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Essential Dietary Supplements

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General note

There is a huge amount of literature regarding supplements -- I couldn't begin to scratch the surface in this small article. What I have presented is a fairly simple, inexpensive start to a supplement program.

- 1. Multivitamin/multi-mineral general supplement** (for example, Centrum Silver is an inexpensive brand. A single tablet can only contain those supplements needed in relatively small quantities.
- 2. Vitamin C, 500mg twice daily**, more if needed.
- 3. Chelated calcium 500mg and chelated magnesium 250mg, before bed** (in separate or single tablets).
- 4. Fish oil capsules, EPA/DHA 300-600 mg, taken with food in the middle of breakfast and supper.** Good quality fish oil is distilled to remove mercury. They have no fishy aftertaste.
- 5. Vitamin D, 1,000 IU daily (in addition to the 400 IU found in most vitamin supplements).** Taking extra on subsequent days will make up for missed doses.

Vitamins

Vitamins are complex molecules — they act as catalysts, chemicals that help create reactions. Processes occur but are not usually consumed themselves. They are present in various foods and may be stored in fat or in the body fluids. Fat-soluble vitamins tend to stay in the body longer and can be toxic if taken in excess. Water-soluble vitamins are excreted more rapidly and need to be replenished more frequently.

Minerals

Some minerals are used in large quantities, as they are important for electrical conduction, or body structures, like the bones. Others are needed in only tiny amounts but are still vital for certain enzymes to work properly.

Centrum Silver

I suggest Centrum Silver as an inexpensive, basic vitamin and mineral supplement that is readily available. There are many other multivitamins that may do an equal or better job. You can compare Centrum to other competing products. Centrum is only one tablet and it is fairly well supplied with those vitamins and minerals that are needed in only small physical quantities. Other supplements are also required in amounts that are too large to fit into just one tablet.

Vitamin B

Centrum Silver will cover minimal needed requirements, but additional supplementation may be required for anemia, elevated homocysteine levels that can increase risk for heart attack and for some abnormal pap smears.

Vitamin C

The body needs lots of Vitamin C every day. It is highly concentrated in the adrenal glands and should be used in large quantities if one is under stress. A 500mg tablet is fairly large and one should take one at least twice and up to six times daily if under stress or the onset of a cold or other viral infection.

Vitamin D

In the last several years there has been growing interest in the value of Vitamin D. It is actually a group of related compounds, the most important of which are Vitamin D2 and D3. One main function is to enhance the absorption of calcium from the intestine and facilitate the building of bone. It is now believed that adequate Vitamin D is needed to protect against many types of cancer. The ideal levels are now much higher than previously thought. Vitamin D can be made in the skin when exposed to ultraviolet radiation but it would require exposure over nearly the entire body under intense sunlight to make sufficient levels. People living at high latitude and those using sunscreen virtually never acquire enough sun exposure to make sufficient Vitamin D. As a fat-soluble vitamin, it is stored in fat and can be taken intermittently, because it stays in the body for long periods of time. A conservative dosing is between 1,000 and 2,000 IU per day.

Calcium and magnesium

Calcium is needed for bone health. Paired with magnesium, these two metals with a +2 charge regulate electrical conduction in muscles all over the body. Blood levels are very tightly controlled by the parathyroid glands and don't reflect the body's need. The phosphates in soft drinks wash calcium out of the body. Our soil has been mostly depleted of magnesium. Because the quantities needed are large, sufficient amounts can not fit into a daily vitamin tablet. I suggest chelated calcium 500/magnesium 250. Take it at bedtime, as bones are built mostly at night. In addition, magnesium is a sedative and will assist in inducing sleep and as a laxative to promote a bowel movement in the morning. Magnesium also protects against migraine headaches and reduces restless leg syndrome.

Fish oil capsules or flax seed

Most Americans eat an excess of the wrong kinds of fat. The membranes of all of our cells are made of fat and we all need the proper building blocks to make healthy cell membranes. When cows and chickens were allowed to run around and eat what they wanted, cows ate grass and hay and chickens ate a lot of

insects. Their meat used to be high in a special kind of fat called omega 3 and omega 6 fatty acid. Today, most of our meat comes from factory farms. The cows and chickens are penned up in very small enclosures and fed almost entirely on corn, which has high sugar content. This has altered the type of fat the animals store and ultimately, in the meat we eat. As a result, almost everyone needs additional Omega 3 and Omega 6 fatty acids. These can be found in cold-water fish.

Unfortunately, some of these fish are also high in mercury, a toxic metal. The current best solution is to take mercury free fish oil capsules with meals at least twice daily. Quality is important in fish oils. If it smells bad or leaves a fishy taste from your stomach, seek out a better brand. Flax seed oil can be converted by most people to these fatty acids, but some people lack the enzyme to make the transformation. Don't buy more than you can use before it expires and keep all opened containers refrigerated. Once exposed to air, Omega oils turn rancid quickly.