

# 3

## Chapter

# Mindful Eating: A Path to a Healthy Body

We'll cover the following key points:

- Fueling Our Bodies
- Components of Food
- Diseases Caused by Nutritional Gaps
- Balanced Diet



Hi, I'm EeeBee

Do you Remember:

Fundamental concept in previous class.

In class 5<sup>th</sup> we learnt

- Balanced Diet
- Lifestyle and Deficiency Disease

Still curious?

Talk to me by scanning the QR code.



## Learning Outcomes

By the end of this chapter, students will be able to:

- Recognize the importance of food as fuel for our bodies and its cultural variations across regions
- Understand the components of food and their roles in maintaining health.
- Identify diseases caused by nutritional gaps and ways to prevent them.
- Design balanced diets while considering factors such as nutrition and sustainability.

## Guidelines for Teachers

- The educator can begin the topic by discussing how food is integral to our lives, emphasizing its role in fueling the body and mind. Students can share their favorite meals and analyze the components present in them. Engage them in hands-on activities such as food tests for carbohydrates, proteins, and fats, encouraging experiential learning.
- Discussions about the importance of hydration, fibre, and diverse diets can help students connect theoretical knowledge to daily practices. Educators can also highlight how cultural and regional diversity influences food habits and introduce the concept of food miles to instill awareness about sustainability.

## NCF Curricular Goals and Competencies

This chapter aligns with the following curricular goals and competencies:

**CG-5 (C 5.1, 5.2, and 5.3)** applies the principles of nutrition, sustainability, and health to daily life, fostering responsible and mindful eating habits.

## Introduction

Mindful eating is an approach to food consumption that emphasizes awareness, balance, and intention. It involves paying attention to what we eat, how we eat, and why we eat, focusing on the nutritional and emotional connection with food. By understanding the importance of each meal, mindful eating encourages us to choose foods that fuel our bodies, promote well-being, and prevent diseases. This practice goes beyond simply satisfying hunger—it integrates cultural traditions, personal health goals, and sustainability into our food choices. Through mindful eating, we can cultivate a healthier relationship with food and make informed decisions about what we consume.

### In history...

The concept of mindful eating is deeply rooted in ancient traditions and practices

across the world. Mindful eating was formally introduced as part of Buddhist meditation practices, particularly in Zen Buddhism. In Buddhism, mindful eating is part of meditation practices, encouraging individuals to eat slowly, savor each bite, and cultivate gratitude for the food they consume. In the late 20th century, mindful eating began to gain recognition in Western cultures, largely due to the work of professionals like Dr. Jon Kabat-Zinn. In 1979, Dr. Kabat-Zinn founded the Mindfulness-Based Stress Reduction (MBSR) program at the University of Massachusetts Medical School.

In the 20th century, governments and health organizations began creating dietary guidelines to educate people about balanced diets. The USDA introduced the first food guide in 1943, which later evolved into the **Food Pyramid in 1992 and MyPlate in 2011.**

## Fueling Our Bodies

Aarav and Maya are at a park, talking about snacks.



## Food and Its Importance

Food is the material or substance that we consume to sustain life. It is an essential source of energy for the body and plays a vital role in the growth, development, and overall well-being of an organism. Food is not merely a source of satisfaction but also a fundamental requirement for the survival of all living beings. Organisms rely on food for various critical functions that are essential for life.

### Why Do Organisms Need Food?

- **To Provide Energy for Various Activities:** Food serves as the primary source of energy that powers all activities in the body, whether it's simple movements like walking and running or complex internal functions like **breathing** and **digestion**.
- **For Growth and Development of the Body:** Food contains essential nutrients like proteins, carbohydrates, fats, vitamins, and minerals that contribute to the physical and mental growth of an organism.
- **To Protect the Body from Diseases and Keep It Healthy:** Certain foods, especially those rich in vitamins and minerals, boost the immune system, helping the body fight off infections and diseases.
- **To Repair Injured Body Parts:** When the body suffers an injury, nutrients like proteins play a key role in repairing damaged tissues and cells.

### 1. Food in Different Regions

The traditional cuisine of a region often reflects the crops cultivated locally, which depend on the soil type and climate. India, being an agricultural country, has diverse soil types and climatic conditions, leading to the cultivation of different crops across regions. These crops influence food habits, traditional recipes, and beverages, shaped by cultural, regional, and taste preferences. The table below highlights some examples of locally grown crops, traditional dishes, and beverages from different states in India.

#### KEYWORDS

**Breathing:** The plant stem facilitates gas exchange by allowing oxygen and carbon dioxide to move through its tiny pores (lenticels).

