

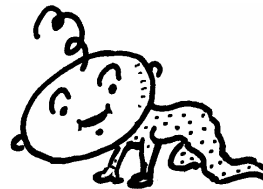
**Supplement
Savvy for
Wellness**

Multivitamins

A Supplement Savvy Family

© 2003 Jill Place, MA, RD

If you're eating the Standard American Diet, or the **SAD** diet, of fast food fare, you're probably long on a lot of fat, salt, and calories and short on the more than 40 nutrients your body needs to work well. Vitamins and minerals do many things for your body. They speed up and slow down metabolism, make cells healthy, and act as antioxidants that protect the body from aging and disease.



We **can** get all the nutrients that we need from food. In our fast-paced, take-out world, however, many of the foods we eat don't have all the nourishment our bodies need. We also don't choose foods that will give us enough nourishment. For example, we're supposed to eat five-plus servings of fruits and vegetables a day and most of us eat less than two. Fruits and vegetables give us lots of vitamins, minerals, and things called phytonutrients that keep us healthy and help prevent degenerative diseases like cancer. Most of us also don't eat a lot of whole grains, legumes, raw nuts, and soy products either. And things like stress, environmental toxins, and certain medicines can rob our bodies of more nutrients.

If you're a healthy person, you might be able to get all the vitamins and minerals you need from good foods. But you're most likely not getting them for one reason to another. So it might be a good thing to add a multivitamin with minerals to your diet.

Even the medical community thinks that taking a multivitamin every day is a good idea. A landmark 1998 editorial in the *New England Journal of Medicine* urged doctors to tell their patients to "Eat right *and* take a multivitamin". As a matter of fact, taking a good multivitamin with minerals is a better idea than taking a bunch of individual supplements. A quality multivitamin with minerals gives you nutrients in good balance; too much or too little of a nutrient can affect the function and absorption of other nutrients in your body.



Multivitamins can serve as a great base upon which to build your supplement regime. If you're already taking a multivitamin, use the checklist below to rate the forms and amounts of the nutrients in your multi. Put a big "X" in the box next to the nutrient if it has the qualities and forms listed below. If you've got a lot of "X"s when you're finished, you're taking a multi of excellent quality. If your multi doesn't measure up, have your Registered Dietitian or Supplement Savvy Specialist choose a good one for you.

HOW DOES YOUR MULTI MEASURE UP?

Does your multivitamin have these antioxidants?

Antioxidants in your multivitamin can work synergistically together to boost immunity and stop free radical damage that may cause aging, cancer, and other diseases.

⊖ Mixed carotenoids

Natural carotenoids, such as natural beta-carotene, are preferred over synthetics. Synthetic Beta-carotene has been used as a single supplement in some studies that have caused cancer. A variety of carotenoids from fruits and vegetables are the best multivitamin bet for this form of vitamin A. Carotenoid varieties may act synergistically and enhance the actions of other carotenoids and antioxidants. Carotenoids have been shown to possibly promote eye, heart, immune, and skin health. Mixed carotenoids that may be included in your supplement include **Alpha-carotene, Cryptoxanthin, Lutein, and Zeaxanthin.**



- ⊗ **Vitamin A** ☐
 Vitamin A is a fat-soluble antioxidant that has similar health-promoting qualities as their cousins, the carotenoids. Best forms come from natural sources, such as fish liver. **Retinylacetate and Retinyl palmitate** are the forms found in most high-quality multis.
- ⊗ **Vitamin C** ☐
 Vitamin C is the most important water-soluble antioxidant. Vitamin C may prevent aging, heart disease, and cancer. It's also important for eye and immune health **Ascorbic acid and** mineral ascorbates, like **Calcium ascorbate**, are the forms most used in multis.
- ⊗ **Vitamin E** ☐
 Vitamin E is a fat-soluble antioxidant that may inhibit a variety of cancers and protect the heart. Natural Vitamin E, d-alpha-tocopherol, is absorbed twice as well as its synthetic cousin, dl-alpha-tocopherol. Most multis contain **d-Alpha-tocopheryl succinate**, the dry form of Vitamin E, which has been used in many cancer prevention studies. For more information, ask your dietitian or Supplement Savvy Specialist for the individual Vitamin E handout.
- ⊗ **Selenium** ☐
 Selenium is an essential mineral in human nutrition that may protect against heart disease and cancer and is essential for healthy immunity. Selenium occurs in supplements mostly as **high-selenium yeast, L-Selenomethionine, Sodium selenate, and Sodium selenite**. Selenium also may be in an amino acid chelate form such as **Selenium aspartate**.

Do you have these extra antioxidants in your multi?

