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Eating Right: 8 Principles of Food and Health

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The following is an abbreviated excerpt from The China Study (BenBella Books) by T. Colin Campbell, PhD and Thomas M. Campbell, MD.

The benefits of a healthy lifestyle are enormous. We want you to know that you can:

• live longer	• vastly decrease the need for pharmaceutical drugs
• look and feel younger	• keep your bones strong
• have more energy	• avoid impotence
• lose weight	• avoid stroke
• lower your blood cholesterol	• prevent kidney stones
• prevent and even reverse heart disease	• keep your baby from getting Type 1 diabetes
• lower your risk of prostate, breast and other cancers	• alleviate constipation
• preserve your eyesight in your later years	• lower your blood pressure
• prevent and treat diabetes	• avoid Alzheimer's
• avoid surgery in many instances	• beat arthritis

These are only some of the benefits, and all of them can be yours. The price? Simply changing your diet. It has never been so easy or so relatively effortless to achieve such profound benefits. We want to summarize the lessons about food, health and disease that we have learned along the way in the following eight principles. These principles should inform the way we do science, the way we treat the sick, the way we feed ourselves, the way we think about health and the way we perceive the world.

PRINCIPLE # 1

Nutrition represents the combined activities of countless food substances. The whole is greater than the sum of its parts.

The main message I'm trying to get across is this: the chemicals we get from the foods we eat are engaged in a series of reactions that work in concert to produce good health. These chemicals are carefully orchestrated by intricate controls within our cells and all through our bodies, and these controls decide what nutrient goes where, how much of each nutrient is needed and when each reaction takes place.

Our bodies have evolved with this infinitely complex network of reactions in order to derive maximal benefit from whole foods, as they appear in nature. The misguided may trumpet the virtues of one specific nutrient or chemical, but this thinking is too simplistic. Our bodies have learned how to benefit from the chemicals in food as they are packaged together, discarding some and using others as they see fit. I cannot stress this enough, as it is the foundation of understanding what good nutrition means.

PRINCIPLE #2

Vitamin supplements are not a panacea for good health.

Because nutrition operates as an infinitely complex biochemical system involving thousands of chemicals and thousands of effects on your health, it makes little or no sense that isolated nutrients taken as supplements can substitute for whole foods. Supplements will not lead to long-lasting health and may cause unforeseen side effects. Furthermore, for those relying on supplements, beneficial and sustained diet change is postponed. The dangers of a Western diet cannot be overcome by consuming nutrient pills.

It is not that these nutrients aren't important. They are-but only when consumed as food, not as supplements. Isolating nutrients and trying to get benefits equal to those of whole foods reveals an ignorance of how nutrition operates in the body. As time passes, I am confident that we will continue to "discover" that relying on the use of isolated nutrient supplements to maintain health, while consuming the usual Western diet, is not only a waste of money but is also potentially dangerous.

PRINCIPLE #3

There are virtually no nutrients in animal-based foods that are not better provided by plants.

Eating animals is a markedly different nutritional experience from eating plants. Plant foods have dramatically more antioxidants, fiber, and minerals than animal foods. In fact, animal foods are almost completely devoid of several of these nutrients plus they have much more cholesterol and fat. Animal foods have slightly more protein than plant foods, along with more B_{12} and vitamin D, although the vitamin D is largely added to milk.

By definition, for a food chemical to be an essential nutrient, it must meet two requirements:

- the chemical is necessary for healthy human functioning
- the chemical must be something our bodies cannot make on their own, and therefore must be obtained from an outside source

One example of a chemical that is not essential is cholesterol, a component of animal-based food that is nonexistent in plant-based food. While cholesterol is essential for health, our bodies can make all that we require; so we do not need to consume any in food. Therefore, it is not an essential nutrient. There are four nutrients which animal-based foods have that plant-based foods, for the most part, do not: cholesterol and vitamins A, D, and B_{12}. Three of these are nonessential nutrients. Cholesterol is made by our bodies naturally. Vitamin A can be readily made by our bodies from beta-carotene, and vitamin D can be readily made by our bodies simply by exposing our skin to about fifteen minutes of sunshine every couple days. It is estimated that we hold a three-year store of vitamin B_{12} in our bodies. If you do not eat any animal products, particularly if you are pregnant or breastfeeding, you should take a small B_{12} supplement regularly and consider getting tested for B_{12} levels.

PRINCIPLE #4

Genes do not determine disease on their own. Genes function only by being activated, or expressed, and nutrition plays a critical role in determining which genes, good and bad, are expressed.

We can safely say that the origin of every single disease is genetic. Our genes are the code to everything in our bodies, good and bad. Without genes, there would be no cancer. Without genes, there would be no obesity, diabetes or heart disease. And without genes, there would be no life.