**Digestion:** The plant stem helps in the breakdown of stored starch into sugars for energy transport to various parts.

State	Locally Cultivated Crops	Traditional Dishes	Popular Beverages
Gujarat	Pearl millet (bajra), jowar, wheat, rice	Handvo, thepla, dhokla, fafda, undhiyu	Buttermilk, sugarcane juice.
Karnataka	Rice, ragi, urad dal, coconut	Idli, dosa, sambhar, coconut chutney, ragi mudde, palya	Filter coffee, buttermilk.
Manipur	Rice, bamboo shoots, soya bean	Eromba (spicy chutney), utti (pea and onion curry), singju, kangshoi	Black
Punjab	Maize, wheat, chickpeas, pulses	Makki di roti, sarson da saag, chhole bhature, paratha, halwa, kheer	Lassi, milk, tea
Rajasthan	Bajra, jowar, gram, maize	Dal baati churma, gatte ki sabzi, ker sangri	Buttermilk (chaas)
West Bengal	Rice, fish, mustard seeds	Fish curry, rice, luchi-aloo dum, rasgulla, sandesh	Tea (chai)

## 2. Change in Cooking Practices Over Time

Culinary practices have undergone significant transformation over time due to cultural, historical, and economic factors. These changes reflect evolving tastes, lifestyles, advancements in technology, improved transportation, and the influence of global food trends.

Aspect	Traditional Practices	Modern Practices
Cooking Methods	Cooking was primarily done using chulhas (clay stoves) fueled by wood or coal.	Cooking is now mostly done using gas stoves or electric induction cooktops.
Grinding and Blending	Manual grinding using a sil-batta (stone grinder) was common.	Electrical grinders and mixers are used for faster and easier grinding.
Food Preparation	Most processes were labor-intensive and required significant manual effort.	Modern appliances like food processors reduce manual work and save time.
Influence of Global Trends	Recipes were influenced by local traditions and available ingredients.	Exposure to global cuisines has introduced new flavors, techniques, and fusion recipes.
Storage and Preservation	Food storage relied on natural methods like sun drying or clay pots.	Refrigerators and freezers are now commonly used for storing perishable items.



These changes highlight how technological innovations and global connectivity have streamlined cooking while introducing a wide array of culinary options.

## Let's recall what we know

### Apply Concept in Real-Life Context

Apply

1. What were some common cooking tools used in ancient Indian households? Name five examples.
2. How do you think modern kitchen tools have influenced the way people cook today?

**Skills Covered:** Critical and logical thinking, Brainstorming, Applicative thinking, Research

### Examine Further

Analyse

1. Research traditional ways of food preservation in India, like pickling or drying. Why do you think these methods were widely used?
2. Interview elderly members in your community to learn how cooking practices have changed over the years. What insights do you gain?

**Skills Covered:** Critical and logical thinking, Brainstorming, Applicative thinking, Research, Investigation

### Self-Assessment Questions

Evaluate

1. Why is food important for survival? Mention three reasons.
2. How does climate influence the type of crops grown in a region?
3. List three modern appliances used in cooking and explain their purposes.

**Skills Covered:** Evaluation, Logical thinking

### Creative Insight

Create

Create a comparison table of traditional and modern cooking methods or tools. Highlight the differences in efficiency, convenience, and energy usage. Present it visually through a chart.

