## "Doctor, which vitamins should I take?"

by Richard E. DuBois, M.D.

More and more Americans are aware of the importance of diet and nutrition to their health. Patients frequently ask me if they should take vitamins, minerals, or other nutritional supplements, and if so, which ones? They want to know if they should follow the Recommended Daily Allowances (RDA's) or maybe they have heard of the newer Dietary Reference Intakes (DRI's). Obviously, vitamins and minerals are important for our health since we can't live without them; however, there is much more to the story than a few isolated nutrients.



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The key to good nutrition is not simply a proper balance of the macronutrients – protein, carbohydrates, and fats – but also of the micronutrients that come with eating a wide variety of foods in a healthy diet. Micronutrients are not just vitamins and minerals; they also include "phytonutrients" -- the many other

nutrients found in plant foods like fruits and vegetables. Ironically, while more research is coming out all the time on the importance of phytonutrients to good health, many of these critically important micronutrients do not yet have established RDA or DRI values!

## "We all need large amounts of fruit and vegetable nutrition daily."

## Richard E. DuBois, M.D.

Most everyone needs to include fruits and vegetables, whole grains, quality proteins, and essential fatty acids in their diet, in that order of predominance, every day. You may have seen a "Five-A-Day" poster in the produce department of your local grocery store. But what you may not realize is that the <u>Centers for Disease Control and Prevention [CDC]</u>, along with other government agencies, actually recommend five to nine servings of fruits and vegetables every day for good health. Clearly, we all need to eat quite a few servings of a variety of fruits and vegetables daily.

Why is this? There is a growing body of scientific research showing the efficacy of fruit and vegetable nutrition in preventing and ameliorating disease. Some of the phytonutrients under the most intense investigation right now are the pigments in brightly colored fruits and vegetables. You may have heard of some of these, such as lycopene, the red color in tomatoes and watermelons, or the anthocyanidins found in red and purple fruits, such as cherries and blueberries.

However, Mother Nature's secret is not the amount of any one thing that is in a given fruit or vegetable, but that there is a little of many different things. This variety is critical to our good health. This is particularly true of produce because fruits and vegetables contain, along with

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their simple and complex carbohydrates and fibers, a symphony of phytonutrients, along with vitamins and minerals. Plant foods provide a multitude of nutrients not available from meats, dairy products, or "white" grain foods such as pasta or white bread.

So, given that most of us eat an imperfect diet, at least some of the time, should we then take supplements? There is a world of difference between "off the shelf" vitamins and Mother Nature's phytonutrients. Here are two very good examples:

- 1. Mother Nature's vitamin E includes four tocopherols and four tocotrienols. Typical man-made "vitamin E" contains only one -- d- (or even worse dl-) alpha-tocopherol.
- 2. There are 722 stereoisomers of carotenoids found in nature, but only one, beta-carotene, finds its way into a few typical store brands of "vitamin pills."

Many multivitamin preparations on the shelf today are formulated to provide 100% of various nutrients based on the RDA values; however, it is important to recognize that RDA's are somewhat arbitrary. They are simply those amounts of certain nutrients that, if absorbed, will prevent acute deficiency diseases, such as scurvy and pellagra. These diseases are seldom, if ever, seen any more in industrialized nations. Diseases that are prevalent in our society are long latency diseases. These are diseases such as heart disease, cancer, stroke, Alzheimer's disease, and osteoporosis. Long-lasting dietary insufficiencies allow harmful processes such as oxidative stress and DNA damage to gradually generate cumulative cell injury that results in premature aging and disease.

Generally, the RDA's that have been established for prevention of acute deficiency diseases are lower than what research is showing to be protective for the development of long latency diseases. In fact, no RDA's have yet been established regarding these long latency conditions. In 1998, the Institute of Medicine began an ongoing project to revise the RDA's based on recent research. The outcome is the development of the Dietary Reference Intakes; and, DRI's are now being issued for various micro- and macro-nutrients. This new information is being taken into account as the current RDA values are now in the process of being revised, based on new DRI recommendations.

So you may ask, "Doctor, what vitamins should I take?" I recommend against taking traditional multivitamin pills for most of my patients. Some patients do have specific needs for isolated nutrients, such as iron for anemic patients, calcium along with vitamin D for people who cannot or will not eat foods high in calcium, Vitamin B12 for some elderly people and people who do not eat any animal products. However, not everyone needs these supplements. Let Mother Nature be your guide and get your nutrition by enjoying a wide variety of whole foods. If you have difficulty including 5-9 servings of fruits and vegetables every day, then consider taking a whole food based nutritional supplement along with as many servings of plant foods as you can manage.