THE HUMAN ECOLOGY DIET

What to Eat

HUMAN ECOLOGY PROJECT

THE PERSONAL IS PLANETARY

The Human Ecology Project is dedicated to illustrating the connections between human actions and their effects on individual health, society, animals, and environmental impact. The unifying factor is the food we eat.

What to eat

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What to Eat

The focus of nutritional studies has shifted away from food and toward the individual components of food. While that is an interesting study, it has really not informed the debate as to what a healthy diet looks like. What foods do we need in order to get the proper balance of nutrients? It turns out that the answer is not a mystery.

If we look at the leading edge of nutritional science, we see that there is little disagreement. Certainly, there are conflicts with those who stubbornly defend the past, who have a vested interest in a particular product, or who refuse to believe that the foods they love can possibly be harmful; but these arguments are superficial and unimportant. If we apply the considerations in previous workbooks regarding personal health, social justice, environmental concerns, and ethical considerations,we arrive at the Human Ecology Diet. It is a simple approach and contains all the foods essential for personal, social, and environmental well–being. The ingredients are not superfoods packed with powerful and mysterious micronutrients.

In fact, a healthy diet is more a fusion of traditional diets from around the world with the simple considerations of ecological and economic realities taken into account.

Remember:
The Personal Is Planetary

WATCH THE VIDEO: **WHAT TO EAT - THE HUMAN ECOLOGY DIET**

https://www.youtube.com/watch?v=AveZ7jpZ0RI

The Human Ecology Diet

The food groups listed below are not based exclusively on botanical classifications but, rather, on the groupings that are familiar to a person shopping in a local market.

Use this table as a daily guide in order to benefit from the food groups and cooking condiments to suit your personal needs. These foods and condiments listed below are the nutrients that supply you with the building blocks for human nutrition. Use organic, seasonal, and local products when possible. Choose non–gluten products if necessary.

	Daily Guide
WHOLE CEREAL GRAINS	Consume whole cereal grains at least two meals a day
COOKED VEGETABLES	Consume a diverse range of cooked vegetables at least two meals a day
BEANS	Eat beans or bean products at least one meal a day
FERMENTED BREADS OR NOODLES	Eat naturally fermented bread or noodles occasionally
MISO SOUP	Eat miso soup at least once a day
RAW VEGETABLES OR SPROUTS	Eat a small portion of raw vegetables or sprouts at each meal
SEASONAL FRUIT	Eat fresh seasonal fruit at least once a day
SEA VEGETABLES	Add sea veggies as a condiment or side dish once a day
SEEDS AND NUTS	Include roasted seeds and nuts as a garnish or snack once a day
WATER	Drink 2 cups of filtered water before breakfast, lunch, and dinner

Whole Grain

The Human Ecology Diet has cereal grain as its foundation. Taken as a group, the grains can feed more people per acre with semi–perishable food than any other food. The nourishing qualities of eating grain plus the ability to store grain for long periods of time with little spoilage have made it the most important single crop in human history. It has assured societies the capacity to survive through periods of drought or the presence of harmful pests. It was insurance against the bad times.

The nutritional profile of grain is excellent. It contains protein, vitamins, minerals, carbohydrate, fats, and fibre in a form that is easy to digest and metabolize. Grain is versatile in use and can be cooked as is or can be made into porridge, breads, or noodles.

Unrefined Grains vs Refined Grains

In the Human Ecology Diet, when I talk about whole grains, I am always referring to unrefined cereal grains. This means that only the inedible husk has been removed. The outside shell of the grain, the cellulose, has not been broken. The grain, with this outer skin intact, is capable of being sprouted and contains the germ, the carbohydrate, and the bran. The micronutrients in the grain are protected. When the outside cellulose is removed, the process of oxidation occurs, and the grains begin to lose their nutritional value.

This process is what we call refining. Whole grain on the label doesn't mean whole grain in the product. The refining process always changes the nutritional value. Aside from the loss of fibre in refined products, there is a loss of protein and antioxidants. This is an important distinction to remember because the food industry will try to fool you in every bend of the road.

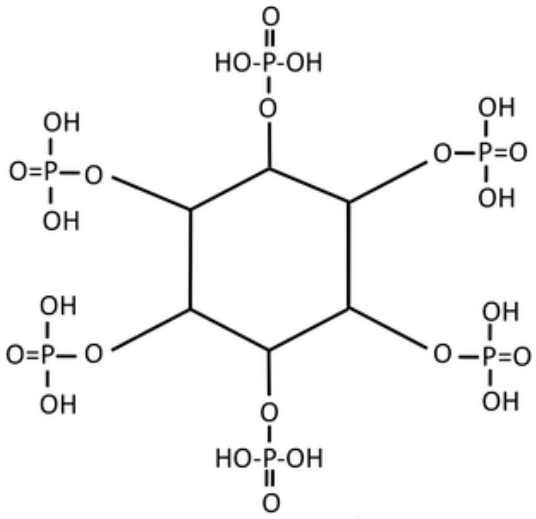
Government recommendations always suggest that you increase your consumption of whole grain and then proceed to have pictures of loaves of bread and pasta and breakfast cereals. This inaccurate definition of whole grain leads consumers to choose poor–quality grain products with the idea that they are eating the healthiest option. Most of the bad press for whole grains comes from a lack of clarity between these refined products and whole grains.

It is refined flour products that cause the problems. We need to question the saying, Best thing since sliced bread. These are products that have virtually no nutritional content, and they are usually filled with sugars, fats, and chemical agents. The commercial breads (including most whole wheat varieties), cookies, muffins, cakes, and pizza crusts are a nutritional nightmare mix of trans fats, refined grain, and simple sugars. These foods raise blood sugar and are difficult to digest.

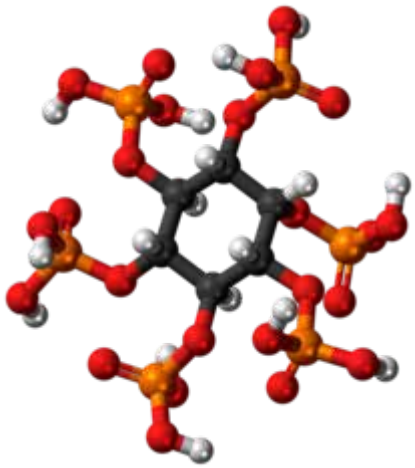
Much of the confusion regarding whole–grain consumption is purposely generated by those who support a high consumption of animal–sourced foods. I consider most of this propaganda to be misleading at best and completely counterintuitive. Books like Wheat Belly and Grain Brain are poorly disguised advertisements for the Atkins diet and its many more recent incarnations, such as the Paleo diet. These low–carbohydrate diets can produce short–term weight loss but are actually dangerous as a healthy way of eating.

Phytic Acid

The issue of phytic acid in grains also became a hot topic for a short time. This is a substance found in grains and nuts and has been labelled as an anti–nutrient. The compound binds with minerals in the body and was thought by some to cause mineral loss when eaten. The truth is that this is only a problem when consumed in great quantity as part of a nutrient–poor diet.



This compound is easily deactivated by simply cooking the grain. Soaking grain overnight, sprouting the grain, boiling, fermenting, or germinating also deactivate phytic acid and free up minerals for absorption. According to Rosane Oliviera from the University of Davis, the consumption of whole grains in recommended amounts seems to have no adverse effect on mineral status whatsoever. Since it is a powerful antioxidant, phytic acid may be instrumental in reducing the risk of heart disease, diabetes, and obesity.



Primary Grains

Among indigenous North and South Americans, the primary grain was maize (corn) or quinoa in the high Andes; oats in the British Isles; buckwheat and barley in Europe; wheat, millet, and rice in the Near and Far East; and wheat and millet in Africa. These grains became synonymous with settled culture.

Agriculture demonstrated the shift to a commensal relationship with the environment discussed earlier. This was the capacity to intelligently farm so that the same land could be used over and over again, and people could stay in one place without completely depleting their resources. The approach of modern organic agriculture is an attempt to return back to this kind of understanding of our relationship to the environment with modern insight and without the chemical maintenance of the soil.

Rice

Rice has been cultivated in the Far East for nine thousand or ten thousand years, and then slowly spread into the Near East and into Europe. Mediterranean–style cooking has incorporated rice for centuries with dishes like paella, stews, and risottos.

