

Here's a thumbnail sketch of what vitamins, minerals and other nutrients do in the body, and where you'll find them.

## vitamin A (a.k.a. pre-formed Retinol; Beta-Carotene)

What it's good for: Promotes growth and repair of body tissue, healthy eyes, good night vision and a strong immune system.

Where you get it: Liver and fish oils, whole and fortified milk and eggs. Carrots, sweet potatoes, spinach and other leafy green veggies, yellow squash, peaches and apricots provide Beta and other carotenes.

RDA: 800 RE for adult women; 1,000 RE for adult men.

*Watch out*: Vitamin A can be toxic in large doses, and when taken during pregnancy can cause birth defects. Your body stores excess vitamin A so don't exceed the RDA.

#### **Amino Acids**

What they're good for: Building blocks that make up proteins like hormones, enzymes and proteins in tissues and muscle. There are nine essential amino acids that we need to get from food; the body can make the other 11.

Where you get them: Meat, fish, poultry, eggs, dairy products and beans.

DRI or RDA: None

## vitamin B-1 (a.k.a. Thiamine)

What it's good for: Helps convert food into energy, nerve functions, growth and muscle tone. Where you get it: Wheat germ, pork, whole and enriched grains, dried beans, seeds, and nuts.

RDA: Between 1.1 to 1.5 mg for adults.

## vitamin B-2 (a.k.a. Riboflavin)

What it's good for: Releases energy, keeps red blood cells healthy, makes hormones.

Where you get it: Dairy products, meats, poultry, whole and enriched grains, and green vegetables such as broccoli, turnip greens, aspargus, and spinach.

Tidbit: High doses of B-2 may help prevent migraine headaches.

RDA: Between 1.3 to 1.7 mg for adults.

## vitamin B-3 (a.k.a Niacin)

What it's good for: Releases energy, important for a healthy digestive system, blood circulation, nerve function, appetite.

Where you get it: Poultry, fish, whole and enriched grains, dried beans, and peas.

RDA: Between 15 to 19 mg for adults.

## vitamin B-5 (a.k.a Pantothenic Acid)

What it's good for: Converts food into energy, necessary to make important hormones, vitamin D, and red blood cells.

Where you get it: Found in almost all foods.

DRI or RDA: None.

## vitamin B-6 (a.k.a Pyridoxine)

What it's good for: Helps convert food into energy, keeps red blood cells healthy, makes antibodies, maintains nerve function, enhances the immune system, helps prevent heart disease.

Where you get it: Poultry, fish, pork, eggs, and whole grains.

Tidbit: Small doses of B-6 may help alleviate morning sickness. Check with your doctor.

RDA: Between 1.6 to 2.0 mg for adults.

Watch Out: B-6 in high doses can cause balance difficulties, nerve injury.

## vitamin B-12 (a.k.a Cobalamin)

What it's good for: Releases energy from food, keeps red blood cells healthy, helps maintain the nervous system, boosts the immune system, helps prevent heart disease.

Where you get it: Dairy products, lean beef, fish, poultry, and eggs.

RDA: 2 mcg for adults.

#### **Biotin**

What it's good for: Metabolizes fats, proteins and carbohydrates, helps in the transfer of carbon dioxide and assists in various metabolic chemical conversions.

Where you get it: Cheese, beef liver, cauliflower, eggs, mushrooms, chicken breast, salmon and spinach. Suggested Daily Value: 300 mcg for adults.

#### vitamin C

What it's good for: Helps wounds heal, strengthens blood vessels, builds connective tissue, healthy gums, skin and promotes strong teeth and bones. May boost immunity.

Where you get it: Citrus fruits, strawberries, green and red peppers, collard and mustard greens, broccoli, spinach, tomatoes, potatoes, kiwi, guava and parsley.

RDA: 75 mg for women, 90 mg for men.

#### Calcium

What it's good for: Supports bones, teeth, muscle tissue, regulates the heartbeat, muscle action, nerve function, blood clotting.

Where you get it: Dairy products, calcium-fortified orange juice or soy milk, salmon with bones, and green leafy vegetables such as broccoli, kale, and collards.

DRI: 1,000 mg for adults.

## Cholesterol

What it's good for: Makes cell membranes, hormones. Low-density lipoprotein (LDL) is often called "bad" cholesterol because too much in your blood can cause heart disease. High-density lipoprotein (HDL) is often called "good" cholesterol because it helps remove LDL.

Where you get it: Meat, poultry, fish, dairy products, and eggs.

DRI or RDA: None.

#### Chromium

What it's good for: Acts cooperatively with other substances to control insulin and certain enzymes. Where you get it: Cheese, whole grains, meat, peas, beans and blackstrap molasses.

DRI or RDA: None.