- ⊗ **Bioflavonoids** ☐
 These colorful pigments from the skins and rinds of fruits and vegetables are some of the best antioxidants in nature. They also modify the body's reaction to allergens, viruses, and carcinogens. They are therefore anti-allergic, anti-inflammatory, anti-microbial and anti-cancer. Look for **standard** or **undiluted bioflavonoids** or **citrus bioflavonoid complex**.
- ⊗ **Quercetin** ☐
 Quercetin is a potent bioflavonoid that is found in abundance in red wine, onions, and green tea. It has been researched as possibly being effective against cancer, heart disease, and inflammatory problems from allergies to arthritis. Quercetin in small amounts in multis helps prevent the oxidation of Beta-carotene.
- ⊗ **Superoxide Dismutase (SOD) Precursors** ☐
 SOD is an enzyme produced in your body that is another potent antioxidant. SOD can be produced in your body when you have enough **zinc, copper, and manganese**. Some supplement authorities believe that these minerals shouldn't be in your multi because we get enough from food, but others believe that these minerals should be included because they help make SOD. Good forms of copper include **Copper gluconate and** copper amino acid chelates such as **lysinate**. Good forms of **Manganese** include **gluconate and ascorbate and** amino acid chelates such as **glycinate**. Good forms of **Zinc** include **gluconate, aspartate, and** amino acid chelates such as **glycinate and histidinate**.



Do you have these forms of other vitamins in your multi?

- ⊗ **Vitamin D** ☐
 This fat-soluble vitamin is used for preventing osteoporosis, enhancing immune function, reducing risk of cancer, as well as preventing auto-immune diseases, muscle weakness, multiple sclerosis, rheumatoid arthritis, chronic obstructive pulmonary disease (COPD), asthma, and bronchitis. Most studies involving vitamin D and cancer use the **D₃**, or **cholecalciferol**, form.

⊗ **B-Complex Vitamins**

This group of water-soluble vitamins, especially B₆, B₁₂, and Folic Acid, may improve immune function and prevent a variety of diseases including cancer and heart disease. Common deficiencies, especially of Folic Acid and B₁₂, may cause anemia and other major health problems. Best forms of B₆ include **Pyridoxine HCl** and **Pyridoxal 5¹ phosphate**. Best forms of B₁₂ include **Cyanocobalamin** and **Methylcobalamin**. The best form of **Folic acid** is Folic acid. For more information, ask your dietitian or Supplement Savvy Specialist for the individual B Vitamins handout.



Do you have these forms of minerals in your multi?

⊗ **True amino acid mineral chelates**

Most one-tablet-a-day multis have inorganic minerals like carbonates, citrates, gluconates, and lactates. They're convenient, but usually are poorly absorbed, decrease absorption of other minerals from supplements and food, and can cause digestive upset. True amino acid chelates are much better absorbed and don't interfere with the absorption of other nutrients. They also don't cause gut problems. Look for forms such as **Calcium** in the form of **glycinate** or **Microcrystalline Hydroxyapatite (MCHC)**, **Iron** in the form of **glycinate**, **Chromium** in the form of **Dinicotinate glycinate**, and other **histidinates**, **lysinate**, and so forth. **Look for the name Albion or a patent number** on the label as Albion holds most of the patents for these chelates. Chelates are big molecules. Molecules are a bunch of atoms stuck together. Because chelates are so big, you'll probably have to take several pills to get the nutrition you need.

Other things to consider when choosing a multi include:

⊗ **Toxicity**

Make sure that you don't take too much of certain nutrients such as Selenium. Check "What to watch out for..." below to see which nutrients may cause toxicity at higher doses.

⊗ **Digestive Upset**

Inorganic minerals like carbonates, sulfates, lactates, and synthetic ingredients such as talc may upset your gut. Check the label to see that there's none in your multi as you may be prone to digestive upset right after cancer treatment or with gastrointestinal surgery.

⊗ **Allergy or Sensitivity**

People who have had cancer may be more sensitive after treatment and surgery. Make sure that your multi doesn't have things like artificial colors, flavors, sweeteners, or preservatives and other things that may cause allergic reactions such as salt, lactose, milk, eggs, sugar, yeast, or wheat.

If your boxes have a lot of **X**'s you've got a great multi. If not, ask your dietitian or Supplement Savvy Specialist to recommend one for you. *Source: "Build a Better Body" ©2000 Advanced Nutrition Publications, Inc.*

What To Watch Out For...

Briefly, here's some possible precautions for each nutrient in your multi :

Bioflavonoids have few interactions. If you're taking *tamoxifen*, however, you want to avoid citrus fruits and juices and the citrus bioflavonoid tangretin. Preparations containing grapefruit bioflavonoids may enhance or inhibit drugs like *felodipine*, *carbamazepine*, *lovastatin*, *simvastatin*, *saquinavir*, *nisoldipine*, and some chemotherapies.

