

VITAMINS AND SUPPLEMENTS HELPFUL OR HARMFUL?

SAFETY: VITAMINS AND SUPPLEMENTS
AVOIDING INTERACTIONS
IMPACT OF USE ON OUR LIFE AND HEALTH



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DISCLOSURES

- ✘ I have no relevant financial relationships to disclose



HERBALS FOR HEALTH? NATURAL PRODUCTS HAVE NO FEDERAL REGULATION TAKE THEM AT YOUR OWN RISK

**PEOPLE TAKE HERBS FOR MANY REASONS AND MANY CONDITIONS.
NATURAL DOES NOT MEAN SAFE.**

**THE FOOD AND DRUG ADMINISTRATION DOES NOT TEST HERBS FOR SAFETY OR
EFFICACY.**

THE BEST PRESCRIPTION FOR DISEASE PREVENTION IS A HEALTHY LIFESTYLE.

Food and Drug Administration – NO

Drug Enforcement Agency – NO

US Pharmacopeia - <http://www.usp.org/aboutUSP/> "The United States Pharmacopeial Convention (USP) is a scientific nonprofit organization that sets standards for the quality, purity, identity, and strength of medicines, food ingredients, and dietary supplements manufactured, distributed and consumed worldwide."

One thing to note is that the USP doesn't cover most herbs... USP mainly only covers vitamins and minerals aside from drugs. They require a lot of specific safety data to verify it wouldn't be harmful under general circumstances but do not require double blind placebo-controlled studies like drugs.

BEST WAY TO GET YOUR VITAMINS???

- ✘ It is possible to get your daily quota from your plate instead of the drugstore shelf.
- ✘ **Fruits and Vegetables**
 - + **Spinach** – Iron, Zinc, Vitamin K, Folic Acid, Calcium, Magnesium
- ✘ **Milk** (Calcium) fortified with Vitamin A and D
- ✘ **Cereal** fortified with vitamins and folic acid
- ✘ **Sunlight** in Moderation (Vitamin D)

VITAMINS B6 AND B12

- ✘ **What it does for you:** The B complex of vitamins (especially B6 and B12) keep blood, nerves, and the immune system functioning properly. A deficiency may be a risk factor for heart disease and stroke.

How much you need daily: The recommended dietary allowance (RDA) is 1.3 milligrams for B6 and 2.4 micrograms for B12.

Best food sources: B6 is plentiful in whole grains, bananas, beans, nuts, wheat germ, chicken, and fish. B12 is found in beef, pork, poultry, eggs, fish, and dairy.

How to eat enough of it: One cup of plain yogurt and a banana, one ounce of sunflower seeds, and three ounces of roast beef will fill your B12 and B6 quotas.

ZINC

- ✘ **What it does for you:** It plays an important role in supporting a healthy immune system. Sucking on zinc lozenges several times a day during the first few days of a cold may shorten its duration and lessen the severity of symptoms.

How much you need daily: The RDA for women is eight milligrams.

Best food sources: Animal products, like beef shank and pork tenderloin, as well as oysters and nuts.

How to eat enough of it: A cheeseburger on a whole-wheat bun will get you to the RDA.

VITAMIN D

✘ **What it does for you:** It enhances calcium absorption. A vitamin D deficiency can lead to osteoporosis and has been linked to certain cancers, as well as to multiple sclerosis, type 1 diabetes, and other chronic illnesses.

How much you need daily: Two hundred IUs for women up to age 50, and 400 to 600 IUs for those over 50. Usually already in combination with Calcium tablets.

Best food sources: Although some is found in fatty fishes, like tuna and salmon, most of our vitamin D comes from fortified foods, like milk and cereal. The body also produces its own vitamin D when exposed to sunlight.

How to eat enough of it: If you're under 50, one 3 1/2-ounce serving of salmon or two cups of fortified milk will give you the RDA. Ten to 15 minutes of sunlight (with no sunscreen) two to three times a week is usually sufficient, too

VITAMIN E

- ✘ **What it does for you:** This vitamin's major function is as an antioxidant. Recent studies point to positive effects on eye health and the prevention of Alzheimer's disease.

How much you need daily: Generally, 22.5 IUs. There is controversy about safe upper limits, but most agree that adding 150 to 200 IUs shouldn't hurt and might help.

Best food sources: Avocados, vegetable oil (such as safflower, sunflower, cottonseed, canola, and olive), wheat germ, sunflower seeds, almonds, and most other nuts.

How to eat enough of it: It's easy to meet the RDA with food—one cup of raw broccoli plus two ounces of either almonds or sunflower seeds will do it.

Warnings: Vitamin E can inhibit platelet aggregation and antagonize vitamin K-dependent clotting factors. As a result, taking large doses with anticoagulant or antiplatelet medications, such as warfarin (Coumadin®), can increase the risk of bleeding

CALCIUM

- ✘ **What it does for you:** It is essential for bone health and plays an important role in preventing osteoporosis.