**Skills Covered:** Creativity, Critical and logical thinking, Brainstorming, Observation, Organization

SCAN TO ACCESS



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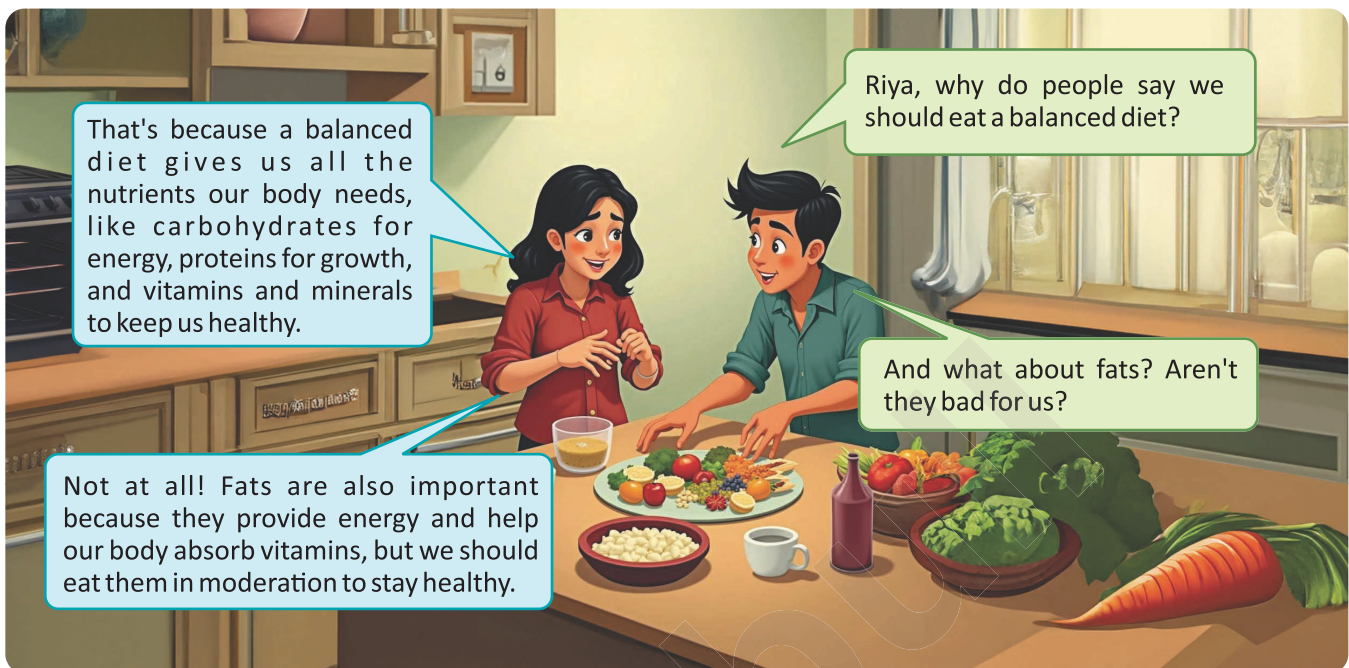


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Taxonomy**

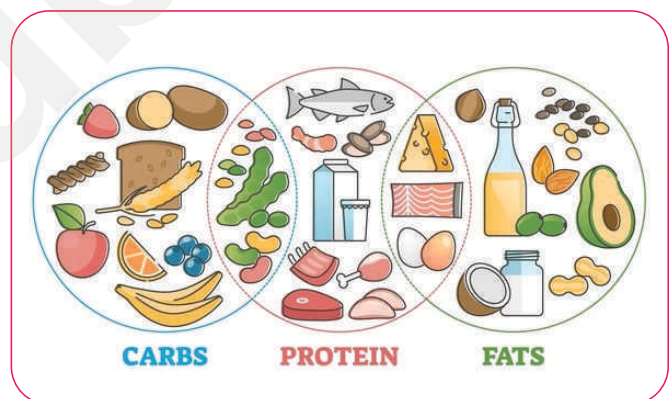
## Components of Food

Riya and Kabir are in the kitchen, preparing a meal.



## Components of Food

Food is made up of different essential components called nutrients, which are required for the body to function properly and maintain energy levels. Nutrients can be grouped into three categories based on their role in maintaining health.



Nutrient Group	Examples of Foods	Primary Function
Energy-giving Foods	Carbohydrates and Fats: Honey, jaggery, sweet potato, bread, cereals (like rice and wheat), oils	Provide energy for daily activities.
Bodybuilding Foods	Proteins: Milk, lentils, beans, cheese, eggs, fish, chicken	Help in growth, repair, and strength of body tissues.
Protective Foods	Vitamins and Minerals: Spinach, cabbage, carrots, tomatoes, fruits, milk	Boost immunity and protect the body from diseases.

## Seven Components of Food

Our body requires essential nutrients for energy, growth, repair, and overall well-being. These nutrients are broadly categorized into seven types: carbohydrates, proteins, fats, vitamins, minerals, water, and fiber. Each plays a crucial role in maintaining health and fulfilling specific bodily functions.

### Nutrient Categories and Their Roles

Nutrient	Description	Food Sources
Carbohydrates	Primary energy providers for the body. Simple carbs (like sugar) give quick energy, while complex carbs (like whole grains) sustain energy for longer periods.	Potatoes, honey, wheat (chapati), brown rice, fruits like mango, and papaya.
Fats	Concentrated energy sources that provide insulation and protect organs. Fats are vital for absorbing certain vitamins.	Dairy products like butter and cheese, nuts like almonds and cashews, vegetable oils, and seeds.
Proteins	Body building nutrients needed for growth, repair of tissues, and boosting immunity. Found in both plant and animal-based foods.	Pulses (lentils, peas, soybeans), eggs, dairy, fish, and meat.
Vitamins	Essential for regulating body functions and strengthening immunity. Different vitamins perform unique roles, such as Vitamin C for immunity and Vitamin D for bones.	Citrus fruits, spinach, carrots, dairy products, and nuts.
Minerals	Required in small amounts but critical for health. Minerals like calcium support bone health, while iron aids in oxygen transport.	Leafy greens, dairy, fish, eggs, and nuts.
Water	Vital for survival, aiding in digestion, detoxification, and maintaining hydration. It regulates body temperature and supports metabolic functions.	Drinking water, fruits like watermelon, and soups or broths.
Fiber	Important for digestive health and maintaining cholesterol levels. Fiber adds bulk to the diet and aids bowel movement.	Whole grains (oats, rice), carrots, apples, and beans.

