

Vitamins

Why they are important?

Vitamin D: Works with calcium to build and maintain healthy bones and teeth.

Source: Sunlight or fortified milk

Vitamin C: Aids in wound healing, cell function, formation of collagen, and iron absorption.

Source: Citrus Fruit, green leafy vegetables, broccoli, peppers, and tomatoes

Riboflavin (B2): Converts food into energy.

Food Sources: Milk, cheese, whole grains, green leafy vegetables, fish, eggs

Thiamin (B1): Helps nerve tissue, digestive system, and energy.

Source: Milk, whole grains, pork, dried beans, and nuts



Vitamin A: Maintains hair and skin. Helps prevent night blindness

Food Sources: Orange and Dark Green vegetables, dairy products, and fish oils

Vitamin E: Protects membranes and red blood cells.

Food Sources: Vegetable oils, whole grains, most fruits and vegetables, nuts, and seeds.

Vitamin K: Aids in blood clotting.

Food Sources: Dark green leafy vegetables or liver.

Folate/Folic Acid (B9): Helps form red and white blood cells, RNA, and DNA.

Food Sources: Beans, peas, lentils, green leafy vegetables, and whole grains.

Niacin (B3): Converts food into energy.

Source: Milk, whole grains, legumes, fish, and poultry.



B Vitamins: Help turn carbohydrates into energy and promote a healthy nervous system.

Disease	Vitamin
Night Blindness, Poor Eyesight: Eyes become sensitive to light and have difficulty seeing in dim light.	Vitamin A
Beriberi: Swelling of the heart, numbness of hands and feet, mental confusion.	Thiamin (B1)
Pellagra: Skin irritations, digestive problems, and swelling of the tongue. If not treated, can result in mental disorder or death.	Niacin
Spina Bifida: A birth defect that occurs when the spine and spinal cord don't form properly in the womb.	Folic Acid/Folate
Scurvy: Weakness, anemia, gum disease, and skin problems. It was a common disease of sailors on long sea voyages without fresh fruit/veg.	Vitamin C
Rickets: Bones become weak and soft. This can result in bone deformities in growing children.	Vitamin D
Jaundice: A yellowing of the skin or whites of the eyes caused by a build-up of the pigment bilirubin. Jaundice occurs when bilirubin builds up faster than the liver can break it down.	Excessive Vitamin K

Fat-soluble vitamins

A, D, E, K

Vitamins dissolve in fat.

Body can store them, excessive amounts can be toxic.

Water-soluble vitamins

C and All B Vitamins

Vitamins dissolve in water.

Body uses what it needs and excretes the rest in urine.

Are fat or water-soluble vitamins stored in the body?

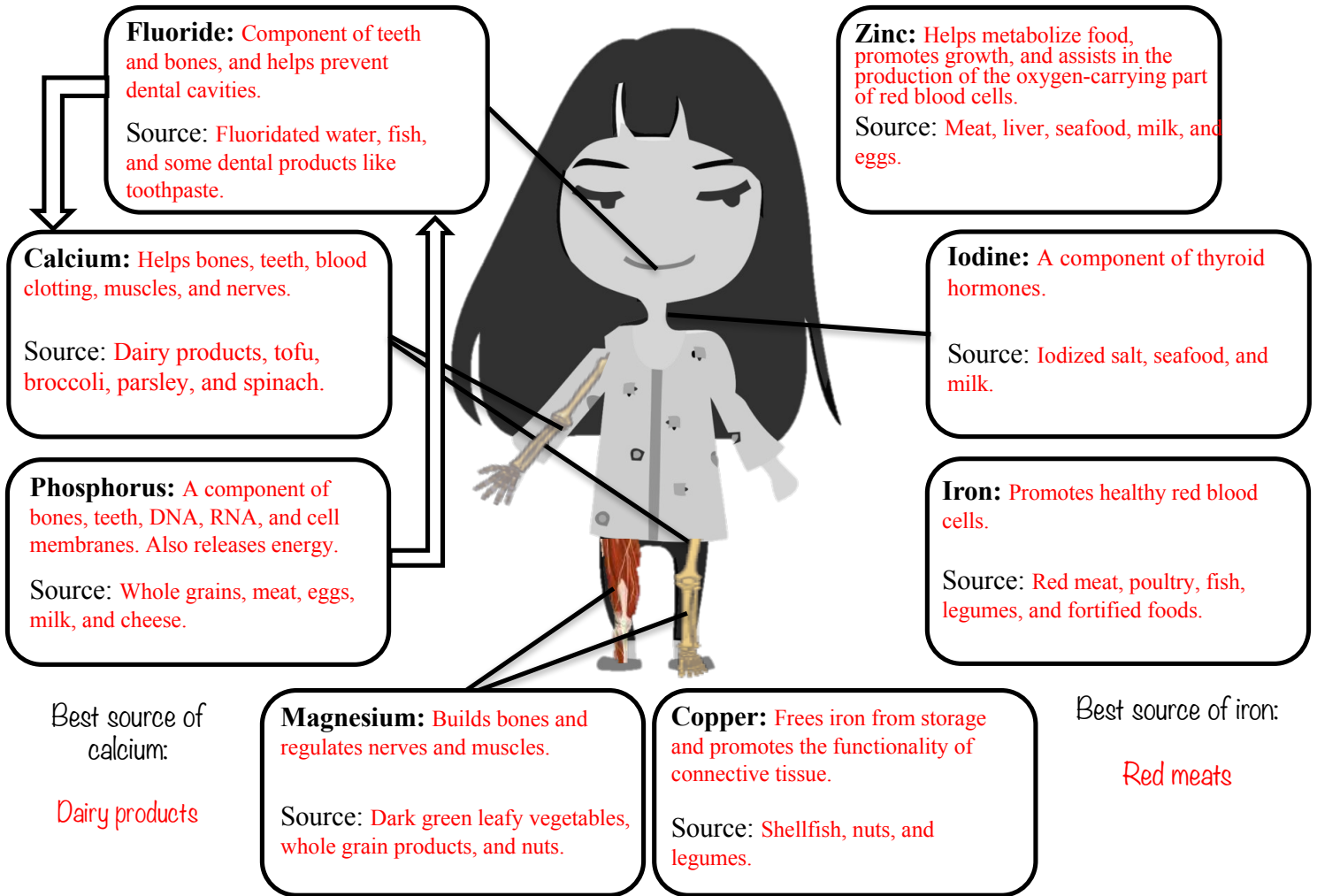
Fat

Treatment:

Phototherapy is a treatment with a special light that helps rid the body of bilirubin.

Minerals

Why they are important?



Disease	Mineral Deficiency
Osteoporosis: When bones gradually lose their minerals. They become fragile and break easily and skeleton may shrink.	Calcium
Anemia: Poor appetite, pale skin, fatigue and weakness caused by a decreased number of circulating red blood cells in the body.	Iron
Goiter: An abnormal enlargement of the thyroid gland at the base of the neck.	Iodine

Vocabulary:

Toxicity: Too much of something (toxic/poisonous).

Deficiency: Not enough of something (shortage).

Three things that destroy vitamins and minerals.

1. Heat
2. Water
3. Air

Two Most Common Mineral Deficiencies
Iron and Calcium

Macro Minerals:

Calcium
Magnesium
Phosphorus

Minerals mostly do what in the body?
Build strong bones and teeth.

Micro Minerals:

Copper
Zinc
Fluoride
Iron
Iodine

Macro Minerals: Minerals needed in larger quantities in the body.

Micro Minerals: Essential minerals needed in smaller quantities.