Vitamins and minerals, also called micronutrients, are required by the body in relatively small amounts and support many body processes.

Vitamins and minerals are nutrients to get more of.

http://www.fda.gov/nutritioneducation

Vitamins and Minerals 1

What They Are

• **Vitamins** are organic substances made by plants and animals, which are then eaten by humans.
  — There are 13 vitamins: vitamins A, C, D, E, K, and the B vitamins (thiamin, riboflavin, niacin, pantothenic acid, biotin, vitamin B₆, vitamin B₁₂, and folate).
  — You can get all your vitamins from the foods you eat, but your body also makes vitamins D and K.

• **Minerals** are inorganic substances that are not made by living things.
  — Minerals are found naturally in soil and water and are absorbed by plants, which are then eaten by people and other animals. Examples of minerals are iron, calcium, and potassium.
  — People obtain minerals from both the plant and animal products they eat.

Where They Are Found

Vitamins and minerals are found in a variety of foods, including:

• Beans and peas
• Dairy products
• Eggs
• Fortified foods (such as breakfast cereals and soy beverages)
• Fruits
• Meats and poultry
• Nuts and seeds
• Seafood
• Vegetables
• Whole grain foods (such as brown rice and whole grain breads, cereals, and pasta)

What They Do

The human body needs the right “mix” of nutrients for good health. That not only means getting the right amount of carbohydrate, protein, and fat (as also called macronutrients), but also the right amount of vitamins and minerals (also called micronutrients). Micronutrients help your body use macronutrients and support many body processes, including:

• Blood pressure regulation
• Blood sugar regulation
• Brain function
• Digestion
• Growth and development
• Heart function
• Hormone production
• Immune function
• Metabolism of drugs and toxins
• Muscle contraction
• Nervous system function
• Protein, carbohydrate, and fat metabolism
• Red blood cell formation
• Reproduction
• Taste and smell
• Vision
• Wound healing

See the Vitamins and Minerals Chart for functions that each vitamin and mineral performs in the body.
• The majority of Americans get the recommended amounts of most vitamins and minerals to meet their needs. However, many people do not get the recommended levels of some important micronutrients. These nutrients are considered to be “nutrients of public health concern” because low intakes are associated with potential health risks and include:
  — Calcium
  — Iron (of concern for young children, pregnant women, and women capable of becoming pregnant)
  — Potassium
  — Vitamin D

• The Dietary Guidelines for Americans recommends choosing a variety of *nutrient-dense* foods that are good sources of vitamins and minerals, especially calcium, iron, potassium, and vitamin D.

Also, see the [Vitamins and Minerals Chart](#) for examples of what foods are good sources of the different micronutrients.

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**Nutrient-Dense: Defined**

Nutrient-dense foods and beverages contain vitamins, minerals, dietary fiber, and other beneficial substances that may have positive health effects. They are also naturally lean or low in saturated fat and have little or no added saturated fat, sugars, refined starches, and sodium. Examples of nutrient dense foods are: beans and peas, eggs, fat-free (skim) and low-fat (1%) dairy products, fruits, seafood, lean meats and poultry, unsalted nuts and seeds, vegetables, and whole grains.

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**Action Steps**

For Consuming a Nutrient-Dense Diet

Use the Nutrition Facts Label as your tool for consuming a nutrient-dense diet rich in vitamins and minerals. The Nutrition Facts Label on food and beverage packages shows the Percent Daily Value (%DV) for vitamin A, vitamin C, calcium, and iron in one serving of the food.

Food manufacturers may voluntarily list the %DV of other naturally occurring vitamins and minerals per serving on the Nutrition Facts Label, but they are required to list any vitamins and minerals that are added to the food or if a statement is made on the package labeling about their health effects or the amount contained in the food (for example, “high” or “low”).

- When comparing foods, choose foods with a higher %DV of vitamin A, vitamin C, calcium, and iron. The goal is to get 100% of the Daily Value for these nutrients on most days. And remember:
  - 5% DV or less of a vitamin or mineral per serving is low
  - 20% DV or more of a vitamin or mineral per serving is high

- Consume at least half of your daily fruit choices as whole fruits (such as fresh, frozen, cooked, dried, and canned in 100% fruit juice). Choose 100% fruit juice instead of sugar-sweetened beverages (such as energy drinks, flavored waters, fruit drinks, soft drinks, and sports drinks). Try fruit as snacks, salads, side dishes, and desserts.

- Eat more colorful vegetables (such as fresh, frozen, canned, and dried) and 100% vegetable juices. Buy frozen (without butter or sauce) or low sodium or no-salt-added canned vegetables. Try vegetables as snacks, salads, and side dishes and incorporate vegetables into main dishes.

- Consume at least half of your total grain choices as whole grains (such as brown rice, whole oats, and whole wheat). Whole grains are a source of important vitamins and minerals and are typically high in fiber, too. Switch from refined to whole grain versions of commonly consumed foods (such as breads, cereals, pasta, and rice). Limit refined grains and products made with refined grains, especially those high in calories, saturated fat, added sugars, and/or sodium (such as cakes, chips, cookies, and crackers).

- Eat a variety of protein foods, such as beans and peas, fat-free (skim) or low-fat (1%) dairy products, eggs, lean meats and poultry, seafood (fish and shellfish), soy products, and unsalted nuts and seeds. Choose seafood and plant sources of protein (such as soy products, beans and peas, and unsalted nuts and seeds) in place of some meats and poultry. Add beans or peas to salads, soups, and side dishes, or serve them as a main dish. Snack on a small handful of unsalted nuts or seeds rather than chips or salty snack foods.

- Substitute fat-free (skim) or low-fat (1%) dairy products (such as cheese, milk, and yogurt), or fortified soy beverages for regular/full-fat (whole) dairy products.