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

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

B.PHARM. VIII SEM / IV YEAR

UNIT 1: TOPIC 2 : SOCIAL AND HEALTH EDUCATION

FOOD IN RELATION TO NUTRITION AND HEALTH

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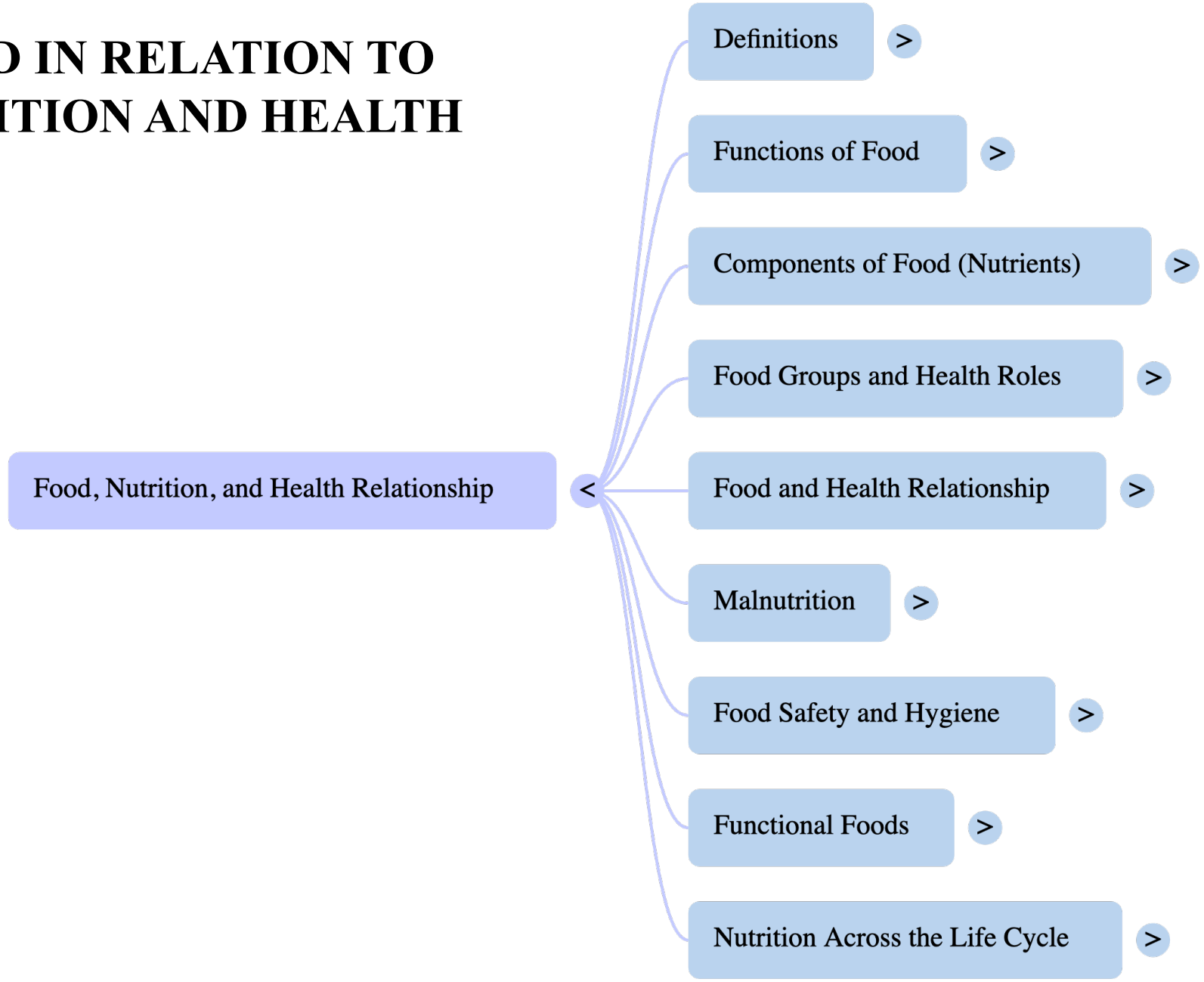

DESIGN THINKING FOOD IN RELATION TO NUTRITION AND HEALTH

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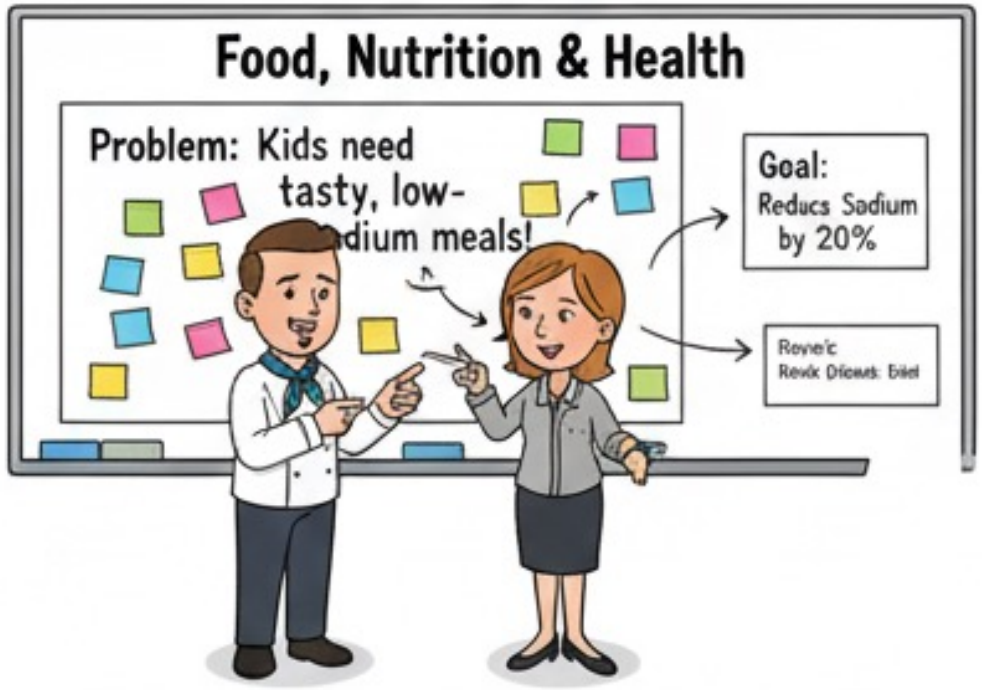
1. EMPATHY

