

PROTEIN



Food Fact

- Proteins contain 4 calories per gram.
- Protein is a very important nutrient. It makes up most of our body cells, tissues and fluids.



Protein Deficiencies



- Leads to Kwashiorkor in children
- Happens mostly in impoverished countries where there is a lack of protein rich foods.
 - It also can lead to stunted growth.

Kwashiorkor & Stunted Growth



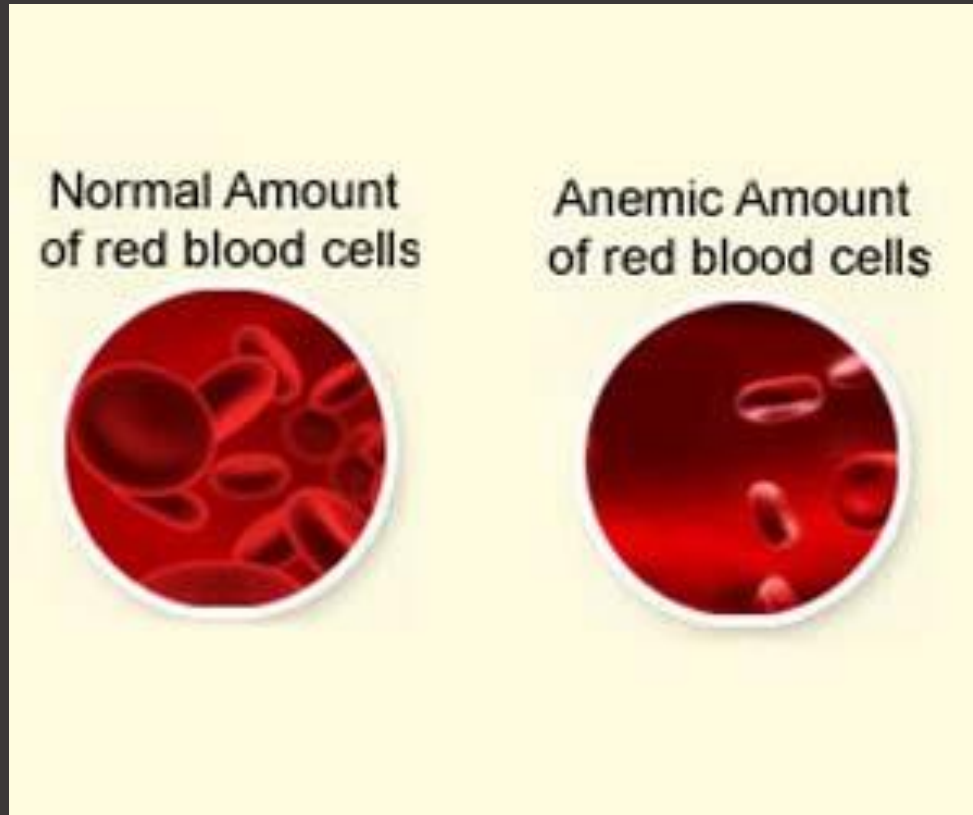
Enlarged liver & abdomen caused by severe malnutrition and starvation



Protein Deficiencies

- Protein deficiency in adults could lead to:
 - ANEMIA
 - Marasmus-the Greek word for “dying away”
 - Infections

