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Chapter 8: Vitamins: Drivers of Cell Processes—Glossary

antioxidant. A substance that reacts with free radicals (unstable single oxygen molecules) to protect other substances from harmful effects of the free radicals.

beriberi. The thiamin deficiency disease, which is characterized by weakness, loss of appetite, irritability, poor arm and leg coordination, and a tingling throughout the body.

coagulation. The blood clotting process that stops bleeding.

coenzyme. A nonprotein compound (usually a vitamin) that combines with an inactive enzyme to form an active enzyme system.

collagen. A protein substance in the connective tissue that holds cells together.

enriched food. A food that has had vitamins and minerals added back that were lost in the refining process.

epithelial cells. The surface cells that line the outside of the body, cover the eyes, and line the passages of the lungs, intestines, and reproductive tract.

erythrocyte hemolysis. A vitamin E deficiency condition that is sometimes seen in premature babies and is characterized by broken red blood cells, resulting in weakness and listlessness.

fat-soluble vitamin. A vitamin, specifically vitamin A, D, E, or K, that dissolves in fats.

fortified food. A food that has one or more nutrients added during processing.

free radical. A highly reactive, unstable single oxygen molecule, which can generate a harmful chain reaction that can damage tissue.

night blindness. A condition in which the cells in the eyes adjust slowly to dim light, causing night vision to become poor.

osteomalacia. A vitamin D deficiency disease in adults that causes the bones to become misshapen.

pellagra. The niacin deficiency disease, which is characterized by diarrhea and dermatitis and can lead to dementia and death.

pernicious anemia. A deficiency disease caused by an inability to absorb vitamin B₁₂, which is characterized by fatigue; weakness; a red, painful tongue; and a tingling or burning in the skin.

phytochemicals. Health-enhancing nonnutrient compounds in plant foods that are active in the body at the cellular level.

placebo effect. A change in a person's condition that is not a result of treatment given, but of the individual's belief that the treatment is working.

prebiotics. The nondigestible food ingredients that stimulate the growth of good microorganisms in the colon.

probiotics. The "good" microorganisms found in foods that help to counterbalance the "bad" microorganisms in your intestinal tract.

provitamin. A compound the body can convert to the active form of a vitamin.

rickets. A deficiency disease in children caused by a lack of vitamin D and characterized by soft, misshapen bones.

scurvy. The vitamin C deficiency disease, characterized by tiredness, weakness, shortness of breath, aching bones and muscles, swollen and bleeding gums, lack of appetite, slow healing of wounds, and tiny bruises on the skin.

toxicity. A poisonous condition.

vitamin. An organic compound needed in tiny amounts as a nutrient to regulate body processes.

water-soluble vitamin. A vitamin, specifically vitamin C or one of the B-complex vitamins, that dissolves in water.