

Health and Environment

A large proportion of the nutrient elements we require are derived from crops grown in soil

Nutrient elements and selected

You need a lot of these...

Macronutrients: requirements (grams/day)

| Sulphur (cartilage formation) | 10 |
|-------------------------------|------|
| Potassium (insulin secretion) | 3.5 |
| Sodium (fluid balance) | 1.6 |
| Chloride (stomach juices) | 2.5 |
| Magnesium (enzyme co-factor) | 0.3 |
| Calcium (bones) | 0.7 |
| Phosphorus (energy release) | 0.55 |

Body Composition 96.7% Water & organic matter 3.2% Macronutrients 0.01% Micronutrients 0.09% Other elements

examples of function

and not much of these ...

| | Micronutrients: requirements (milligrams/d | | |
|---|---|--------------------------|--|
| | Iron (haem proteins) | 8.7(M) 11.4(F) | |
| | Manganese (bone formation) | 1–10 | |
| | Zinc (wound healing) | 5.5–9.5(M) 4.0–7.0(F) | |
| | Copper (enzymes) | 1.2 | |
| 7 | Molybdenum (oxidoreductase) | 0.1–0.3 | |
| | Iodine (thyroid) | 0.14 | |
| | Selenium (antioxidant) Chromium | 0.075(M) 0.06(F) | |
| | (carbohydrate metabolism) | 0.025 | |
| | Cobalt (vitamin B12) (fatty acid metabolism) | 0.000006 | |

REFERENCE Expert Group on vitamins and minerals Food Standards Agency 2003