Calcium should be taken with food to decrease possibility of kidney stones. If you have kidney stones, don't take supplemental calcium. There are many drugs and nutritional supplements that decrease the absorption of Calcium. Please ask your dietitian or Supplement Savvy Specialist if you're interested in more information. Calcium may also be poorly absorbed from foods like spinach, beans, seeds, nuts, and grains that have a lot of phytic or oxalic acid. Calcium is best taken in the evening with some food that's not oxalate or phytate-rich.



Carotenoids should be avoided by pregnant women and nursing mothers in doses of greater than 6 mg a day and they should attempt to get this nutrient from fruits and vegetables. Smokers should avoid supplementation. Doses of 30 mg or more may cause a yellowing of the skin, which is harmless and reversible if use is discontinued. Drugs like *cholestyramine*, *colestipol*, and *orlistat*, supplements like Lutein and Pectin, and foods like Olestra may decrease absorption.

B Vitamins. Please see individual B Vitamin handout for precautions.

Chromium dosages of greater than 200 mcg a day may be toxic. There are few interactions or precautions. Phytates may decrease absorption.

Copper overdose can be toxic and so stick to small amounts because too much might also cause digestive disturbances. Don't take copper supplements if you have chronic liver failure or kidney failure. Copper and *penicillamine* may cause decrease in absorption of both substances. Many nutritional supplements may decrease copper status, including Iron, Molybdenum, Vitamin C, and Zinc.

Manganese should be at a dosage of 1 mg or less in your multi to avoid toxicity. Supplementation is not recommended if you have liver failure. *Magnesium-containing antacids* and *laxatives* and *tetracycline* decrease absorption. Supplements such as Calcium, Iron, and Magnesium may also decrease absorption.

Quercetin adverse effects are rare. **Avoid usage if you are taking cisplatin.** Quercetin decreases absorption of *quinolone antibiotics*. Bromelain and papain enzymes increase absorption.

Selenium dosages of 200 mcg or greater in your multi may be toxic. Selenium is safe and has no known interactions at normal doses.

Vitamin A dosages of more than 5,000 IU in multis can be toxic. Nursing mothers shouldn't take more than 5,000 IU. Doses of 25,000 IU or more can cause toxicity and 10,000 IU can cause birth defects. *Cholestyramine*, *colestipol*, and *mineral oil*, Vitamin K, and Olestra can decrease absorption.

Vitamin C dosages shouldn't be more than 75 to 90 grams a day if your kidneys aren't working well, if you have too much iron in your blood, or if you have iron-related diseases such as thalassemia or sickle cell anemia. Rare difficulties occur in those who take more than 3 grams a day. High doses of *aspirin* may impair absorption. Vitamin C enhances the uptake of flavonoids, Iron, and Vitamin C. The protective effect of Selenium may be negated by Vitamin C.

Vitamin D overdosage may cause adverse reactions, but multis rarely have anything but low to moderate doses. Higher doses should be used only under medical supervision. Use with caution when taking *digoxin* or other *cardiac glycosides*. *Cholestyramine*, *colestipol*, *ketoconazole*, *mineral oil*, *phenobarbital*, *phenytoin*, and Olestra may reduce absorption. Calcium enhances Vitamin D absorption.

Vitamin E is an anticoagulant, and shouldn't be used if you have bleeding lesions such as peptic ulcers, a history of hemorrhagic stroke, or inherited bleeding disorders such as hemophilia. Pregnant and nursing mothers should avoid doses of more than 15 and 19 mg a day respectively. Also, you need to stop supplementation about a month before surgery and not resume it until you are recovered. Vitamin E may enhance the actions of drugs like *amiodarone*, *cyclosporin*, *zidovudine*, *aspirin*, *cyclosporin A*, *verapamil*, *doxorubicin*, and *vinblastine*, and supplements like Selenium, Vitamin C, and some herbs. Drugs such as *phenobarbital*, *phenytoin*, *cholestyramine*, *colestipol*, *isoniazid*, *mineral oil*, *neomycin*, *orlistat*, *sucralfate* and *wayfarin* and supplemental lipids such as flaxseed oil, gamma-linolenic acid, DHA, EPA, and CLA may decrease absorption of Vitamin E. For a more complete list of precautions, see the individual Vitamin E handout.

Zinc in higher doses may cause digestive disturbances and may suppress your immune system. Drugs such as *bisphosphonates*, *quinolones*, *penicillamine*, and *tetracycline* may decrease absorption. Many supplements decrease absorption, such as Calcium, Copper, Inositol, Iron, and Phosphates and food components such as caffeine, oxalates, phytates, and tea. Cysteine, Histidine, and NAC may enhance absorption.