How much you need daily: Up to age 50, women should get at least 1,000 milligrams daily; those over 50 should get at least 1,200. The body can't absorb more than 500 milligrams of calcium at a time, so small doses are best.

Best food sources: Dairy products are the most calcium-dense foods, but smaller amounts can be found in legumes and dark green, leafy vegetables.

How to eat enough of it: An eight-ounce glass of skim milk, one cup of yogurt, one cup of cooked spinach, and one fig will get you to your calcium goal. If you don't eat dairy, look for calcium-fortified soy milk or orange juice

FOLIC ACID (FOLATE)

- ✘ **What it does for you:** Low intake during pregnancy causes a higher-than-normal risk of neural-tube birth defects, Deficiencies may be a risk factor for some cancers, heart disease, and stroke.

How much you need daily: Generally, 400 micrograms.

Best food sources: Leafy vegetables, strawberries, wheat germ, broccoli, asparagus, whole grains, beans, and foods that have been fortified with folic acid, such as cereals and breads.

How to eat enough of it: A 3/4-cup serving of fortified breakfast cereal contains 100 percent of what you need. A cup of peas, a cup of cooked spinach, and about five spears of asparagus also add up to the RDA.

VITAMIN C

- ✘ **What it does for you:** Vitamin C is an antioxidant that has been shown to fight DNA-damaging free radicals. It may help to maintain a healthy immune system and boost HDL, the so-called "good" cholesterol.

How much you need daily: Seventy-five milligrams, but some experts recommend getting at least 200 milligrams. *As for megadoses of C to prevent colds, there's no scientific evidence that they accomplish anything.*

Best food sources: Citrus fruits and juices, strawberries, red and green peppers, Brussels sprouts, broccoli, spinach, kale, and collard greens.

How to eat enough of it: Just one orange almost gets you to the RDA. Eat your recommended five servings a day of fruits and vegetables and you shouldn't be lacking in C.

MAGNESIUM

- ✘ **What it does for you:** It helps maintain normal muscle and nerve function, regulate blood sugar levels, and keep bones strong. A lack of it in your diet may contribute to heart disease or high blood pressure.

How much you need daily: Generally, 320 milligrams.

Best food sources: Whole-grain breads and cereals, legumes, spinach, broccoli, dates, raisins, bananas, almonds, cashews, peanuts, walnuts, and pecans.

How to eat enough of it: Have two slices of whole-wheat toast for breakfast, snack on three ounces of almonds and raisins in the afternoon, and for dinner try three ounces of grilled halibut with a baked potato.

VITAMIN K

✦ **What it does for you:** It helps maintain healthy blood clotting and promotes bone density and strength.

How much you need daily: No RDA has been set. The adequate intake (AI) for women is 90 micrograms.

Best food sources: Dark green, leafy vegetables and vegetable oils, such as olive, canola, and soybean.

How to eat enough of it: One cup of raw broccoli or a spinach salad will provide about all you need.

IRON

- ✘ **What it does for you:** It prevents iron-deficiency anemia. There's also evidence that it helps support a healthy immune system. A deficiency may be linked to impaired memory and an inability to focus.

How much you need daily: Generally, 18 milligrams. *Excess levels of iron are rare but may damage organs, so never supplement iron beyond the amount found in most multivitamins without a doctor's prescription.*

Best food sources: Iron is most plentiful in and best absorbed from red meat, clams, and, in lesser amounts, egg yolks, chicken, and fish. It's also found in legumes, fortified grains, and cereals.

How to eat enough of it: A large spinach salad, a cup of lentil soup, and a small (three-ounce) serving of red meat will give you adequate iron

Herbs, Vitamins, and Dietary Supplements with Most Interactions

Medscape

166 herbs/botanical

347 medications

890 pairs of interactions

Top 10 herbs/botanical

1. St. John's wort ($n = 147$)
2. Ginkgo ($n = 51$)
3. Kava ($n = 41$)
4. Digitalis ($n = 26$)
5. Willow ($n = 19$)
6. Asian Ginseng ($n = 17$)
7. Astragalus ($n = 17$)
8. Licorice ($n = 17$)
9. Saw palmetto ($n = 17$)
10. Garlic ($n = 16$)

28 VMA

288 medications

529 pairs of interactions

Top 10 VMA

1. Magnesium ($n = 102$)
2. Calcium ($n = 75$)
3. Iron ($n = 71$)
4. Vitamin A ($n = 43$)
5. Potassium ($n = 29$)
6. Niacin ($n = 26$)
7. Zinc ($n = 25$)
8. Vitamin D ($n = 24$)
9. Folic acid ($n = 21$)
10. Vitamin C ($n = 18$)

