

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES



Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai
Approved by Pharmacy Council of India, New Delhi.
Coimbatore -641035

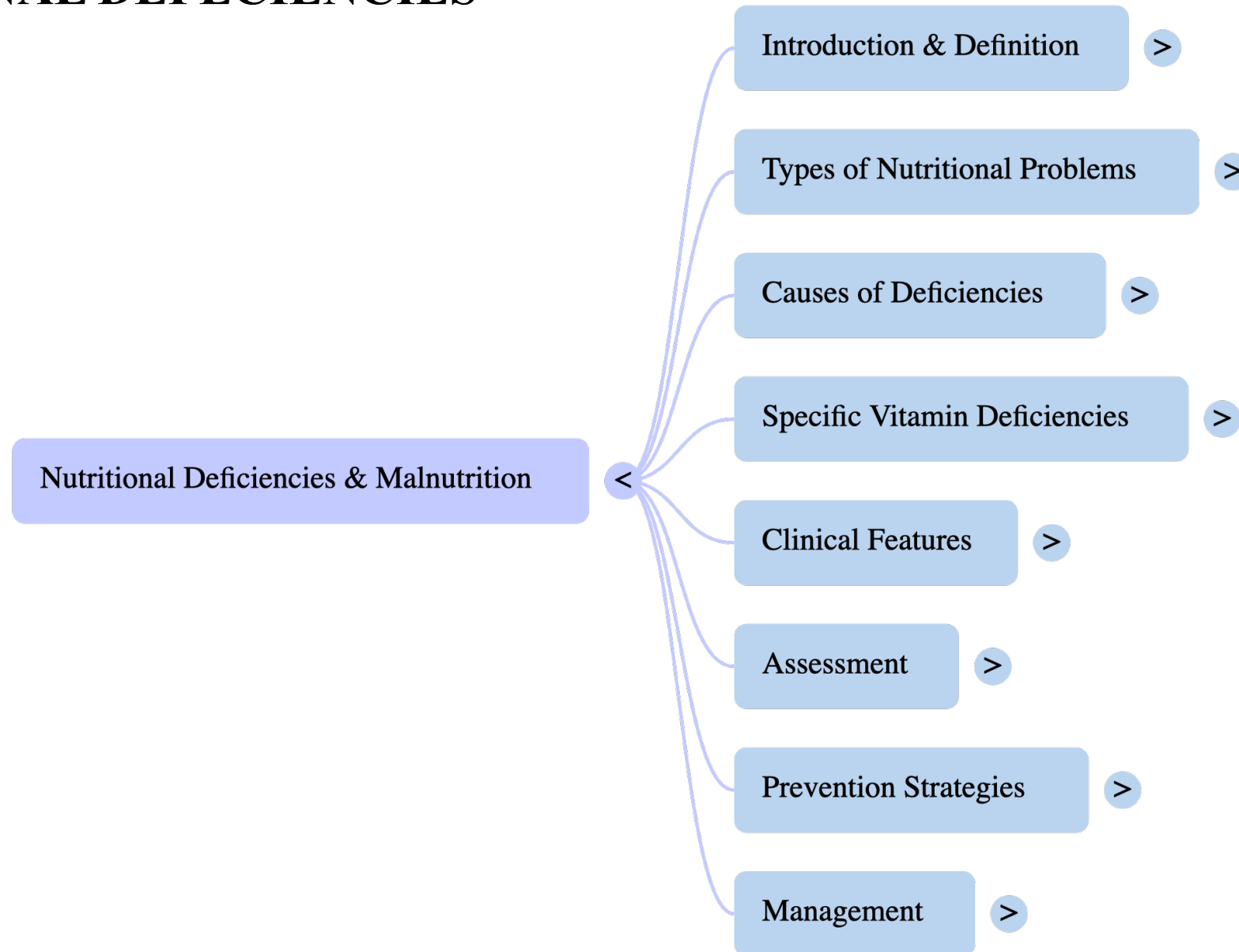
COURSE NAME : SOCIAL AND PREVENTIVE PHARMACY (BP 802 T)

B.PHARM. VIII SEM / IV YEAR

UNIT 1: TOPIC 2 : SOCIAL AND HEALTH EDUCATION

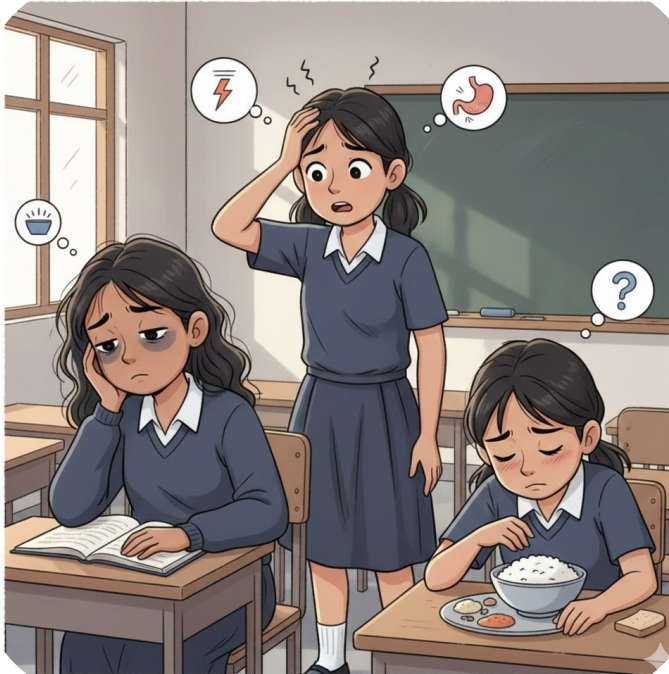
NUTRITIONAL DEFECIEIENCY AND MALNUTRITION

