



Nutritional Problems in Adolescence





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Learning Outcomes:



Identify the major nutritional problems affecting adolescents, including undernutrition, obesity, and micronutrient deficiencies.

Explain the key factors influencing adolescent nutrition, such as lifestyle, dietary habits, and social influences.

Apply appropriate strategies to prevent and manage nutritional problems in adolescence.



Adolescence is a unique biological window where nutritional requirements are higher than at almost any other point in life due to rapid physical growth, hormonal shifts, and brain development. When these needs aren't met, several specific nutritional problems commonly emerge.

In 2026, the global landscape of adolescent nutrition is increasingly defined by the "Double Burden of Malnutrition," where undernutrition (deficiencies) and overnutrition (obesity) coexist within the same communities or even the same individuals.



1. Common Nutritional Problems in Adolescents

A. Undernutrition

- Not enough calories or protein
- Seen in restrictive eating, poverty, or poor appetite
- Leads to stunted growth, weakness, low immunity

What Happens Inside the Body?

When the body is undernourished, it goes into survival mode:

- Slows down metabolism
- Breaks down muscle for energy
- Prioritizes vital organs over growth



Signs & Symptoms

The body whispers before it screams:

- **Low body weight / stunted growth**
- **Fatigue & weakness** (always tired, even after rest)
- **Pale skin** (often linked to iron deficiency anemia)
- **Hair thinning or hair loss**
- **Delayed puberty**
- **Poor concentration** (brain needs fuel too)



Health Consequences

- Impaired physical growth
- Delayed sexual maturation
- Weak immune system → frequent infections
- Poor academic performance
- Long-term risks: osteoporosis, chronic diseases later in life



Prevention & Management

Balanced diet

Carbs + protein + healthy fats + vitamins = non-negotiable

Regular meals

Skipping meals isn't a personality trait—it's a problem

Nutrition education

Teens need to *understand*, not just be told

Family & school support

Environment shapes habits

Early screening

Catch it before it escalates

Address mental health

Especially in eating disorders



B. Overnutrition (Obesity)

- Excess calorie intake (fast food, sugar drinks, late-night eating)
- Low physical activity
- Leads to early Type 2 Diabetes, hypertension, and body image issues

Main Causes

High-calorie diets

Fast food, sugary drinks, ultra-processed snacks

Sedentary lifestyle

Screens > sports (TikTok burns zero calories, unfortunately)

Genetic factors

Some are more prone, but lifestyle still drives it

Emotional eating

Stress, boredom, anxiety → food becomes comfort

Family habits

Household patterns shape teen behavior




What Happens in the Body?

When excess energy keeps coming:

- Body stores it as fat (adipose tissue)
- Hormones (like insulin) get disrupted
- Inflammation slowly increases

Signs & Indicators

- Increased body weight / BMI
 - Central obesity (fat around abdomen)
 - Low physical fitness
 - Breathlessness with mild activity
 - Early signs of metabolic issues
- 



Prevention & Management

- **Balanced nutrition:** Less processed, more whole foods
- **Physical activity:** At least 60 minutes/day (non-negotiable)
- **Cut sugary drinks:** Liquid calories are sneaky villains
- **Structured meals:** Random eating = chaotic metabolism
- **Family involvement:** Change the environment, not just the teen.
- **Behavioral support:** Fix the relationship with food, not just the plate



C. Micronutrient Deficiencies

- Iron deficiency (most common) → anemia, fatigue, poor concentration
- Calcium & Vitamin D deficiency → weak bones, future osteoporosis
- Zinc & vitamins → poor immunity and delayed growth



D. Eating Disorders

1. Psychologically & Socially Driven Eating Disorders

- Eating disorders aren't just about food. They're a mix of **mind, environment, and control**. Think of them as silent battles between identity, pressure, and coping.

Psychological Factors

- Low self-esteem (“I’m not enough unless I look a certain way”)
- Perfectionism (extreme need for control)
- Anxiety & depression
- Body image distortion (seeing “fat” when underweight)

Social Factors

- Media & beauty standards (thin = success narrative)
- Peer pressure / bullying
- Family dynamics (control, criticism, or high expectations)
- Cultural norms around body shape



2. Anorexia Nervosa (Extreme Restriction : is discipline turned destructive.

Core :

- Severe restriction of food intake
- Intense fear of gaining weight (even when underweight)
- Distorted body image

Behavior Patterns

- Skipping meals / eating tiny portions
- Obsessive calorie counting
- Excessive exercise (burning “every bite”)

Physical Consequences

- Extreme weight loss
- Fatigue, dizziness
- Hair loss, dry skin
- Amenorrhea (loss of menstruation)
- Bradycardia (slow heart rate)
- In severe cases → organ failure

Psychological State

- Feels in control when restricting
- Denial of seriousness (“I’m fine”)
- Identity tied to thinness



3. Bulimia Nervosa (Binge + Purge Cycle)

This is chaos hidden behind normal appearance.