2. DEFINE



3. IDEATE

DESIGN THINKING FOOD IN RELATION TO NUTRITION AND HEALTH

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4. PROTOPTPE & TEST

5. EVOLVE

THE SYNERGY OF FOOD NUTRITION AND HEALTH

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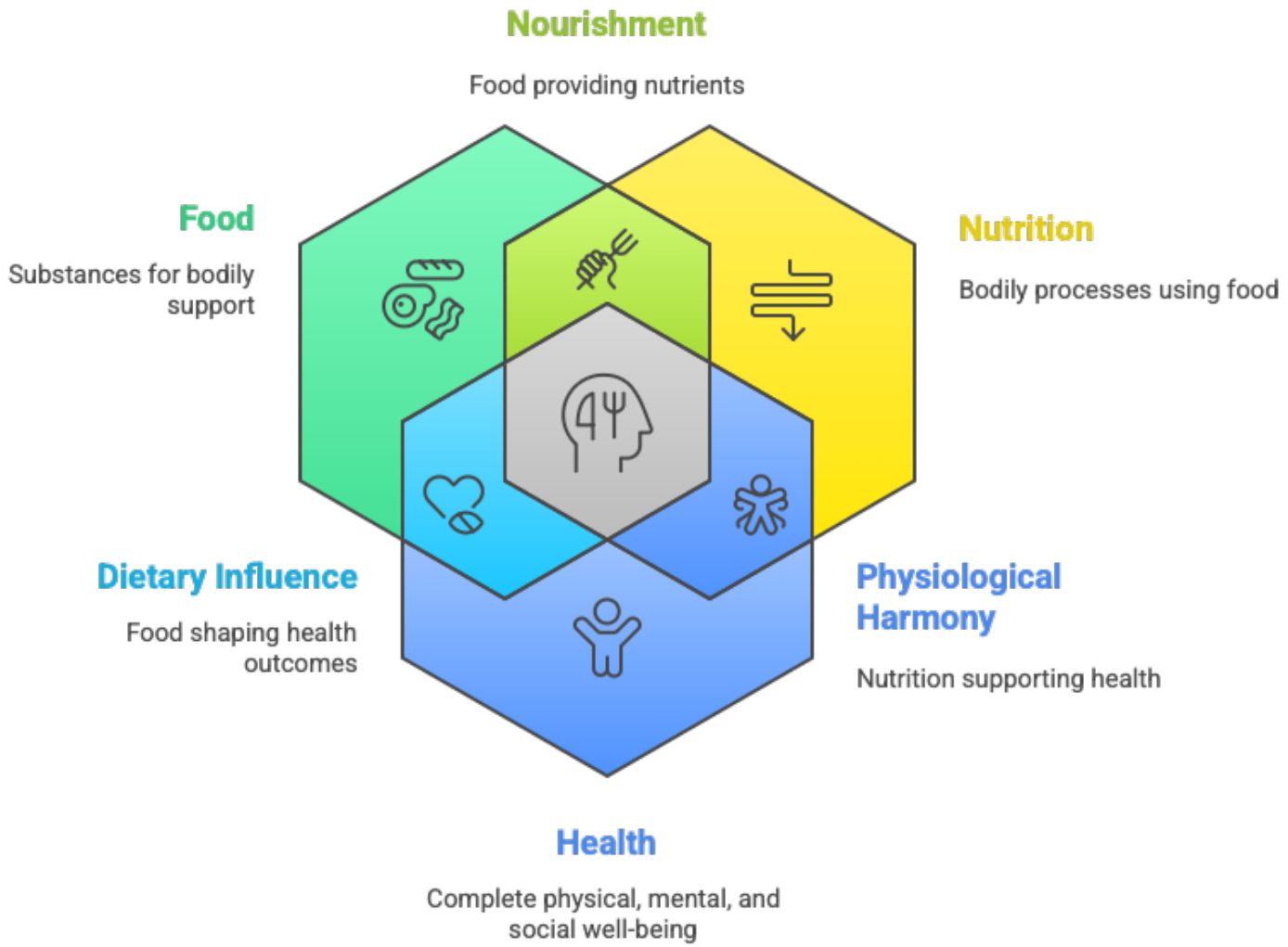

THE FUNCTONS OF FOOD

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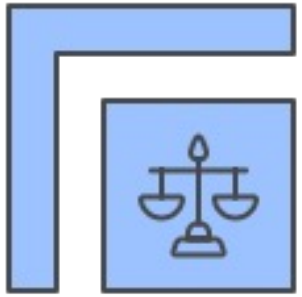
Regulatory Function

Maintains homeostasis through digestion and temperature control.

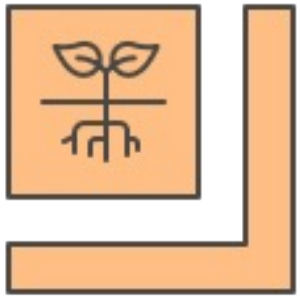


Energy-Giving Function

Provides fuel for physical activity and metabolism.

Protective Function

Regulates physiological processes and protects against damage.



Body-Building Function

Supports growth, repair, and maintenance of tissues.

MACRONUTRIENT FUNCTONS

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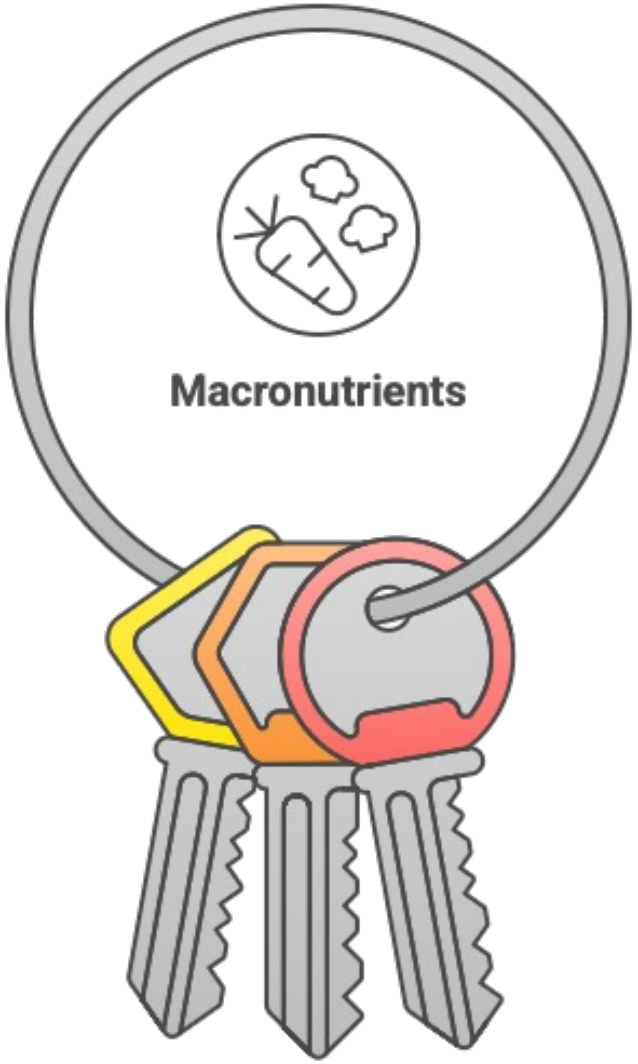