This is the most nourishing grain and possibly the most delicious. Its naturally sweet taste can be enjoyed on a daily basis. For a complete meal, eat rice with a bean dish, a variety of vegetables, and fermented pickles. Brown rice gives you lots of fibre, vitamins and minerals, and small amounts of thiamine, riboflavin, vitamin B6, folate, and niacin. These B vitamins tend to work hand–in–hand to metabolize the energy from the foods you eat, while supporting blood–cell formation. You'll also get magnesium, phosphorus and calcium, potassium, and a small amount of sodium for fluid balance and heart functions.

Millet

Millet has been cultivated in the Far East for at least ten thousand years and eventually spread into Africa, where it is used still to this day. In some cultures, it is the principal food crop. In Europe, it was never as popular; but as people became more used to using whole grains in their diet, it has become more popular. Some may find that lightly roasting millet before using it brings out its sweetness. Oftentimes, people use gravies or sauces on top of the millet as it can have a tendency to be a little dry. It can also be used as a porridge and is also good added into soups and stews.

Millet is alkaline, and it digests easily. The serotonin in millet is calming to your moods. Millet is a super carbohydrate with lots of fibre, and it is low in simple sugars. Magnesium in millet can help reduce the effects of migraines and heart attacks. Niacin (vitamin B3) in millet can help lower cholesterol. Scientists in Seoul, South Korea, concluded that millet may be useful in preventing cardiovascular disease.

All millet varieties show high antioxidant activity. It is an effective alkalizing agent and is the only whole grain that does not produce stomach acid, so it is a great food for those who have suffered from ulcers.

Millet is gluten–free and non–allergenic. It is a great grain for sensitive individuals, and the high protein content (15 percent) makes it a substantial addition to a vegan diet. Millet and other whole grains are a rich source of magnesium, a mineral that acts as a cofactor for more than three hundred enzymes, including enzymes involved in the body's use of glucose and insulin secretion.

Barley

Barley is a grain that has wonderful warming qualities when eaten, but it is usually associated with brewing and making beer. It's a wonderful food in the colder months.

One of the most popular uses for it is, of course, to use it in soups and stews as it makes these dishes creamy and hearty. There is nothing nicer on a winter day than a barley vegetable stew. Barley has an inedible portion of husk that runs down the centre of the grain. Because of this, most barley is pearled and thus refined. By itself, barley is a great low–fat grain, chock–full of nutrients; and it is reputed to aid the body in breaking down fat.

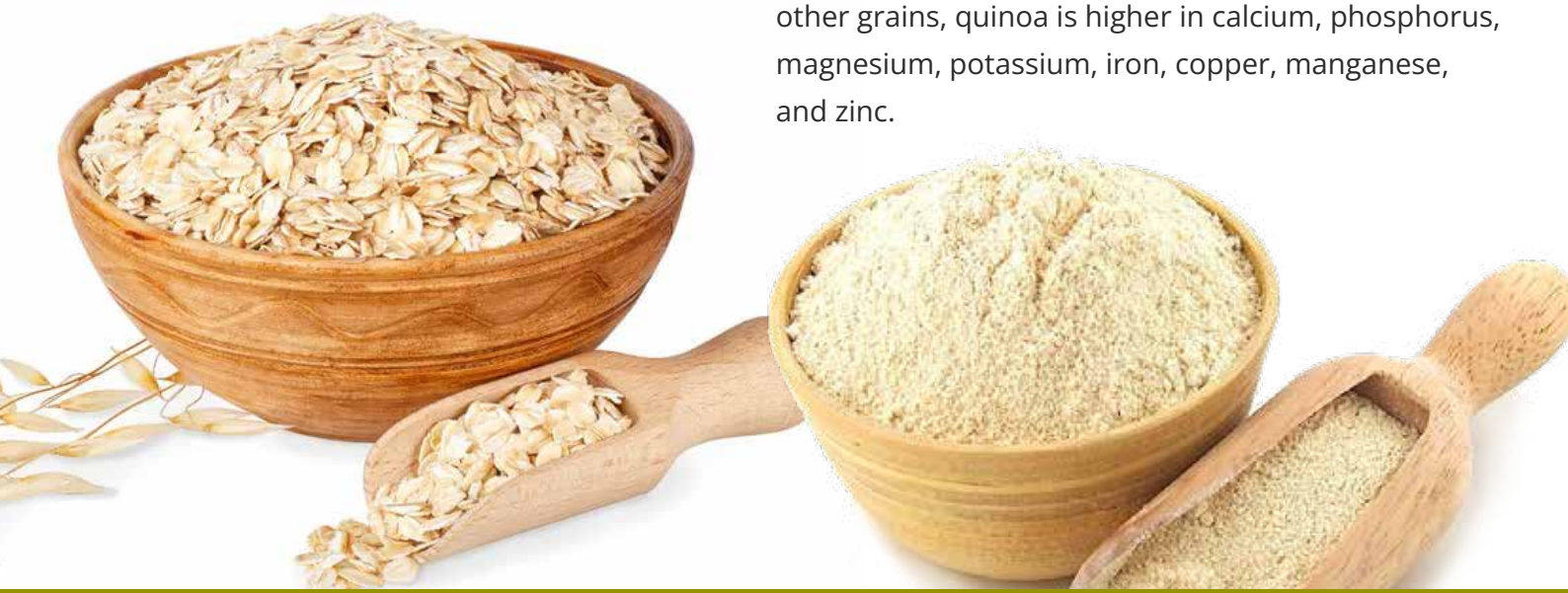
Oats

Oats are similar to barley in use; rolled oats and oatmeal are the common forms, but the whole grain can be used as porridge. Similar to barley, this is an excellent winter grain, particularly in cold and wet climates. This is due to the fact that it has more fats than other grains. Steel–cut oats (US)—also called pinhead oats, coarse oatmeal (UK), or Irish oatmeal—are groats (the inner kernel with the inedible hull removed) of whole oats that have been chopped into two or three pieces. Steel–cut oats are traditionally used to make porridge as well as oatcakes and the like.

Quinoa

Quinoa is often touted as a superfood, particularly because of its high protein content; but, interestingly, oats have more protein than quinoa. This is a grain that thrives in a dry, high environment such as the Andes, where it originates. It is still the principal food for many of the native people that live in those high mountain areas. It has been domesticated for over seven thousand years. Quinoa should be rinsed well before cooking to remove the outer coating—the saponin can give the grain a slightly bitter taste.

It contains high levels of protein and a nearly perfect balance of essential amino acids. The small yellow seeds turn translucent when cooked. Compared to other grains, quinoa is higher in calcium, phosphorus, magnesium, potassium, iron, copper, manganese, and zinc.



Corn

Corn is a grain that developed in Mesoamerica in prehistoric times. Up to the first European landings, most Native American people on the East Coast of America, the Southwest, Mexico, and South America were living on a diet that was based around the consumption of corn, or maize. **Corn can either be eaten fresh as sweet corn or ground into a meal.**

Buckwheat

Buckwheat has a very strong taste; however, some people (myself included) love the hearty, earthy taste. Buckwheat is the most warming of all the grains. Its use has been traced back to very cold areas, particularly in Mongolia, Tibet, in Russia, and Finland. It has been documented to be in use since about 5,000 BC; and in the Balkans, it was cultivated regularly from about 4,000 BC.

Buckwheat is actually a pseudo cereal. It is gluten–free, making it a popular substitute for other wheat–based foods. You can use this as a grain in soups, or you can use it with sauces; but most people are familiar with it as being used in noodles or as a flour product. In whole form, it is eaten primarily as kasha, and in noodle form such as soba or as a porridge.

Buckwheat is also high in manganese, magnesium, copper, and zinc, which are great for the immune system. It contains all eight essential amino acids, including lysine, which plays a key role in collagen production and is not produced by the human body.

Wheat

Wheat is the most widely used of all the cereal grains. Most of it is ground and made into flour products. Hard wheat varieties have more gluten in them and are therefore used more popularly to make both noodles and flatbreads. Wheat products are popular in almost every cuisine around the world, in one form or another, but usually used in breads.

Wheat is rich in mineral salts, calcium, magnesium, potassium, sulfur, chlorine, arsenic, silicon, manganese, zinc, iodide, copper, vitamin B, and vitamin E. This wealth of nutrients is why wheat is often used as a cultural base or foundation of nourishment. Since there is a high gluten content in wheat, some may find it an advantage to remove wheat from the diet for a test period and see if they notice a difference.

Most problems that are experienced with wheat may be down to three factors:

1. Flour products can cause havoc if there is poor digestion; whole grain that has not been finely ground is easier to digest. Because the bread dissolves quickly in the mouth, it is seldom chewed well and mixed with the digestive enzymes in the mouth that aid digestion.

