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Amino acids



Amino acids are organic compounds that combine to form **proteins**. Amino acids and proteins are the building blocks of life.

When proteins are digested or broken down, amino acids are left. The human body uses amino acids to make proteins to help the body:

- Break down food
- Grow
- Repair body tissue
- Perform many other body functions

Amino acids can also be used as a source of energy by the body.

Amino acids are classified into three groups:

- Essential amino acids
- Nonessential amino acids
- Conditional amino acids

ESSENTIAL AMINO ACIDS

- Essential amino acids cannot be made by the body. As a result, they must come from food.
- The 9 essential amino acids are: histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, **tryptophan**, and valine.

NONESSENTIAL AMINO ACIDS

Nonessential means that our bodies produce an amino acid, even if we do not get it from the food we eat. Nonessential amino acids include: alanine, arginine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, proline, serine, and tyrosine.

CONDITIONAL AMINO ACIDS

- Conditional amino acids are usually not essential, except in times of illness and stress.
- Conditional amino acids include: arginine, cysteine, glutamine, tyrosine, glycine, ornithine, proline, and serine.

You do not need to eat essential and nonessential amino acids at every meal, but getting a balance of them over the whole day is important. A diet based on a single plant item will not be adequate, but we no longer worry about pairing proteins (such as beans with rice) at a single meal. Instead we look at the adequacy of the diet overall throughout the day.

Images



Amino acids

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