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The Non-Medicated Life: The Nature of What's Natural

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This is the nineteenth in a series on optimal diet and lifestyle to help prevent disease and responsibly avoid an over reliance on medications. This complementary approach is based in the medical evidence of the most successful research trials and the best science available. Any planned change in diet, exercise or treatment should be discussed with and approved by your personal physician before implementation. Consultation with a registered dietitian is strongly advised.

Medicines are a mainstay of American life and the healthcare system not only because they are perceived to work by the individual taking them, but also because their benefit may be shown by the objective assessment of scientific study. Clinical research trials have shown that some of the medicines of Western science may reduce the risk of heart attacks, strokes and cardiovascular death.

In the first 18 installments of The Non-Medicated Life, informed diet and lifestyle have been shown to accomplish “naturally” for the majority of individuals, many, if not most of the benefits of medications. The question arises, however, just what is natural? Is organic produce natural and all other produce unnatural? Are all dietary supplements natural? Is something that is natural inherently safe? Are natural substances taken in unnatural amounts, natural?

Natural, according to Webster’s dictionary, may be defined as something produced by or existing in nature; or to put it another way, something that is not artificial. When one speaks of natural foods or produce, natural usually means organic or grown without the use of pesticides or fertilizers.

The natural food movement is, in part, a response to the perceived risk in the use of pesticides and fertilizers first given wide recognition by Rachael Carson in her book “Silent Spring.”

Carson identified pesticides and fertilizers as technology’s solution to the decreased crop yields resulting from insect pests. While increasing crop yield, such an approach had unintended deleterious effects on the environment and the human body. The science of ecology was a result of a realization of the interconnectedness of all living things and the appreciation that artificial substances released into the environment could have far reaching and unintended deleterious consequences on microbial life, plants, animals and humans.

Organic

The terms “natural” and “organic” with respect to foods are not synonymous. Foods may be certified organic by the USDA which in its definition means that the foods are grown, handled and processed without pesticides or chemicals or fertilizers made with synthetic ingredients or sewage sludge and without bioengineering (genetically modified) or ionizing radiation. Food certified as organic, therefore, represent not simply food that is free from substances potentially detrimental to humans but also food that has been grown by a method which does the least damage to the environment and by extension to humans.

Is certified organic food better for you? On the basis of scientific analysis the content of protein, carbohydrate, and fat as well as micronutrients is
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the same or nearly the same in certified organic produce as in conventionally raised produce. The difference lies in pesticide residues and chemical residues in conventionally raised produce and antibiotic and growth hormone residues in conventionally raised animal meat. The effects of such residues on humans is not known with certainty and the effects on more vulnerable human subpopulations such as pregnant women or a fetuses are not known and cannot be studied. Prudence dictates caution in unnecessarily exposing any of us but especially these individuals to substances of unknown risk.

While consuming organically certified foods is one way to avoid unnecessary exposure, washing conventionally raised fruits and vegetables with soap and water will remove the majority of the contamination. A practice of avoiding conventionally raised produce highest in pesticide residue – such as strawberries, apples and onions – in favor of organic produce and washing the rest with soap and water will go a long way to cost-effectively reduce unnecessary risk.

Needless to say bringing young children to commercial apple groves or strawberry patches to “pick it yourself” when those groves have been sprayed with pesticides has significant potential risk for unnecessary exposure. Using lawn care services that promise a weed free lawn through the application of pesticides has potential risk, especially granular pesticides which may be inadvertently dispersed on neighborhood sidewalks and roads. Such pesticides are tracked into homes by shoes and pets, get into carpets and may increase pesticide ingestion despite the use of organic produce.

Natural

The term “natural” used in connection with dietary supplements, herbs and botanicals is somewhat different and does not assure safety. Such non-pharmaceutical medicines, which made up 75-percent of the entries in the first edition of the United States Pharmacopoeia published in 1820, experienced a decline in use during the early 20th century until the

countercultural movement of the early 1960s. That movement which emphasized more natural, non-traditional approaches to healthcare heralded a return to herbals, botanicals and more recently dietary supplements. The Dietary Supplement Health and Education Act of 1994 allowed manufacturers to market vitamins, minerals, amino acids, herbal products, botanicals and supplements without prior proof of safety, purity or efficacy.

Unfortunately, most consumers interpreted this Act of Congress as implicit proof of the safety of all naturally derived products. What is not always appreciated is that natural substances are not universally safe and through history have been the basis of the great majority of human poisons. Curare, strychnine, hemlock are completely natural substances which are lethal. A natural substance derived from the herb Ephedra Sinica (Ma huang) was a part of many weight reducing natural products until it became clear to the FDA that a number of people had been harmed or died including some without any previously recognized cardiovascular or neurological risks in whom the supplement was taken at recommended doses.

More recently, cases of heavy metal toxicity have been documented after the use of traditional Indian herbal medicines (Ayurvedic) which were shown to contain lead, mercury and arsenic. Aristolochia is a Chinese herb that has been linked to kidney toxicity and may be a human carcinogen associated with kidney cancers. While there are herbal products and botanicals which have scientific evidence of benefit, the use of a specific herbal products or botanical is best discussed with one's physician. Even herbal medicines previously used without apparent toxicity may cause toxicity when used in conjunction with newly prescribed pharmaceuticals. Anyone currently taking medication who is contemplating adding an herbal product or botanical to their medications should first discuss the potential risk and benefit with their physician.

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Moreover, natural substances such as vitamins which are safe when used in appropriate amounts may be unsafe when used in excessive amounts. Vitamin A is a fat soluble vitamin which when used in excessive dose may result in toxicity characterized by neurological abnormalities and liver disease. In the first trimester of pregnancy, intake of excessive Vitamin A may result in birth defects. Selenium is a mineral and an antioxidant which when used in excessive amounts may cause toxicity characterized by hair loss, nail changes, mental status changes and nerve damage. Even Vitamin E which as a supplement has been used in doses far exceeding what would be possible to achieve with food alone has in a meta-analysis recently been shown to increase the risk of all cause mortality when used in doses greater than 400 international units per day.

In summary, what is most “natural” is to consume foods and produce which are not contaminated with chemicals and pesticides. This may be accomplished by avoiding those with the highest pesticide residues in favor of certified organic produce and/or washing produce to reduce risk. In the case of meats, those that are certified organic or at least minimally processed without addition of hormones or antibiotics are preferred. With regard to botanicals and herbal medicines “natural” does not assure safety and it is best to discuss the use of such non-traditional medicine with one’s physician.

Finally, the use of vitamins and other supplements should never exceed the recommended dose without a thorough discussion with one’s physician. In this way, the use of natural foods and medicines in conjunction with a healthy natural diet and lifestyle may safely help one to minimize or avoid the proverbial bottle of prescription pills to treat a variety of our 21st century health problems.

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