Carbohydrates

Primary energy source essential for brain function

Proteins

Growth and repair of tissues, vital for body building

Fats

Concentrated energy, cell membranes, hormone regulation

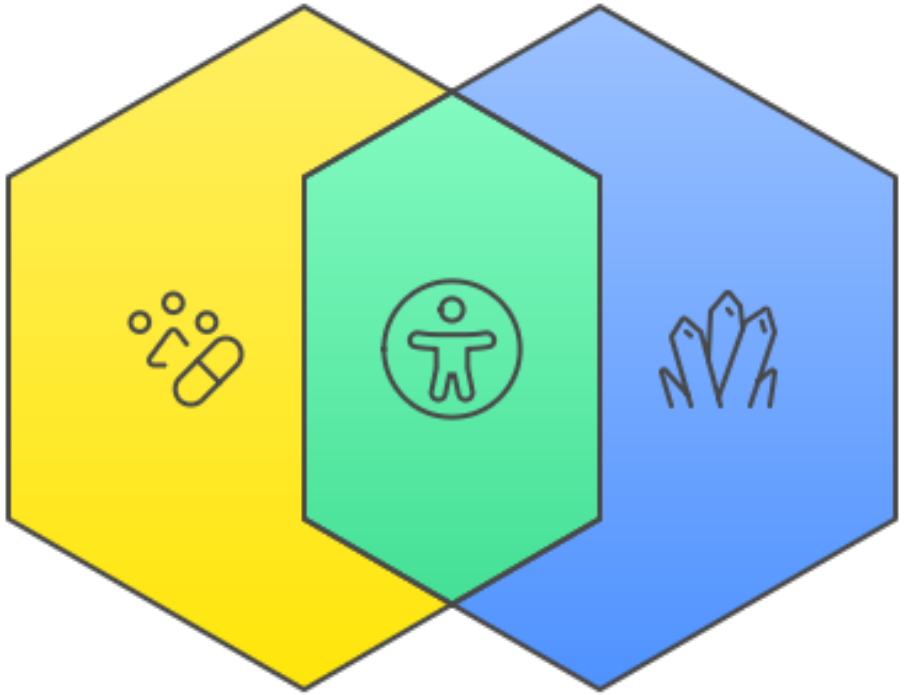
THE SYNERGY OF VITAMINS AND MINERALS FOR HEALTH

Essential Health Regulators

Vital for body processes and disease prevention

Vitamins

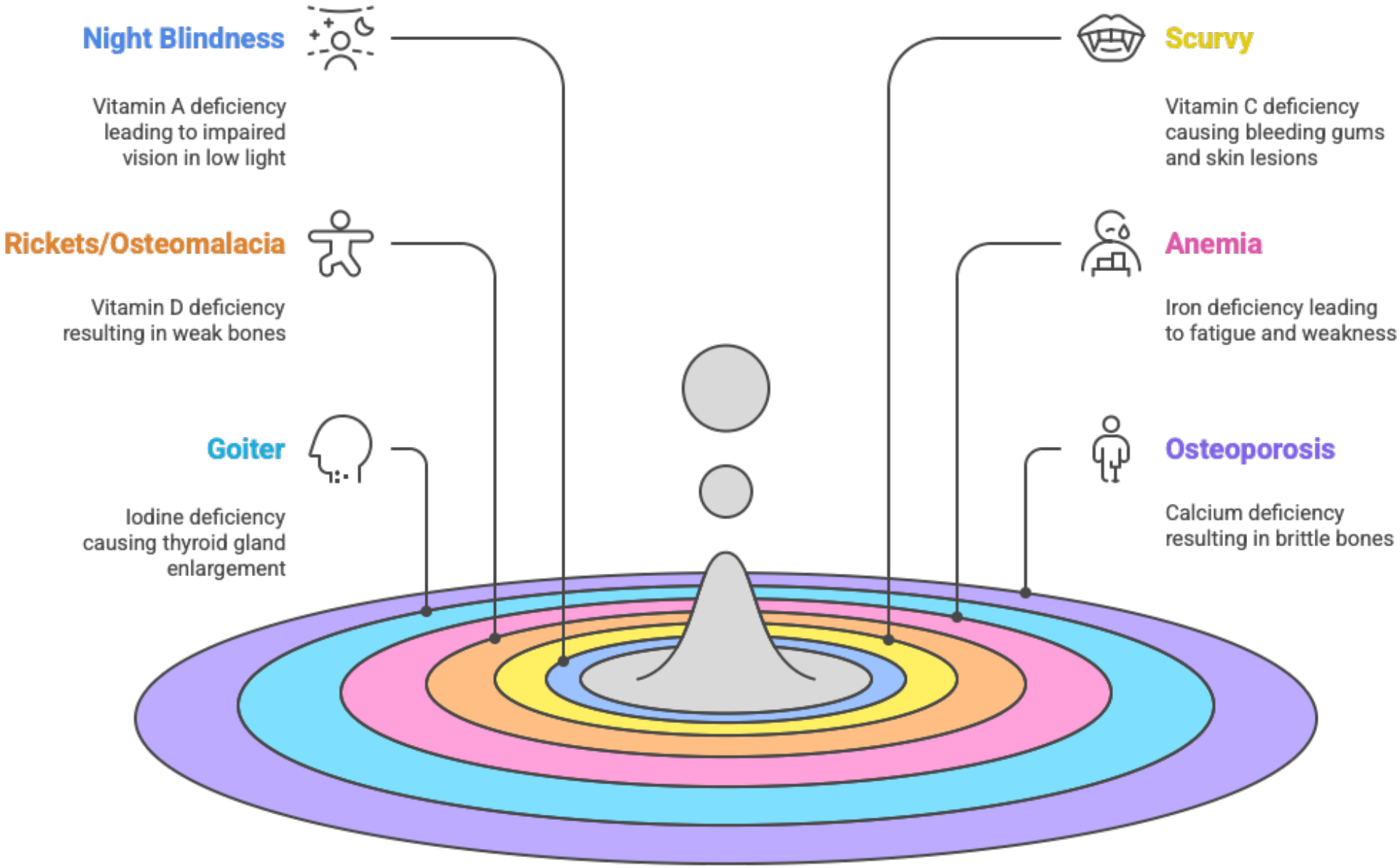
Organic compounds for immunity and metabolism



