

Which Vitamins Are Right For Me?

An Analysis of four vital supplements

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In 2006, it would be difficult to find someone who hasn't heard about the importance of taking vitamins and supplements. From a doctor's standpoint, it appears that patients know they should be taking supplements, but very few actually do. In fact, according to a study of 15,387 men, only 44% reported taking vitamins on a regular basis. Those who do take vitamins are often taking low quality, cheaply made brands. With hundreds of brands to choose from it is difficult to know which supplements are of high quality. This leaves many wondering; a) which vitamins and supplements should be taken, b) how much to take, and c) does the brand of supplement matter. This newsletter discusses four vital supplements which virtually ALL adults should be consuming, including a Multiple Vitamin, Omega-3 Fatty Acids, Coenzyme Q10, and Magnesium.

Multiple Vitamin

Everyone, **yes everyone**, should take a multiple vitamin daily. Why? With the average American diet there is almost no way to intake adequate amounts of needed nutrients. For example, a survey noted in the Journal of American Diet Association found that the average American eats only 1.5 servings of vegetables per day and less than 1 serving of fruit. The American Medical Association reported in 2002 that "the usual American diet is sufficient to prevent only overt vitamin deficiency diseases". They further report that insufficient intake is a cause of chronic diseases and recommend that all adults take a multiple vitamin daily.

Even when enough fruits and vegetables are consumed, the controversy still exists over whether genetically modified crops, and the nutrient-leached soil in which they're grown, can offer the same nutrients as in the past. Many argue that hormone-injected animals yield less nutrients per ounce than grass-fed, free range animals. Regardless, taking a multiple vitamin is vitally important to long term physical and mental health.

Taking a multiple vitamin is a great first step. Next, it is important to choose a high quality, effective source. Supplements are not regulated by the Food and Drug Administration, therefore the quality is quite variable from brand to brand. A 2002 study in The Journal of Urology tested vitamin E in 7 brands of vitamins and found that the stated amount varied from the actual amount by as much as -41% to +57%. Therefore, a bottle claiming 100mg of Vitamin E might have as little as 59mg or as high as 157mg. A reputable company will continually test their raw materials and finished product for accurate quantity.

Certain brands have also been known to use pharmaceutical byproducts in their vitamins. These byproducts often include two or more vitamins bound to one another. It is legal to then claim the vitamin contains both nutrients, but in many instances these bound nutrients are not usable in your body. Byproducts make the vitamins cheaper to produce, and cheaper for consumers. Unfortunately these cheap vitamins simply end up as expensive bodily waste.

A reputable vitamin company will go through several quality assurance measures to guarantee the quality and quantity of their product, but those measures are rarely listed on the bottle. How does a consumer know which are good and which are bad? First, most high grade vitamins are not sold directly to consumers, but rather to a doctor's office, so ask your chiropractor. Second, it is nearly impossible to get all the proper nutrients in just one daily pill. Third, while unfortunately unavoidable, you get what you pay for. It costs more to make a high quality vitamin, and therefore cheap brands on average should be avoided when it comes to a multiple vitamin.

Omega 3 Fatty Acids

Fatty acids are the building blocks of which fat and oils are composed. Contrary to popular myth, the body does need fat... it just needs the right kind of fat. There are basically two categories of essential fatty acids, designated omega-3 (O3) and omega-6 (O6). Both are essential, however too much O6 will increase health risk, while an increase in O3 will lower that risk. An ideal ratio of O6:O3 is 1:1. According to several studies, the average western diet has a ratio of 25:1. Such a ratio can lead to a multitude of diseases. The cells of the body will use either O6 or O3 to make their membranes, so whichever is more readily available will be used. It is often helpful to think; "Omega-3's are good for me...Omega-6 will make me sick".

Omega-3 fatty acids have been tested in several studies, and their efficacy has been proven to reduce incidence of heart attack, stroke, arteriosclerosis, cholesterol, arrhythmias, high blood pressure, depression, and even cancer. These fatty acids are anti-inflammatory to the body, which means they decrease many chemicals which can damage tissues. The majority of diseases known to man have some inflammatory component, therefore current thinking suggests that O3's are beneficial in a global fashion, and should be taken by all adults.

The American Heart Association (AHA) released a statement in 2002 regarding omega-3 fatty acids and cardiovascular disease. They cite a 30-year study in which researchers found that men who con-

Multiple Vitamin

(as directed)

- Necessary to provide proper nutrients to our body which are needed to perform optimally, both mentally and physically

Omega 3 Fatty Acids

(1-5grams daily)

- Heart Disease
- Stroke
- Atherosclerosis
- High Cholesterol
- Arrhythmias
- High Blood Pressure
- Cancer

Coenzyme Q10

(60-150mg daily)

- Heart Disease
- Congestive Heart Failure
- Angina (chest pain)
- High Blood Pressure
- High Cholesterol
- Migraine Headaches
- Diabetes
- Cancer

Magnesium

(350-400mg daily)

- Heart Disease
- Atherosclerosis
- Angina (chest pain)
- Osteoporosis
- PMS
- High Blood Pressure
- Chronic Fatigue Syndrome
- Diabetes
- Birth Defects
- Depression
- Muscular Spasm

sumed 35g of fish (high in O3) had 38% fewer deaths from Heart Disease, and 67% fewer deaths from heart attacks. A study of 36 countries found that those which consumed higher amounts of fish had lower risk of heart disease and stroke. A study of 11,324 patients with preexisting heart disease found that those given 850mg/day of O3 were 45% less likely to die of sudden death from heart attack. Participants in a study taking 4g/day of O3 oil reduced their cholesterol by 30%. Others found that O3 supplementation lowered blood pressure by several points.