NUTRITIONAL DEFECIENCIES



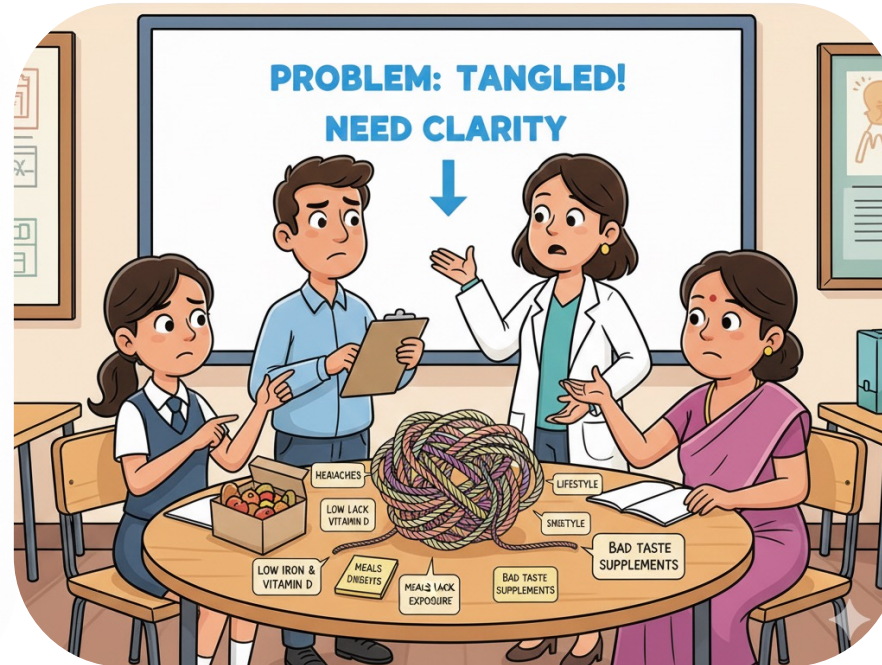
DESIGN THINKING NUTRITIONAL DEFECIENCIES

Empathy



School children with sever anemia and nutritional deficiency

Define



Problem with meals lack diversity, outdoor exposure is low, and supplements are not student-friendly.

Ideate



“Breakfast in a Box”: A weekly distribution of ready-to-eat iron-rich snacks.
“Sunshine Break”: A 15-minute daily supervised outdoor period.