This might explain why we are spending hundreds of millions of dollars trying to figure out which gene causes which disease and how we can silence the dangerous genes. This also explains why some perfectly healthy young women have had their breasts removed simply because they were found to carry genes that are linked to breast cancer.

Dormant genes do not have any effect on our health. This is obvious to most scientists, and many laypeople, but the significance of this idea is seldom understood. What happens to cause some genes to remain dormant, and others to express themselves? The answer: environment, especially diet. In our body, nutrition is the environmental factor that determines the activity of genes.

PRINCIPLE #5

Nutrition can substantially control the adverse effects of noxious chemicals.

Stories of cancer-causing chemicals regularly appear in the press. Acrylamide, artificial sweeteners, nitrosamines, nitrites, Alar, heterocyclic amines and aflatoxin have all been linked to cancer in experimental studies.

There is a widely held perception that cancer is caused by toxic chemicals that make their way into our bodies in a sinister way. For example, people often cite health concerns to justify their opposition to pumping antibiotics and hormones into farm animals. The assumption is that the meat would be safe to eat if it didn't have those unnatural chemicals in it. The real danger of the meat, however, is the nutrient imbalances, regardless of the presence or absence of those nasty chemicals. Long before modern chemicals were introduced into our food, people still began to experience more cancer and more heart disease when they started to eat more animal-based foods.

It is useful to think of this principle in another way: a chronic disease like cancer takes years to develop. Those chemicals that initiate cancer are often the ones that make headlines. What does not make headlines, however, is the fact that the disease process continues long after initiation, and can be accelerated or repressed during its promotion stage by nutrition. In other words, nutrition primarily determines whether the disease will ever do its damage.

PRINCIPLE #6

The same nutrition that prevents disease in its early stages (before diagnosis) can also halt or reverse disease in its later stages (after diagnosis).

It is worth repeating that chronic diseases take several years to develop. For example, there is a general thought that breast cancer can be initiated in adolescence and not become detectable until after menopause! For many people this translates into the fatalistic notion that little can be done later in life.

Cancer that is already initiated and growing in experimental animals can be slowed, halted or even reversed by good nutrition. Luckily for us, the same good nutrition maximizes health at every stage of a disease. In humans, we have seen research findings showing that a whole foods, plant-based diet reverses advanced heart disease, helps obese people lose weight and helps diabetics get off their medication and return to a more normal, pre-diabetes life.

Some diseases, of course, appear to be irreversible. The autoimmune diseases are perhaps most frightening because once the body turns against itself, it may become unstoppable. And yet, amazingly, even some of these diseases may be slowed or attenuated by diet.

I believe that an ounce of prevention does equal a pound of cure, and the earlier in life good foods are eaten, the better one's health will be. But for those who already face the burden of disease, we must not forget that nutrition still can play a vital role.

PRINCIPLE #7

Nutrition that is truly beneficial for one chronic disease will support health across the board.

As I have come to understand more about the biochemical processes of various diseases, I have also come to see how these diseases have much in common. Because of these impressive commonalities, it only makes sense that the same good nutrition will generate health and prevent diseases across the board. Even if a whole foods, plant-based diet is more effective at treating heart disease than brain cancer, you can be sure that this diet will not promote one disease while it stops another. It will never be “bad” for you. This one good diet can only help across the board. So I’m afraid I don’t have a different, catchy formula for each disease. I only have one dietary prescription. It is a chance to clear away much of the incredible public confusion. Quite simply, you can maximize health for diseases across the board with one simple diet.

PRINCIPLE #8

Good nutrition creates health in all areas of our existence. All parts are interconnected.

The process of eating is perhaps the most intimate encounter we have with our world; it is a process in which what we eat becomes part of our body. But other experiences also are important, such as physical activity, emotional and mental health and the well-being of our environment. Incorporating these various spheres into our concept of health is important because they are all interconnected. Indeed, this is a holistic concept.

Furthermore, it turns out that if we eat the way that promotes the best health for ourselves, we promote the best health for the planet. By eating a whole foods, plant-based diet, we use less water, less land, fewer resources and produce less pollution and less suffering for our farm animals. Our food choices have an incredible impact not only on our metabolism, but also on the initiation, promotion and even reversal of disease, on our energy; on our physical activity, on our emotional and mental well-being and on our world environment. All of these seemingly separate spheres are intimately interconnected.

Who Cares, Anyway?

The applicability of these principles should not be underestimated. Most importantly, they can help to reduce public confusion regarding food and health. The benefits of understanding these principles are wide-ranging and profound for individuals, societies, our fellow animals, and our planet.