Core:

- Recurrent binge eating (large amount, loss of control)
- Compensatory behaviors (purging)

Purging Methods

- Self-induced vomiting
- Laxatives / diuretics misuse
- Excessive exercise
- Fasting after binge

Cycle Pattern

- Emotional trigger (stress, guilt, sadness)
- Binge (loss of control)
- Guilt/shame hits hard
- Purge to “undo”
- Temporary relief → repeat



Physical Consequences

- Electrolyte imbalance (can lead to cardiac arrest)
- Swollen cheeks (parotid glands)
- Tooth enamel erosion (from stomach acid)
- Esophageal tears
- Dehydration

Psychological State

- Feels out of control during binge
- Deep guilt afterward
- Often normal weight → harder to detect



Prevention & Management

Early Prevention

- Promote realistic body image
- Nutrition education (not dieting culture)
- Supportive family & school environment

Treatment Approach

- Psychological therapy (CBT is gold standard)
- Nutritional rehabilitation
- Medical monitoring
- Family-based therapy (especially adolescents)



2. Factors Affecting Adolescent Nutrition

It's not just food — it's the environment shaping the plate.

a. Lifestyle

- Skipping meals (especially breakfast)
- Fast food dependence
- Screen time > physical activity

b. Peer Pressure & Body Image

- Social media = unrealistic body standards
- Diet trends without science

c. Family Influence

- Eating patterns at home
- Availability of healthy vs junk food

d. Economic Factors

- Limited access to nutritious foods
- Cheap food = often unhealthy

e. Knowledge & Awareness

- Lack of nutrition education
- Misconceptions (e.g., “carbs are bad”)



3. Health Consequences of Poor Nutrition

what they eat now writes their future health story.

Short-Term Effects

- Fatigue, ضعف التركيز (poor concentration)
- Low academic performance
- Frequent infections

Long-Term Effects

- Obesity → Cardiovascular Disease
- Weak bones → osteoporosis later in life
- Hormonal imbalance (especially in girls)
- Increased risk of chronic diseases

Psychological Impact

- Low self-esteem
- Anxiety and depression
- Disordered eating patterns



4. Prevention and Management Strategies

a. Balanced Diet

- Include: carbs + protein + healthy fats + vitamins
- Emphasize fruits, vegetables, dairy, whole grains

b. Nutrition Education

- Teach why, not just what to eat
- Schools + universities must step up

c. Healthy Lifestyle

- Regular physical activity
- Limit screen time
- Proper sleep (this one is underrated but powerful)



D. Family & School Role

- Healthy meals at home
- School meal programs
- Supportive environment

E. Early Detection & Intervention

- Monitor weight, growth, Hb levels
- Address eating disorders early



Summary

Poor dietary habits

Skipping meals, junk-heavy diets, low appetite

Eating disorders

Like anorexia nervosa or bulimia (body image pressure hits hard here)

Socioeconomic factors

Limited access to nutritious food

Busy lifestyle

School, stress, irregular eating patterns

Chronic illness or infections

Affect nutrient absorption or appetite

Media & body image pressure

Unrealistic “perfect body” standards



Activity:

Scenario 1: Skipping Meals & Low Energy

Case: Sara is 15. She skips breakfast almost every day, grabs a soda mid-morning, and eats very little at lunch. By afternoon, she feels tired and can't focus in class.

Look at what's missing in her diet. What nutrients are likely low? What are the health consequences?

Scenario 2: Fast Food & Sugar Overload

Case: Ahmed is 16. He eats fast food for lunch and dinner 5 times a week and drinks energy drinks regularly. He complains of weight gain and feels sleepy after meals.

Identify the nutritional problem (overweight, high sugar intake). What health issues might develop? How could his diet be improved?

Scenario 3: Limited Variety & Vitamin Deficiency

Case: Laila is 14. She eats mostly bread, rice, and potatoes, rarely touches fruits, vegetables, or dairy. She often feels weak and gets sick easily.

What nutrients is she missing? What are the possible consequences on growth, immunity, and bone health?



Identify the Nutritional Problem

List the Causes

Describe Health Consequences

Suggest Practical Solutions

Optional Creative Step

A soft, pink watercolor splash with a textured, torn-edge appearance. The splash is centered on a white background and contains the text 'Thank You' in a black, elegant cursive font. The splash has various shades of pink, from light to a deeper magenta, and some darker, vein-like patterns within it.

Thank
You