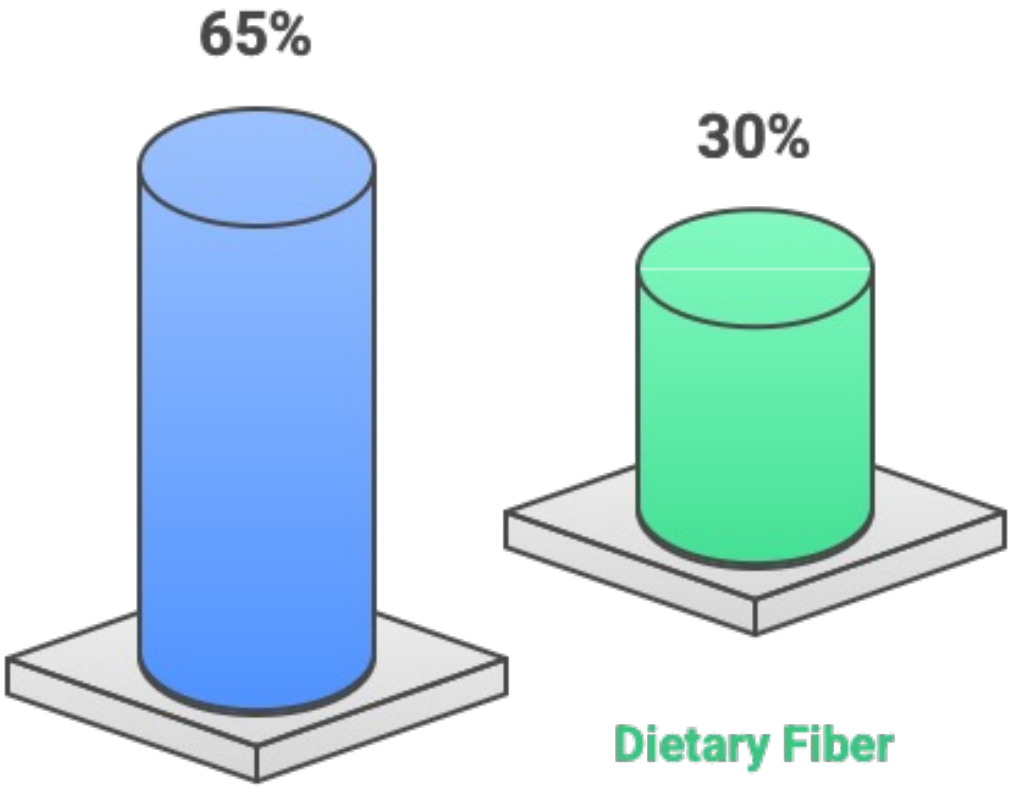
Minerals

Inorganic elements for structure and function

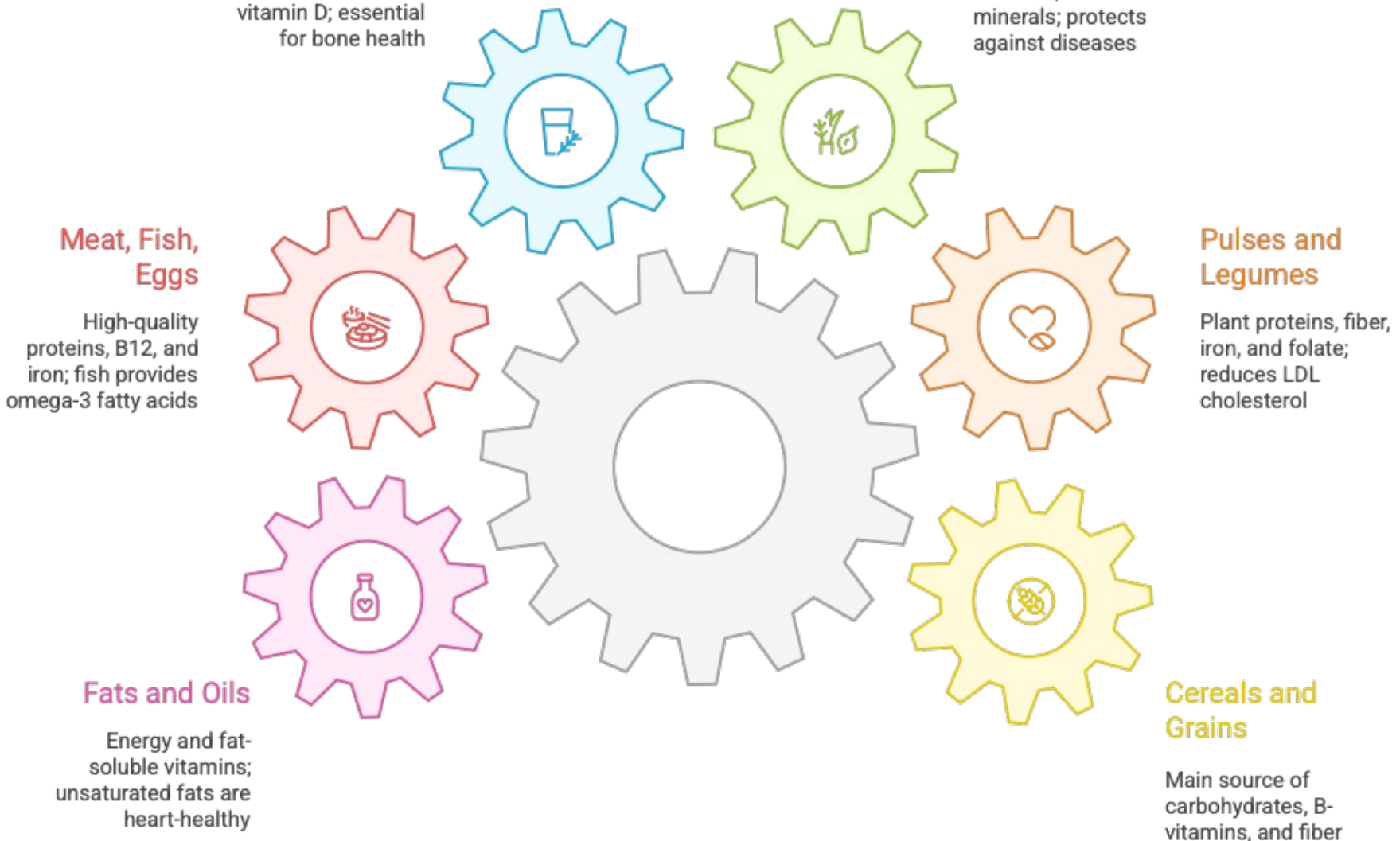
NUTRITION DEFECIENCY



THE IMPORTANCE OF WATER AND DIETARY FIBER



FOOD GROUPS


Milk and Milk Products
Calcium, protein, and vitamin D; essential for bone health
Fruits and Vegetables
Rich in antioxidants, vitamins, and minerals; protects against diseases
Meat, Fish, Eggs