Marasmus & Anemia

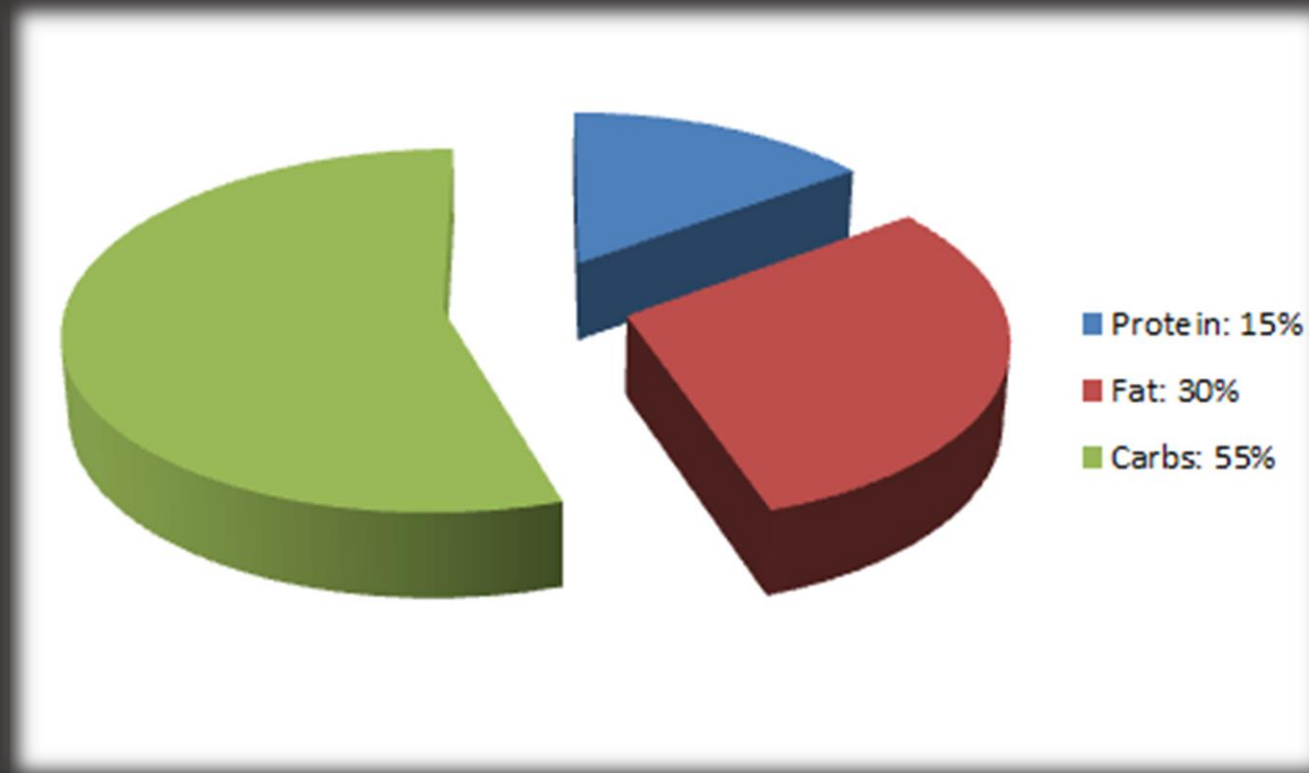


Lack of blood cells caused by lack of protein & amino acids



Severe malnourishment causing weight to be abnormally low for the age.

10-15 % of calories come
from protein each day



Protein is the Building Block to Our Healthy Bodies

- Protein is the building block of most of our body structures.
- From the moment of conception proteins begin to form the building blocks for our body structures like our bones and teeth.



Functions of Proteins



Protein

Proteins provide 4 calories per gram.

The main function of protein is to build and repair body tissues.

You must eat protein daily to replace the wear and tear on your body tissues.

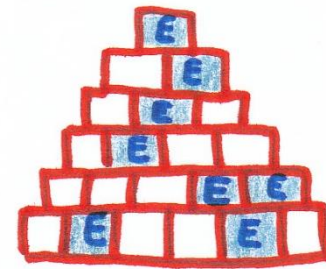
We get most of our protein from the PROTEINS food group.



Amino Acids

Amino acids are the “building blocks” of protein.

Essential amino acids cannot be made by the body. As a result, they must come from food.



Amino Acids =
Building Blocks
of Protein

There are 9 essential amino acids.

Essential means that your body MUST have them.

Complete Proteins

Complete proteins contain all 9 of the essential amino acids.

Complete proteins come from animal food sources.

Tofu (from soybeans) and Quinoa are the only complete proteins from a plant source.



Incomplete Proteins

Incomplete proteins do NOT contain all of the essential amino acids.

Incomplete proteins come from plant food sources.

Examples of incomplete proteins could be:

- a. Grains
- b. Beans
- c. Nuts/Seeds
- d. Rice
- e. Wheat



COMPLEMENTARY PROTEINS

Incomplete proteins can be combined to create a Complementary protein.

Examples include:

- a. Beans and Rice
- b. Peanut Butter and Whole Wheat Toast
- c. Bean Soup with a Wheat Roll



Protein Supplements

- Help build muscle

(muscle work builds muscle; protein supplements do not)

- spare bodies protein while losing weight

- strengthen fingernails

