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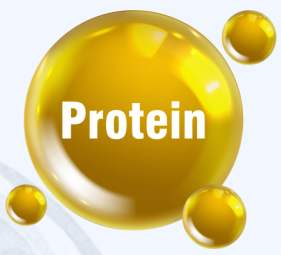


National Nutrition Week
1 - 7 September, 2025

“Eat Right for a Better Life”

Day 3

Nutrition Week in India is observed to raise awareness about the widespread prevalence of nutrient deficiencies.

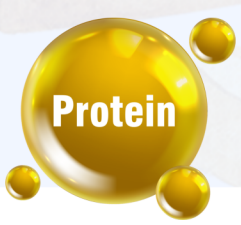
This promotes education and actions toward improving nutritional status, preventing deficiency-related diseases, and ensuring a healthier future.

Today’s focus
PROTEINS

Proteins are vital molecules, made of amino acids that build tissues, enzymes, and signals, essential for body function.

Amino acids are categorized as essential (required from dietary sources) and non-essential (produced by our body). We focus on a few key amino acids commonly deficient in cereal, a significant part of the diet.

Ensuring a diverse diet is vital for acquiring all essential amino acids and maintaining proper nutrition.



swipe

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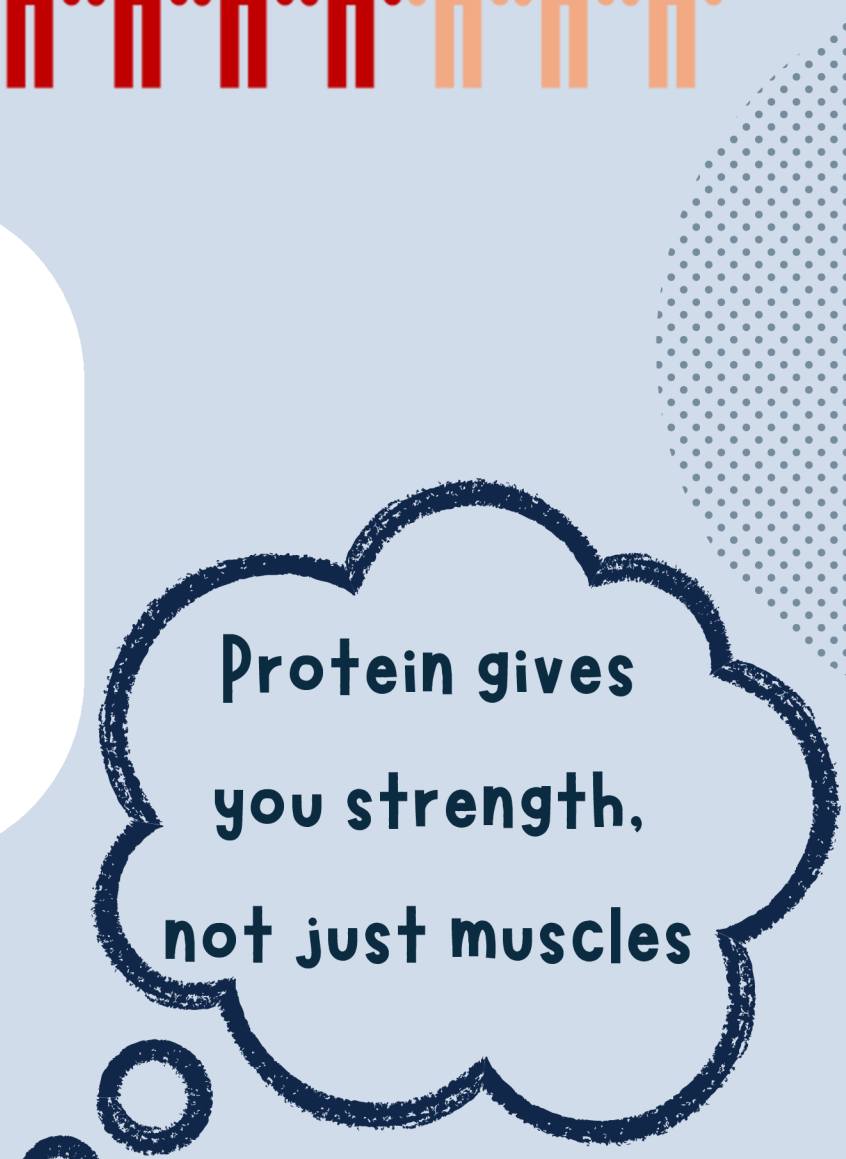
Proteins

Prevalence of Deficiency

Nearly 7 out of 10 people do not get sufficient protein from their diet

Symptoms of Deficiency

- Severe deficiency in the body causes muscle wasting, fatigue
- Low levels in the body leads to
  - Impaired wound healing
  - Skin infections due to lack of amino acids
  - Stunted growth and Impaired immunity
  - Dry and thinning of hair



Rich sources of Protein

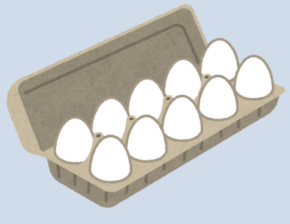

Lentils


Beans


Chikpeas


Quinoa


Nuts


Eggs (Yolk)


Soy products


Milk

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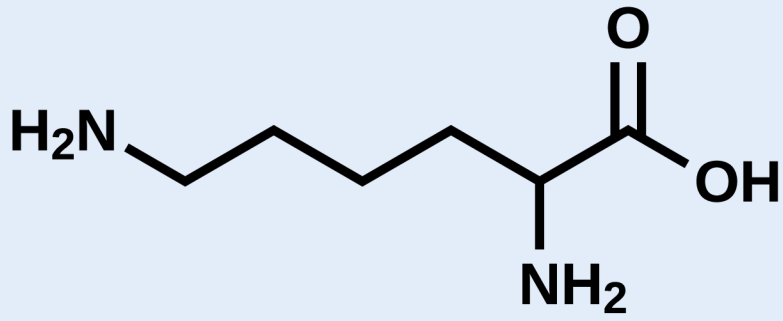
Lysine