The recommended dosage of O3 is 1-5 grams daily. The FDA conservatively ruled that intake of 3g/day is generally recognized as safe. Studies involving supplementation of 6-8g/day found only rare side effects, most commonly a fishy aftertaste, in only 7% of participants. Quality capsules are virtually mercury-free, and are considered safe for pregnant women.

Coenzyme Q10

Coenzyme Q10 is a compound made naturally in the body. The body uses it to make energy needed for the cells to grow and stay healthy. The body also uses it as an antioxidant, which is a substance which protects cells from damage due to free radicals. Free radicals are damaging particles which alter cell membranes, damage DNA, and even cause cell death. They are believed to contribute to the aging process as well as the development of a number of health problems including heart disease and cancer.

CoQ10 boosts energy, enhances the immune system, and several studies have proven its benefit in prevention and treatment of heart disease, congestive heart failure, angina, high blood pressure, high cholesterol, migraine headaches, diabetes, and cancer. The National Cancer Institute believes CoQ10 is useful in treating cancer because it boosts the immune system. They also report that CoQ10 may prevent the growth of cancer cells directly. They further explain CoQ10's role as an antioxidant as aiding in the prevention of cancer. Cancer can be considered a mutation of cells, and mutation of cells often happens with free radical damage.

Coenzyme Q10 has shown tremendous benefit to Parkinson's Disease patients as well. In high dosages, the tremors of the disease are markedly diminished. The anti-aging benefits of CoQ10 are the result of its antioxidant properties, known to prevent the damage and mutations of cells.

Dosage recommendations of Coenzyme Q10 range from 60mg in an adult with no health problems, to 150mg/day for congestive heart failure or other specific health risks. In Japan, where CoQ10 is approved by the government for the treatment of congestive heart failure, amounts can be even higher. Recent studies involving doses up to 3000mg/day in patients with Parkinson's disease have confirmed the safety and tolerability of the supplement. Cholesterol medications lower the CoQ10 in the body, and are therefore anyone taking Statin drugs needs a CoQ10 supplement.

Magnesium

Magnesium is needed for more than 300 biochemical reactions in the body and is essential to good health and prevention of many diseases. It helps maintain normal muscle and nerve function, keeps heart rhythm steady, supports the immune system, and keeps bones strong. It also helps regulate blood sugar levels, promotes normal blood pressure, and is known to be involved in energy metabolism and protein synthesis. Several studies exist linking magnesium deficiency to Heart Disease, Osteoporosis, PMS, Angina (chest pain),

Atherosclerosis (hardening of the arteries), High Blood Pressure, Chronic Fatigue and Fibromyalgia syndromes, kidney stones, muscle cramps and spasm, Diabetes, birth defects, and depression. Despite this research, a survey performed by the Gallup Organization found that 72% of Americans are not getting the Recommended Daily Allowance for magnesium.

Magnesium (Mg) is essential for the heart to function, beat smoothly and regularly. It also prevents arteries from constricting, clogging with platelets, or hardening (atherosclerosis); each of which are major contributors of heart disease. Researchers at the Center for Disease Control performed a study on 12,000 people finding that those with low magnesium levels were 34% more likely to die from heart disease. They estimated that as many as 55,000 deaths from heart disease in 1993 could be attributed to low magnesium levels. Researchers at Ceders-Sinai Medical Center found that sufferers of coronary artery disease were 72% more likely to have low Mg levels, and suggests supplementation as a necessary way to reduce heart-related deaths.

Magnesium has also been shown to reduce blood pressure (BP) by decreasing artery spasm and dilating blood vessels. In a study of 30,000 health professionals performed by the Harvard School of Public Health, researchers determined that the risk of developing high BP decreased as magnesium intake increased. An analysis showed that participants consuming less than 250mg of Mg per day had a 50% greater chance of developing high BP than those taking 400mg/day or more. Magnesium has also shown benefit in reducing high BP associated with preeclampsia and eclampsia in pregnant women.

Diabetes is a disease resulting in insufficient production and/or use of insulin, which is a hormone that helps convert sugars and starches in food into energy to sustain life. Magnesium plays an important role in carbohydrate metabolism, and influences the release and activity of insulin. According to the National Institutes of Health, there are several studies which have shown diabetics have lower magnesium levels, and non-diabetics who have lower Mg levels are much more likely to develop Type II diabetes. One such study followed 170,000 health professionals for several years beginning in 1980.

Various studies have demonstrated other benefits of proper magnesium supplementation. Such studies cite its role with respect to increasing energy, both in athletes and non-athletes, decreasing depression, decreasing kidney stones, decreasing PMS symptoms, regulating arrhythmias, reducing mitral valve prolapse symptoms, reducing and reversing osteoporosis, and even reducing risk of Cerebral Palsy and mental retardation in low birth weight babies.

Current recommended dosage of magnesium is 350-400mg/day, although many authorities indicate the amount should be as much as 600-700mg/day. Magnesium should be taken **between meals** or at bedtime.

Conclusion

Regardless of age, sex, or other distinguishing characteristic, all adults should supplement their diet with a Multiple Vitamin, Omega-3 fatty acids, Coenzyme Q10, and Magnesium. These four should form the foundation by which any supplementation program begins. Our next newsletter will build on that foundation and focus on supplements which may be beneficial for specific conditions. Until then, begin a supplementation program with the confidence that it will help you live a longer, healthier life.