High-quality proteins, B12, and iron; fish provides omega-3 fatty acids
Pulses and Legumes
Plant proteins, fiber, iron, and folate; reduces LDL cholesterol
Fats and Oils
Energy and fat-soluble vitamins; unsaturated fats are heart-healthy
Cereals and Grains
Main source of carbohydrates, B-vitamins, and fiber

INTERCONNECTION OF FOOD AND HEALTH

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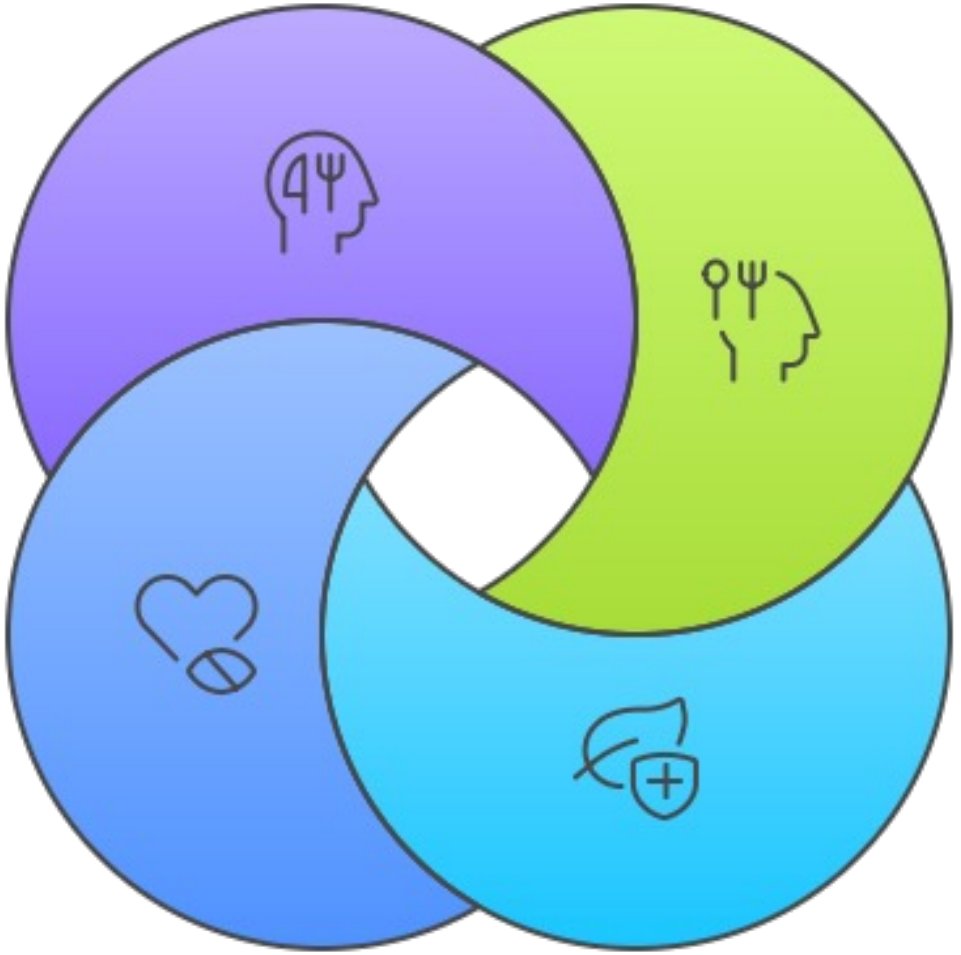
Food and Mental Health