$(C_6H_{14}N_2O_2)$



Major functions in the body

- Collagen formation
- Calcium absorption
- Bone strength

Symptoms of Deficiency

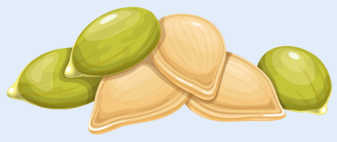
- Severe deficiency in the body causes impaired growth and development
- Low levels in the body leads to
  - Fatigue
  - Irritability
  - Nausea
  - Hair loss

Lysine is the calcium's best buddy – it helps your body soak up and hold on to calcium, keeping bones strong and happy!

Lysine rich sources


Lentils

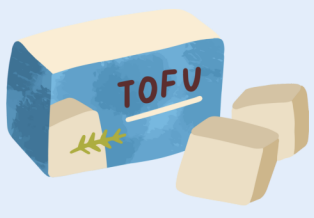

Black Beans


Pumpkin seeds

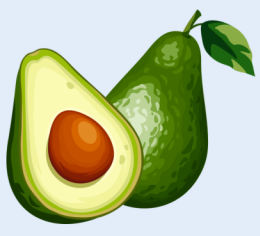

Quinoa


Nuts


Amaranthus



Tofu


Avocado

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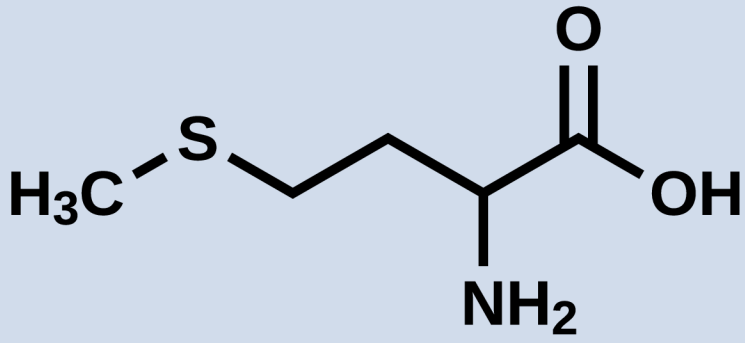
Methionine

$(C_5H_{11}NO_2S)$



Major functions in the body

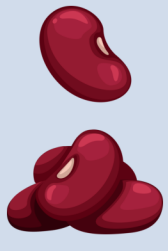
- Structural integrity
- Anti-oxidant supporter
- DNA repair

Symptoms of Deficiency

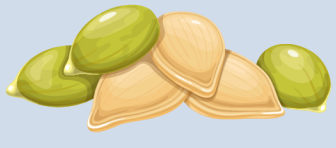
- Severe deficiency in the body causes stunted growth and increased fat deposition
- Low levels in the body leads to
  - Disturbances in brain function
  - Weak muscle tone
  - Tremors
  - Learning difficulties

Methionine rich sources

Tofu



Kidney Beans

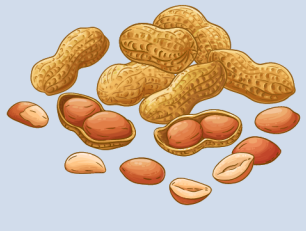


Pumpkin seeds

Chia seeds

Nuts

Brown rice



Peanuts

Buckwheat

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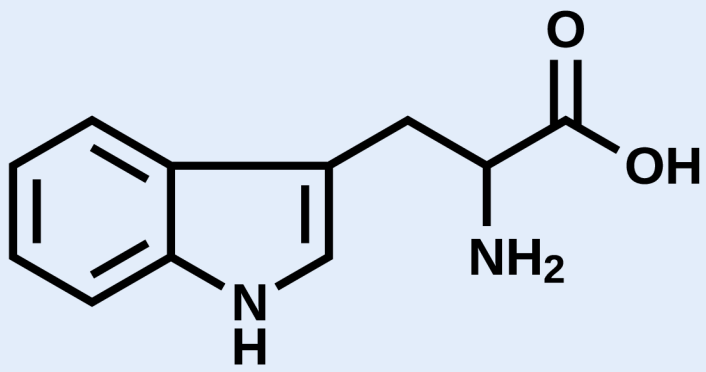
Tryptophan

$(C_{11}H_{12}N_2O_2)$



Major functions in the body

- Synthesis of serotonin
- Precursor of vitamin B3
- Metabolic pathways

Symptoms of Deficiency

- Severe deficiency in the body causes muscle fatigue and pain
- Low levels in the body leads to
  - Aggression
  - Heightened stress response
  - Difficulty concentrating
  - Poor memory consolidation

Tryptophan helps your body make serotonin and melatonin, the brain chemicals that regulate mood and sleep

Tryptophan rich sources

Tofu

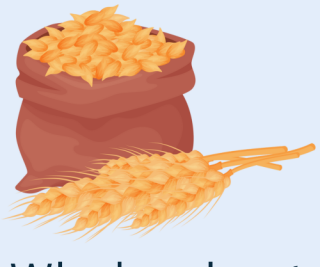
Quinoa

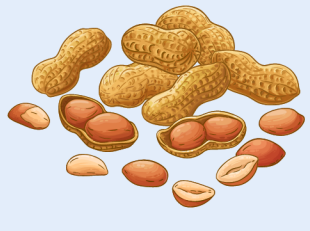

Pumpkin seeds


Chia seeds


Walnuts


Spinach


Whole wheat


Peanuts

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Protein

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Protein