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While running on the treadmill this morning about 5:30, I saw a blog on CNN stating that a large study had shown that vitamin supplements are not effective in reducing cancer or heart disease. Since about 60% of the people in this country take vitamins and often depend on them for the nutrition that they receive, it really is important for us to know whether or not this is true. If it is true, there is a lot of money being spent unnecessarily for vitamin supplements and they are not really helping to keep you healthy. The real downside of this is that if you depend on vitamins for enhancing your nutrition, as a way to prevent cancer, heart disease, and premature aging, it may not be effective. We must also understand that although food can furnish vitamins and minerals, there are other nutrients numbering in the thousands that are furnished by food as well.

I was looking at some past references and noted that in May 2006, the National Institutes of Health (NIH) held a conference on multivitamin/mineral supplements in chronic disease prevention. The NIH report at that time showed that excessive doses of vitamins that exceed the recommended daily amount (RDA) may raise safety concerns. For example, it has been shown clearly from a Scandinavian study that taking large doses of beta-carotene actually increases the risk of lung cancer in smokers. We do know also that natural sources of beta-carotene and other antioxidants reduce the incidence of lung cancer.

A study in London in April '08 noted that vitamin supplements taken by millions of people in the hope of extending their lives may actually increase the risk of premature death in some cases. They reviewed 67 studies on 230,000 people and found that vitamin C had no effect in reducing the incidence of upper respiratory disease. Additionally, it did not strengthen bones or improve circulation, and it was concluded that the evidence does not support the use of antioxidant supplements in the general healthy population.

In the *Harvard Health Letter* in January 1996, an example was given of a 76-year-old male who took 48 vitamin supplement pills daily, spending \$150 monthly on them. The 23 different types of pills he took were supposed to benefit his prostate, eyes, and memory as well as other incidental problems. When all of his vitamins were totaled up, it was noted that he was taking a potentially dangerous level of vitamin A and possibly zinc and selenium. Even though his case is possibly extreme, millions of Americans take excessive doses of vitamin pills in hopes of avoiding health problems.

Last year, Americans spent more than \$3 billion on nutritional supplements. The question is, whether or not it is useful to take any supplements at all and whether they do help any overall health picture. Four of the usual vitamins that we take – including A, C, E and selenium – are antioxidants. All the rest are used as trace elements in the normal enzymatic processes in the body which perform all of the different body functions. We know that antioxidants are necessary and that you need about 3,500 to 5,000 ORAC units each day to slow down the aging process which is caused by free radical formation in

your body. It appears that just getting trace amounts of most vitamins are adequate, and if you eat a nutritious diet this can occur. However, if you look at the diets currently being ingested in this country, a large part of the amount of ingested food is hydrogenated fat, sugar, starch, and saturated fat. None of these have any nutrients of any significance, and so only the remainder of what is eaten besides that will furnish any nutrition to your body.

In the past three years there has been a lot of discussion about vitamin D, a vitamin that occurs naturally when you are exposed to the ultraviolet light of the sun. If you get total body exposure about three times a week, your vitamin D levels can remain normal and have a very positive effect on your body. Studies have shown that reduced vitamin D levels increase the incidence of cancer and heart disease, while adequate levels are associated with improved statistics regarding those diseases. We also know that of the multiple types of vitamin D products available, vitamin D3 (cholecalciferol) is the most effective. You can also note that by taking supplements of vitamin D, your serum levels of vitamin D can go up to what is considered normal.

One of the problems here is that as you look at other studies over the years, some conclusions have been made which support taking vitamin supplements. For example, in 1993 two large epidemiologic studies showed a strong association between a high level of vitamin E from supplements and reduced risk for heart disease. However, large amounts of vitamin E can interfere with blood clotting and may cause serious bleeding problems, especially in those who take anticoagulants. We know that folic acid deficiency increases the risk for fetal abnormalities and congenital defects in infants. Folic acid supplementation is helpful in preventing these, and this has been shown statistically.

One also needs to understand the difference between vitamins and food supplements. A food supplement might, for example, be the juice of the blueberry which has multiple pytochemicals and antioxidants, including a good level of vitamin C. The phytonutrients are plant-based nutrients which nurture the body functions and which furnish antioxidants rather than vitamins and minerals. We do know from nutritional studies that if you eat four to six fruits and vegetables a day, the incidence of breast cancer, prostate cancer, and even skin cancer are markedly reduced.

Having said all of this, I think that there is a reasonable conclusion to your thinking process here about whether to take vitamins or not. It appears from everything that I can study and read that mega doses of vitamins are not helpful, can be expensive, and can be dangerous to your health. However, in regards to taking a multivitamin, I believe that it probably is good insurance so that you are not vitamin deficient in one or another area. Since your body cannot manufacture vitamins from within, it is at least comforting to know that you can get these minimum elements from a multivitamin.

Nutrients that come from good food need to be taken in adequate quantities to be able to do battle with the free radicals present in your body every day, and so it is important to keep that intake level up. If you eat a lot of sugar, fat, starch, and other non-nutrient foods, you will not get adequate nutrition products from your dietary intake. Additionally, if you overload your body with hydrogenated fat and sugar, it cannot digest

the good elements of food that you eat and still put you behind in terms of being able to absorb nutrients.

So the bottom line is to take a vitamin supplement as "health insurance," but don't take excess vitamins or mega vitamins. Also, eat a diet that eliminates empty calories and eat smaller quantities of food so that your digestive process is able to function in an environment where it is not overloaded and will be able to absorb more of the nutrients from your food.