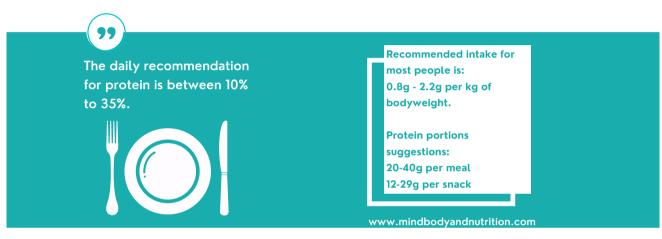
# **Protein: Amino Acids**



- The main role of protein in the body is to facilitate and regulate different functions in the body.
- Protein forms the building blocks of muscle, blood, and skin.
- Some proteins act as enzymes and hormones.
- Helps maintain the body's fluid balance.
- Helps maintain the balance between acids and bases in the body.
- Works as transporters that carry nutrients and other molecules.
- As antibodies, proteins help to defend the body against disease.



### **Protein in Foods and Quality Proteins**

#### Amino Acids

Proteins are made up of 20 common amino acids. 9 are essential, meaning that the human body can not make them, and must be supplied from diet. The other 11 are nonessential, meaning that they are produced in the body.



#### **High-Quality Protein**

Contain all the essential amino acids. Foods derived from animals such as meat. seafood, poultry, eggs, and dairy provide high-quality proteins. These are also called complete proteins.



## **Complementary Proteins**

Plant proteins are lower in quality when compared to animal protein and offer less protein. When combining 2 complementary proteins together, they contain all essential amino acids. These are also called incomplete proteins, but when combined, form a complete protein.







#### Calculate Recommended Protein Intakes

- Convert pounds to kilograms, (pounds divided by 2.2 equals kilograms).
- Multiply kilograms by 0.8 to get your recommended daily allowance in grams per day. Example:

Weight =150  $150 \, \text{lbs} / 2.2 \, \text{lb/kg} = 68 \, \text{kg} \, \text{(rounded)}$  $68 \text{ kg} \times 0.8 \text{ g/kg} = 54 \text{ g protein (rounded)}$ 

\*This is an example of the low end of the recommended protein intake