Water-Soluble Vitamins

Biotin, Folate, Niacin, Pantothenic acid, Riboflavin, Thiamin, Vitamin B₆, Vitamin B₁₂, Vitamin C
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Water Soluble Vitamins

- Dissolve in water
- Pass easily through the bloodstream
- Remain in the body for a short time
- Are needed on a daily basis
Biotin

Functions
- Helps body use carbohydrates, proteins, and fats
- Helps stabilize sugar level

Food Sources
- Green leafy vegetables
- Whole-grain breads and cereals
- Liver
- Egg yolks
Folate (B9) (Folacin, Folic acid)

Functions
- Teams with vitamin B₁₂ to help build red blood cells and form genetic material (DNA)
- Helps your body use proteins
- Helps prevent birth defects in brain and spinal cord

Food Sources
- Green leafy vegetables
- Dry beans and peas
- Fruits
- Enriched and whole-grain breads
Niacin (Vitamin B₃)

Functions
- Helps your body release energy from carbohydrates, proteins, and fats
- Needed for a healthy nervous system and mucous membranes

Food Sources
- Meat, poultry, fish
- Enriched and whole-grain breads and cereals
- Dry beans and peas
- Peanuts
Pantothenic acid

Functions
- Helps the body release energy from carbohydrates, proteins, and fats
- Helps the body produce cholesterol
- Promotes normal growth and development
- Needed for a healthy nervous system

Food Sources
- Meat, poultry, fish
- Eggs
- Dry beans and peas
- Whole-grain breads and cereals
- Milk
- Some fruits and vegetables
Riboflavin (Vitamin B$_2$)

**Functions**
- Helps your body release energy from carbohydrates, proteins, and fats
- Contributes to body growth and red blood cell production

**Food Sources**
- Enriched breads and cereals
- Milk and other dairy products
- Green leafy vegetables
- Eggs
- Meat, poultry, fish
Thiamin (Vitamin B₁)

Functions
- Helps turn carbohydrates into energy
- Needed for muscle coordination and a healthy nervous system

Food Sources
- Enriched and whole-grain breads and cereals
- Dry beans and peas
- Lean pork
- Liver
Vitamin B₆

Functions
- Helps body release energy from carbohydrates, proteins, and fats
- Promotes healthy nervous system
- Helps make nonessential amino acids

Food Sources
- Poultry, fish, pork
- Dry beans and peas
- Nuts
- Whole grains
- Some fruits and vegetables
- Liver and kidneys
Vitamin B\textsubscript{12}

**Functions**
- Helps body use carbohydrates, proteins, and fats
- Helps maintain healthy nerve cells and red blood cells
- Used in making genetic material

**Food Sources**
- Found naturally in animal foods, such as meat, poultry, fish, shellfish, eggs, and dairy products
- Some fortified foods
- Some nutritional yeasts
Vitamin C (Ascorbic Acid)

Functions
- Helps maintain healthy capillaries, bones, skin, and teeth
- Helps form collagen, which gives structure to bones, cartilage, muscles, and blood vessels
- Helps your body heal wounds and resist infections
- Aids in absorption of iron
- Works as an antioxidant

Food Sources
- Fruits – citrus fruits (orange, grapefruit, tangerine), cantaloupe, guava, kiwi, mango, papaya, strawberries
- Vegetables – bell peppers, broccoli, cabbage, kale, plantains, potatoes, tomatoes
Questions?
Textbooks:

Website: