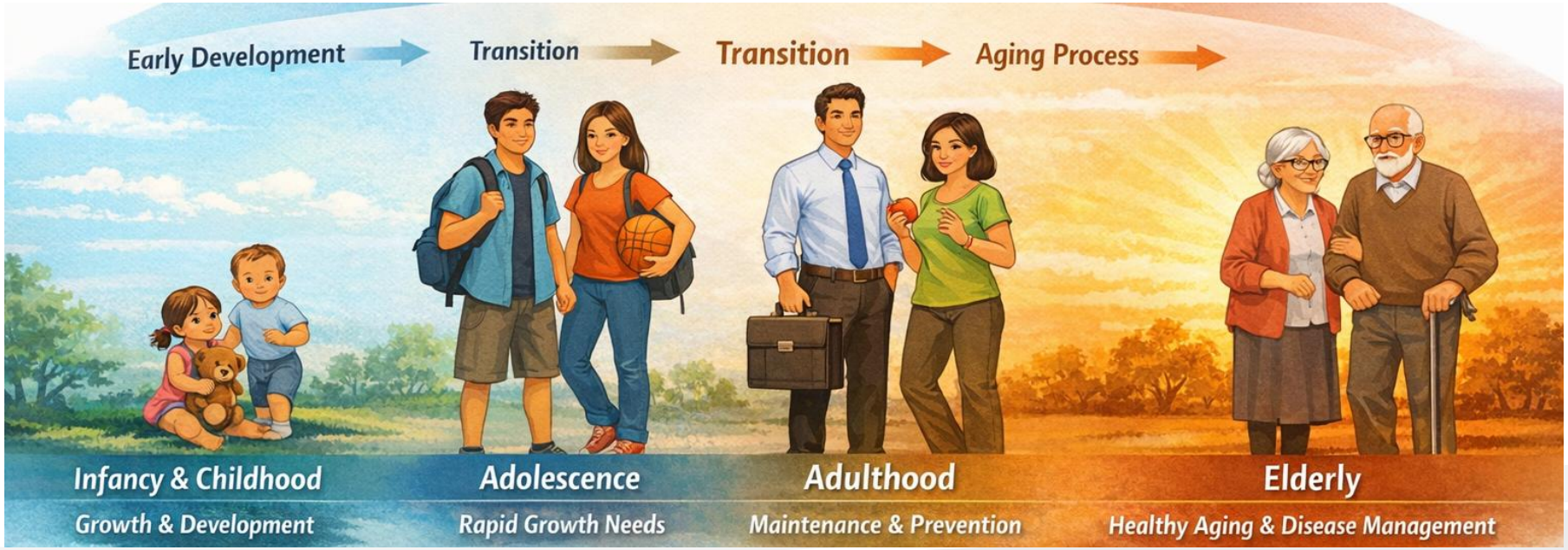
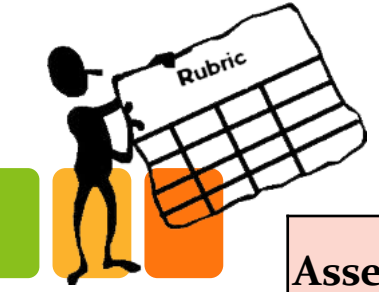
Tishk International University
Faculty of Applied Science
Nutrition and Dietetics Department
Nutrition for Adolescents and the Elderly– 2nd Grade

Life-Cycle Nutrition – Continuum Approach





Assessment Component	Weight / Marks	Evaluation Criteria
Quizzes (weekly/biweekly)	10%	Accuracy, understanding of weekly topics, participation, and timely submission
Midterm Exam	20%	Knowledge of theory and application, problem-solving, understanding of adolescent & adult nutrition
Book Chapter Weekly Reviews and Seminars	10%	Completion of chapter reading, quality of summary, reflection, and understanding of key concepts
Case Study & Follow-up	10%	Identification of nutritional problems, analysis, proposed interventions, and presentation clarity
Assignments / Meal Plans / Projects	10%	Quality, completeness, creativity, application of knowledge, accuracy of calculations, and references
Final Exam	40%	Comprehensive evaluation of knowledge and application across all topics in the course


Nutritional Needs Change at Every Stage
Early Development
Transition
Transition
Aging Process
Infancy & Childhood
Growth & Development
Adolescence
Rapid Growth Needs
Adulthood
Maintenance & Prevention
Elderly
Healthy Aging & Disease Management
Growth & Maturity
Optimal Health
Prevention
Healthy Aging

Contents:

Learning Outcome

Describe how nutritional needs change across different stages of life, especially during adolescence and older adulthood.

Identify key nutrients that are important for each age group and explain why their needs differ.

Recognize common nutrition-related problems that adolescents and older adults may face.

