

Name:

Date:

Micronutrients



Micronutrients are needed in the body in tiny amounts. They do not provide energy, but are required for a number of important processes in the body.

There are two main groups of micronutrients:

- vitamins;
- minerals and trace elements.

Micronutrients are measured in milligrams (mg) and micrograms (µg) with 1mg = 0.001g and 1µg = 0.001mg.

Micronutrient Recommendations

The recommendations for vitamins and minerals are based on the **Reference Nutrient Intake (RNI)**.

When looking at low intakes of micronutrients, the Lower Reference Nutrient Intake (LRNI) is used.

For more information, go to:
<https://bit.ly/36KUnji>

Micronutrient Recommendations
People have different requirements for each micronutrient, according to their:

- age;
- gender;
- physiological state (e.g. pregnancy).

Vitamins

Vitamins are nutrients required by the body in small amounts, for a variety of essential processes.

Most vitamins cannot be made by the body, so need to be provided in the diet.

Vitamins are grouped into:

- fat-soluble vitamins (vitamins A, D, E and K);
- water-soluble vitamins (B vitamins and vitamin C).

Minerals

Minerals are inorganic substances required by the body in small amounts for a variety of different functions.

The body requires different amounts for each mineral.

Some minerals are required in larger amounts, while others are needed in very small amounts and are called 'trace elements'.

Vitamins

Minerals

Key terms

Micronutrients: Nutrients needed in the diet in very small amounts.

Lower Reference Nutrient Intake (LRNI): Is the amount of a nutrient that is enough for only the small number of people who have low requirements (2.5%). The majority of people need more.

Reference Nutrient Intake (RNI): The amount of a nutrient that is enough to ensure that the needs of nearly all the group (97.5%) are being met. The RNI is used for recommendations on protein, vitamins and minerals.

Vitamin D

Vitamin D is a pro-hormone in the body. It can be obtained in two forms:

- ergocalciferol (vitamin D₂);
- cholecalciferol (vitamin D₃).

Vitamin D₃ is also formed by the action of sunlight. Different to most vitamins, the main source of vitamin D is synthesis in the skin following exposure to sunlight. The wavelength of UVB during the winter months in the UK does not support vitamin D synthesis.

Tasks

- Create an infographic on micronutrients. Focus on the definition of each micronutrient, daily recommendations and source.
- Keep a food diary for four days and calculate the micronutrients provided per day.
<http://explorefood.foodafactoflife.org.uk>