DESIGN THINKING NUTRITIONAL DEFECIENCIES

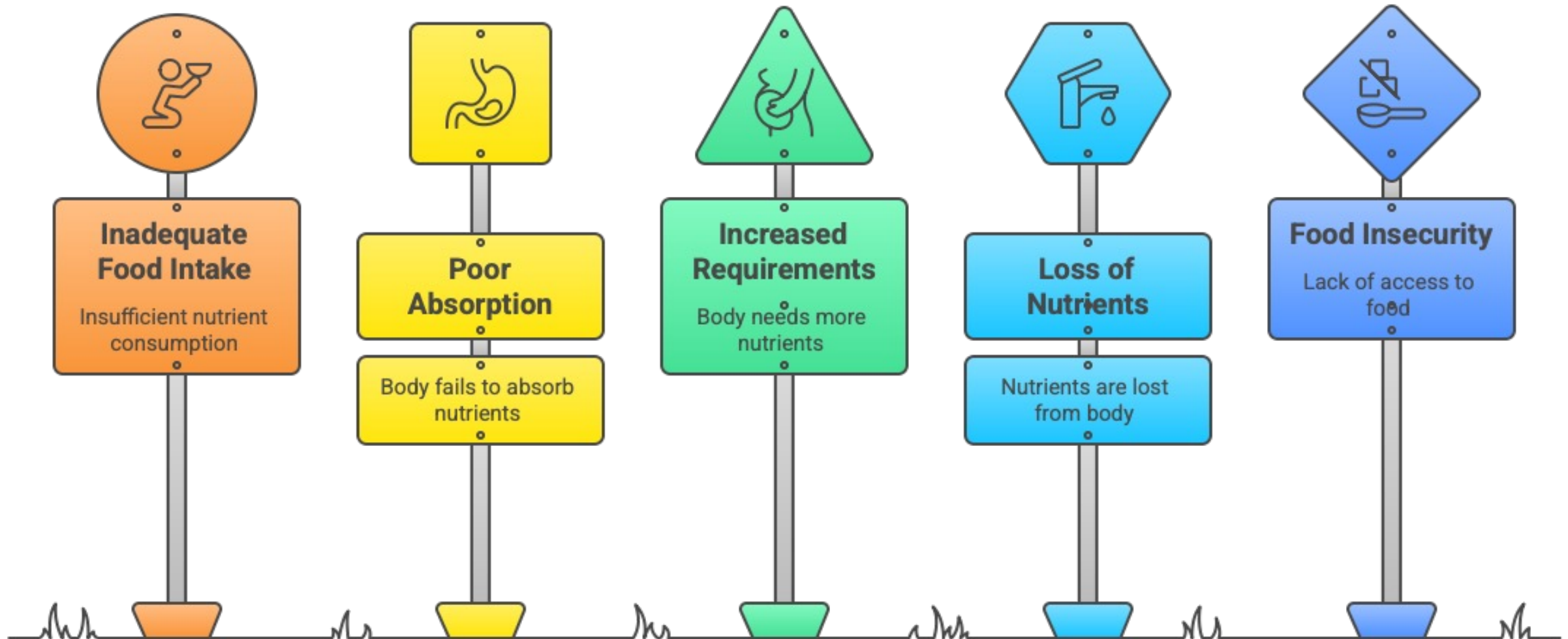
Prototype / Test



Evolve

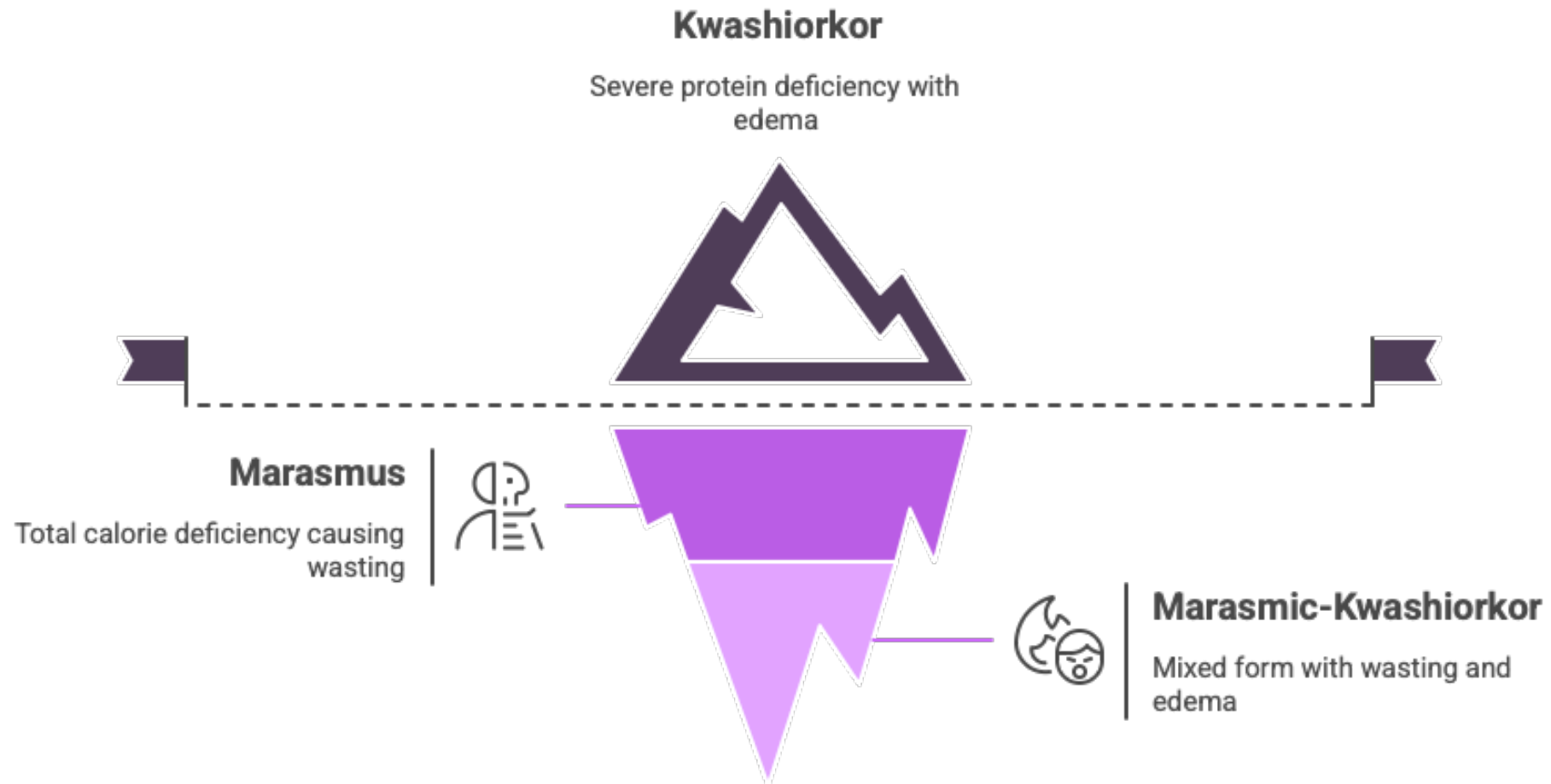


ADDRESSING NUTRITIONAL DEFECIENCIES



MACRONUTRIENT DEFECIENCIES

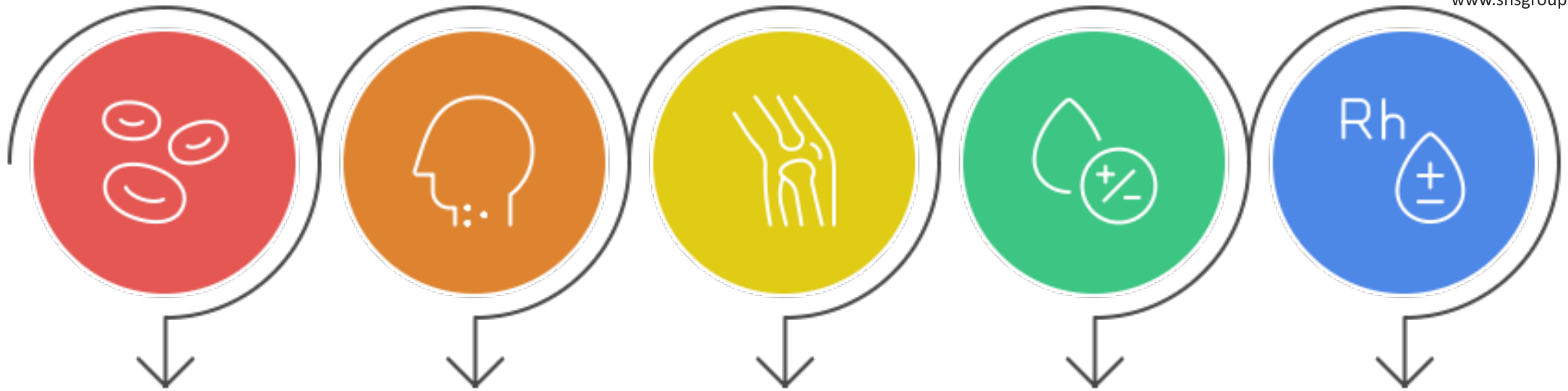
Macronutrient Deficiencies: Unveiling the Hidden Depths



VITAMIN DEFECIENCY OUTCOMES



MINERAL DEFECIENCIES



Iron Deficiency

Hemoglobin synthesis is impaired, leading to fatigue and pallor. Breathlessness may also occur.

Iodine Deficiency

Thyroid hormone production decreases, causing goiter and cretinism. Hypothyroidism can also develop.

Calcium Deficiency

Bone and teeth health deteriorates, resulting in rickets and osteoporosis. Muscle cramps are also a symptom.

Zinc Deficiency

Immunity and enzyme activity are compromised, leading to poor wound healing. Hair loss and growth retardation may occur.

Sodium & Potassium

Fluid balance and nerve function are disrupted, causing muscle weakness. Cramps and arrhythmias may also occur.