## Millets: Nutrition-rich Cereal

Millets are a group of small-grained cereal crops that have been a staple food in India for centuries. Known for their versatility and resilience, these crops are native to India and thrive in a variety of climatic conditions, making them an essential part of sustainable agriculture.

### Examples of Millets



Jowar (Sorghum)



Bajra (Pearl Millet)



Ragi (Finger Millet)



Sanwa (Barnyard Millet)

## Health Benefits of Millets

- 1. Balanced Diet:** Millets provide essential nutrients for growth and development, making them ideal for children and adults.
- 2. Disease Prevention:** Their high fiber content and nutrient richness help:
  - Manage diabetes.
  - Reduce the risk of heart disease.
  - Improve overall immunity.
- 3. Weight Management:** Millets keep you fuller for longer, supporting healthy weight management.
- 4. Easy Digestion:** Being gluten-free, they are suitable for those with gluten intolerance and are easy on the stomach.

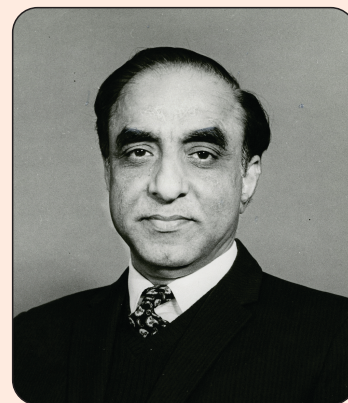
### Midday Meal

Coluthur Gopalan (1918–2019) was a pioneer in the field of nutrition research in India. His groundbreaking work included the analysis of over 500 Indian foods, leading to valuable insights and recommendations for suitable diets tailored to the needs of the population.



His research uncovered widespread deficiencies in protein and energy intake across various communities, prompting significant reforms. These findings were instrumental in the introduction of the Midday Meal Programme in 2002, which is now widely known as PM POSHAN.

The programme provides nutritious and balanced meals to children in government schools, addressing malnutrition and improving health and energy levels.



## Activity

### Test for Carbohydrates: Starch Test

To determine the presence of starch in a food sample.

#### Materials Required:

- Food sample (e.g., a slice of bread or potato)
- Dilute iodine solution
- Small dish or plate
- Dropper

#### Procedure:

- Place the food sample (bread, potato, or any other item) in a small dish or on a plate.
- Using a dropper, carefully add 2–3 drops of dilute iodine solution onto the sample.
- Observe any changes in the color of the sample.

#### Observation:

- **Positive Result:** The appearance of a blue-black color indicates the presence of starch in the sample.
- **Negative Result:** No color change means that starch is absent in the sample.
- **Conclusion:**

The formation of a blue-black color confirms the presence of starch in the tested food item.

## Activity

### Test for Protein

To identify the presence of protein in a given food item.

#### Materials Required:

- Food sample (e.g., raw egg white or besan)
- Copper sulfate solution
- Sodium hydroxide solution (caustic soda)
- Water
- Test tube
- Dropper



### Procedure:

- Take a small amount of the food sample in a test tube. If using besan, first make a paste by mixing it with water.
- Add 5–10 drops of water to the test tube and shake well to ensure mixing.
- Add 2–3 drops of copper sulfate solution to the mixture.
- Then, add 10–12 drops of sodium hydroxide solution (caustic soda) to the same test tube.
- Shake the test tube thoroughly and let it stand for 4–5 minutes.

### Observation:

- **Positive Result:** The solution turns purple or violet, indicating the presence of protein.
- **Negative Result:** No color change means the absence of protein.

### Conclusion:

The appearance of a purple or violet color confirms the presence of protein in the tested food item.

## Let's recall what we know

### Apply Concept in Context

Apply

- Differentiate between macronutrients and micronutrients.
- Explain the role of dietary fiber in maintaining a healthy digestive system.

**Skills Covered:** Critical and logical thinking, Brainstorming, Applicative thinking

### Examine Further

Analyse

- Suggest food items rich in complex carbohydrates and explain their benefits over simple carbohydrates.
- A community is experiencing a high prevalence of obesity despite consuming a low-fat diet. Identify potential causes and suggest solutions.