2. Breads often contain yeast, sugars, milk, or other products that inhibit digestion or create nutritional problems.

3. The presence of excessive gluten. Modern bread and baked food production have favoured very high gluten varieties of wheat. Making sourdough bread, where commercial yeast is not used, is better if you have no specific problems with bread use.

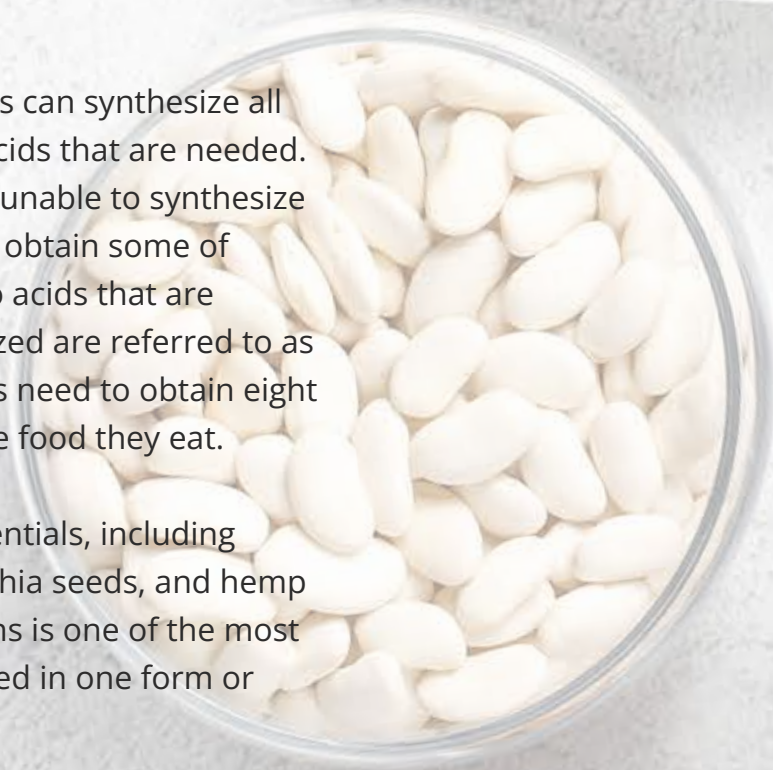
The sourdough process uses a starter that contains naturally occurring lactobacilli and yeasts. The fermentation that takes place makes the bread more digestible, needs less gluten (can be made with low–gluten varieties of grain), and does not create the lift in blood glucose that yeasted bread does.

Getting the Most From Grains

Using whole grains as the foundation of your diet is not only healthy but also economical. Grains can be cooked and stored to be re–used for up to five days. They can be reused as grain burgers mixed with vegetables or beans, used in soups and stews or simply heated and used with a condiment or sauce. Try and have at least one or two servings of grain a day.

Beans

Beans are usually mentioned in relation to protein for those consuming a plant–based diet. The concept of a ***"first–class"*** or ***complete protein*** dies hard. This focus on meat protein as being superior deflects the issue away from the simple fact that all plants contain protein. It would be more accurate to call animal protein as ***second hand*** protein.



Most plants and microorganisms can synthesize all twenty of the standard amino acids that are needed. Animals, including humans, are unable to synthesize all the amino acids and so must obtain some of them from their diet. Any amino acids that are needed and cannot be synthesized are referred to as "essential" amino acids. Humans need to obtain eight amino acids exclusively from the food they eat.

Some plants contain all the essentials, including quinoa, buckwheat, soybeans, chia seeds, and hemp seeds. Combining rice with beans is one of the most popular combinations and is used in one form or another in many cultures.

The key is to consume a variety of plant foods and to include both whole grains and beans on a regular basis. This is because, while all plant foods contain some of the essential amino acids, there is only a few that contain all. Dietary diversity allows the body to construct protein as it is needed. That is why the grains and beans are part of the foundation in the ***Human Ecology Diet***.

Kidney Beans

Kidney beans, being a major source of protein, provide all the basic forms of amino acids. Studies have revealed that the darker the colour of the skin of the beans, the higher the antioxidant content. They are high in fibre, magnesium, iron, and copper.

Adzuki Beans

Adzuki beans are small and compact shiny red beans that are lower in fat and oil than other beans. Adzuki beans are easier to digest than most beans, and in Asia, they are thought to strengthen the kidneys. It's a great source of magnesium, zinc, iron, copper, potassium, fibre, manganese, and B vitamins, such as niacin, thiamine, and riboflavin.

Garbanzo Beans

Garbanzo beans (chickpeas) have a wonderful nutty taste and creamy texture when cooked. These are wonderful to use in bean dishes combined with sweet vegetables or corn, as well as in soups and stews. The choline in chickpeas helps with sleep, muscle movement, learning, and memory. Choline also helps to maintain the structure of cellular membranes, aids in the transmission of nerve impulses, assists in the absorption of fat, and reduces chronic inflammation.

Lentils

Lentils are an ancient legume that comes in many varieties, from common brown–green to red to yellow to lentils Le Puy (a tiny sweet French variety, which is great in salads). Very high in protein and minerals and with a full–bodied, peppery taste, lentils are good in everything from stews and soups to salads and side dishes. Low in calories and high in nutrition, lentils are the perfect legume to eat in summer salads and to make delicious soups and stews for the colder months of winter.

Pinto Beans

Pinto beans are a very good source of cholesterol–lowering fibre, as are most other beans. In addition to lowering cholesterol, pinto beans' high–fibre content prevents blood sugar levels from rising too rapidly after a meal, making these beans an especially good choice for individuals with diabetes, insulin resistance, or hypoglycemia.

When combined with whole grains such as brown rice, pinto beans provide virtually fat–free, high–quality protein. But this is far from all pinto beans have to offer. Pinto beans are a very good source of folate and protein, vitamin B1, and vitamin B6, as well as the minerals copper, phosphorus, iron, magnesium, manganese, and potassium.

Soya Beans

Soya beans are always mentioned as the most efficient way to achieve the full complement of amino acids. In the Far East, they have proved a life–saving crop for many centuries. There is a huge difference between the ways that soy foods have been traditionally used in Asia compared to their more recent use in the West.

Using the Western approach to nutritional science, the soya bean was recognized as a valuable source of protein but not really studied in terms of its normal dietary use. This has stimulated a commercial rush to put soy into anything and call it a health food. Soy is now found in a variety of products, such as soy milk, soy yogurt, imitation meat products, and as a filler in many standard grocery products. It is also a popular source of feed for animals.

Vegetarian diets and other plant–based approaches to nutrition were common in Asia, and they developed simple food technologies to create healthy foods from vegetable sources. The benefits of the soya bean were prized—but only when processed, mostly through fermentation. Foods like miso paste, tempeh, soya sauce, natto, and a wide variety of soy foods were developed. These foods are unique and very valuable. The process of fermentation makes the nutrients more bioavailable. It is important to note that these foods are used in relatively small amounts in the daily diet.

Without fermentation, soy is more difficult to digest. This is especially true with children, and it should not be given to infants as a formula to replace mother's milk. This is because of the concentration of protein in these formulas. Since the baby is only getting their protein in the form of this concentrated soy, the phytoestrogens present a problem. In this concentrated form, they are several times higher than for adults who are eating soy foods.

Miso

Miso, for example, is a nourishing, high–energy whole food that helps maintain health and vitality. The same enzymes that help with fermentation during the making of miso can also help with digestion of a meal that includes miso and can even destroy substances in food that cause food allergies. Miso also acts like a digestive tonic, and once established in the intestine, the acid–loving bacteria (found in abundance in unpasteurized miso) promote health and stamina.

The fermentation process creates the probiotic bacteria (the ***good bacteria***) that your gut requires—such as lactobacilli, which has been shown to increase the availability, quantity, digestibility, and absorption of nutrients in the body. Nutritional researchers agree that—rather than specific nutrient content—it is the cultured soy medium that is responsible for fermented soy's health benefits.

Miso has long been suspected to be one of the most significant influences in the high levels of health among the Japanese.

Miso is a probiotic, a living ingredient. Miso's lactic–acid bacteria help to maintain a healthy digestive system. A 2003 report that followed 21,852 Japanese women for ten years showed that eating three bowls (or more) of miso soup every day reduced breast cancer risk by one–half.

Studies report that regular miso consumption may reduce the risk of liver and breast cancer by 50 percent to 54 percent. The breast–cancer protection appears especially beneficial for postmenopausal women. In an extensive review of over one hundred experimental and epidemiological studies, the Journal of Toxicologic Pathology identified miso as being helpful in the suppression of cancer tumours, the lowering of blood pressure, and even resistance to radiation damage.

