

State two functions of protein in the diet.

Protein:

- aids growth
- cell repair and maintenance
- enzyme & hormone production.

Explain how different complementary proteins work together.

High Biological Protein HBV

Low Biological Protein LBV

Amino acids

- These are the small building blocks that make up proteins.
- **Indispensable** - cannot be made in the body so we **must** get them from food. Adults need 8 and children need these 8 and an extra 7.
- **Dispensable** - these are made in the body.

HBV means that these foods contain **ALL** the essential amino acids.

- meat
- fish
- eggs
- milk
- cheese
- soya.

- nuts
- beans
- legumes
- grains
- seeds.

LBV means that these foods are missing **1** or more of the essential amino acids.

Can you identify each HBV protein food?

Indispensible Amino Acid for Adults

Leucine	Isoleucine
Lysine	Methionine
Phenylalanine	Threonine
Tryptophan	Valine

Mnemonic:
Lucy & I Love Making Very Tricky Pastry Tarts

Can you identify each LBV protein food?

Protein deficiency:

- wasting of muscles
- oedema- a build-up of fluids in feet and ankles
- slow growth in children.

In the UK we tend to eat too much protein and so deficiencies are rare.

RNI / RDA

This depends on gender, age, weight, size:

- Pre-school child - 15g a day
- Female aged 18-50 - 45g a day
- Male aged 18-50 - 55g a day

Complementary Proteins

Combining 2 LBV protein foods creates 'complementary' proteins giving the meal a higher biological value.

Examples are:

- Grains + Beans: beans on toast.
- Legumes + Grains: hummus and pitta bread.