**Skills Covered:** Critical and logical thinking, Brainstorming, Applicative thinking

### Self-Assessment Questions

Evaluate

1. What are the main components of food?
2. List the functions of proteins in the human body.

**Skills Covered:** Evaluation, Critical thinking.

### Creative Insight

Create

Create a presentation using MS PowerPoint Impress explaining the importance of including all food components in a balanced diet for optimum growth and development.

**Skills Covered:** Creativity, Digital-age literacy, Critical and logical thinking

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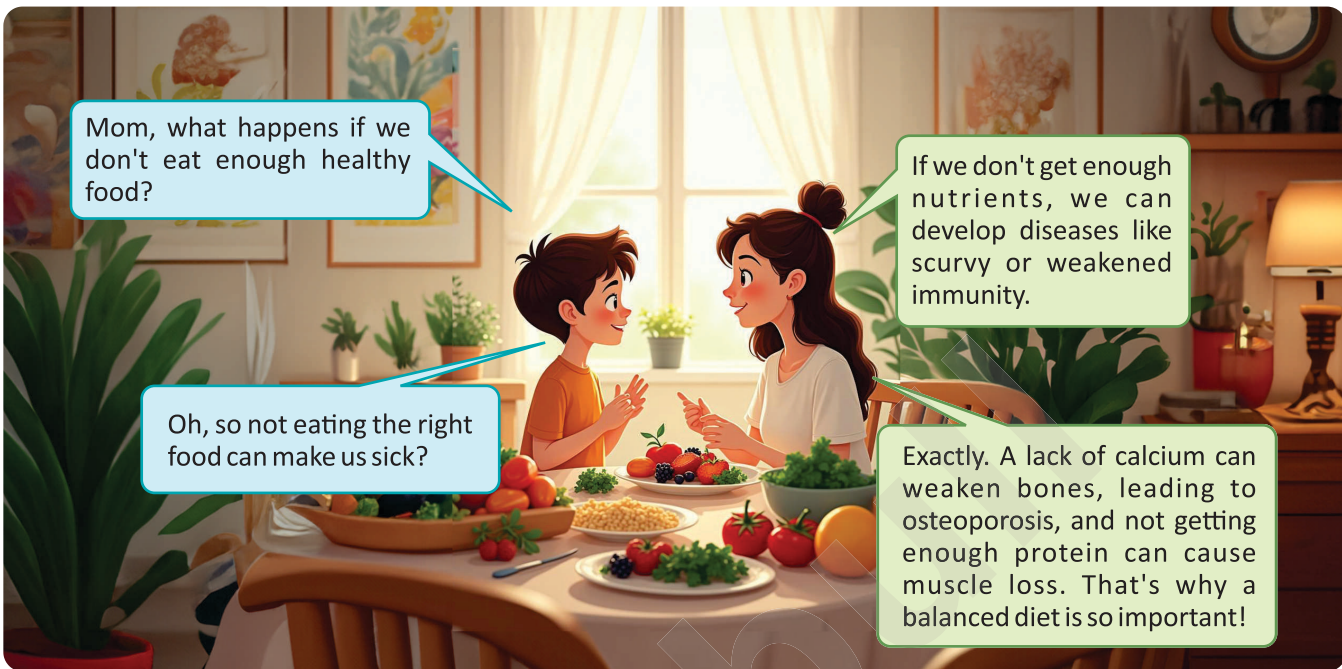


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## Diseases Caused by Nutritional Gaps

Aarav and Maya are at the dining table, discussing health.



Nutrition is the cornerstone of a healthy life, as our body depends on essential nutrients to function effectively. However, when the diet lacks key vitamins, minerals, or macronutrients, it can lead to nutritional gaps, causing various health problems. Diseases like scurvy (caused by vitamin C deficiency), rickets (due to a lack of vitamin D), anemia (resulting from insufficient iron or vitamin B12), and osteoporosis (linked to inadequate calcium and vitamin D) are direct outcomes of these deficiencies. Similarly, protein-energy malnutrition can lead to conditions like kwashiorkor and stunted growth, especially in children.

### Deficiency of Carbohydrates

**Fatigue:** The body lacks sufficient energy, resulting in a constant feeling of tiredness.

**Loss of Stamina:** A decrease in physical endurance and strength, making it harder to perform prolonged tasks or activities.

**Quick Exhaustion:** The body becomes unable to sustain energy for extended periods, leading to tiredness even after minimal exertion.

#### Importance of Carbohydrates:

- Vital for overall energy metabolism and functioning of the body.
- A deficiency disrupts the body's ability to maintain normal activity levels.