Obtaining adequate protein in our diet is certainly not a problem. Concentrated protein–rich foods have been made for centuries in Asia. None of them require extensive processing, and none of them taste like meat. They do not fit the bill if you are trying to pretend you still eat meat but don't want to feel somehow deprived. The food industry has taken soy in many forms and manufactured it to have ***meaty*** or ***cheesy*** flavours.

About Fake Meat

The issue of meat substitutes brings up issues that go deeper than simply the providing of a tasty treat. It speaks to our attitudes about what we eat, some potent mythologies of nutritional science, and our place in nature. They are issues that I believe are important for anyone who is vegan, macrobiotic, or would label themselves an environmentalist. For decades, the whole topic of eating animal products or to avoid them has revolved around two issues: nutritional need and pleasure. When the issue of nutritional need is debunked, the default setting is "But I love meat." It is a sensory, emotional, and often sentimental attachment.

Since increasing numbers of people have come to the conclusion that meat is not a good choice, this decision invariably affects social and personal habits. **What if you like the taste of meat? What if you like the texture of meat? What if you simply like the idea of meat?** Food science is on the way to your door with a wonderful resolution to your concerns: fake meat. Pretend meat, pretend milk, and pretend cheese is flooding the marketplace.

Soy protein isolate is a favourite ingredient in artificial soy meat substitutes. Soy burgers, soy sausages, and lunch meats are mostly touted as healthy replacements for meat. The problem is that the products are made from soybeans (usually GMO) that have had all the fat removed and washed in a chemical bath or water to remove the natural sugars and fibre.

A company called ***Beyond Meat*** recently caught the eye of the multi–billionaire Bill Gates. The young entrepreneur who started the company is busy cranking out all sorts of fake meat in his factory. He outlined his idea in an interview with ***Business Insider magazine***.

Meat is well understood in terms of its core parts, as well as its architecture. Meat is basically five things: amino acids, lipids, and water, plus some trace minerals and trace carbohydrates. These are all things that are abundant in non–animal sources and in plants.

Here we are again in the ***food as a chemical delivery system*** world. So far, they have manufactured artificial chicken (it tastes just like chicken) and beef in his new facilities in Southern California. The prevalence of these foods is a clear indication of our addiction to ***junk food***. If we are concerned that the junk is either environmentally damaging or unhealthy, we simply try to make what seems to be a ***healthier*** junk replacement. The quality differences are often marginal, and the irony escapes us.

Another option soon coming to market is ***SuperMeat***. This is a science–fictional product that takes animal stem cells and ***grows meat muscle and fat*** in the lab. The cells are placed in a ***meat–growing environment***, and the product is said to taste just like the real thing since it is simply artificially grown meat without being attached to any particular animal.

The ***Swedish Institute for Food and Biotechnology*** did a study on the carbon footprint of various protein–source meals. What they discovered was that a meal using peas as the major protein required a fraction of the energy required to produce the same calories as pork. When they compared peas that were processed into a ***pea burger***, the footprint was roughly equal to a pork–chop.

These products are being marketed as a solution to the meat problem. But we don't have a ***meat problem***. We have a human problem. It is a problem that goes to the source of our relationship with planet Earth. Do we feel that we need meat at some level, or do we really need to alter our thinking and accept the fact that nature provides our needs without superficial improvements? We seem determined to meddle with the laws of nature to suit invented social habits. It's good to remember that nature knows best.

Claiming a new relationship with nature and all life is revolutionary and transformative; the rejection of consumerism is part of it. It is within our power to occupy the food supply and reduce our reliance on an industry that separates us from the simple pleasures of choosing real food, local food, and foods grown in living soil. **So, who needs fake meat? Nobody.**

Tempeh

Tempeh is a good example of a natural protein–rich food. It is made by using a controlled fermentation process that binds hulled, cooked soybeans into a cake form. Tempeh originated in Indonesia and is still a staple there. The beans are mixed with a mold spore starter and incubated for two days. The white mycelium of the Rhizopus vegetable mold keeps the soybean packed together to form a sliceable cake. As a result of the fermentation process, the soy protein in tempeh becomes more digestible. Tempeh is fibre–rich and a healthy source of vegetable protein, minerals, and soy isoflavones.

Tempeh is low in saturated fat and contains a generous source of B vitamins, iron, calcium, and lecithin, plus essential polyunsaturates, such as linoleic acids. These acids are important because they help emulsify, disperse, and eliminate cholesterol deposits and other fatty acids that frequently accumulate in and around vital organs and throughout the bloodstream.

Tempeh is always cooked before eating; you can steam, boil, bake, or sauté it. You can enjoy it with a wide variety of grains, vegetables, or noodles—or use it in soups, salads, and sandwiches. It is a very versatile addition to a healthy diet.

Tofu

Tofu is a staple food that has been eaten throughout Asia for the past two thousand years. Tofu is known for its good nutritional and culinary versatility. It has a cheese–like quality and is laboriously made by curdling milk made from boiled soybeans with a natural coagulant. It's notorious for its bland taste, but tofu blends with and absorbs flavours from other foods. Rich in B vitamins and a vegetable protein source, tofu is often portrayed as a meat substitute. Tofu is taken traditionally with miso soup as a meal, but it's perfectly fine to use in the occasional dessert or marinated patties. Always buy a brand that is made from organic whole soya beans and nigari.

Nigari is a naturally occurring, mineral–rich coagulant produced after removing sodium chloride from salt. The base of nigari is magnesium chloride, which is an alkalizing mineral vital for the proper functioning of the cells in our body. It also has numerous other beneficial mineral salts in abundance, such as potassium chloride and calcium chloride. Tofu is an excellent protein as it has all the eight amino acids.

Soy and Estrogen

The growing popularity of soy products has led to controversy about their health and safety. These concerns have been raised by some (again, those suggesting a diet reliant on animal protein) regarding the presence of phytoestrogens. The phytoestrogen compounds can mimic the hormone estrogen because of their similar structure, and they can inhibit the function of naturally occurring estrogen in the body.

What is seldom pointed out is that plant estrogens are a thousand times weaker than the estrogen produced in our bodies. They are only significant if they are eaten in amounts that would never be part of a normal diet. What has been shown in the bulk of soy research is that it is helpful in preventing some cancers and other serious health issues.

When using these soy foods, it is always good to read the labels and use only products that are certified organic and made with non–GMO beans.

Getting The Most From Beans

As with grains, you can store beans for several day in the fridge and recycle them. Many people like beans when recooked better than the first cooking. Soups, stews and casseroles are common ways of using beans. They combine very well with onions, and other root vegetables as well as the squashes. It is a good idea to have beans, or bean products at least once a day. I also suggest the use of miso soup regularly several times a week.

Vegetables

Vegetables reflect the changing of the seasons; the different colours that they show indicate the phytonutrients that are in the foods. A good guideline is to always try and eat any perishable food from local sources and in the season of its growth. Be particular about **organic quality**. The challenge is to consider these things but to make sure to get variety. This is particularly true if you live in an area where local weather, poor soil, or lack of local variety is a problem. There are hundreds of varieties of vegetables. Listed in the next pages are the general characteristics of some popular vegetable varieties.

Cruciferous Vegetables

The cruciferous vegetables are very important for most people living in the northern hemisphere in a four–season climate.

They include cabbage, broccoli, cauliflower, and curly kale. Vegetables in this particular family are best when they are cooked. They can sometimes be a little bit difficult to digest if they are not cooked well. Cabbage has been a staple food in Europe for centuries, both cooked and fermented as sauerkraut.

These vegetables are very nutrient–dense, and they are often known to have particular healing qualities, including anti–inflammatory properties. A review of ***206 human studies and 22 animal studies in the Journal of the Academy of Nutrition and Dietetics*** showed a pronounced protective effect of several varieties of vegetables, including: **cruciferous vegetables**, **carrots**, and **allium vegetables**.

Cruciferous vegetables include:

- Arugula
- Bok choy
- Broccoli.
- Broccoli rabe
- Brussels sprouts
- Cabbage
- Cauliflower
- Chinese cabbage
- Collard greens
- Daikon
- Kale
- Kohlrabi
- Radish
- Rutabaga
- Turnips

As discussed earlier in the section on macrobiotic classification, foods that hold their energy for a long period of time and don't wilt or dissipate very quickly are foods that are very important when the weather is cooler (or in cold weather). These foods have more warming qualities.

