



## Protein Deficiency in Rural India

**For Prelims:** Malnutrition, Poverty, Calorific Deficiency, Hidden Hunger, Micronutrient Deficiency

**For Mains:** Issues Associated with Malnutrition in India, Current Government Initiatives to Tackle Malnutrition.

[Source: DTE](#)

### Why in News?

A recent study conducted by the **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)** revealed that **rural Indians suffer from 'hidden hunger'** despite the availability and affordability of **protein-rich foods**.

### Note

- **Hidden Hunger:** It refers to a form of **malnutrition** where people consume sufficient calories but **lack essential micronutrients** and **macronutrients**, particularly **proteins**.
- **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT):**
  - **Established:** 1972
  - **Status:** Recognized as a specified **"International Organisation"** by the Government of India under Section 3 of the United Nations (Privileges and Immunities) Act, 1947.
  - **Vision:** Achieving **prosperity, food security, and resilience in dryland tropics**.
  - **Mission:** Alleviating poverty, hunger, malnutrition, and environmental degradation in dryland regions.

### What are the Key Findings of the ICRISAT Study on Hidden Hunger?

- **Dominance of Cereal-Based Diets:** Rural diets are **heavily dependent on rice and wheat**, which **contribute 60-75% of daily protein intake**.
  - However, these cereals lack essential amino acids, leading to an imbalanced diet.
- **Underutilization of Protein-Rich Foods:** Despite the availability of protein-rich foods like pulses, dairy, and livestock products, their **consumption remains low due to cultural preferences**, limited nutritional awareness, and financial constraints.
- **Public Distribution System (PDS) Limitations:** While the PDS effectively ensures calorie intake, **it reinforces a cereal-heavy diet without incorporating sufficient protein-rich options**, exacerbating protein deficiency.
- **Education and Nutrition Link:** Women's education levels significantly influence household dietary patterns. **Better-educated women tend to ensure a more balanced and diversified**

**diet** for their families.

- **Regional Variations in Protein Consumption:** Factors affecting **protein intake vary across states and districts**, highlighting the need for region-specific nutritional interventions.
  - Many wealthier families, despite economic capability, fail to consume adequate protein.

Click Here to Read: [Rising Obesity Burden in India](#)

## What are the Consequences of Protein Deficiency in the Human?

- **Muscle Atrophy and Weakness:** Long-term protein deficiency leads to **muscle atrophy**, causing **weakness, fatigue**, and reduced mobility.
  - Severe cases result in frailty, impairing daily activities.
- **Weakened Immune System:** Protein is **essential for antibody and immune cell production**, and its **deficiency weakens immunity, increasing infection risk** and slowing recovery.
- **Stunted Growth and Developmental Delays:** In children, protein deficiency causes **stunted growth, cognitive impairment, and delayed puberty**.
  - If untreated, it leads to **permanent developmental issues**, impacting long-term health and productivity.
- **Organ Damage:** Protein deficiency strains the **liver and kidneys**, causing **metabolic imbalances, fatty liver, and renal dysfunction** over time.

## What are the Key Recommendations as per ICRISAT Report?

- **Diversification of PDS:** Reform the PDS to include **pulses, millets, and protein-rich foods** while **expanding fortified food distribution** programs to enhance protein intake among vulnerable populations.
- **Nutrition Education:** Integrate nutrition education into **school curricula and public health initiatives** while **promoting community-based awareness programs** on balanced diets and protein consumption.
- **Empowering Women:** Enhance **women's education to improve dietary choices** and **strengthen self-help groups** to facilitate better access to protein-rich foods.
- **Diversified Farming Practices:** Provide incentives for cultivating **protein-rich crops like pulses and millets** while **promoting sustainable agriculture** models to ensure both food and nutrition security.
- **Targeted Regional Strategies:** Given that factors influencing protein consumption vary by region, **customized policies should be developed to address state-specific nutritional gaps**.

### ***Drishti Mains Question:***

**Q.** Evaluate the challenges to food security in India and their impact on hunger. How can India ensure sustainable food security to eliminate hunger?