

3.2.2.3.7.8 Multivitamins - save your money for better purchases

As scientific research into nutrition progresses, micronutrients such as vitamins and minerals are receiving more and more attention. They do so not only among scientific researchers but also from health-conscious consumers.

Furthermore, awareness is pushed for the purpose of marketing. The sale of nutrients in the form of pills is big business. On the Internet, lots of advertorial pseudo-information is disseminated. Fact is, for the vast majority of micronutrients, healthy food is by far the best source.

Supplements, by and large, are justified for specific, therapeutically active phytochemicals not found in standard food items. Tongkat ali (*eurycoma longifolia*) has contains phytochemicals that have been proven scientifically to raise testosterone levels and be useful as malaria prophylaxis, and sirih leaves contains phytochemicals that cause a shrinkage of the vaginal lining.

Alas, sirih leaves make a poor salad, and tongkat ali root is so bitter, it is consumed by millions of men (and an increasing number of women) in Southeast Asia and China not for its Lucullan potential but for the additional sexual potency it provides.

For sirih leaves and tongkat ali, extracts in capsule form make sense. I can even understand people taking vitamin E or vitamin C in the form of tablets. But what is commonly sold as multivitamins and minerals is making a fool of the buyer. This is the case because multivitamins typically combine a very wide range of ingredients, most of which are not needed as supplements. Of those that do make sense as supplements, the amounts found in multivitamin capsules are mostly irrelevant.

Here a rundown of typical ingredients and our comments on them. We start with those ingredients that make some sense... though one better chooses these ingredients as separate products, and if possible, gets them from food sources:

The sensible

Selenium - this is often the most useful ingredient in multivitamins. 200 mcg per day is what we should consume as dietary intake. Selenium protects against some cancers. If you prefer natural sources, two or three brazil nuts a day will get you enough selenium, and you don't have to worry about harmful chemistry in pills.

Beta-carotene - health guru Dr. Weil recommends 25,000 IU a day; multivitamins typically provide about 5,000 to 10,000 IU. If you eat some tomatoes and carrots, you get a fair share of beta-carotene.

Some B-vitamins as supplements make sense. You can't do much wrong by taking them.

Vitamin B-6 (Pyridoxine) - multivitamins typically provide 10 to 25 mg; much higher doses (several hundred milligrams a day) have been tried as remedy for arthritis, premenstrual pain, depression and a few other conditions. According to Dr. Weil, high doses will increase the instance of remembered dreams.

Niacinamide, a form of Niacin (vitamin B-3) - multivitamins provide something in the range of 50 to 100 mg per pill; higher doses are used to lower cholesterol but there is some risk of an adverse liver reaction.

Zinc - this mineral is important for prostate health, and many men are alleged not to get enough of it. The best food sources for zinc are oysters (one may want to avoid them because of likely contamination through poisoned ocean waters) and meat. Vegetarians, unless they eat nuts regularly, are much more likely than meat consumers to suffer from zinc deficiency. Multivitamins often provide 15 mg, which is the Recommended Dietary Allowance per day. For a stressed prostate, about 30 mg a day are taken as support.

Copper - this is a mineral that should somehow be in proportion with zinc, in an amount that equals about 10 percent of the zinc taken. Multivitamins often provide about 2 mg; there is nothing wrong with this. If you get your zinc from mixed nuts, you will also have taken

care of your copper needs.

The unnecessary

Vitamin B-1 (thiamine) - multivitamin products often contain around 25 mg, which is generous. Some people, especially those abusing alcohol, may feel a bit more energetic when taking vitamin B-1 in doses of more than 100 or 200 mg but specific effects are so diffuse that a necessity for supplementation does not exist in most individuals.

Vitamin B-2 (riboflavin) - look at the label of your multivitamins bottle, and you may learn that each pill gives you 25 mg riboflavin. Health guru Dr. Weil: "Riboflavin (vitamin B-2) is a yellow pigment, which is what turns the urine bright yellow when you take a B-complex supplement. This is harmless, but can be upsetting if you don't know the cause. I do not know any reason to take this vitamin separately."

Vitamin B-12 (cobalamin), Vitamin B-5 (Pantothenic Acid), Folic Acid - Many multivitamin products provide amounts that make a fair share of what is considered a sensible amount of these vitamins consumed per day, but the benefits of taking these vitamins as supplements is not clear for healthy individuals. For those recovering from illnesses, physicians often prescribe B-vitamins; at least, they do no harm, unlike many pharmaceuticals, which may also not really be needed but are prescribed by many doctors, because they feel that patients aren't happy if they are not ordered to take a variety of pills.