Squash

Squash is a very diverse family of vegetables that originate in the northern hemisphere in the Americas; the cultivation of food crops in both North and South America rotated around maize (corn), beans, and squash. They were sometimes referred to as the three sisters. The combination of these three foods gave people an incredibly rich and nutritionally diverse diet that sustained the native peoples of North America for centuries before the arrival of the Europeans.

They are a fantastic autumn and winter food. They can be stored for months without losing their nutritional value. They are a great source of complex carbohydrates and are very sweet to the taste, so they are very useful in cooking. Their sweetness makes them popular as vegetable dishes (cooked with beans) or even used as desserts. Because of their natural sweetness and more complex sugars, they are often used by us for people with ***type 2 diabetes*** when ***switching to a Human Ecology Diet.***

The Summer Squash

The Summer Squash—which are sometimes referred to as cucumbers in shape and consistency—are foods that don't have that particular density of nutrition, but they are cooling and best used in season when they ripen with the exception of being useful to preserve as pickles.

- Pumpkins
- Acorn squash
- Hokkaido pumpkins
- Butternut squash
- Cheese pumpkins
- Hubbard squash
- Kabocha squash
- Turban squash.

Roots & Tubers

Roots and Tubers are vegetables that grow below the ground. Most of the roots and tubers have been used traditionally as good sources of complex carbohydrate all over the world. They have often been used as a primary food source when climate or other environmental conditions were not favourable to growing grain. Some tubers have an even broader range of nutrients than grains. This is probably why—before grain cultivation and in semitropical climates—they were the principal foods. They even have vitamins A and C.

Roots are the energy storage system of the plant. Similar to some of the other foods that we have talked about, these foods are nutritionally dense and have traditionally been considered as essentials to a healthy diet.

Foods like carrots and onions, potatoes, yams, and sweet potatoes will last a long time without losing their nutritional qualities.

Roots & Tuberous Vegetables Include

(some vegetables previously listed as cruciferous also)

- Carrots
- Daikon
- Parsley root
- Parsnips
- Beets
- Celeriac
- Radishes
- Rutabagas
- Turnips
- Burdock
- Salsify
- Taro

Roots & Tuberous Vegetables Include

- Onion
- Garlic
- Shallots
- Spring onions
- Leeks

Most Popular Tuberous Roots are:

- Sweet potatoes
- Yams
- Potatoes

Hearty Greens

Hearty Greens are a basic requirement for healthy eating. Some cruciferous vegetables mentioned earlier will fit into this category. If you are eating a plant–based diet, I think it is very important to have green vegetables every day. The unique concentration of nutrients in dark–green vegetables lies in the rich mix of vitamins and minerals. These greens pack a more significant punch than the salad greens we will talk about next. If you have a good seasonal balance, you are going to have a good nutritional balance.

Dark–Green Vegetables Include, but are not limited to:

- Collards
- Mustard greens
- Turnip greens
- Chard
- Kale
- Hardy Spring Greens

Most of these vegetables are best lightly cooked (more so with kale).

Cruciferous Vegetables

Even when the climate is cold, people (especially those who have eaten a lot of animal fats) need some raw food. Raw foods are helpful in cleaning out the gut and dissolving fatty tissue. Have small amounts of raw food daily—but remember it's easy to eat too much of it in a cooler climate.

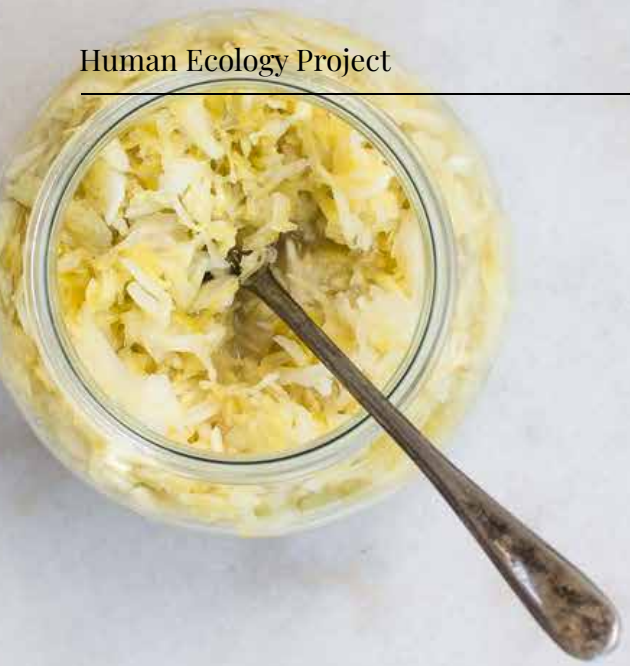
Whether it's pressed salads or light fresh salads, consume these cooling foods in the summertime. Varieties of lettuce, rocket, or any of the spring greens—these leafy greens can be eaten raw and are good to have on a daily basis.

These salad vegetables are relaxing by nature. Aside from their cooling qualities, they are an excellent source of vitamins and enzymes. We manufacture enzymes in our bodies, but it's good to get some enzymes in our diet (although many are destroyed during digestion). Eating salad vegetables or raw vegetables ensures that you get the full spectrum of foods you need.

Vegetables reflect the seasons, so let the seasons be your guide. Food is often shipped long distances, so use produce that has travelled only when local or regional supplies are inadequate.

Vegetables that are Seldom Cooked include:

- Arugula
- Endive
- Chicory
- Dandelion greens
- Escarole
- Radicchio
- Watercress
- Iceberg lettuce
- Bibb lettuce and
- Romaine lettuce



Fermented Vegetables

Fermented Vegetables are important probiotics, which are good to have in small portions daily. Sauerkraut, one of the most common, is easy to make. Making fresh fermented foods can really promote a healthy gut biome. There are good–quality commercial sauerkrauts on the market, but making it at home is a satisfying project.

Juicing & Sprouting

Juicing and sprouting are quite popular now, particularly in warmer seasons and climates. Many advocates of juicing and sprouting live in Florida or Southern California, where refreshing foods make sense.

Sprouting is a good way of having salads and that light freshness in your diet all year round. Sprouting seeds or beans is simply germinating them. You rinse seeds to clean them and then soak them for up to twelve hours (depending on the type of seed). You drain the seeds and rinse at regular intervals.

As the beans germinate, the nutrients are broken down and become more available. The quality of the protein is improved, and the vitamin and fibre content is increased.

Sprouts can be used year–round.

Add them to just about anything from soups to salads and grain dishes. Enzymes are the catalyst for proper food absorption. Living foods are loaded with live, active enzymes. Enzyme–rich foods boost energy, feed the cells, nourish the organs, tone the blood, regulate the bowels, and support immunity. Thus, living foods can help you beat fatigue and will make your skin glow.

Juicing has become popular as chewing has become unpopular. When you juice, notice the amount of pulp that is left behind. That pulp is part of the nutrient base of the food. Removing it challenges our digestion and wastes valuable minerals, fibre, and vitamins. Ecologically, economically, and from a health point of view, it is a wasteful process.

Mung beans, alfalfa, broccoli seeds, and lentils are all easy to sprout.

The Nightshades

The Nightshades are a family of vegetables permeated with mythology. Nightshades include some plants with highly toxic features (such as tobacco and belladonna).

Nightshades vegetables also include:

- Potatoes
- Tomatoes
- Aubergine (eggplant)
- Peppers

Within that family of foods, there are chemical compounds that have a tendency to exacerbate inflammatory processes in the body.

Solanine is a toxic chemical found in members of the nightshade family, which is also known as the Solanaceae family. The chemical acts as a natural pesticide. Plants produce solanine to protect themselves from insects and fungi that attack them.

Solanine and related chemicals are found in:

- Potatoes
- Tomatoes
- Eggplants
- Red and yellow peppers
- other nightshade plants
  (but not in black pepper, which belongs to a different plant group).

When creating a diet for someone who suffers from a major inflammatory illness, we eliminate all nightshades. On a health maintenance diet, I suggest that they be used sparingly and to make sure they are always well cooked.

Getting the Most From Vegetables

The key to vegetable consumption is variety.

It is the diversity of vegetables that assure the best nutrition.

Think in terms of colour. A healthy plate of food usually has a variety of colours.

Roots, cruciferous vegetables, leafy greens, squash, and onions vary with season and local availability. But make sure to have a wide variety.