## Deficiency of Proteins

**Stunted Growth:** Insufficient protein intake can impair physical and mental development, particularly in children.

**Hair Discoloration:** Lack of protein affects **melanin** production, leading to changes in hair color or texture.

**Face Swelling:** Protein deficiency can result in fluid retention, causing puffiness in the face and other body parts.

**Skin Issues:** Dry, flaky, or peeling skin can occur due to inadequate protein levels.

**Diarrhea:** Poor protein intake can weaken the intestinal lining, leading to digestive issues like diarrhea.

**Swollen Abdomen:** A prominent symptom of protein deficiency caused by fluid imbalance (edema).

### Severe Protein Deficiency in Children:

#### Kwashiorkor:

- Occurs due to extreme protein deficiency despite sufficient calorie intake.

#### Symptoms include:

- Swollen abdomen.
- Hair discoloration.
- Irritability and lethargy.
- Skin lesions and infections.

#### Marasmus:

- Caused by a severe deficiency of both protein and calories.

#### Symptoms include:

- Extreme weight loss and muscle wasting.
- Thin and fragile appearance.
- Lack of energy and severe weakness.

## Deficiency of Vitamins and Minerals

Vitamins are classified into two categories: fat-soluble (e.g., A, D, E, K) and water-soluble (e.g., B-complex, C). A balanced diet rich in fruits, vegetables, and other nutrient-dense foods is necessary to meet the body's vitamin requirements.

### KEYWORDS

**Melanin:** Melanin is a natural pigment found in the skin, hair, and eyes of humans and animals, responsible for their color. It provides protection against harmful UV radiation by absorbing and dissipating sunlight. Produced by specialized cells called melanocytes, its levels vary, determining skin tone and susceptibility to sun damage.

Vitamin	Description	Deficiency Disease	Symptoms	Sources
Vitamin A	Keeps eyes and skin healthy	Night blindness	Loss of night vision, poor vision, complete vision loss	Carrots, tomatoes, green leafy vegetables, mango, milk, butter, fish liver oil
Vitamin B <sub>1</sub>	Supports heart and body functions	Beriberi	Fatigue, trouble breathing, swelling/tingling in extremities	Cereals, peas, nuts, whole grains, potatoes, yeast, meat, milk
Vitamin B <sub>12</sub>	Forms red blood cells	Anemia	Deficiency of red blood cells, pale skin, lack of appetite	Meat, liver, yeast, fish, milk
Vitamin C	Maintains teeth, gums, bones; fights diseases	Scurvy	Swelling/bleeding of gums, slow wound healing	Citrus fruits, tomatoes, guava, green chilies
Vitamin D	Forms strong bones and teeth by absorbing calcium	Rickets	Weak, soft, bent bones, tooth decay	Sunlight, milk, fish, butter, eggs
Vitamin K	Aids in blood clotting	Impaired blood clotting	Bleeding of gums	Spinach, cabbage, eggs, liver

**Minerals** are essential nutrients required by the body in small amounts for various vital functions. They play a crucial role in maintaining healthy bones, teeth, muscles, and nerves, as well as supporting enzyme activities and hormone production.

Mineral	Functions	Deficiency Disease	Symptoms	Sources
Calcium	Formation of bones and teeth; blood clotting	Bone and tooth decay; Rickets	Weak bones, tooth decay	Milk, cheese, curd, soya milk, green vegetables
Iodine	Physical and mental well-being functions	Goitre	Swelling in the neck, mental retardation	Seafood, chestnut, iodized salt
Iron	Formation of red blood cells	Anemia	Pale skin, whitish nails, body weakness	Cereals, leafy vegetables, meat, beetroot, eggs
Fluorine	Strengthens teeth	Tooth decay	Increased tooth decay	Seafood, oatmeal, coffee, tea

## Let's recall what we know

### Apply Concept in Real-Life Context

Apply

- Differentiate between lifestyle diseases and diseases caused by nutritional gaps.
- What are the long-term consequences of micronutrient deficiencies on mental health and cognitive abilities?

**Skills Covered:** Critical and logical thinking, Brainstorming, Applicative thinking, Research.

### Examine Further

Analyse

- Suggest food items that can help prevent vitamin D deficiency.
- A community faces a rising prevalence of anemia despite having access to fortified cereals. Identify the possible reasons and provide solutions.
- Research and describe how the traditional farming practices of the Khasi community promote access to nutrient-rich crops in Meghalaya.

**Skills Covered:** Critical and logical thinking, Brainstorming, Applicative thinking, Research, Problem-solving.

### Self-Assessment Questions

Evaluate

- What are micronutrient deficiencies?
- List the symptoms of calcium deficiency.
- Name a disease caused by the lack of vitamin B12.
- Name a disease caused by a deficiency of potassium.

**Skills Covered:** Evaluation, Critical thinking.

### Creative Insight

Create

Create a presentation using MS PowerPoint or LibreOffice Impress that highlights the importance of government policies like food fortification in reducing diseases caused by nutritional gaps.