Impacts brain function and mood regulation



Food and Growth

Ensures proper development during youth

Food and Chronic Diseases

Influences the risk of long-term illnesses

Food and Immunity

Strengthens the body's defense mechanisms

GLOBAL MALNUTRITION

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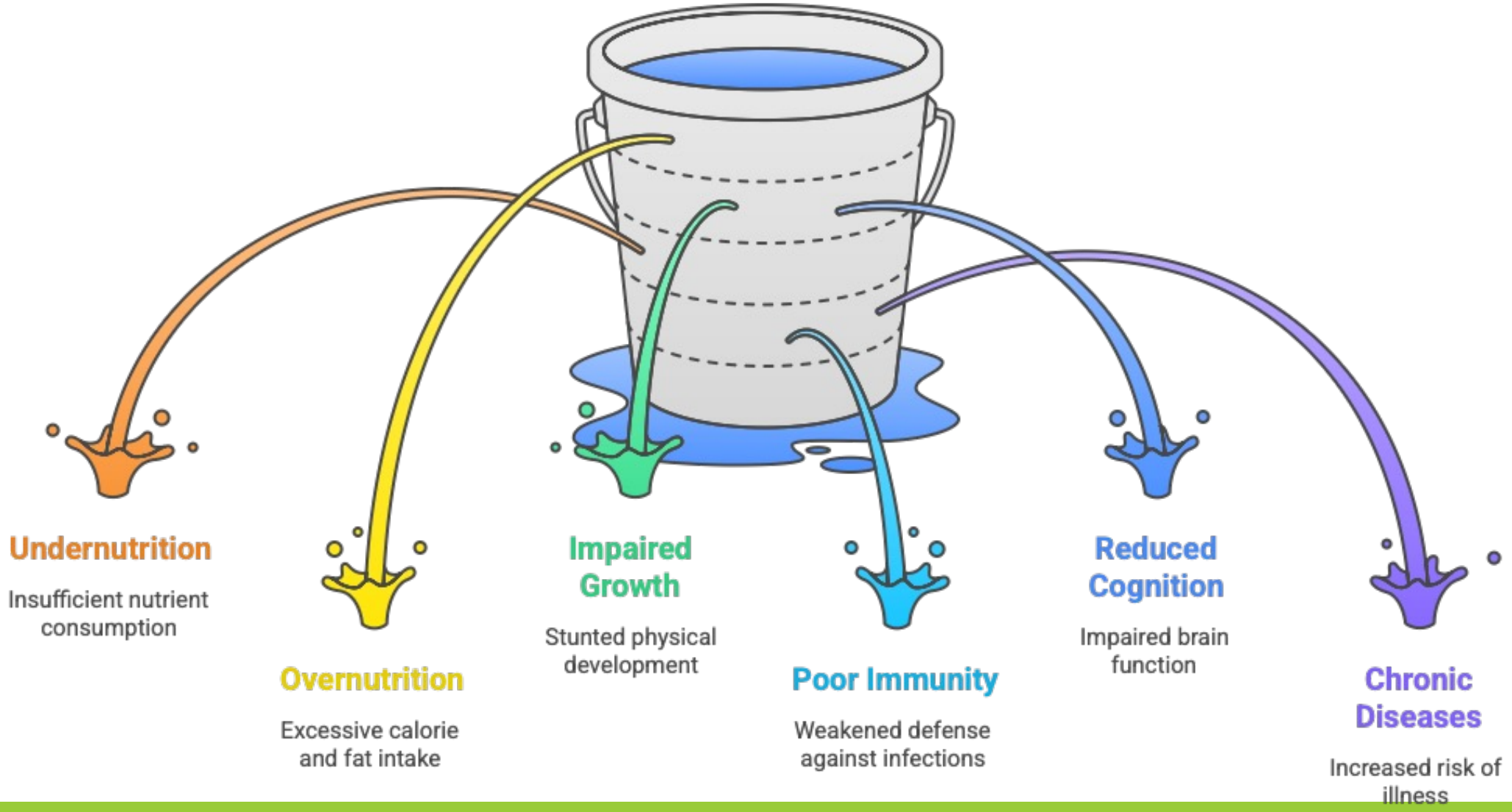
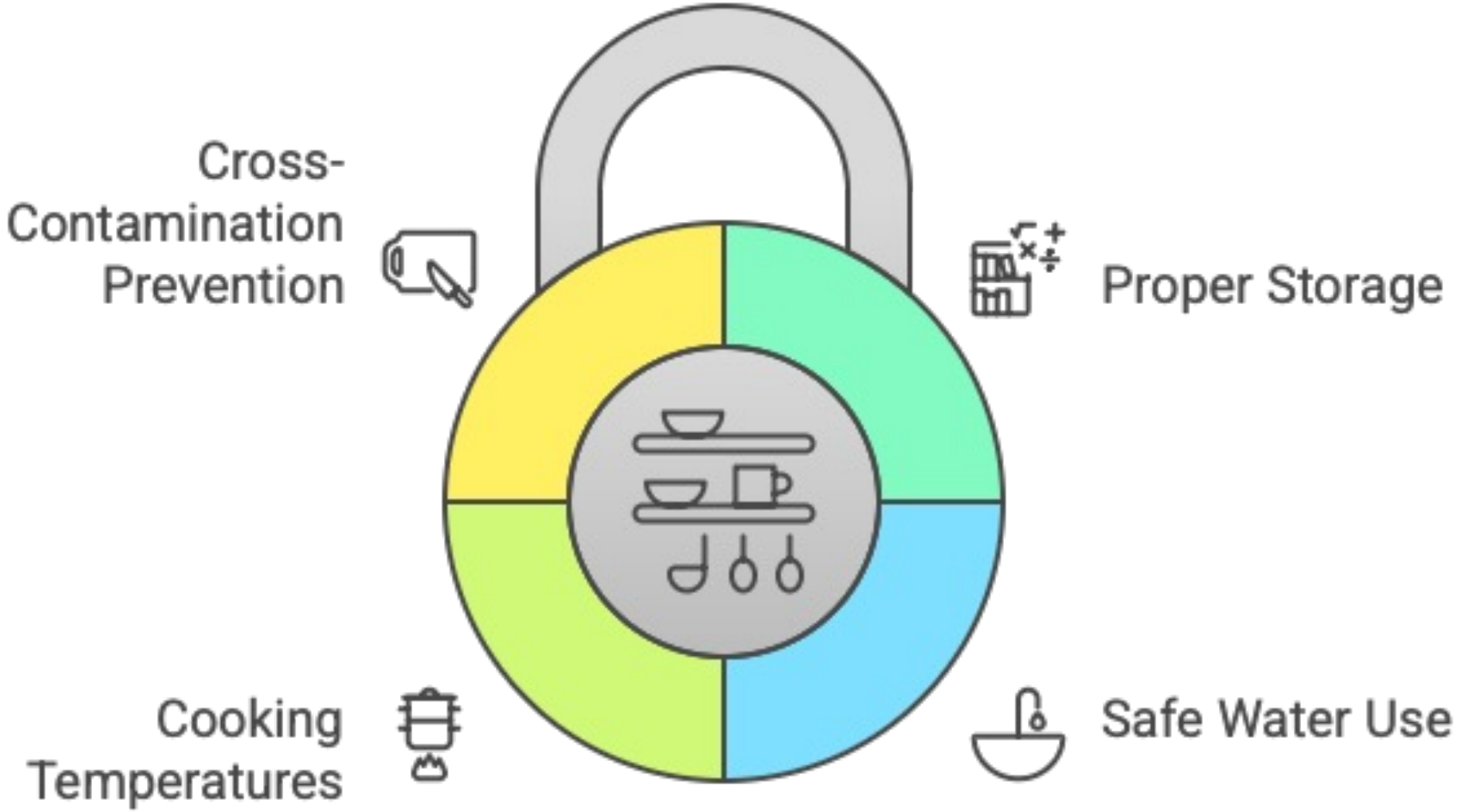