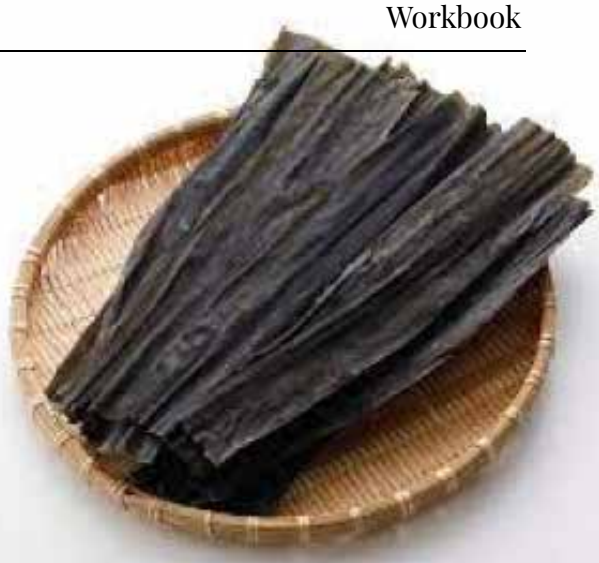
Have vegetables at least twice a day and make sure to have some raw vegetables daily.

Sea Vegetables

In some parts of the world, sea vegetables are traditionally consumed in moderate amounts regularly, to provide a balanced intake of minerals. We normally associate their use with Japan and Korea, but they were also part of the traditional Scottish and Irish diets.

> Seaweeds are low in fat and calories and very high in calcium, iron and iodine. Also high in Vitamins A, B, C, and E.

Kombu



Kombu is a good source of iodine, which is necessary for proper thyroid function. Researchers in the United Kingdom found that it strengthened the gut mucus and slowed down digestion. It was also very low on the glycemic index and high in fibre. High consumption of sea vegetables (kombu) helped in the predigestion of pulses, which reduced the production of gas.

Seaweeds

Seaweeds are low in fat, very low in calories, and rich in essential minerals, vitamins, and protein. Seaweeds are very beneficial to vegetarians and those abstaining from dairy foods because of their high levels of calcium, iron, and iodine. In addition to minerals, seaweeds contain vitamins, A, B, C, and E. All sea vegetables contain significant amounts of protein, sometimes as much as 48 percent.

Sea Vegetables include:

- Nori
- kombu
- Wakame
- Arame
- Hijiki
- Dulse

The sea vegetables include nori (usually used in making sushi or as a condiment), kombu (used in making soup stocks or cooked with beans or vegetable stews), wakame, arame and hijiki (used as side dishes), and dulse (used with vegetables, in soups, or as a condiment).

It is important to check with distributors that all sea vegetables have been harvested from clean waters and have been tested for heavy metals.

The same properties that sea vegetables have for attaching themselves to toxins in the body for excretion also make it easy for them to absorb toxins in the water. This is the same as demanding organic growing for vegetables. There are many good sources, so do your homework.

Nutrients in sea vegetables cleanse the colon and improve digestion and absorption.

Research shows that the sticky starch in sea vegetables can strengthen gut mucus, slow down digestion, and allow food to release its energy slowly. Sea vegetables have an antibiotic effect on harmful anaerobic bacteria.

> Sea Vegetables remove pollutants, toxins, and heavy metals from the body.

Their unique range of polysaccharides removes pollutants, toxins, and heavy metals. Sea vegetables bind heavy metals and radioactive pollutants (deletion) (present in the environment from industry and transport) and remove them from the body.

Sea vegetables improve the full digestion and metabolism of nutrients from other foods, and they facilitate the formation of new cells.

Harvard University has published a paper proposing that kelp (kombu and wakame) consumption may be a factor in the lower rates of breast cancer in Japan.

Research is also being done on the effects of sea vegetables as an alternative to **HRT** (hormone replacement therapy). Sea vegetables are very high in **lignins**, plant substances that become **phytoestrogens** in the body—meaning that they help to block the chemical estrogens that can predispose people to cancers like breast cancer. Sea vegetables have traditionally been used in Asia to treat cancer, heart disease, and thyroid problems.

Getting the Most From Sea Vegetables

Sea vegetables may be a new food in your kitchen, but you will find them a valuable addition. You don't need large quantities to have benefit. Most people who are new to using them find using wakame in soups the easiest place to start. A tablespoon a day of cooked sea vegetables is about right.

Fruit

"Eat more fruits and vegetables."

This is a familiar health message that blurs good nutrition lines in several ways. Fruit is high in sugar. This sugar (fructose) is not as disruptive to the system as the refined fructose we discussed earlier, particularly when consumed in a whole fruit, but it is still a simple form that is absorbed into the system quickly. However, at least fruit contains fibre, minerals, and vitamins, which slow down the potential negatives.

Sugar comes in several different forms:

- Glucose
- Fructose
- Sucrose

Glucose is the healthiest source of energy. Carbohydrates, such as those in grains and vegetables, break down into glucose, your body's main source of fuel. Fructose is the only type of sugar found in fruits.

When fructose is eaten in excess, it presents health challenges similar to those of the simpler refined sugars. Given the huge difference in sugar content from fruit to fruit, it's almost impossible to suggest how much to consume. We should think carefully about our five a day.

People who cut back on all simple sugars for a month or two commonly become more sensitive to more complex forms of sugar in their food. Until then, people often do not perceive the sweetness in a carrot or in brown rice, partly because you have to chew in order for the sugars to begin breaking down. Also, the more we consume simpler forms of sugar (like fructose), the less we detect the sugars in other foods. So we need to re–educate our taste buds.

Fruits in general, are very perishable—so they are best eaten fresh and in season (and local, where possible). **As a general rule, tropical fruits are the highest in sugars and acid and the most perishable.**

Fruits grown farther from the equator have a higher ratio of fibre to sugar so the impact on blood sugar is less. Drinking the juice of fruits is probably the worst form of consumption, since the sugars are more concentrated and the buffering agents have been removed. Sugars are also concentrated in dried fruits, so a raisin has more sugar content by weight than a grape.

Eating fruit in smaller amounts is generally a good idea. Fruit can also be cooked into purées, sauces, or baked. It makes great fillings for pies or as a smooth dessert dish. Think of fruit as a pleasure food, not an essential. There is nothing you can get from fruit that you cannot get from vegetables. It is a good idea to have fruit an hour or so after a meal, or between meals, for best digestion.

Here are some non–tropical fruits:

- Apples
- Strawberries
- Cherries
- Blueberries
- Watermelons
- Cantaloupes
- Peaches
- Plums
- Raspberries
- Pears and
- Apricots

Getting the Most From Fruits

Do your best to focus on locally grown foods in season. When this is difficult try regional fruits from similar climate. Use fruits that are shipped long distance seldom or not at all. Remember that dried fruits have high sugar content. Most fruit is best eaten raw, but cooking fruit is a healthy option for making fruit compote.

Nuts & Seeds

Seeds and nuts are an excellent source of protein and fat. When unshelled, they are easy to store for a long time. Once shelled, they are susceptible to rancidity if left at room temperature, unless preserved with salt. The oils in seeds and nuts complement grains and beans to provide the full range of amino acids needed to meet protein needs; and they also contain easily assimilated and healthy oils. They may be used as condiments with grains or vegetable dishes or roasted as a snack. Roasting nuts and seeds release their oils, making them easier to digest.

Nuts and seeds are an excellent source of fats in a healthy vegan diet. They contain healthy monounsaturated and polyunsaturated fats—fats that manage inflammation, maintain the normal structure of our cells, and lower cholesterol.

Extensive research associates nut consumption with a lower risk of coronary heart disease (CHD).

The Tree Nuts

The tree nuts—such as Macadamia, Cashew, Brazil Nuts and Pecans all have a fairly high fat content. Most of the fat in nuts is monounsaturated fat, as well as omega–6 and omega–3 polyunsaturated fat.

European Nuts

The Walnut, Almond and Hazelnut are native to Europe and have slightly lower fat content.

Chestnuts

Chestnuts are used in many parts of the northern hemisphere and have the least fat of any nut; they are rich in carbohydrates and the only nut that contains vitamin C.