## Copper

What it's good for: Formation of red blood cells, pigment, bone health. Where you get it: Nuts, black pepper, blackstrap molasses and cocoa.

#### vitamin D

What it's good for: Calcium and phosphorus metabolism, aids bone growth and integrity, promotes strong teeth.

Where you get it: Fortified milk, egg yolks and fatty fish, like herring, kipper and mackerel.

DRI: 5-10 mcg for adults.

## DRI

Dietary Reference Intakes: A joint collaboration with Canada and the US, DRIs are revised recommendations for vitamins and minerals from the Institute of Medicine, an arm of the National Academy of Sciences, which will gradually replace the Recommended Dietary Allowances or RDA guidelines. DRIs are being developed for vitamins and minerals that currently have no RDAs.

## vitamin E

What it's good for: Antioxidant powers protect cell membranes, essential for red blood cells, aids cellular respiration and protects lung tisse from pollution.

Where you get it: Vegetable oils, wheat germ, green leafy vegetables, seeds, nuts, seafood, apples, carrots and celery.

RDA: 15 mg alpha-tocopherol for adults

## **Essential Fatty Acids**

## (a.k.a. Omega-3 and Omega-6)

What they're good for: Make cell membranes, hormones, and prostaglandins.

Where you get them: Vegetable oils such as canola, flaxseed, walnut, corn, soybean, and safflower oils, fish, and fish oil supplements.

*Tidbit*: Flaxseed oil is a great source of omega-3s, but not for cooking because heat destroys them.

DRI or RDA: None.

#### Fiber

What it's good for: Lowers cholesterol and blood sugar levels, helps move waste through the intestines. Diets rich in plant fiber are related to a reduction of heart disease, colon cancer and diabetes.

Where you get it: Fruits, vegetables and whole-grains.

*Tidbit*: If you're upping your fiber intake, do it slowly to avoid stomach upset. Also, drink lots of water.

DRI or RDA: None.

## **Folate**

What it's good for: Helps cells grow and divide, reduces risk of certain birth defects, important for red blood cells and crucial in creating amino acids.

Where you get it: Green leafy vegetables, dried beans, liver, poultry, fortified cereals, oranges and nuts.

*Tidbit:* Pregnant women or women trying to conceive are often told to take folate.

RDA: 400 mcg for adults.

## Fluoride

What it's good for: Dental health.

Where you get it: Tea, fish eaten with their bones, processed foods, and treated drinking water.

DRI: Between 3.1 to 3.8 mg for adults.

#### Glucose

What it's good for: A simple sugar that is a major source of energy in the body.

Where you get it: All carbohydrates are broken down into simple sugars and transported as glucose in the bloodstream. Carbohydrates are found in fruits, vegetables and grain and dairy products.

DRI or RDA: None.

## Glycogen

What it's good for: As the storage form of glucose, it's used by the body for energy when needed. It's stored in the liver and muscle.

Where you get it: Carbohydrates. Natural sugars (fruit, vegetables, milk) and complex carbohydrates (grains, cereals, pasta) are the best choices.

DRI or RDA: None.

#### lodine

What it's good for: Making thyroid hormones that control metabolism. Where you get it: Lobster, shrimp, bread, milk and iodized salt.

RDA: 150 mcg for adults.

#### Iron

What it's good for: Making hemoglobin in blood and myoglobin in muscle, which supply oxygen to cells. Where you get it: Meat, fish, poultry, eggs, whole and enriched grains, and green leafy vegetables. RDA: Between 10 to 12 mg for men and 12 to 15 mg for women.

Watch out: Iron supplements even in small amounts can be toxic to young children. Keep iron and multis with iron out of reach.

#### vitamin K

What it's good for: Helps blood clot.

Where you get it: Green beans, green leafy vegetables, dairy products, eggs, meats, cereals, fruits and vegetables.

RDA: Between 60 to 65 mcg for women and 70 to 80 mcg for men.

## Lycopene

What it's good for: A carotenoid—a class of phytochemicals that gives fruit and vegetables their bright colors. This powerful antioxidant helps convert beta carotene into vitamin A.

Where you get it: Tomatoes, carrots, sweet potatoes, leafy greens, apricots, papayas and watermelons. DRI: None.

## Magnesium

What it's good for: Enzyme activation, nerve and muscle function, and bone growth. Where you get it: Nuts, meats, leafy vegetables, whole grains, beans and legumes.

Tidbit: Magnesium supplements may help ward off migraine headaches.

DRI: Between 280 to 300 mg for women, 350 to 400 mg for men.

#### Manganese

What it's good for: Essential for reproductive function, physical growth, normal formation of bones and cartilage and normal brain function.

Where you get it: Whole grains and cereals, fruits, vegetables and tea.

DRI or RDA: None.