The Human Lifecycle:

- According to the American Journal of Clinical Nutrition, the human life span, or the maximum length of time possible for human life, **is 130 years**. Ordovas, J. M. "Living Well to 100: Nutrition, Genetics, Inflammation." Am J Clin Nutr 83 (2006): 401S490S.
- Human bodies change significantly over time, and food is the fuel for those changes.
- People of all ages need the same basic nutrients—essential amino acids, carbohydrates, essential fatty acids, and twenty-eight vitamins and minerals—to sustain life and health. However, the amounts of nutrients needed differ.

Major Stages of the Human Life Cycle

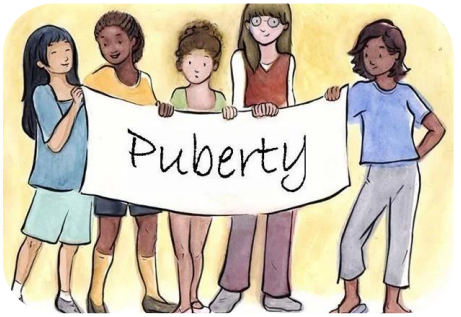
Pregnancy: The development of a zygote into an embryo and then into a fetus in preparation for childbirth (before birth).

Infancy (Birth to 1 year): The earliest part of childhood, from birth through age one.

Toddler Years (2 to 3 years): Occur during ages two and three and mark the end of early childhood.

Childhood (4 to 8 years):

- Takes place from ages four to eight, a period of steady growth and development.



Puberty (9 to 13 years): The beginning of adolescence, involving hormonal changes and rapid physical growth.

Older Adolescence (14 to 18 years): The stage between ages fourteen and eighteen, continuing physical and psychological development.

Adulthood (19 years to 30): The period starting from age nineteen, involving maintenance of body functions and health.

Middle Age (31 to 50 years): A sub-period of adulthood characterized by gradual physiological changes.

Senior Years or Old Age (51 years and above): Extends from age fifty-one until the end of life, marked by aging processes and increased nutritional needs.

Pregnancy and Nutrition:

- During pregnancy, it is imperative that a woman meet the nutritional needs both she and her unborn child require, which includes an increase in certain micronutrients, such as iron and folate.
- Starting BMI determines how much weight a woman needs to gain throughout her pregnancy.
- In an average pregnancy, a woman gains an extra 30 pounds.
- During the second and third trimesters, a woman's energy requirements increase by 340 calories and 450 calories per day for the second and third trimesters.

1. How might cultural food habits affect pregnancy nutrition—positively or negatively?

2. Is pregnancy considered a disease, or is it a normal physiological condition?

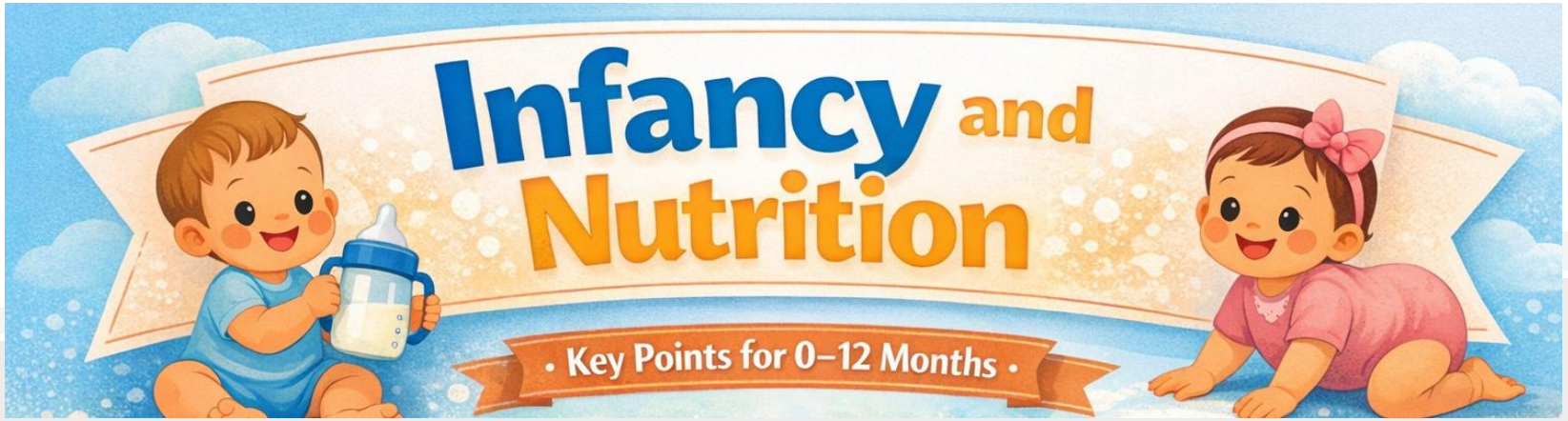
3. Why do pregnant women need medical care if pregnancy is not a disease?

