

# 13. Common Nutrient Deficiencies

## 13.1 Overview

Micronutrient deficiencies, also known as “hidden hunger,” affect over **2 billion people globally**. ([WHO, 2023](#))

Deficiencies in iron, vitamin A, iodine, zinc, and vitamin D are most widespread. They impair growth, immunity, and cognitive function.

In India, **ICMR and UNICEF** report iron deficiency anemia as the leading cause of years lived with disability among women.

## 13.2 Causes / Risk Factors

- Poor dietary diversity (high cereal, low fruit/vegetable diets).
- Malabsorption conditions (celiac disease, IBD).
- Increased physiological needs during pregnancy or growth.
- Food insecurity and limited access to fortified foods.

## 13.3 Symptoms / Indicators

- **Iron deficiency:** fatigue, pale skin, breathlessness.
- **Vitamin A deficiency:** night blindness, dry eyes.
- **Vitamin D deficiency:** bone pain, muscle weakness.
- **Iodine deficiency:** goiter, developmental delays.
- **Zinc deficiency:** poor wound healing, hair loss.

## 13.4 Prevention / Lifestyle

WHO and ICMR recommend:

- Consuming diverse diets with fruits, vegetables, legumes, dairy, and seafood.
- Using fortified foods and iodized salt.

- Sunlight exposure for vitamin D synthesis.
- Supplementation during pregnancy and early childhood as per health program guidelines.  
([WHO, 2023](#))

## 13.5 Screening / Diagnosis

- **Hemoglobin test** for anemia.
- **Serum ferritin, vitamin D, and B12 tests.**
- **Thyroid function tests** for iodine deficiency.  
Regular nutritional assessments are part of India's **Anemia Mukh Bharat** and **Poshan Abhiyaan** programs.

## 13.6 Management / Public Health Perspective

Global actions include food fortification (flour, salt, milk) and targeted supplementation. India's **National Iron Plus Initiative** provides iron-folic acid tablets to women and children. Education campaigns emphasize dietary diversity and bioavailability of nutrients.

## Summary Points

- Micronutrient deficiencies cause long-term developmental harm.
- Balanced diets and fortified foods can prevent most deficiencies.
- Regular screening and supplementation are critical public health measures.