NUTRITIONAL DEFECIENCIES CHALLENGES

Poor Growth
Stunted development in children

Fatigue and Weakness
Reduced energy and vitality

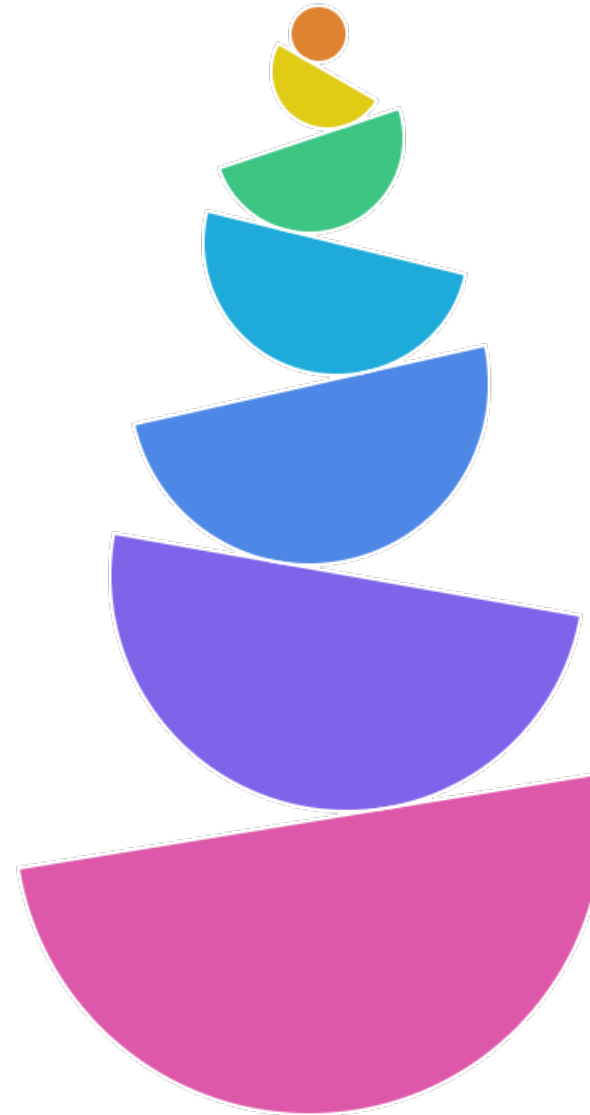
Frequent Infections
Weakened immune system

Skin and Hair Changes
Visible signs of deficiency

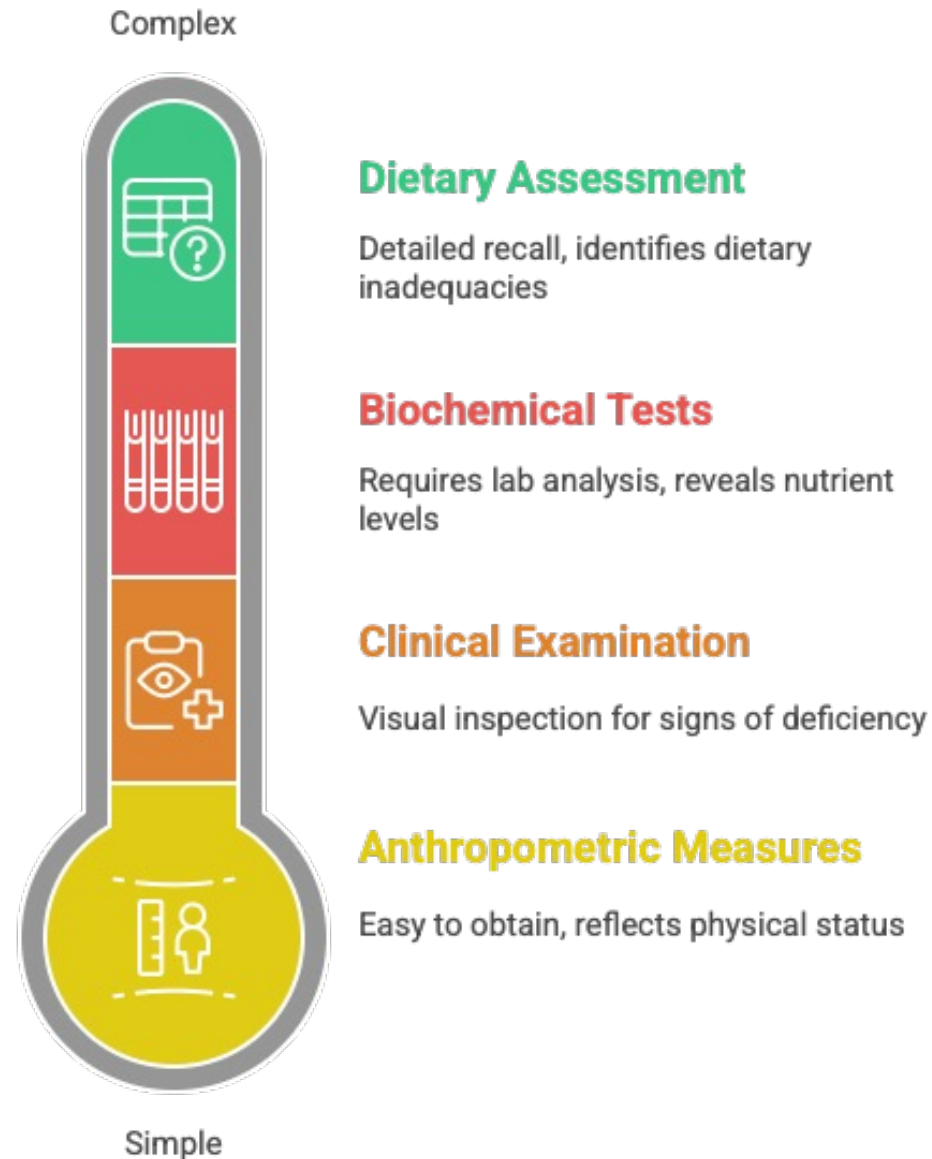
Poor Concentration
Difficulty focusing and learning