19 other DS

53 medications

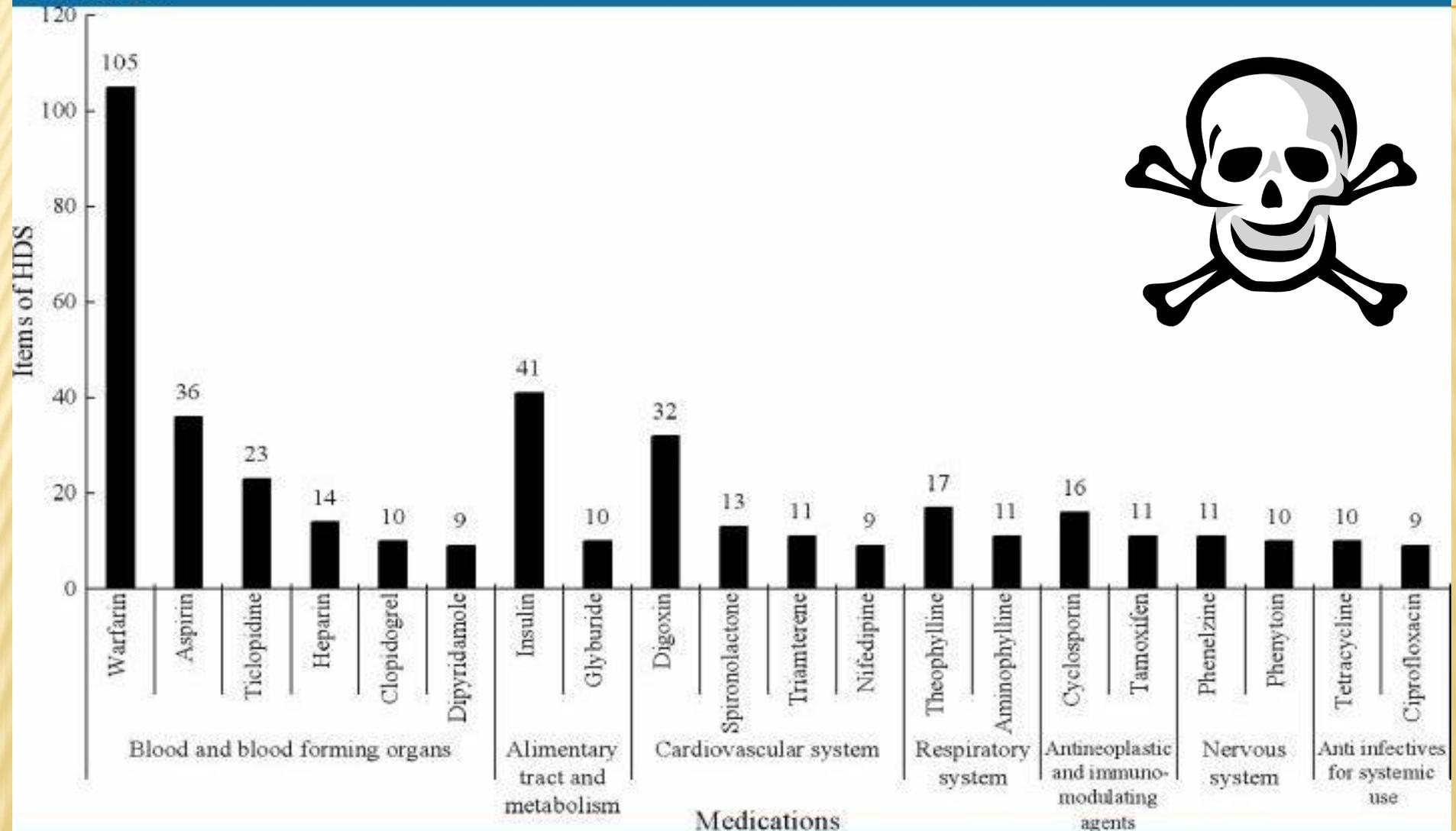
72 pairs of interactions

Top 10 other DS

1. Melatonin ($n = 30$)
2. Coenzyme Q10 ($n = 7$)
3. DHEA ($n = 5$)
4. Creatine ($n = 4$)
5. Fiber ($n = 4$)
6. Fish oil ($n = 3$)
7. Shark cartilage ($n = 3$)
8. Acidophilus ($n = 2$)
9. Chondroitin ($n = 2$)
10. Glucosamine ($n = 2$)

MEDICATIONS WITH THE LARGEST NUMBER OF INTERACTIONS WITH HERBS AND DIETARY SUPPLEMENTS.

Medscape



CREDITS

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<http://www.realsimple.com/health/nutrition-diet/vitamins/eat-vitamins-0000000009517/index.html>

- ✘ **Evaluation of Documented Drug Interactions and Contraindications Associated With Herbs and Dietary Supplements** [International Journal of Clinical Practice](#)
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- ✘ Thurston, Charleston. Nutraceuticals World. Dietary Supplements: The Latest Trends & Issues <http://www.nutraceuticalsworld.com/articles/2008/04/dietary-supplements-the-latest-trends-issues> accessed December 10, 2008.

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RESOURCES:

THE FOLLOWING ARE RELIABLE RESOURCES FOR INFORMATION ON HERBS AND OTHER DIETARY SUPPLEMENTS:

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- ✘ Healthcare Reality Check:
www.hcrc.org/index.html.
- ✘ Consumer Lab: www.Consumerlab.com.

THANK YOU

Questions?