# Molybdenum

What it's good for: As a component of three different enzymes, it's involved in the metabolism of nucleic acids (DNA and RNA) iron and food converts food into energy. Helps breakdown toxic build ups of sulfites in

the body. May help prevent cavities.

Where you get it: Milk, lima beans, spinach, breads, liver and cereals.

DRI or RDA: None.

#### Monounsaturated fats

What they're good for: A nutrient that provides dietary energy without raising cholesterol levels.

Where you get them: Olive oil, canola oil, and peanut oil.

DRI or RDA: None.

## Omega-3 Fatty Acids

What they're good for: Help protect the heart, help prevent stroke, lower cholesterol levels and alleviate arthritis

Where you get them: Cold-water fatty fish like salmon and mackerel; vegetable oils, wheat germ, flax seeds, soybeans, tofu, leafy greens and walnuts.

DRI or RDA: None.

## **Phosphorus**

What it's good for: Helps form bones and teeth, builds muscle and is involved in almost all metabolic actions in the body.

Where you get it: Milk, meat, poultry, fish, eggs, whole grains, seeds and nuts.

DRI or RDA: 800 mg to 1,200 mg for adults.

## Phytonutrients/Phytochemicals

## (i.e., flavonoids and carotenoids)

What they're good for: Reducing risks of diseases of aging such as Alzheimer's, osteoporosis, cancer and heart disease.

Where you get them: Plant foods, including soy products and fruits and vegetables, cruciferous vegetables such as Brussels sprouts, cabbage, broccoli, kale, bok choy and cauliflower.

DRI or RDA: None.

## Polyunsaturated fats

What they're good for: A nutrient that provides dietary energy without raising cholesterol levels.

Where you get them: Corn oil, safflower seed oil, sunflower seed oil, sesame oil, soybean oil, fish oil and walnuts.

DRI or RDA: None.

# Potassium

What it's good for: Helps keep blood pressure down and aids muscle contractions, aids healthy electrical activity in the heart and rapid transmission of nerve impulses throughout the body.

Where you get it: Dried fruits, bananas, potatoes, most raw vegetables, citrus fruits, molasses, and sunflower seeds.

DRI or RDA: None.

# Proanthocyanidins

What they're good for: Powerful antioxidants that promote urinary tract health.

Where you get them: Cranberries.

DRI or RDA: None.

## Protein

What it's good for: Keeps the body running, made from different combinations of amino acids.

Where you get it: Meat, eggs, dairy products, beans, whole grains, and vegetables.

RDA: Between 46 and 63 g for adults.

#### RDA

Recommended Dietary Allowances: Nutrient intake recommendations from the Institute of Medicine, an arm of the American Academy of Sciences. RDAs are safe levels of intake for essential nutrients, based on current scientific knowledge. They are set to meet the known nutrient needs or practically all healthy people. RDAs have been around and updated regularly for more than 50 years. RDAs are gradually being replaced by revised guidelines called Dietary Reference Intakes or DRIs.

#### Resveratrol

What it's good for: Inhibits tumor formation and breaks down "bad," LDL cholesterol; lowers risk of atherosclerosis.

Where you get it: Found in grapes (particularly red) and wine, as well as peanuts, cranberries and mulberries DRI or RDA: None.

#### Saturated fat

What it does: Shown to raise cholesterol, associated with a risk of heart disease.

Where you get it: Butter, lard, meat, poultry, whole-milk dairy foods, palm oil, and coconut oil.

DRI or RDA: None.

## Selenium

What it's good for: Works with vitamin E as an antioxidant and binds with toxins in the body, rendering them harmless.

Where you get it: Lobster, clams, crabs, whole grains, Brazil nuts and oysters.

RDA: 55 mg for women and 70 mg for men.

#### Sodium

What it's good for: Regulates and balances the amount of fluids outside the cells in the body. Aids in muscle contractions and nerve function.

Where you get it: Processed foods and table salt.

DRI or RDA: None.

## Thiamine (a.k.a. vitamin B-1)

What it's good for: Helps convert food into energy, nerve functions, growth and muscle tone. Where you get it: Wheat germ, pork, whole and enriched grains, dried beans, seeds and nuts. RDA: Between 1.1 to 1.5 mg for adults.

#### Zinc

What it's good for: Essential for normal growth, development and immunity. Helps maintain skin, hair and bones. Keeps reproductive organs functioning and helps in the perception of taste and the ability to see at night.

Where you get it: Beef, poultry, liver, oysters, eggs and dairy products.

RDA: Between 12 to 15 mg for women and 15 mg for men.

## Sources of Information:

National Academy of Sciences (NAS), National Research Council. *Recommended Dietary Allowances 10th Edition*, Washington, DC: NAS PRess, 1989.

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