**Skills Covered:** Creativity, Critical and logical thinking, Brainstorming, Observation, Organization

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## Balanced Diet



A balanced diet includes a variety of foods in the right proportions to provide all the essential nutrients the body needs for proper functioning. It typically consists of carbohydrates, proteins, fats, vitamins, minerals, fiber, and adequate water. A balanced diet ensures energy, growth, immunity, and overall well-being while preventing nutrient deficiencies and health problems.

## Food Miles: From Farm to Our Plate

### Definition of Food Miles:

- The total distance food travels from producer to consumer.

### Environmental Impact:

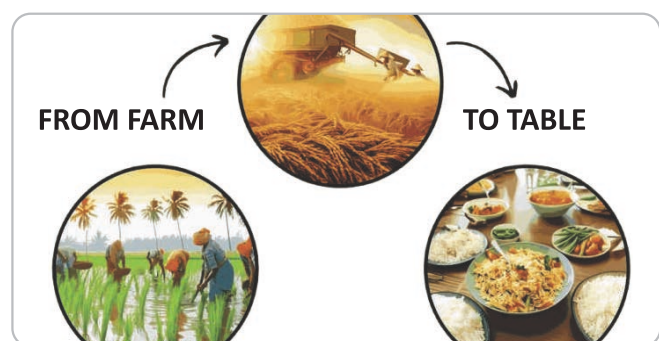
- Long-distance transportation increases costs and pollution.
- Crops often transported internationally via air or sea.

### Importance of Reducing Food Miles:

- Supports local farmers.
- Promotes consumption of fresh and healthy food.
- Reduces environmental harm caused by transportation.

### Food Waste:

- Many people waste food by leaving it uneaten.
- Food waste disregards the efforts of farmers and others in the food supply chain.



# SUMMARY



## 1. Fueling Our Bodies

- Food provides the energy and nutrients essential for bodily functions, growth, and repair.
- Macronutrients like carbohydrates, proteins, and fats act as the primary fuel sources, while water and micronutrients (vitamins and minerals) are vital for sustaining life processes.
- Choosing nutrient-dense foods ensures the body receives adequate fuel without excess calories.

## 2. Diseases Caused by Nutritional Gaps

- Deficiency diseases occur when the body lacks essential nutrients due to poor dietary habits.
- Examples include:
  - Rickets (lack of vitamin D and calcium).
  - Anemia (iron deficiency).
  - Scurvy (vitamin C deficiency).
- Overeating or unbalanced diets can lead to lifestyle diseases like obesity, diabetes, and heart problems.
- Addressing these gaps through fortified foods, dietary changes, and supplementation is crucial.

## 3. Components of Food

- Food is categorized into macronutrients (carbohydrates, proteins, and fats) and micronutrients (vitamins and minerals).
- Carbohydrates: Provide quick energy. Found in rice, bread, and fruits.
- Proteins: Build and repair tissues. Found in pulses, meat, and dairy.
- Fats: Supply long-term energy and aid in hormone production. Sources include

oils, nuts, and fish.

- Vitamins and Minerals: Support immunity, bone health, and overall well-being. Found in fruits, vegetables, and dairy products.

## 4. Balanced Diet

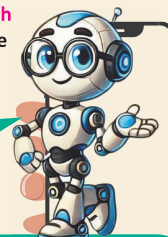
- A balanced diet includes all food components in appropriate proportions to meet the body's energy and nutritional needs.
- It emphasizes:
  - Plenty of fruits and vegetables for vitamins and fiber.
  - Whole grains for sustained energy.
  - Lean proteins for muscle repair and immune health.
  - Healthy fats for brain function and energy.

Moderation and variety are key to preventing over-reliance on any one food group while ensuring nutritional adequacy.

### EeeBee: Your AI Buddy

Explore! **Mindful Eating: A Path to a Healthy Body** with EeeBee AI Buddy.

Hi Friend! Use prompts to ask me questions about the chapter we just finished! eeee, lets go!



Start by  
Scanning this  
QR Code:





Gap Analyzer™  
Take a Test



# EXERCISE

That turn curiosity into confidence—let's begin!



## A. Choose the correct answer

1. Which nutrient provides quick energy?

(a) Proteins

☐

(b) Fats

☐

(c) Carbohydrates

☐

(d) Vitamins

☐

2. Which is a rich source of fibre?

(a) Milk

☐

(b) Rice

☐

(c) Whole grains

☐

(d) Butter

☐

3. Millets are an example of:

(a) Fats

☐

(b) Nutrition-rich cereal

☐

(c) Vitamins

☐

(d) Proteins

☐

4. Which test detects the presence of carbohydrate?

(a) Fat Test

☐

(b) Starch Test

☐

(c) Protein Test

☐

(d) Fibre Test

☐

## B. Fill in the blanks

1. \_\_\_\_\_ provide long-lasting energy and support brain health.