FOOD SAFETY PRACTICES



EXPLORING FUNCTONS OF FOOD

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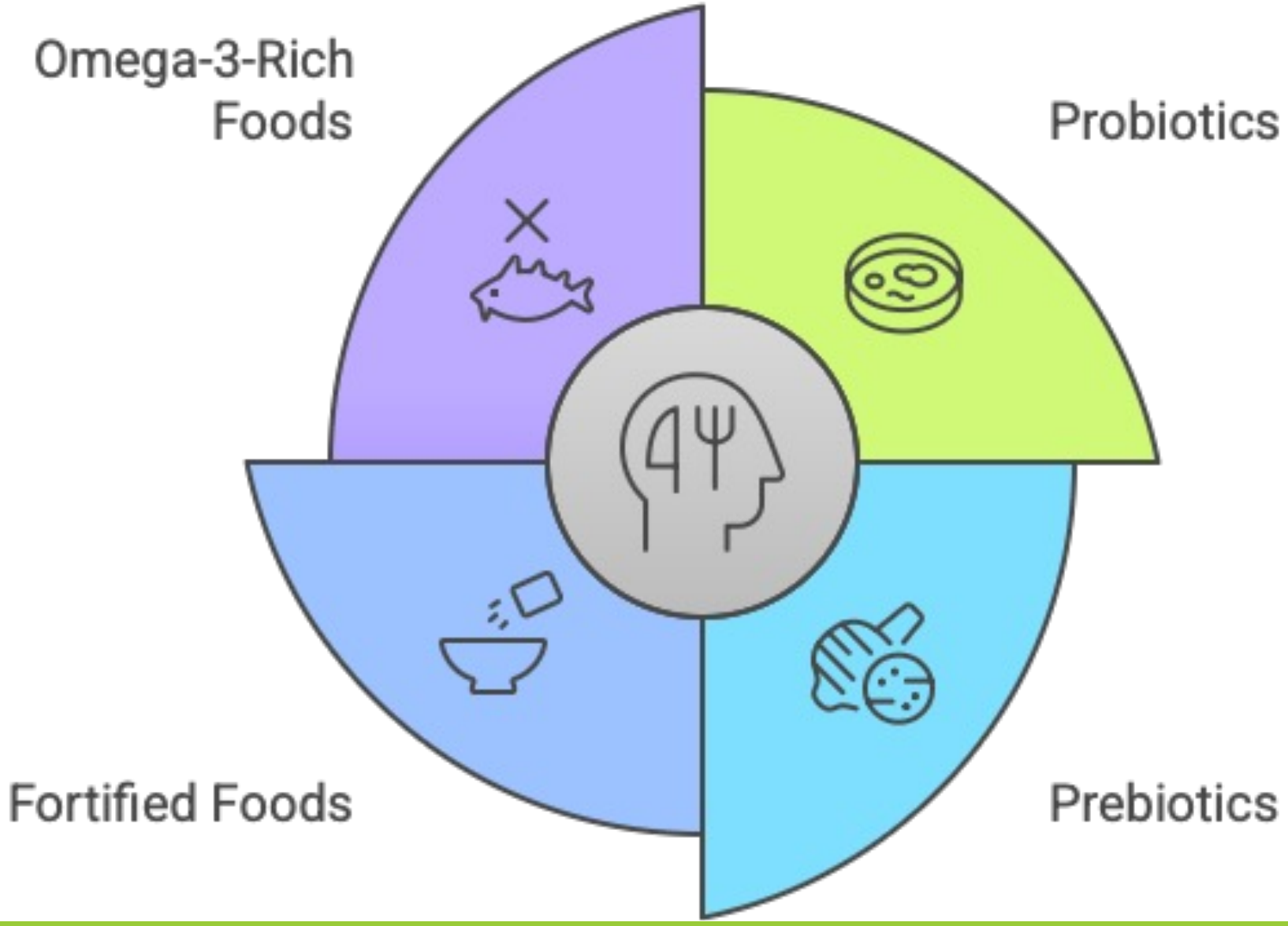
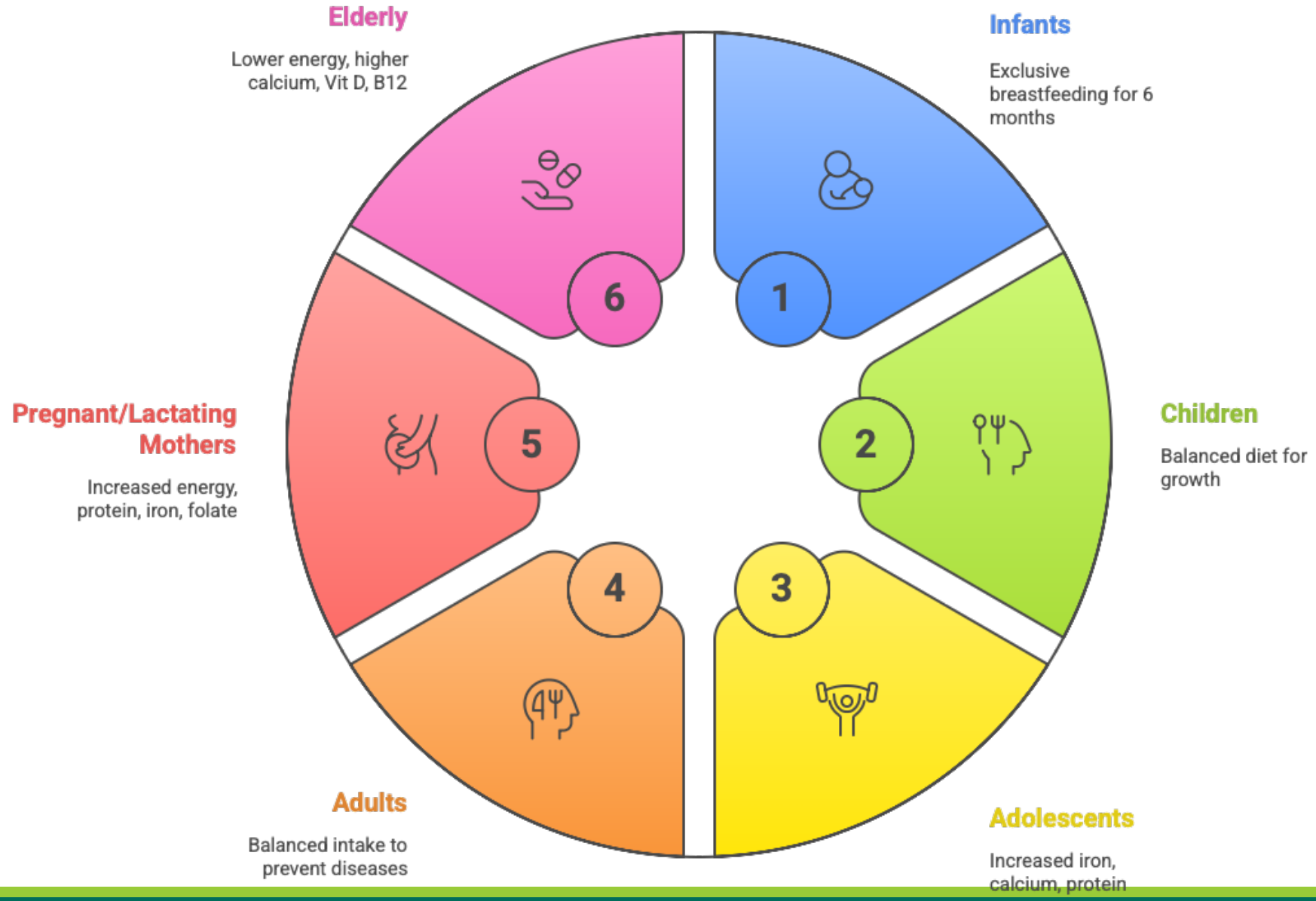


