Society & Social Justice · GS - II

Examine the nutritional and public health challenges associated with micronutrient deficiencies among adolescents in India. Suggest measures to strengthen prevention and early intervention.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 26/11/2026	GS - II	Society & Social Justice

MARKS	WORD LIMIT
15	~250 words

Answer Hint

Micronutrient deficiencies, adolescent health, dietary diversity, anaemia, nutrition education, food fortification, school-based interventions

Model Answer

The public health significance

Adolescence is a critical period of physical growth, cognitive development and increased nutritional requirements. Deficiencies of micronutrients such as vitamin B12, iron, folate and vitamin D can adversely affect health, learning outcomes and long-term productivity.

Vitamin B12 is particularly important for red blood cell formation, DNA synthesis and neurological functioning. Its deficiency may lead to megaloblastic anaemia and neurological complications.

Factors contributing to deficiencies

1. **Dietary inadequacy:** Limited consumption of animal-source foods, inadequate dietary diversity and poorly planned vegetarian diets can increase the risk of vitamin B12 deficiency.

2. **Socio-economic inequality:** Poverty, food insecurity and unequal access to nutritious foods affect vulnerable adolescents disproportionately.

3. **Knowledge gaps:** Limited awareness about balanced diets and micronutrient requirements can result in poor food choices.

4. **Health-system limitations:** Inadequate screening, delayed diagnosis and insufficient nutrition counselling allow deficiencies to remain undetected.

Strengthening the response

1. **School-based nutrition:** Integrate nutrition education, periodic health assessments and age-appropriate counselling into adolescent health programmes.

2. **Targeted supplementation:** Provide evidence-based supplementation to identified at-risk groups, supported by appropriate screening and monitoring.

3. **Food fortification:** Promote scientifically appropriate fortification of commonly consumed foods with essential micronutrients.

4. **Dietary diversification:** Improve access to pulses, dairy products, fortified foods, vegetables and other nutrient-rich options.

5. **Community outreach:** Strengthen the role of ASHA workers, Anganwadi services and healthcare facilities in identifying and counselling vulnerable adolescents.

Conclusion

Addressing micronutrient deficiencies requires a shift from calorie-focused interventions towards nutrition security and dietary quality. Coordinated action across schools, families, public health institutions and food systems is essential for improving adolescent health and human capital.