

NUTRITION and WEIGHT MANAGEMENT

VITAMINS & MINERALS and their FUNCTIONS in the Body

Vitamins and Minerals are vital components in our daily diet. While they provide no direct energy in the form of calories, they do play a very important role, as they are essential in the breakdown of *macronutrients* (Carbohydrate, Protein and Fat) for the release of energy. Since they only need to be consumed in small quantities, they are referred to as *micronutrients*. Food doesn't just meet our energy needs, but can directly affect our health, mood, emotions and looks.

VITAMIN	Found in	Functions in the body
Vit A (retinol)	Dairy products, green leafy vegetables, yellow and orange fruits, fortified cereals, oatmeal	Promotes healthy growth, maintains vision, skin cells, gut and respiratory tract
Vit B1 (thiamine)	All vegetables, fortified cereals, oatmeal, whole grains, rice, pasta, meat	Maintenance of healthy nervous system, heart and growth. Involved in carbohydrate metabolism and energy production
Vit B2 (riboflavin)	Green leafy vegetables, whole grains, organ meat (offal)	Helps the body release energy from protein, fats and carbohydrates during metabolism
Vit B3 (niacin)	Fortified cereals, oatmeal, meat, poultry	Involved in metabolism of Carbohydrates, protein and fat
Vit B6 (pyridoxine)	Whole grains, meats, poultry, fish	Aids both glucose and protein metabolism and energy production, maintains healthy nervous system, important in resistance to infection
Vit B12 (cobalamin)	Meat, Seafood	Aids cell development, functioning of the nervous system and the metabolism of protein and fat
Vit C (ascorbic acid)	Citrus fruits, berries	Essential for the structure of bones, cartilage, muscle and blood vessels, helps maintain capillaries and gums and aids iron absorption
Vit D (calciferol)	Dairy products, fish, Sunlight	Aids bone and tooth formation, helps maintain healthy functioning of the heart and nervous system
Vit E (alpha-tocopherol)	Green leafy vegetables, fortified cereals, oatmeal, grain products, vegetable oils, nuts	Protects blood cells, body tissue and essential fatty acids from damage or destruction in the body
Vit K	Green leafy vegetables, fruits, grain products, vegetable oils, nuts	Essential for blood clotting

MINERAL	Found in	Functions in the body
Calcium	Milk and milk products	Essential for healthy bones and teeth, important in muscle contraction and transmission of nerve impulses
Chromium	Whole grains, corn oil, clams, brewer's yeast	Important in glucose metabolism (energy), increases effectiveness of insulin
Folate (folacin, folic acid)	Green leafy vegetables, organ meats	Aids genetic material development, involved in red blood cell production and strengthens immune system
Iodine	Legumes, nuts, oysters, organ meats, seafood	Formation of red blood cells, bone growth and health. Component of hormone thyroxine which controls metabolism
Iron	Legumes, meat	Essential in red blood formation, Improves blood quality, increases resistance to stress and disease
Magnesium	Green vegetables	Acid/Alkaline balance, important in metabolism of carbohydrates, minerals and sugar
Manganese	Whole grains, nuts	Enzyme activation, carbohydrates, and fat production, sex hormone production, skeletal development
Pantothenic Acid	All vegetables, fruits, whole grains, meats	Aids the release of energy from fats and carbohydrates
Phosphorus	Milk and milk products, eggs, grains, meat, poultry, fish	Important role in the delivery of energy to all cells and formation of bones and teeth
Potassium	All vegetables, (particularly potatoes and tomatoes), lean meats	Maintenance of body fluids, controls activity of heart muscle, nervous system and kidneys
Selenium	Grains, seafood, organ meats, lean meats, brazil nuts,	Protects body tissue against oxidative damage from radiation, pollution and normal metabolic processing
Zinc	Eggs, whole grains, seafood, organ meats, lean meats	Involved in digestion and metabolism, important in development of reproduction system, aids healing