

Tishk International University
Faculty of Applied Science
Nutrition and Dietetics Department
Maternal and Child Nutrition – 2nd Grade



Nutrition in Infancy, Early Childhood, Preschool and School-Age Children Nutrition in Special Conditions





*Previous
Lecture*





Contents:

Nutrition in Infancy and Early Childhood

Nutrition of Preschool and School-Age Children

Nutrition in Special Conditions

Maternal and Child Nutrition Interventions

Nutrition Education, Counseling, and Behavior Change

Learning Outcome

Analyze nutritional needs and dietary practices across infancy, early childhood, preschool, and school-age stages, including special conditions.



Evaluate maternal and child nutrition interventions and their impact on growth, development, and long-term health outcomes.



Apply nutrition education, counseling, and behavior change strategies to promote healthy eating habits in individuals and communities.



Nutrition in Infancy and Early Childhood



- Infancy and early childhood (0–5 years) are **critical periods** for growth, brain development, and long-term health.
- Proper nutrition reduces the risk of **malnutrition, infections, developmental delays, and chronic diseases** later in life.

Nutritional Needs by Age

A. Infancy (0–6 Months)

Exclusive breastfeeding is recommended for the first 6 months.

Breast milk provides:

- Ideal balance of nutrients
- Antibodies and immune protection
- Optimal digestion and absorption

If breastfeeding is not possible, **age-appropriate infant formula** is used.



B. Late Infancy (6–12 Months)

Introduction of **complementary foods** while continuing breastfeeding.

Foods should be:

- Soft, mashed, or pureed
- Nutrient-dense and hygienically prepared

Begin with iron-rich foods (e.g., fortified cereals, meat puree).

Feeding principles:

- One new food at a time
- Gradual increase in texture and variety



C. Early Childhood (1–5 Years)

Transition to **family foods** with appropriate texture.

Balanced diet including:

- Grains
- Fruits and vegetables
- Protein sources (meat, eggs, legumes)
- Dairy products

Establish healthy eating habits and routines.



Establishing Healthy Eating Habits and Routines – Practical Ideas

1. Structured Meal Routine

- Set **regular times** for meals and snacks (3 meals + 2 healthy snacks).
- Avoid constant grazing between meals.
- Offer water between meals instead of sugary drinks.



Establishing Healthy Eating Habits and Routines – Practical Ideas

2. Balanced and Age-Appropriate Meals

- Include foods from **all food groups** at each main meal.
- Use **small portions** suitable for the child's age.
- Cut foods into safe sizes to prevent choking.

3. Family Meals

- Eat together as a family whenever possible.
- Children learn healthy habits by **watching adults**.
- Turn off TV and mobile devices during meals.

4. Encourage Self-Feeding

- Allow children to use a spoon, fork, or hands.
- Accept messiness as part of learning.
- Praise effort, not the amount eaten.



Establishing Healthy Eating Habits and Routines – Practical Ideas

5. Positive Feeding Environment

- Avoid force-feeding or punishment.
- Respect hunger and fullness cues.
- Keep mealtime calm and stress-free.

6. Repeated Exposure to Healthy Foods

- Offer new foods **multiple times** without pressure.
- Combine new foods with familiar favorites.
- Be patient—acceptance takes time.

7. Limit Unhealthy Foods

- Reduce sugary snacks, salty foods, and fast food.
- Avoid using sweets as rewards.
- Choose healthy snacks (fruit, yogurt, nuts* if age-appropriate).



Establishing Healthy Eating Habits and Routines – Practical Ideas

8. Involve Children

- Let children help wash vegetables or set the table.
- Allow simple choices (e.g., apple or banana).
- This increases interest and acceptance of food.

9. Establish Healthy Beverage Habits

- Encourage **water and milk** as main drinks.
- Limit juice (if given, dilute and serve in small amounts).
- Avoid sweetened beverages.

10. Consistent Routine Across Caregivers

- Parents, grandparents, and caregivers should follow **similar rules**.
- Consistency helps children feel secure and develop habits.



Nutrition of Preschool and School-Age Children

- Preschool (3–5 years) and school-age children (6–12 years) experience steady physical growth, rapid cognitive development, and increasing independence in food choices. Proper nutrition during this period supports **growth, learning, immunity, and lifelong healthy habits.**



Nutritional Needs by Age Group

A. Preschool Children (3–5 Years)

- **Energy:** Moderate needs; small stomach → frequent, nutrient-dense meals
- **Protein:** Growth and tissue repair (milk, eggs, legumes, lean meats)
- **Calcium & Vitamin D:** Bone and teeth development
- **Iron:** Prevent anemia; support cognitive development
- **Fiber:** Digestive health (fruits, vegetables, whole grains)

B. School-Age Children (6–12 Years)

- **Energy:** Increases with growth and physical activity
- **Protein:** Muscle development and immunity
- **Iron:** Especially important for girls approaching adolescence
- **Zinc & Iodine:** Growth, immunity, and cognitive function
- **B-Vitamins:** Energy metabolism and brain function



Recommended Dietary Pattern

A balanced daily diet should include:

