you need is a quart jar and a bit of counter space.
3. **Local and Fresh:** You've heard about the benefits of buying local. You get to support local merchants and farmers, take less energy to get the food home, and eat fresher food. Your kitchen is as local as you can get. The seeds may travel to your location, but then you get to decide when, where, which seeds, how much and how often they are sprouted. Even in the middle of winter you can create a fresh supply of sprouts.
4. **Verifiably Organic:** Organic becomes practical, economical and simple when it happens in your kitchen. Start with seeds bought from a reputable organic source, use filtered water or a reliable source of clean water, and you can create organic food right in your kitchen.

For instructions on how to sprout your own seeds, see How to Get Started with Sprouting on page 54.

It's not easy to eat well when you're going through surgery recovery, chemotherapy and radiation. Even though you clearly know what you should eat: organic, lots of vegetables, enough protein, whole grains. Standing at the stove is a stretch, chopping vegetables is a dream from the past, and shopping at the grocery store feels like climbing Mount Everest.

I'm feeling strong, and even back to work four months after completing treatment, to a large degree because of the Ceres Community Project. Not only because of the incredible food that sustained me, but because Ceres gave me so much more than food.

The deep healing intention and caring consciousness was there each time I opened the container and found beauty, balance and, I have to say it, love.

Moreover, this was a gift for me from strangers. Strangers who realize that it takes a lot of work to heal, and who, amazingly, truly care about me – a complete stranger. These weekly phenomenal acts of deep kindness (for that is what Ceres is about) helped me know that I was, and am, connected to a much larger and kinder world than the confines of my illness and treatment. That I was and am part of a deeply conscious and loving community of hearts.

The gratitude I feel about this is indescribable and life-changing. And I'm realizing that for me, gratitude is the biggest healer of all. And so I thank everyone at Ceres for making this incredible support available to me and to so many others.

~ Kathleen Kraemer

One Client's Story

Thursday
I'm tired. I feel crummy.
Still in my nightgown in the afternoon.
Laying on the sofa.
I remember... it's Thursday.
Day of the shopping bag Ceres angels.
This thought... makes me happy.

Saturday
Everything seems to hurt. Feel sick...
Can't remember what day it is...
just want to lie here in the dark room.
I should get up. Should eat. Don't feel like it.
Remember...the Ceres Angels bearing gifts.
Remember... that I hate to waste good food.

I open the fridge. Nifty plastic container says
"Chicken in Orange Ginger Sauce with
Rice and Vegetable Medley".
Hhhhmmmm. .. okay... well... sexy name!
I open the enticing box and see colors
that remind me of the garden I love.
I'll give it a try... just a bite, anyway,
just in case I can stand it.
Fork to mouth.
Oh!... taste buds surprise my brain.
Oh... wow! That was good!
Think I'll take another bite to be certain.
I sit down. Take another bite.
Eat the entire serving,
amazed that I find myself wishing there was more.
I'm clearly full..., but I'm drawn back to the fridge.
Hhmmm... "Mushroom Strudel with
Stuffed Artichokes".
I like the sound of that...
I look forward to the next time I
"should" eat... to the next opportunity
to be surprised, delighted, and deeply nourished.