



Nutrition

Exploring Nutrients

Lesson 4

Understand the effects that
macronutrients and
micronutrients have on the body.





Water

Water is not classed as a nutrient of the body but it is needed by the body for temperature regulation, nutrient transport in the body and normal brain functioning.





Dietary Reference Value's (DRV's) are set in the UK by the Committee on Medical Aspects of Food and Nutrition Policy (COMA). They are a range of requirements for energy and nutrition of the various groups of healthy individuals in the whole of the UK.



There are 4 types of Dietary Reference Values:

1. Estimated Average Requirements (EAR's)
2. Reference Nutrient Intakes (RNI's)
3. Lower Reference Nutrient Intakes (LRNI's)
4. Safe Intake





Carbohydrate DRV's

**Based on SCAN 2015
recommendations of 2 years plus.**

**50% of daily food energy should
come from total carbohydrates
(includes sugars, starch and dietary
fibre). Not more than 5% of daily
food energy should come from free
sugars (sugars added by a cook,
consumer or manufacturer).**





Fat DRV's

**Based on COMA 1991
recommendations of 5 years
plus**

**Not more than 35% of daily
food energy should come from
total fat (includes all saturated
and unsaturated fat). Not more
than 11% of daily food energy
should come from saturated
fat.**





Dietary fibres

**Based on SCAN 2015
recommendations of 2 years
plus.**

**2 to 5 year olds should consume
15g of fibre per day, 5 to 11 years
olds 20g of fibre per day, 11 to 16
year olds 25g of fibre per day
and 17 years and over 30g of
fibre per day.**





Protein

The Reference Nutrient Intake for Children

Age	RNI per day
0-3 months	12.5g
4-6 months	12.7g
7-9 months	13.7g
10-12 months	14.9g
1-3 years	14.5g
4-6 years	19.7g
7-10 years	28.3g

Taken from the British Nutrition Foundation, 2019

Protein

Adult protein requirements are calculated with reference to body weight. The Reference Nutrient Intake for adults is 0.75g of protein per Kilogram of bodyweight everyday.

Example 70kg bodyweight $70 \times 0.75\text{g/d} = 52.5\text{g}$ of protein per day





Food packaging nutrition labels usually contains Reference Intakes (RI's). These are based on the daily maximum amount of a nutrient for the average adult female. They also show the percentage of the products nutrient content in relation to RI's per 100g/100ml and or per portion of the item.





Nutrient	RI's
Energy	8400kJ/2000kcal
Fat	70g
Saturates	20g
Carbohydrate	260g
Total Sugars	90g
Protein	50g
Salt	6g

Taken from the British Nutrition Foundation, 2019



If a varied diet is consumed following the eatwell plate guide then the body should receive all the nutrients it requires. There are some cases when it is necessary to take a supplement.





Common reasons for needing to take a supplement:

- Vitamin D for over 5 year olds during the months of October to March (very little sunlight hours)
- Vitamin D for breastfed babies from birth to one year
- Vitamin A and C for under 5 year olds
- Iron for women who have heavy menstrual loses
- Iron for pregnant women who have low iron stores in the body
- Folic acid for people who might become pregnant and for the first 12 weeks of pregnancy.
- Any supplement a doctor recommends for deficiencies or illness





It is found that minerals are absorbed by the body better when they come from foods instead of coming from a supplement so it is always best to follow a varied diet if possible.





Revision Activity 4

What is the recommended amount of fibre required per day for people over 17 years old?