- **Grains:** Prefer whole grains (bread, rice, cereals)
- **Fruits & Vegetables:** Variety of colors for micronutrients
- **Protein Foods:** Meat, poultry, fish, eggs, legumes, nuts
- **Dairy:** Milk, yogurt, cheese (or fortified alternatives)
- **Healthy Fats:** Vegetable oils, nuts, seeds



Eating Behaviors and Habits

- Appetite fluctuations are **normal**, especially in preschoolers
- Food preferences and dislikes are common
- Regular **meal and snack routines** promote healthy intake
- Family meals encourage better food choices and social skills
- Avoid force-feeding; encourage **self-regulation**



Common Nutritional Problems

- **Undernutrition:** Poor growth, frequent infections
- **Iron-deficiency anemia:** Fatigue, poor concentration
- **Overweight & Obesity:** Excess sugary foods, low physical activity
- **Dental caries:** High sugar intake, poor oral hygiene

Role of School and Home

Schools: Healthy canteens, nutrition education, physical activity

Home: Availability of healthy foods, positive role modeling

Limit sugary drinks, fast food, and excessive screen time



Practical Nutrition Tips

- Offer **3 main meals + 1–2 healthy snacks** daily
- Include fruits or vegetables at every meal
- Encourage water instead of sweetened beverages
- Involve children in food selection and preparation
- Promote daily physical activity





Main Learning Outcomes

- Nutrition during preschool and school years shapes **growth, learning, and future health**
- Balanced diets and regular routines are essential
- Parents, schools, and communities share responsibility
- Early healthy habits reduce the risk of chronic diseases later in life



Assignment 1:

- Identify the key nutritional requirements of preschool and school-age children.
- Explain common nutrition-related problems in this age group.
- Propose practical strategies to promote healthy eating habits at home and school.



Nutrition in Special Conditions



Nutrition in special conditions refers to dietary modifications required to meet the unique nutritional needs of individuals experiencing **physiological stress, illness, or vulnerability**.

Common Special Conditions

- **Malnutrition (undernutrition & overnutrition)**
- **Anemia**
- **Obesity and overweight**
- **Chronic diseases** (diabetes, hypertension)
- **Food allergies and intolerances**
- **Acute and chronic infections**
- **Disabilities and developmental disorders**



Nutritional Goals

- Prevent nutrient deficiencies
- Support recovery and immune function
- Maintain appropriate body weight
- Improve quality of life
- Reduce disease complications





Nutritional Strategies:

- Energy-dense and nutrient-rich foods
- Therapeutic diets (e.g., iron-rich, low-sugar, allergen-free)
- Micronutrient supplementation when required
- Individualized nutrition plans



Maternal and Child Nutrition Interventions

Maternal and Child Nutrition Interventions

Importance of Maternal and Child Nutrition

- Critical for **growth, development, survival, and long-term health**
- Poor nutrition contributes to:
 - Low birth weight
 - Stunting and wasting
 - Increased morbidity and mortality





Maternal Nutrition Interventions

- **Balanced energy and protein intake**
- **Micronutrient supplementation**
 - Iron–folic acid
 - Calcium
 - Iodine
- **Nutrition counseling during pregnancy and lactation**
- **Promotion of healthy weight gain**
- **Prevention and treatment of anemia**



Child Nutrition Interventions

- **Early initiation and exclusive breastfeeding (0–6 months)**
- **Appropriate complementary feeding (6–24 months)**
- **Growth monitoring and promotion**
- **Vitamin A and iron supplementation**
- **Management of acute malnutrition**
- **School feeding programs**



Community-Based Interventions

- Nutrition screening and referral
- Food fortification programs
- Maternal and child health services
- Health education campaigns



Nutrition Education, Counseling, and Behavior Change

Nutrition Education, Counseling, and Behavior Change

Nutrition Education

- Providing individuals and communities with knowledge and skills to make healthy food choices.

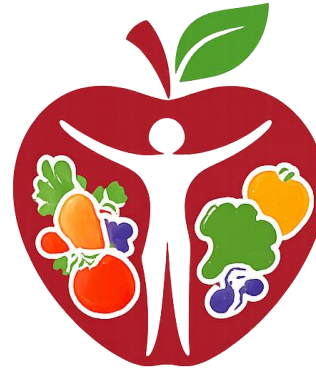
Focus Areas:

- Balanced diets
- Portion sizes
- Food hygiene and safety
- Reading food labels



Nutrition Counseling

- A personalized, interactive process aimed at supporting dietary change.
- **Key Features:**
 - Individual-centered approach
 - Assessment of dietary habits
 - Goal setting
 - Follow-up and support



**Nutrition
Counseling**

Barriers to Behavior Change

- Limited resources
- Cultural food practices
- Low motivation
- Lack of family support



Common Behavior Change Strategies

- Setting realistic goals
- Positive reinforcement
- Motivational interviewing
- Family and community involvement
- Use of visual tools and reminders



Nutrition Behavior Change Strategies





Assignment 2:

- Describe nutritional needs in special health conditions
- Explain major maternal and child nutrition interventions
- Discuss the role of education, counseling, and behavior change in nutrition improvement



Thank
You