LIFE CYCLE AND NUTRITION



ASSESSMENT- 1

Case Study: A 25-year-old marathon runner, preparing for a race, has drastically reduced his intake of **cereals, fruits, and vegetables** to "cut weight." He now feels constantly **fatigued** and struggles to maintain his pace during training. A blood test shows his **primary energy stores are depleted**.

Question:
Which specific **macronutrient** is this runner likely deficient in, and what is its primary function in the body?

ASSESSMENT- 2

Case Study: A nutritionist observes a child showing signs of **stunted growth** and **poor wound healing**. Upon reviewing the child's diet, it is found to be very low in foods like **milk, eggs, and meat**. This deficiency is also associated with severe conditions like **kwashiorkor**.

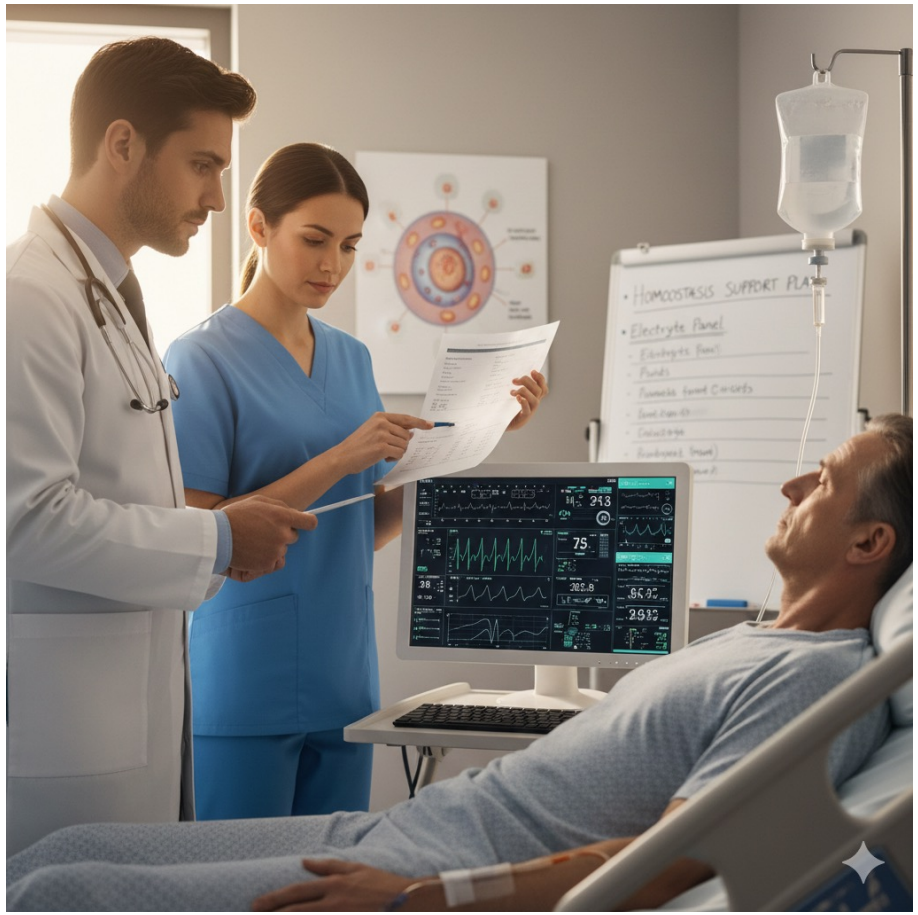
Question: Which essential function of food is compromised in this child, and which macronutrient is primarily responsible for this function?

ASSESSMENT- 3

Case Study: An elderly person visits a clinic complaining of difficulty seeing in dim light or at night, a condition known as **night blindness**. The patient's diet history suggests minimal consumption of brightly colored vegetables and a limited intake of **fats and oils**.

Question: Identify the specific **micronutrient** deficiency responsible for this condition, and name one other physiological process that this category of nutrients helps regulate?

ASSESSMENT- 4



Case Study: A person has been severely dehydrated due to illness. Beyond the obvious need for fluid, the medical team is concerned about maintaining the body's **homeostasis** and aiding in key processes like **digestion** and **temperature regulation**. This component makes up about **60–70% of the body's weight**.

Question: Which key food component (not a nutrient in the traditional sense) is crucial for the **Regulatory Function** in this scenario, and what percentage of body weight does it constitute?

ASSESSMENT- 5

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Case Study: A patient is diagnosed with high levels of **LDL cholesterol** and is at an increased risk of **cardiovascular diseases**. The patient's traditional diet is high in saturated and trans fats. The doctor advises adding more **pulses and legumes** and choosing **unsaturated fats** to improve their diet.

Question: Besides reducing LDL cholesterol, what is the protective health role of food groups like **Fruits and Vegetables** in relation to chronic diseases?

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
3. Review of Preventive and Social Medicine (Including Biostatistics), Jain Vivek, 6th Edition, 2014, ISBN: 9789351522331, JAYPEE Publications
4. Essentials of Community Medicine—A Practical Approach, Hiremath Lalita D, Hiremath Dhananjaya A, 2nd Edition, 2012, ISBN: 9789350250440, JAYPEE Publications

Thank you