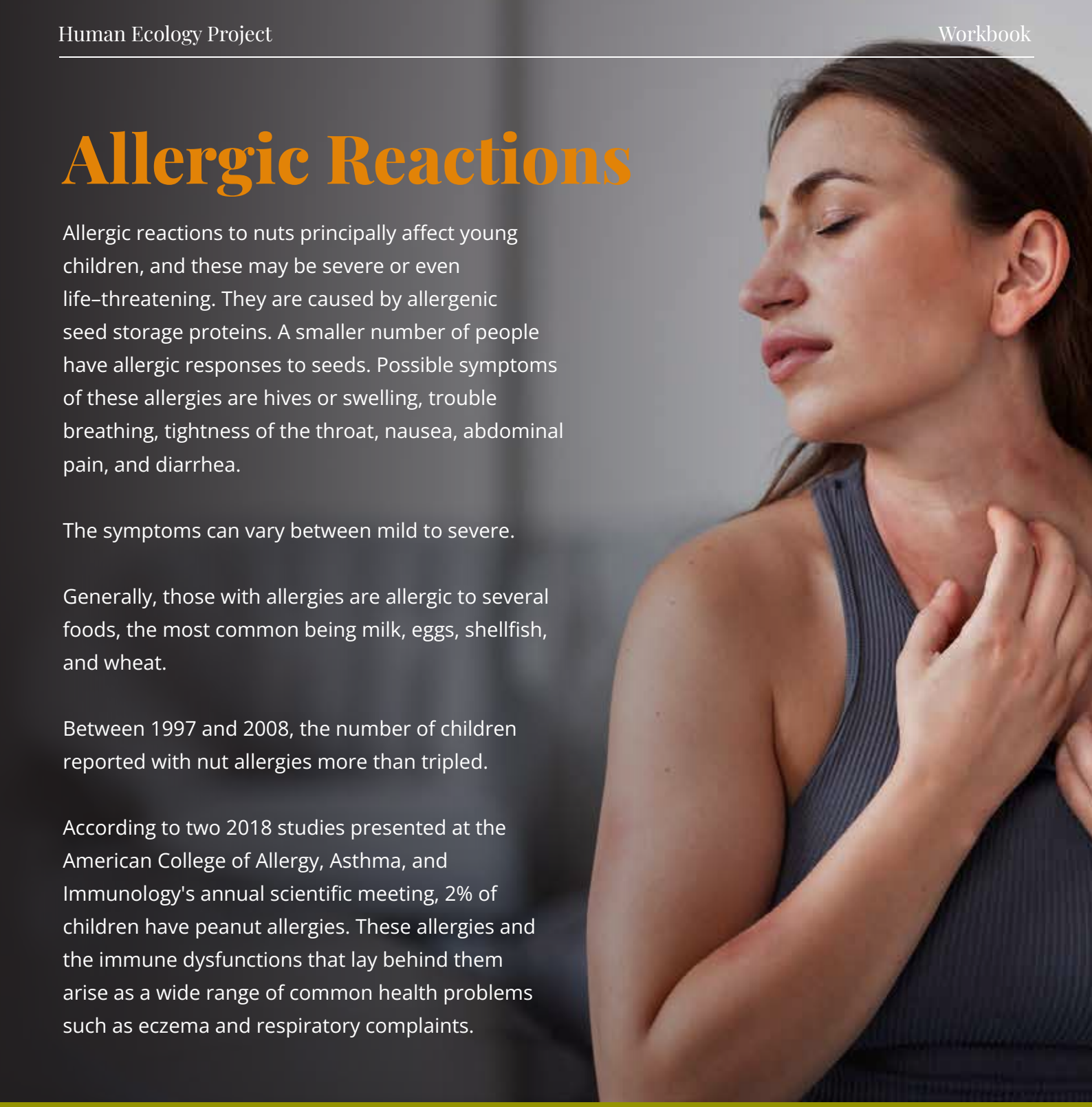
Peanuts

Peanuts have among the highest amounts of fats in this group. They are from a different botanical family than true tree nuts but are commonly thought of as a nut. They are widely used as a snack item or as an ingredient in snacks, for their oil, or as animal feed. A handful of any of the tree nuts supplies more than the daily requirement of healthy fats.

Seeds

Seeds are often used as a garnish on foods, particularly with whole–grain dishes. Pumpkins seeds, sesame seeds, sunflower seeds, chia seeds, flaxseeds, and hemp seeds are all sources of omega oils and add flavour and variety to the diet.

Allergic Reactions



Allergic reactions to nuts principally affect young children, and these may be severe or even life–threatening. They are caused by allergenic seed storage proteins. A smaller number of people have allergic responses to seeds. Possible symptoms of these allergies are hives or swelling, trouble breathing, tightness of the throat, nausea, abdominal pain, and diarrhea.

The symptoms can vary between mild to severe.

Generally, those with allergies are allergic to several foods, the most common being milk, eggs, shellfish, and wheat.

Between 1997 and 2008, the number of children reported with nut allergies more than tripled.

According to two 2018 studies presented at the American College of Allergy, Asthma, and Immunology's annual scientific meeting, 2% of children have peanut allergies. These allergies and the immune dysfunctions that lay behind them arise as a wide range of common health problems such as eczema and respiratory complaints.

Getting the Most from Seeds and Nuts

Either roasted or raw nuts and seeds are a healthy addition to the diet as a snack or as a garnish. I usually suggest seeds over nuts as a breakfast garnish for porridge and Pumpkin and Sunflower seeds as a snack item. In our house we usually only use nuts in dessert items.

Simple Condiments

In the ***Human Ecology Diet***, we use few table condiments. Our cooking condiments are generally **miso** and **soy sauce**, **herbs** and **spices**. Some of these products contain salt, so use them sparingly or not at all, to suit your own preference.

It is a good idea to use condiments, herbs and spices in moderation. The most healthy eating should have a variety of tastes. Sometimes it is also good to splash out on extreme taste for celebration, but for the best results learn to adapt to the true taste of the foods themselves on a daily basis.

Water

Your body needs water—it is the most common element in the human body. About 60 percent of the weight of an adult body is water. This can be altered by any number of factors, including age, general health, and the amount of fat tissue. More fat cells usually mean less water. We get water in our food and by drinking.

Our suggestion is to drink two cups of filtered water before breakfast, lunch and dinner. This assists in digestion as hydrochloric acid reduces as we age. Water is one of the greatest facilitators of toxic discharge.

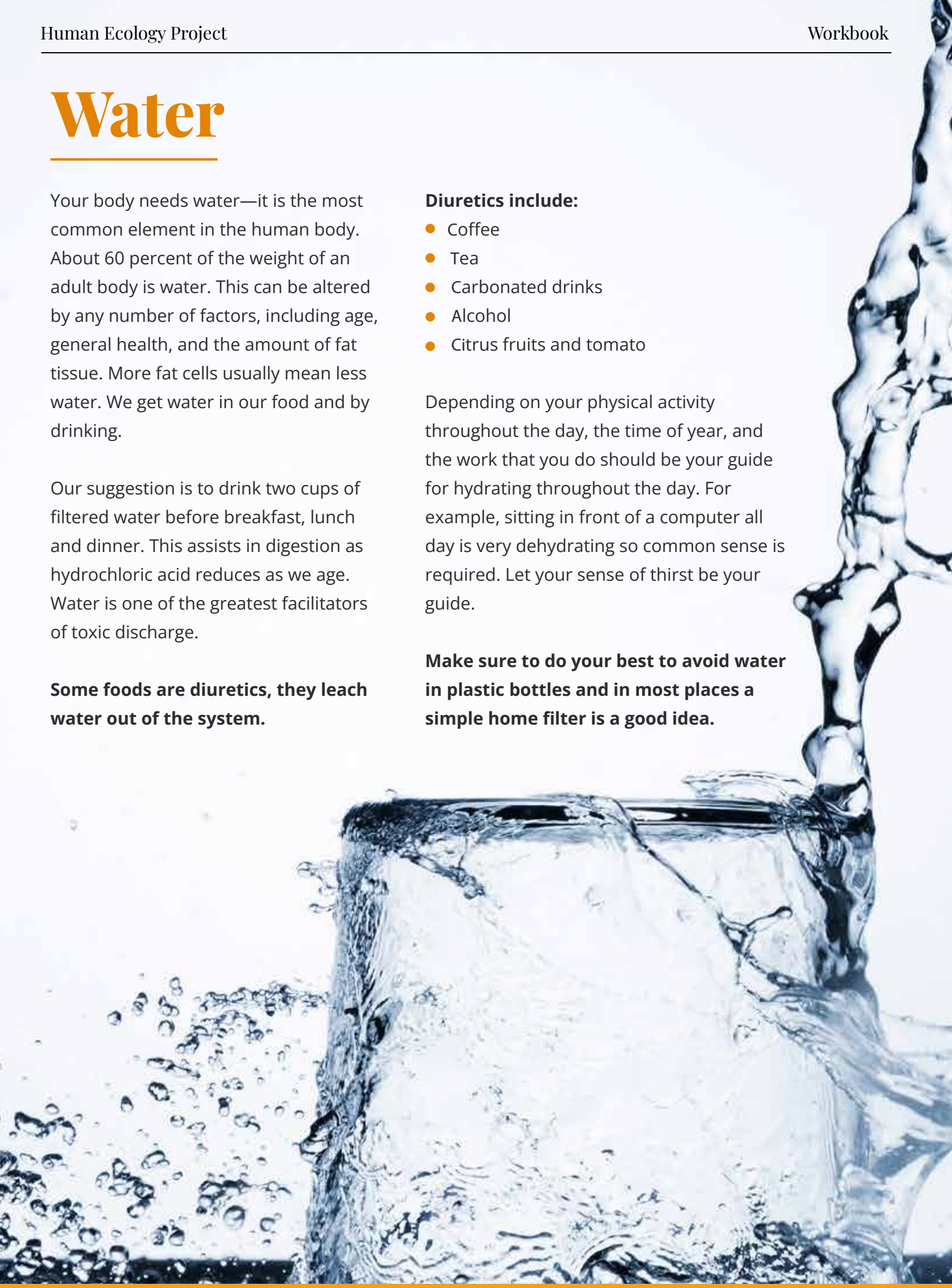
Some foods are diuretics, they leach water out of the system.