Biotin - multivitamins are likely to contain about 300 mcg per capsule. While we may not get enough biotin from the foods we eat, biotin in sufficient amount is produced by intestinal bacteria, which are part of the flora of healthy people. Only when a lot of antibiotics have been taken, and the normal intestinal flora has been killed, is there a need to take supplemental biotin. Because of specific enzymatic processes, there may exist a biotin deficiency in individuals who eat a lot of raw eggs. For others, biotin supplementation is truly unnecessary.

Manganese - you may find that you get about 5 mg of manganese from your multivitamins, specified as manganese gluconate. Ask your health food sales clerk or even your pharmacist what benefit

you will derive from the manganese in your multivitamins. They will have a hard time to answer this question. It may be good for something, as anyway, trace amounts of manganese are found in many foods we eat. But it's clearly unnecessary as supplement.

The obsolete

The following ingredients of multivitamins are typically provided in such irrelevant amounts that one may just as well go without the supplementation:

Vitamin C - multivitamin pills often provide just around 100 mg; therapeutic or prophylactic dosages are in the range of 1 to 5 grams per day.

Vitamin E - multivitamins may provide 50 to 100 IU; most health benefits of vitamin E supplementation kick in at dosages of 400 to 800 IU.

Calcium - the officially Recommended Dietary Allowance per day is about 1 gram (1000 mg). If your multivitamins provide 25 or 50 mg, they just mixed it into the formula so they could print calcium on the label. The calcium amounts of some common foods: 100 gr oats - 52 mg; 100 gr chocolate - 191 mg; 100 gr sardines in tomato sauce - 240 mg; 100 gr oranges - 40 mg (47 kcal).

Magnesium - found in multivitamin products at around 10 mg. The officially Recommended Dietary Allowance per day for men 25 to 50 years of age are 350 mg. Therefore, 10 mg are an absolutely irrelevant amount. The kidneys very well regulate magnesium levels. The magnesium contents of some foods: 100 gr oats - 148 mg; 100 gr chocolate - 60 mg; 100 gr sardines in tomato sauce - 34 mg; 100 gr banana - 29 mg (92 kcal); 100 gr oranges - 10 mg (47 kcal).

Potassium - multivitamins may provide just some 5 mg per day, an absolutely irrelevant amount. The minimum daily requirement is 2000 mg, and an average American diet contains 2000 mg to 6000 mg. The potassium contents of some common foods: 100 gr oats - 350 mg; 100 gr chocolate - 385 mg; 100 gr sardines in tomato sauce - 341 mg; 100 gr banana - 396 mg (92 kcal, no other minerals in significant amounts); 100 gr oranges - 181 mg (47 kcal)

Choline Bitartrate - you may find 25 mg in multivitamin pills, which is an irrelevant amount; one egg already gives you about 250 mg choline.

PABA (para-aminobenzoic acid) - multivitamin pills often contain around 25 mg of this substance, of which common consumers have no idea what it may be good for. It's not necessary as a supplement as intestinal bacteria produce PABA. 25 mg also are an irrelevant amount; therapeutic dosages are several 100 mg, e.g. for hair growth.

The unwanted

While the substances listed above are largely unnecessary, your multivitamins may also contain substances, which you don't want to ingest if you care about your health.

Iron - whether iron supplementation through multivitamins or iron supplements makes sense, is primarily a question of age and gender. As bleeding depletes iron reserves, women before menopause may derive some benefit from supplemental iron. For men in developed countries, it's rather a question of how to avoid too much iron. Unlike what is the case for minerals like calcium or potassium, there is no common route by which excess iron would be excreted from the body. It has to happen through bleeding, which is why donating blood is a healthy practice for some men. Too much iron intake will cause excessive iron storage in the liver and other organs. This is a condition called iron overload disease or hemochromatosis, with symptoms similar to diabetes. Iron overload may also interfere with sexuality and specifically may caused erectile dysfunction.

Vitamin D - many multivitamins contain 200 to 400 IU. More than 400 IU per day should be avoided. If you get some exposure to sunshine every day, you don't need Vitamin D at all.

Chromium - your multivitamins may contain 200 mcg of chromium, specified with the abbreviation GTF for Glucose Tolerance Factor. The following is an excerpt from a Reuters item dated March 23, 1999: "The popular dietary supplement chromium picolinate may

damage DNA, possibly increasing the risk of cancer, a University of Alabama researcher reported at the American Chemical Society's annual meeting in Anaheim, California."

Molybdenum - your multivitamins may contain 150 mcg, specified as "natural molybdate". With molybdenum, the problem is usual one of toxicity rather than deficiency. Gout is a common health problem associated with too high a dietary intake of molybdenum.