

Safe Supplementing

From car seats for children to helmets for bike riders, everyone wants to be safe and protected to enjoy life. Our diet is another area where safety is important not just for our daily health but for prevention of disease and illness. And today those who want to be on the front-end of prevention and reaching optimal health know that supplementing with vitamins, minerals, antioxidants and herbs will be their helmet of protection for their bodies. Dr. Chandra from Memorial University (Newfoundland) states “For every US dollar spent on supplements, twenty-eight dollars would be saved in health care costs”. Or as Dr. Hamer of the US National Cancer Institute remarked “An ounce of prevention is worth \$20,000 of pharmaceuticals.” Supplements are true prevention.

So save your life and supplement. Remember knowledge is power when it comes to making wise choices. Below is a chart to help with your decisions and understanding how to safely take supplements.

Each supplement is listed by common names. For detailed information about each one specifically, the foods to obtain each nutrient and its function read the [Treasures of Health Nutrition Manual](#).

Recommended Intake RDI

Want answers – ask the government. I am not sure when this mentality took hold in our society but it is so well rooted that I doubt many people will ever give up looking to the government as their big brother or their all-in-one caretaker. In the case of supplementation fifty years ago the government set up rules for RDA, Recommended Daily Allowances, these guidelines show how much of each nutrient is needed in the diet. Do you ever wonder how man survived prior to the last 50 years without this labeling? The RDA (Recommended Dietary Allowance) is defined as the average daily dietary intake level of a specific nutrient sufficient to meet the requirement of nearly all healthy individuals in a particular life-stage group. The RDA and RDI (Reference Daily Intake) has four problems:

1. You cannot get all the nutrients needed from today’s food which it states is possible.
2. The RDI’s reflect amounts that are not adequate to prevent nutrient-deficient disease and are not tailored for individual needs. They are a one size fits all. They are designed to satisfy the needs of a mythical average healthy person, not individual needs.
3. The RDI’s do not consider optimal health or the prevention of degenerative diseases such as cancer, heart disease or autoimmune diseases.
4. They are not adequate for treating certain conditions.

Optimal Intake

Vitamins and minerals are used in every process of the body. If you want to walk, blink, pick a flower, or smell a rose then you need adequate nutrition. Just as an earthquake is the final dramatic action from a series of smaller problems, being nutrient deficient can manifests itself over years until it shows up as an explosion of ill health. When this happens the simple act of smelling the rose will no longer be achievable because of a particular lacking enzyme or vitamin. Dr. Shari Leiberman refers to the RDI’s (formerly RDA) as the “minimum wage of nutrition”. Which means it is difficult to make ends meet when you are only earning \$5 an hour. How much better could you live and take care of a family if you

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were earning \$20-30 or much more per hour. The same is true for your health. When we consume a higher quantity and quality of fruits and vegetables it is like giving your body a raise. And with supplementing, increase certain nutrients that your body needs and your body will act like it too received a nice raise. This section of the chart will give you suggested optimal intakes for you to give your body a raise in its health.

Functions and Uses

This is a brief overview of each supplement's use and function in the body. For a more detailed explanation read the *Treasures of Health Nutrition Manual*.

Toxicity & Adverse Effects

First of all know that there is no vitamin or mineral that is as toxic as are most of the drugs you can buy over the counter, including aspirin. Did you know that 2,500 people die each year from aspirin, and that 100 die each year from acetaminophen, the main ingredient in Tylenol? To reach toxicity in vitamins and minerals you must go out of your way to abuse supplements by taking massive quantities, usually for prolonged periods of time.¹ Toxicity limits are listed to give you peace of mind when taking these specialized nutrients.

Micronutrient/ Drug Interaction

Our society has become very dependent on prescriptions and this can cause confusion when combining with supplements. More than not the doctor prescribing drugs is not educated in supplements so when a patient ask if they can continue taking their supplements while on a drug the doctor usually says no. When I questioned my own doctor about this reply he said it is because they have no knowledge about supplements so that is what they are taught to answer. This means each person is basically responsible for doing the research to see if there are any interactions of the drug and supplements. The answers are available. Listed here is an overview of some interactions. For a more complete list consult your library or contact us for a specific answer. When contacting us please state the name of the drug and the specific supplement you are referring to. Then allow several days before one of our professional staff is able to return your answer.

For further reading see these articles on the DesignedHealthyLiving.com website:

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Understanding the function and use of certain vitamins and minerals along with a listing of toxicity and adverse effects.

Savoring the Senior Years, Enjoying the Life You Dreamed About

Start each day preparing for a future of pleasure. This guide will give you the basics and advanced plan for supplementing in the senior years.