2. Millets are an excellent source of \_\_\_\_\_ and are eco-friendly.

3. Drinking sufficient water prevents \_\_\_\_\_.

4. Deficiency of Vitamin A causes \_\_\_\_\_.

5. Fibre improves \_\_\_\_\_ and prevents constipation.

## C. Write True or False

1. Millets are low in nutrition and unsustainable.

\_\_\_\_\_

2. Vitamins and minerals regulate body processes.

\_\_\_\_\_

3. Fats provide quick energy like carbohydrates.

\_\_\_\_\_

4. Food miles refer to the energy food gives us.

\_\_\_\_\_

5. Fibre-rich foods include fruits and vegetables.

\_\_\_\_\_

### D. Define the following terms

1. Balanced diet
2. Food miles
3. Deficiency disease
4. Fibre
5. Millets

### E. Match the columns

#### Column - A

1. Starch Test
2. Protein Deficiency
3. Vitamins
4. Fibre
5. Millets

#### Column - B

- (a) Kwashiorkor
- (b) Blue-black color
- (c) Regulate body processes
- (d) Prevents constipation
- (e) Nutrition-rich cereals

### F. Give reasons for the following statements

1. Millets are considered eco-friendly and nutritious.
2. Water is essential for maintaining body functions.
3. Balanced diets are important for preventing deficiency diseases.
4. Food miles influence sustainability.
5. Fibre-rich foods should be a part of daily meals.

### G. Answer in brief

1. Why are carbohydrates called energy-giving foods?
2. How does a deficiency of proteins affect children?
3. List two advantages of millets over regular cereals.
4. Why is hydration important for the body?
5. What does a balanced diet consist of?

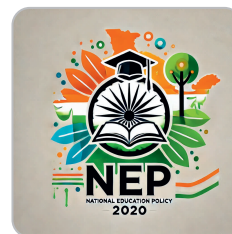
### H. Answer in detail

1. Describe the role of carbohydrates, proteins, and fats in the body.
2. Explain the concept of food miles and how it impacts sustainability.
3. How can balanced diets prevent diseases caused by nutritional gaps?
4. Discuss the tests for carbohydrates, fats, and proteins with their procedure.
5. How do vitamins and minerals contribute to overall health?



**Cooler Report Cards!**

Your report cards will now reflect not just your marks but also your skills, values, and teacher's and peer's feedback. It's all about the real you!



## Skill-based Activity



### Fueling Our Energy

**STEM**

Observe the eating habits of individuals in your surroundings and identify one common food item they consume regularly. Write a question about how this food item contributes to providing energy or essential nutrients to the body. Using the scientific method, describe the steps you would take to answer your question.

**Skills Covered:** Critical and logical thinking, Brainstorming, Analytical thinking, Problem-solving, Curiosity, Observation, Decision-making skills

### Visualizing Nutrition

**Art**

Identify and sketch a balanced meal that includes all the major components of food. Write a short description of how each component in the meal contributes to overall health and energy levels. Present your work to the class.

**Skills Covered:** Creativity, Critical and logical thinking, Applicative thinking

### Food Groups in Action

**Group Activity**

In groups, research and classify common foods consumed in your local area into food groups (e.g., carbohydrates, proteins, fats, vitamins, minerals). Create a chart showing their nutritional benefits and present it to the class.

**Skills Covered:** Critical and logical thinking, Brainstorming, Teamwork, Communication, Applicative thinking, Decision-making skills

### Technology for Nutrition

**Case to Investigate**

Explore and research how scientists and dietitians use technology, such as food scanners or fitness apps, to analyze the nutritional value of foods and recommend balanced diets. Write a short report on your findings.

**Skills Covered:** Critical and logical thinking, Brainstorming, Research, Applicative thinking



### Balanced Diet Advocacy

Aligning with SDGs

Research a government or NGO initiative that promotes healthy eating habits and addresses malnutrition or lifestyle diseases. Highlight its key features and explain how it aligns with sustainable development goals (e.g., SDG 3 – Good Health and Well-being). Present your findings to the class.

**Skills Covered:** Critical and logical thinking, Brainstorming, Research, Problem-solving, Ethics

### Mapping Nutrition

Integrated Learning

Using the Internet, create a map of India highlighting regions with high consumption of specific nutrient-rich foods (e.g., rice in the south, wheat in the north, seafood in coastal areas). Explain how the geography and culture of these regions influence their dietary patterns.

**Integrated Learning:** Geography

**Skills Covered:** Critical and logical thinking, Brainstorming, Analytical thinking, Applicative thinking