Diuretics include:

- Coffee
- Tea
- Carbonated drinks
- Alcohol
- Citrus fruits and tomato

Depending on your physical activity throughout the day, the time of year, and the work that you do should be your guide for hydrating throughout the day. For example, sitting in front of a computer all day is very dehydrating so common sense is required. Let your sense of thirst be your guide.

Make sure to do your best to avoid water in plastic bottles and in most places a simple home filter is a good idea.



Teas & Beverages

Here is a list of some of the most popular teas used on the Human Ecology Diet. Always buy **“organically grown”** and **“fair trade”** products.

Green Tea

Green Tea, native to China and India, has been consumed globally for centuries. After water, tea is the most consumed beverage in the world. All types of tea (I don't include varieties, which are, in fact, infusions rather than true teas) are harvested from the same bush; the only difference is in the way the leaves have been treated. Over 78 percent of the tea consumed worldwide is black, and only about 20 percent is green tea.

Green tea is picked, allowed to wither, and then steamed. This helps the tea retain many of its nutritional components and gives it a lighter taste. Black tea is crushed and then rolled, which lowers the antioxidants but brings out a stronger taste.

Kukicha

Kukicha is a traditional Japanese method for processing tea, which uses both twigs and leaves. It is an excellent mild daily beverage loaded with antioxidants and is wonderful for the digestive system. You can purchase the tea in twig form or in teabags. It has very little caffeine, so it is not a stimulant.

Peppermint Tea

The peppermint in Peppermint tea is a fragrant herb that makes for a soothing drink. Peppermint helps you digest foods better, and it also reduces flatulence and digestive issues. A cup of peppermint tea will ease nausea and vomiting, especially if you suffer motion sickness. If you have heartburn, don't drink peppermint tea as this might aggravate your condition. The natural mint flavour of the herb helps to freshen your breath. It also has cooling properties and can be added to green teas or kukicha for a cool summer drink.

Nettle Tea

Nettle tea is made with the leaves of the stinging nettle, which has tiny hairs on its fresh leaves that can sting the skin. Despite its rough exterior, nettle is one of nature's best remedies for an assortment of ailments—including anemia, high blood pressure, rheumatism, arthritis, coughs and colds, congestion, urinary tract infections, and kidney and bladder problems.

Chamomile Tea

Chamomile tea is often recommended for people who have trouble sleeping. It has very relaxing properties. Chamomile also calms the mind and helps people relax and deal better with their stresses.

Ginger Tea

Ginger tea both stimulates and soothes the digestive system. Ginger is an energizer and stimulant. Ginger can aid people who are experiencing nausea.

A note for our vegan friends

OR THOSE ON “ELIMINATION DIETS”

There is a common mythology that simply cutting out animal fats and protein as well as sugar will provide good health, not the case. Reducing those foods that are stressful to the system is a good move. Toxic food creates sickness and good food creates health. It is not simply cutting things out; it is also what you add in.

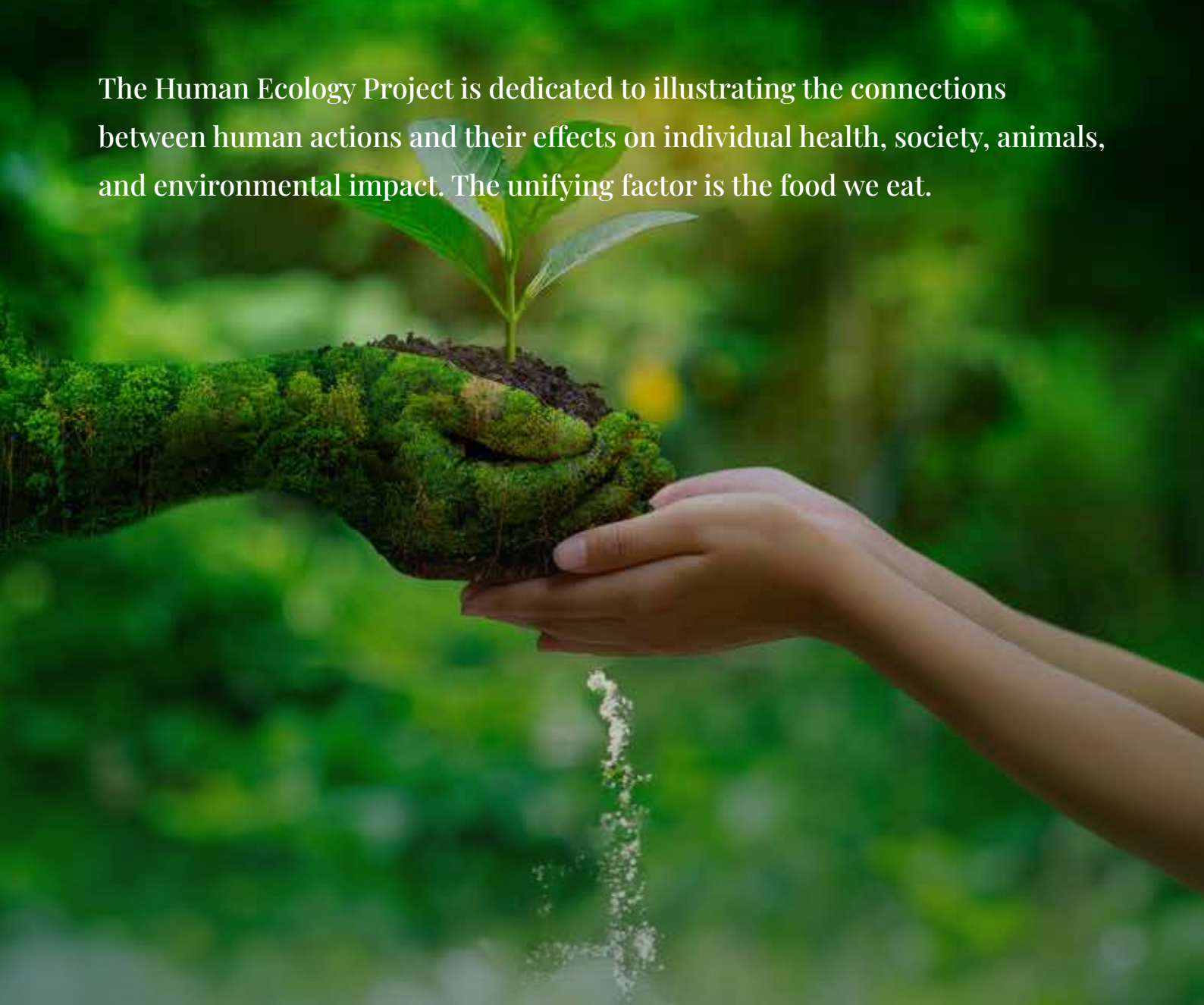
A diverse diet, such as that described above, will stimulate the bodies natural capacity to create health, increase energy and fortify the immune system. The process needs no professional supervision (unless you suffer from a serious health issue), it is self–directed. The only thing we require is a firm resolve to create a healthy life and the ability to learn a few new life skills.

In good health!

Bill and Marlene X

www.humanecologyproject.com

The Human Ecology Project is dedicated to illustrating the connections between human actions and their effects on individual health, society, animals, and environmental impact. The unifying factor is the food we eat.



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