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Vitamin/Mineral	Recommended Intake (RDI)	Optimal Intake	Functions and uses*	Toxicity/Adverse Effects	Micronutrient/Drug Interactions
A	5,000 men/women 8,000 pregnant or lactating women	5,000 – 25,000 IU	<ul style="list-style-type: none"> • Infections and immunity • Cardiovascular disease • Cancer prevention • Skin/acne • AIDS • Vision • Respiratory problems • GI ulcers 	Stored in liver therefore large amounts may be toxic. A normal healthy adult must take at least 100,000 IU of Vit. A daily for several months for toxicity. No toxicity with beta-carotene.	Zinc deficiency may interfere with vitamin A metabolism. Supplemental vitamin A may add to risk of toxicity in retinoid drugs.
D	700 – 10,000 IU	Have blood tested for optimal intake	<ul style="list-style-type: none"> • Immune system • Cancer prevention • Increases cancer treatment • Reduces heart disease risk • Lowers blood pressure • Prevent auto-immune disease • Lower risk of Type I diabetes in children 	Studies are changing daily see latest research.	Active form of Vit. D increases intestinal calcium absorption and decreases urinary calcium excretion. Anticonvulsants may interfere with Vit. D. Ketoconazole may interfere with vit. D.
B – Complex Includes:	Minimum 100% RDI of each one		<ul style="list-style-type: none"> • Metabolism of fats, protein, carbs. • Lowers cholesterol. 		Sulfa drugs, sleeping pills, and estrogen deplete B.
Folic acid	400 mcg	400-1,200 mcg	<ul style="list-style-type: none"> • Improves mood • Improves brain function. 	None.	The B vitamins work synergistically together for better results.
Pantothenic acid	10 mg	25-500 mg 25-300 mg	<ul style="list-style-type: none"> • Needed for healthy cell division. 	None.	Antibiotics decrease biotin.
B1-Thiamin	1.5 mg		<ul style="list-style-type: none"> • Prevents heart disease. 	None	Anticonvulsants increase need for biotin and interfere with folic acid, riboflavin, thiamin, and B6.
B2-Riboflavin	1.7 mg		<ul style="list-style-type: none"> • Needed for red blood cells. 	None	
B3-Niacin	20 mg	25-500 mcg	<ul style="list-style-type: none"> • Needed for hormones. 	None with 2,000 mg or less.	
B6-pyridoxine	2.0 mg	300 mcg	<ul style="list-style-type: none"> • Vital for adrenal function. 	None	
B12-cobalamin	6 mcg		<ul style="list-style-type: none"> • Improves hair, skin, liver, mouth, and muscles. 	None.	Diuretics increase need for thiamin.
Biotin	300 mcg		<ul style="list-style-type: none"> • Improves digestion. 		H2-receptor antagonists decrease

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			<ul style="list-style-type: none"> • Prevents stress. • Useful in circulation. • Perfect for PMS. 		<p>B12 food-bound absorption. Anti-inflammatory interfere with folic acid. Contraceptives interfere with Pantothenic acid. Proton pump inhibitors interfere with B12. Antidepressants interfere with riboflavin.</p>
E Consists of 8 substances: Alpha, beta, delta and gamma tocopherol are most active but all 8 increase the activity.	400 – 1,200 IU men and women	Same	<ul style="list-style-type: none"> • Antioxidant • Cancer prevention • Heart disease prevention. • Improves circulation • May prevent age spots • Tissue repair • Useful in treating fibrocystic breast 	<p>Conflicting studies state it can be toxic but these have not been confirmed. High doses over 1,200 IU – must be working with a nutritionists or DR.</p>	<p>Vitamin C may regenerate Vitamin E. Avoid the synthetic form: dl-alpha-tocopherol</p>
K	300 mcg	300 mcg	<ul style="list-style-type: none"> • Needed for blood clotting • Bone formation • Prevent osteoporosis 	<p>Only the K3 form – synthetic form is known to be toxic.</p>	<p>High doses of Vit A may decrease vitamin K absorption. High doses of vitamin E may inhibit activity of vit. K-dependent enzymes, resulting in deficiency.</p>
C Ascorbic acid	60 mg	500-5,000 mg More during stress	<ul style="list-style-type: none"> • Growth and repair of tissues • Reduce cholesterol • Antioxidant • Cancer prevention • Immunity • Stress increases requirement • Reduce blood pressure • Prevent atherosclerosis • Protects against 	<p>No toxic effects. One adverse effect can be intestinal gas and loose stools.</p>	<p>Vitamin C regenerates vit. E.</p>