Bone Deformities
Skeletal abnormalities and pain

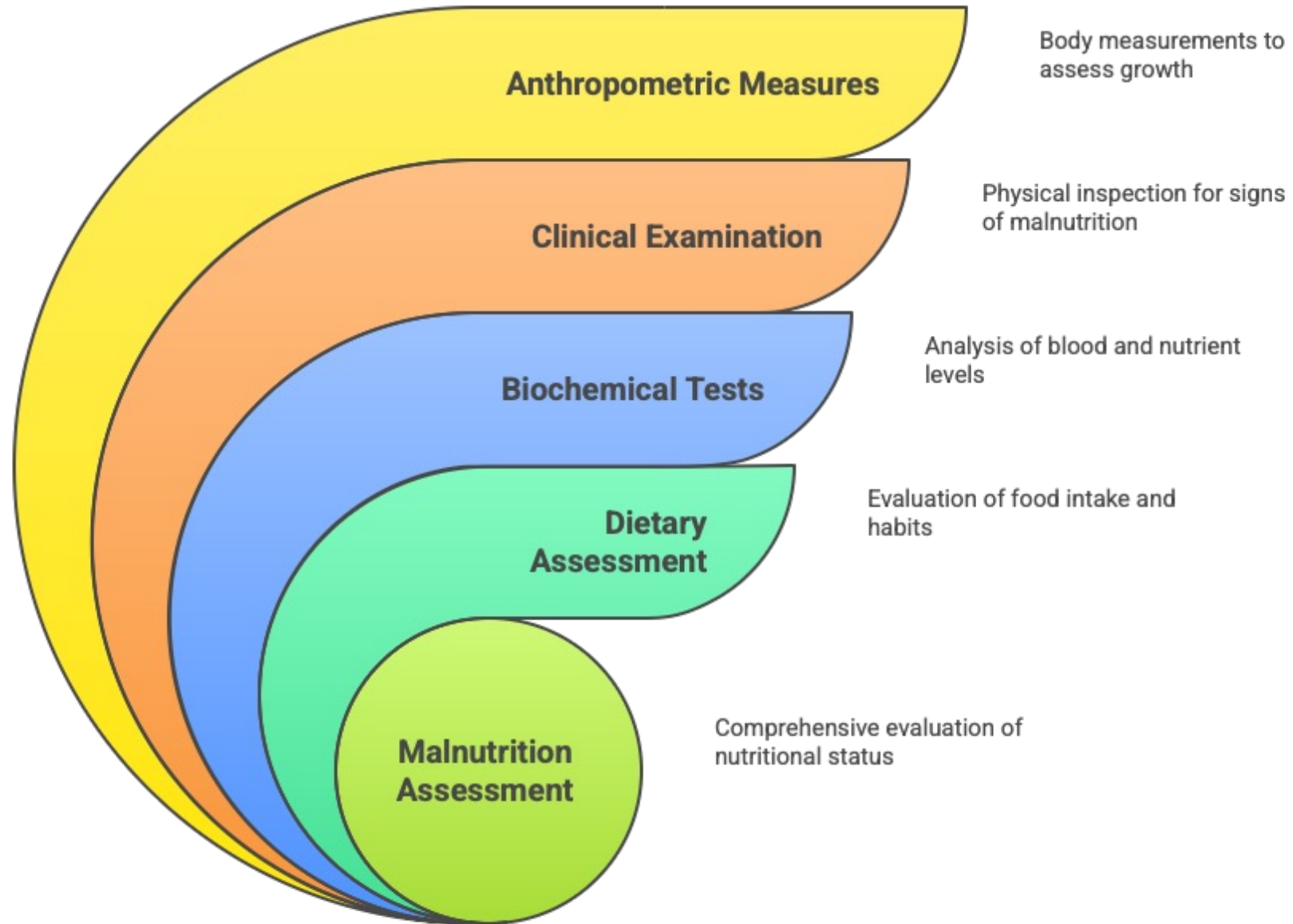
Poor Wound Healing
Slow recovery from injuries



MALNUTRITION ASSESSMENT METHOD



MALNUTRITION ASSESSMENT



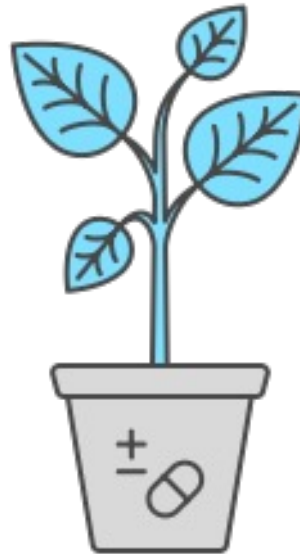
STEPS TO PREVENT NUTRITIONAL DEFECIENCIES