Infancy and Nutrition

Parents and other caregivers should use growth charts to track an infant's development and determine how to best meet their child's nutritional needs.

For the first four to six months of life, children should consume breast milk exclusively.

For the next six months, solid foods should be introduced gradually into an infant's diet as parents and caregivers continue to provide breast milk. Breast milk is ideal for infants and provides all of the nutrients they need to grow and develop



Foreword to From Pregnancy to the Toddler Years

Nutritional choices that parents make, such as the decision to breastfeed or bottle-feed, not only affect early childhood development, but also a child's health and wellness later in life.

It is imperative to promote and support the best practices for the well-being of infants and mothers alike.

how dietary choices—from daily caloric intake for pregnant women to serving sizes for toddlers—impact health and wellness during pregnancy and the early childhood years.

Nutrition in the Toddler Years

By the **toddler years**, young children are able to self-feed and begin to develop eating habits and preferences.

The energy requirements for ages two to three are about 1,000 to 1,400 calories per day, and in general, a toddler needs to consume about 40 calories for every inch of height.

Growth slows during the toddler years, but children are more active at this stage and undergo a great deal **of logical, emotional, and social development.**

Childhood and Nutrition

The recommended intakes of macronutrients and micronutrients for children are higher relative to body size compared with nutrient needs during adulthood.

Also, children's daily energy needs vary depending on their **level of physical activity and their gender.**

Girls ages four to eight require 1,200 to 1,800 calories, while boys ages four to eight need 1,200 to 2,000 calories.

Some food- and nutrition-related problems that can affect school-aged children include **malnutrition and food allergies.**

Adolescence and Nutrition

The daily energy requirements for preteens differ according to gender, growth, and activity level.

Girls ages nine to thirteen should consume 1,400 to 2,200 calories per day, and boys should consume 1,600 to 2,600 calories per day.

Nutritional concerns for older children include **malnutrition and obesity**.

Preteens should be encouraged to develop good habits, including **consuming a healthy diet and regularly exercising.**

Older Adolescence and Nutrition

Older adolescents experience numerous physical changes and must increase their energy intake to support these changes and meet nutrient needs.

Nutrient needs are greater during adolescence than at any other time in the life cycle, except during pregnancy.

The daily energy requirements for ages fourteen to eighteen are 1,800 to 2,400 calories for girls, and 2,000 to 3,200 calories for boys, depending on activity level.

Nutritional concerns for older adolescents include eating disorders.

Young Adulthood and Nutrition

Young adults typically have reached their physical peak and can support health and wellness with adequate nutrition and exercise. For ages nineteen to thirty, the daily energy requirements are 1,800 to 2,400 calories for women and 2,400 to 3,000 calories for men, depending on activity level.

Nutritional concerns for young adults include adequate energy and fluid intake, sodium intake, and the consumption of fiber.

Young adults should avoid consuming solid fats, added sugars, and excess alcohol.

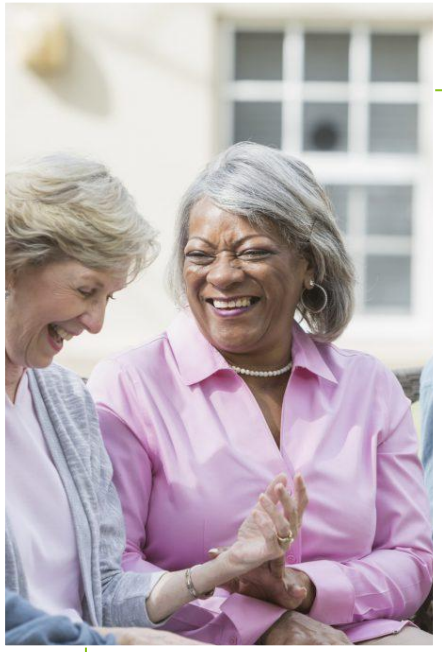
Middle Age and Nutrition

Middle-aged adults begin to experience signs of aging and must continue to support their health and wellness with nutrition and exercise.

The daily energy requirements for ages thirty-one to fifty are 1,800 to 2,200 calories for women and 2,200 to 3,000 calories for men, depending on activity level.

Nutritional concerns for middle-aged adults relate to menopause and the prevention of chronic disease.

Old Age and Nutrition:



As adults age, physical changes impact nutrient needs and can result in deficiencies. The daily energy requirements for adults ages fifty-one and over are 1,600 to 2,200 calories for women and 2,000 to 2,800 calories for men, depending on activity level.

Older adults are more susceptible to medical problems, such as disability and disease, which can impact appetite, the ability to plan and prepare food, chewing and swallowing, self-feeding, and general nutrient intake.


Thank
You