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MINERALS

Boron	None noted	3-6 mg	<ul style="list-style-type: none"> Prevents bone loss Improve bone density Helps improve osteoarthritis 	None noted at 3-6 mg.	None.
Calcium	1,000 mg	1,000-1,500 mg	<ul style="list-style-type: none"> Needed for healthy bones and teeth Needed for muscle function Osteoporosis prevention May lower blood pressure 	No toxic effects.	Vitamin D increases absorption of calcium. High calcium intake may decrease zinc absorption.
Phosphorus	1,000 mg	Generally avail through foods.	<ul style="list-style-type: none"> Necessary for bones Needed for energy Needed for utilizing proteins, fats, and carbs. 	Too much phosphorus may lead to an increase in the excretion of calcium.	Taking potassium supplements together with phosphates may cause elevated potassium
Magnesium	400 mg	500-750 mg	<ul style="list-style-type: none"> Needed for bones Nerve transmission Muscle function Energy Healthy blood vessels May lower blood pressure 	Toxicity is rare except in kidney failure.	
Zinc	15 mg	22.5-50 mg	<ul style="list-style-type: none"> Needed for wound healing Immunity Maintains taste and smell Protects liver from chemical damage 	Symptoms include GI upset and vomiting occurs when 2,000 mg or more have been digested.	High calcium intake may decrease zinc absorption High zinc intake may cause copper deficiency. Supplemental doses of iron may decrease zinc absorption.
Iron	18 mg	15-25 mg men 18-30 ,g women	<ul style="list-style-type: none"> Vital for blood formation Needed for energy Immunity 	Toxicity in iron is low and harmful effects of daily intakes of up to 75 mg per day are unlikely in healthy individual.	Vitamin A def. may cause iron def. Copper def. may lead to iron def. Absorption is increased with vitamin C.
Copper	2 mcg	Generally	<ul style="list-style-type: none"> Involved in blood 	Toxic in Wilson's	Copper def. may

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		in foods.	<ul style="list-style-type: none"> formation • Healthy nerves • Taste sensitivity • Energy production • Bone development 	disease.	interfere with iron absorption. High supplemental zinc may cause copper def.
Manganese	2 mg	15-50 mg	<ul style="list-style-type: none"> • Needed for protein and fat metabolism • Used in energy formation • Required for bone growth • Healthy nerves • Healthy blood sugar regulation • Healthy immunity 	Toxic when inhaled as in mining or when well water is contaminated.	
Chromium	120 mcg	200-600 mcg	<ul style="list-style-type: none"> • Required for glucose metabolism • Prevent diabetes • Reduce cholesterol 	No toxicity noted.	Taken with vitamin C increases absorption.
Selenium	70 mcg	100-400 mcg	<ul style="list-style-type: none"> • Functions as antioxidant especially in breast cancer prevention. • Heart disease prevention 	Long term intakes of 500-750 mcg have produced no signs of toxicity in humans.	Re-energize Vitamin C.
Iodine	150 mcg	150-300 mcg	<ul style="list-style-type: none"> • Needed for thyroid function 	An intake of up to 1,000 mcg is safe.	Selenium def. can cause iodine def.
Potassium	None	99-300 mcg	<ul style="list-style-type: none"> • May lower blood pressure • Needed for energy storage • Needed for nerve transmission • Muscle contraction • Hormones 	Toxicity is seen when daily intakes exceed 18 grams . Excess potassium may cause muscle fatigue, irregular heartbeat and possibly heart failure.	
OTHER NUTRIENTS					
CoQ 10	None	30-300 mg	<ul style="list-style-type: none"> • Cell energy and metabolism • Prevents heart disease 	Few adverse effects. Some report of GI	Use of statin drugs blocks CoQ10 – supplementation is

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			<ul style="list-style-type: none"> • Improve diabetes • Improve diabetic neuropathy 	upset, loss of appetite.	necessary.
EFA	None	1,500-3,000 mg	<ul style="list-style-type: none"> • Prevents heart disease • Lower blood pressure • Lower triglycerides • Lower cholesterol • Prevents excess blood clotting • Relieve inflammation • Relieve allergic reactions • Inhibit cancer • Enhance immunity • Improve bipolar 	None noted for EPA, DHA or ALA. Blood clotting times do decrease with supplementation but are still within range.	
Flavonoids	None	250-1,000 mg	<ul style="list-style-type: none"> • Antioxidant • Lower cholesterol • Prevent heart disease • Inhibit cancer • Maintain healthy blood vessels • Fight viral infections 		
Garlic	None	200-1,200 mg	<ul style="list-style-type: none"> • Lower blood pressure • Enhance immunity • Prevent heart disease • Lower triglycerides • Lower cholesterol • Antibacterial • Antiviral • Antifungal • Prevents excess blood clotting • Prevent cancer • Antioxidant 		

Sources for this information was compiled from:

An Evidence-Based Approach to Vitamins and Minerals, Dr. Jane Higdon

The Real Vitamin & Mineral Book, Dr. Shari Lieberman

Laboratory Evaluations for Integrative and Functional Medicine, Richard Lord and J. Alexander Bralley

ⁱ Lieberman, Ph.D. Shari, *The Real Vitamin & Mineral Book*.2003 Penguin Group Publishing, NY. p.16.