Balanced Diet



Food Fortification



Supplementation

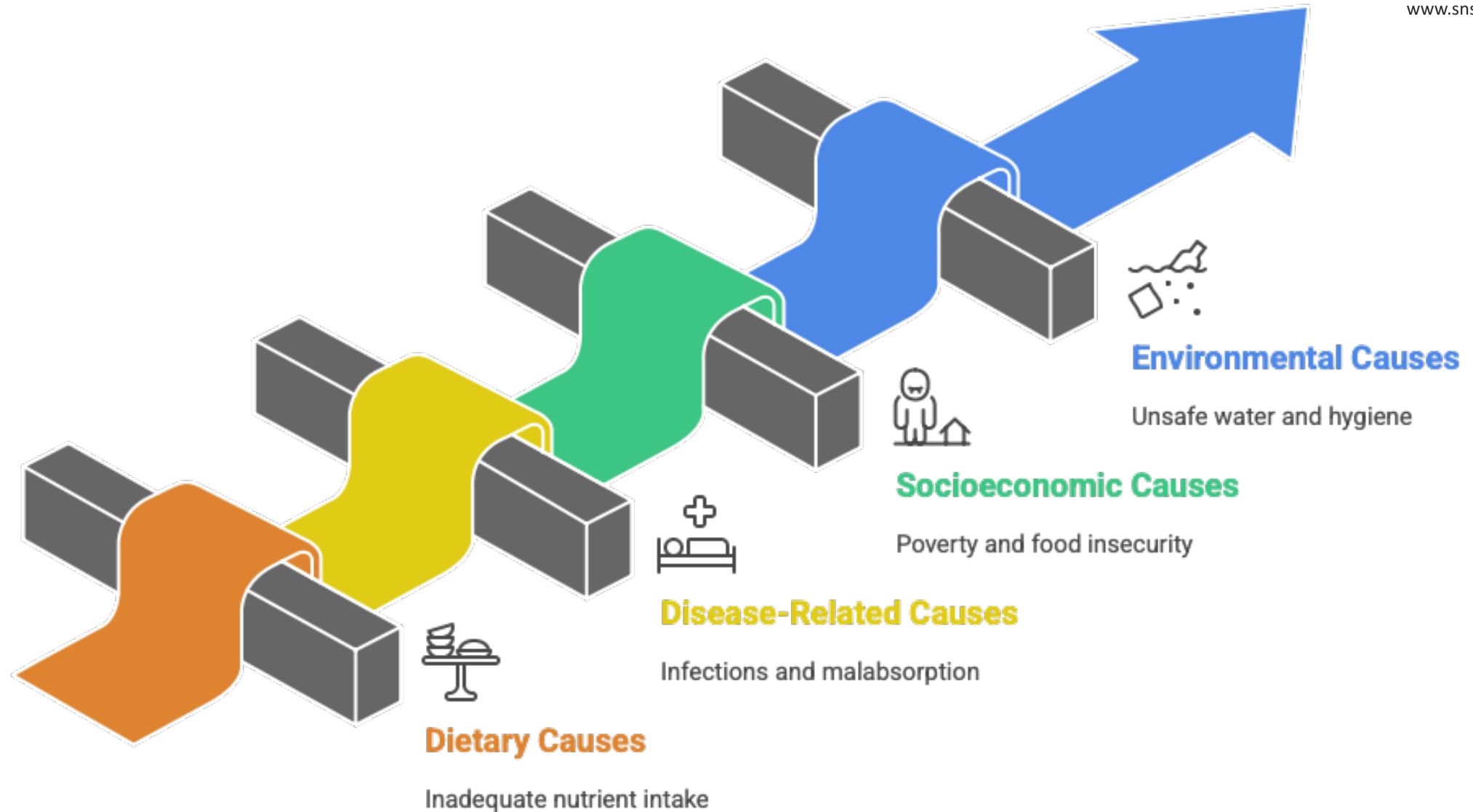


Nutrition
Education

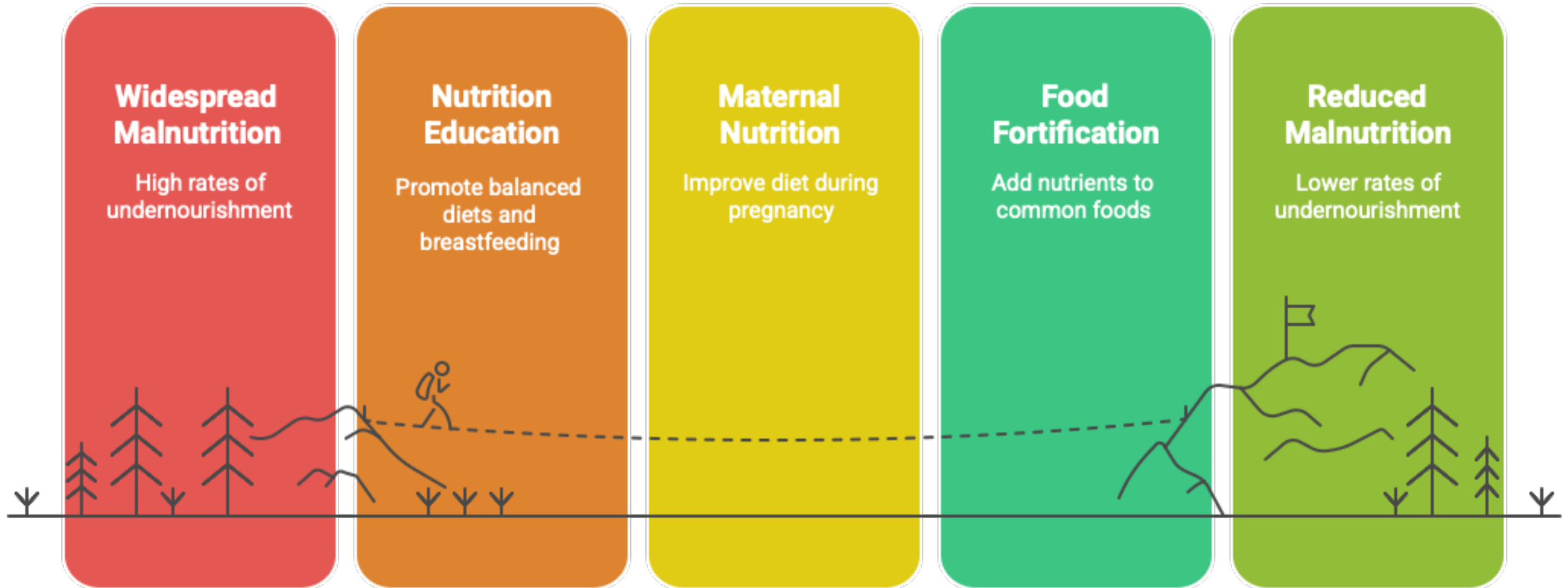


Government
Programs

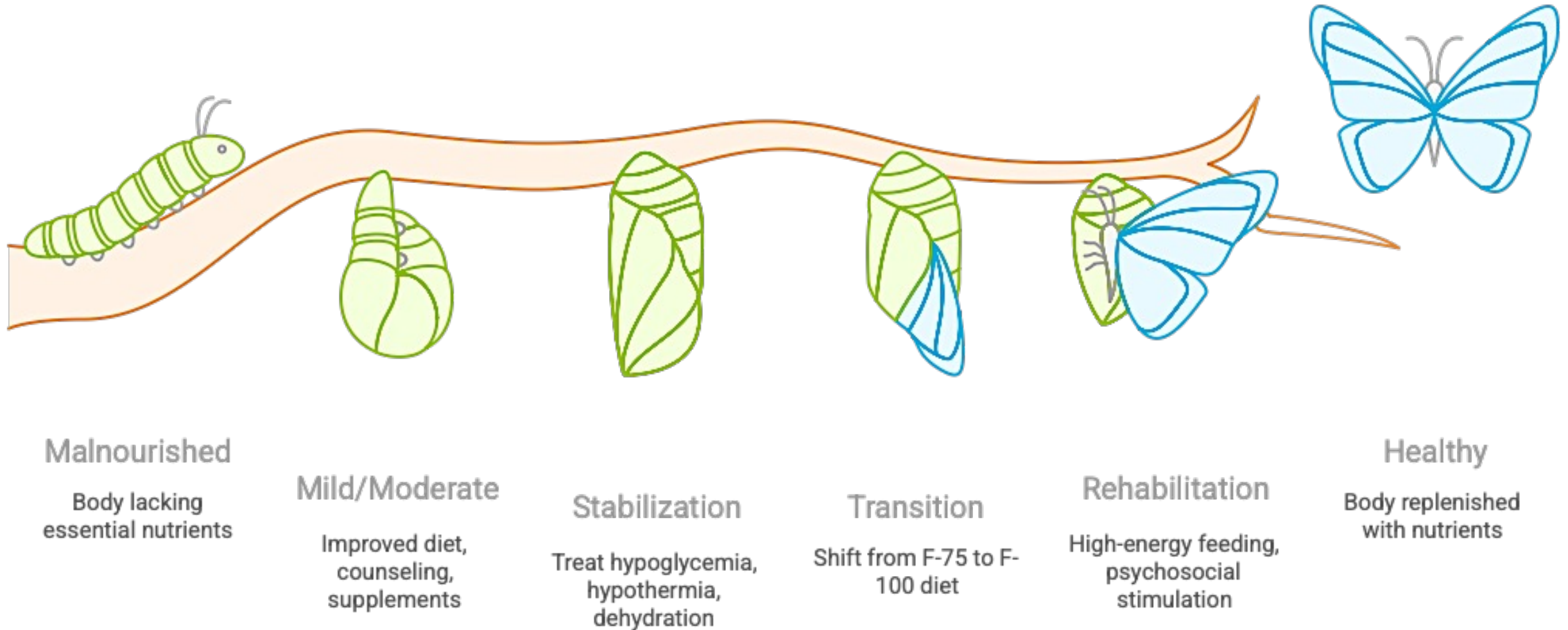
ADDRESSING ROUTE CAUSE OF MALNUTRITION



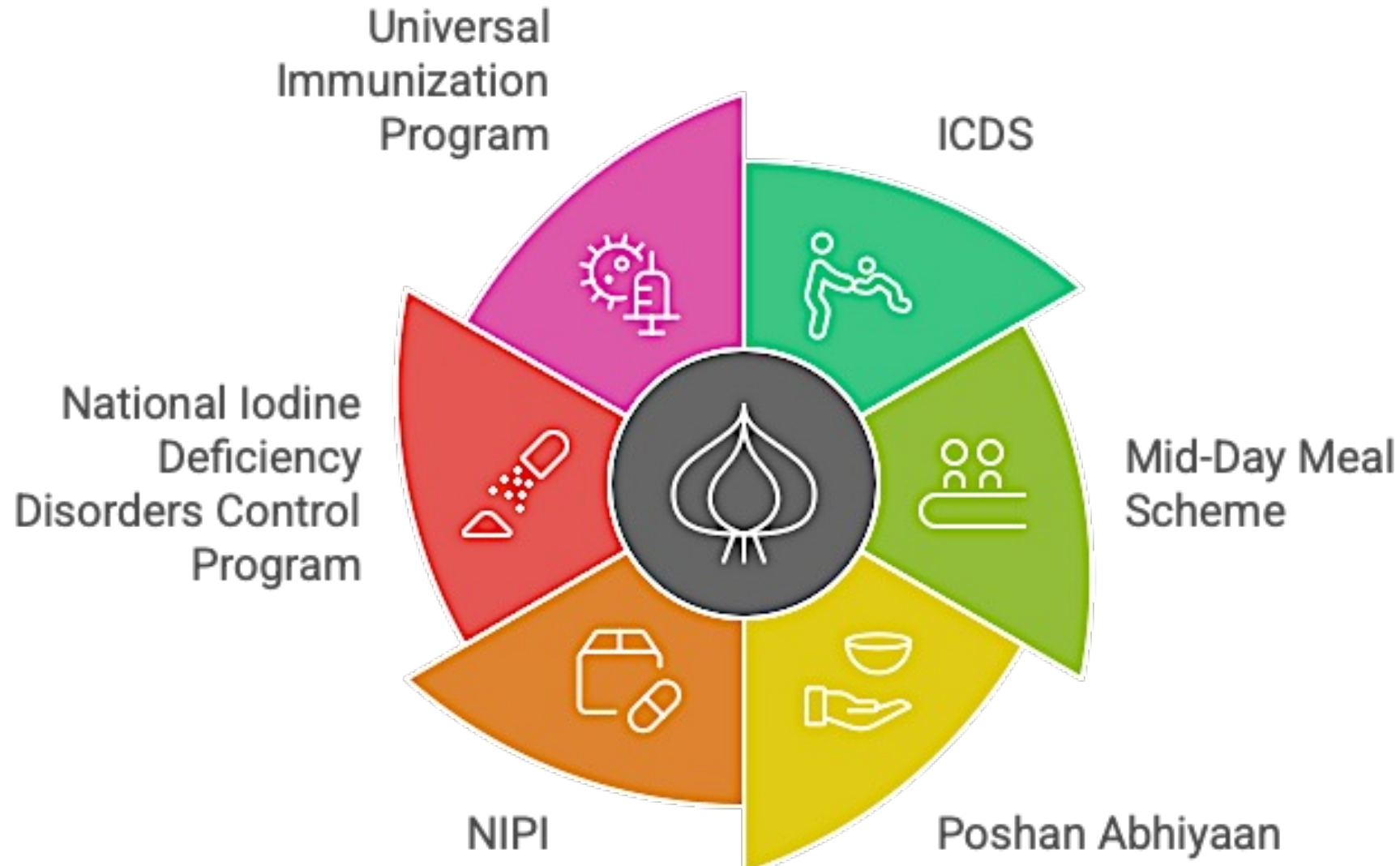
PREVENTING MALNUTRITION



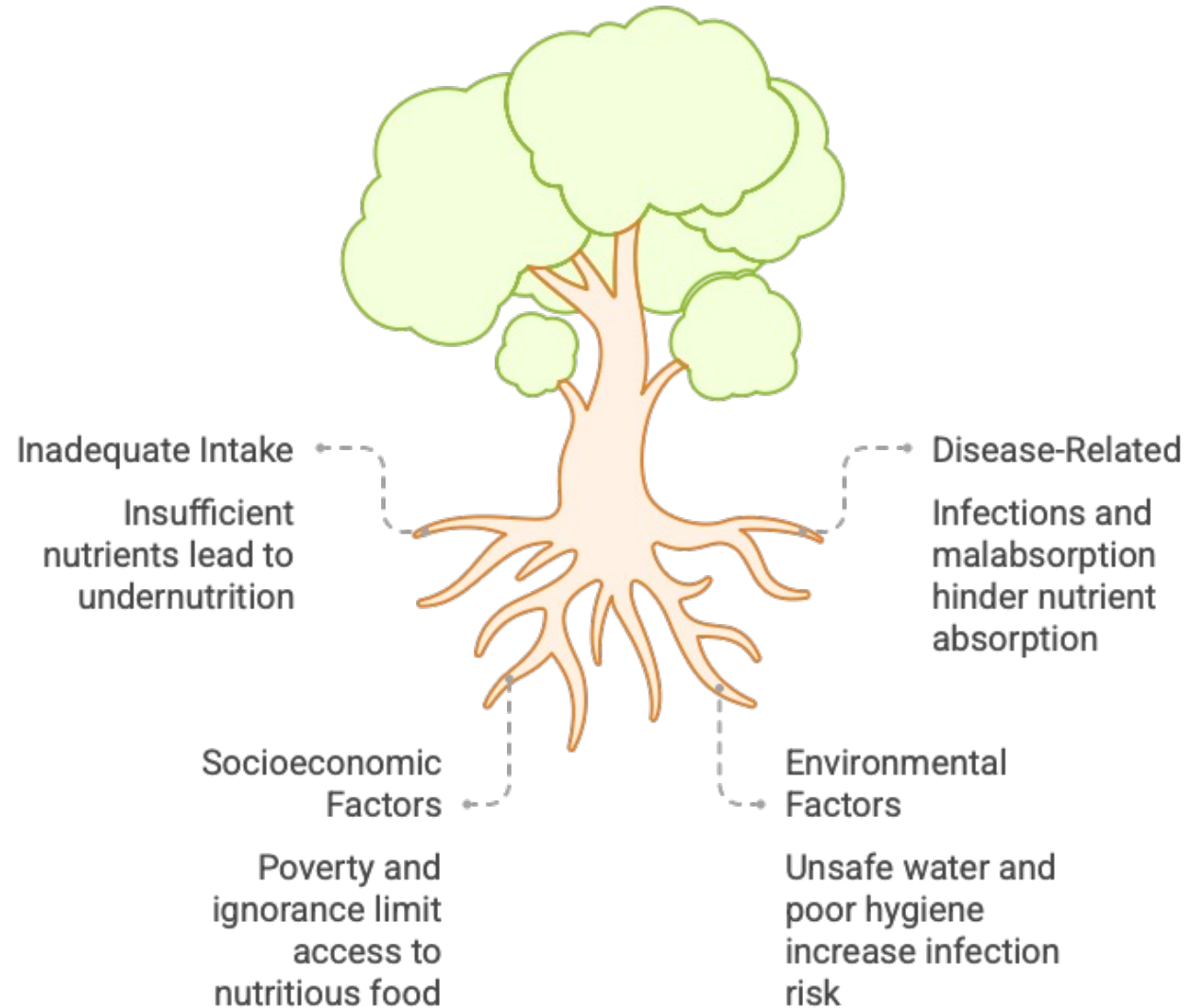
MANAGEMENT OF MALNUTRITION



NATIONAL NUTRITION PROGRAMME



MALNUTRITION AND HEALTH



ASSESSMENT- 1

A 7-year-old boy presents with **fatigue, shortness of breath on exertion, pale conjunctiva,** and poor school performance. His diet mainly consists of polished white rice, and he rarely eats vegetables. Hemoglobin is **8 g/dL**, and peripheral smear shows microcytic hypochromic RBCs.



Assessment Question:

1. Identify the nutritional deficiency.
2. Explain the physiological reason for fatigue in this condition.
3. Suggest *two* dietary modifications to correct this deficiency.

ASSESSMENT- 2

A



B



C



D



Based on the provided sources, list the vitamins required to prevent nutritional deficiencies.

A.....

B.....

C.....

D.....

ASSESSMENT- 3

Match the vitamins and deficiencies

Vitamins	Deficiency Disease
Vitamin A	Scurvy
Vitamin D	Beriberi
Vitamin C	Night blindness
Vitamin B1	Rickets



ASSESSMENT- 4

1. A key symptom is **bilateral pitting edema** (swelling) of the limbs and face, often due to a lack of plasma proteins like **albumin**.
2. The name is an African word, often translated as "the sickness the baby gets when the new baby comes."

What am I?



ASSESSMENT- 5

Which of the following is NOT a common cause of nutritional deficiencies?

- ☐ Poverty
- ☐ Gastrointestinal diseases
- ☐ Pregnancy and lactation
- ☐ Excessive exercise



REFERENCES

1. Short Textbook of Preventive and Social Medicine, Prabhakara GN, 2nd Edition, 2010, ISBN: 9789380704104, JAYPEE Publications
2. Textbook of Preventive and Social Medicine (Mahajan and Gupta), Edited by Roy Rabindra Nath, Saha Indranil, 4th Edition, 2013, ISBN: 9789350901878, JAYPEE Publications
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4. Essentials of Community Medicine—A Practical Approach, Hiremath Lalita D, Hiremath Dhananjaya A, 2nd Edition, 2012, ISBN: 9789350250440, JAYPEE Publications

Thank you