OBJECTIVES

Upon completion of this unit the student will:

1. Describe the health-illness continuum.
2. Discuss traditional and current views of health and illness.
3. List Maslow’s five basic human needs, and explain why they constitute a hierarchy.
4. Explain four levels of adaptability to stress.
5. Discuss concepts related to health promotion, disease prevention, and health maintenance.
6. Define acute and chronic illness.
7. Discuss illness behavior and the impact of illness on the family.
8. Describe nursing measures for health promotion, health maintenance, and illness.
9. Describe complementary and alternate therapies and the nurse’s role in relation to both.

PLAN OF LESSON

I. Health-Illness Continuum
   A. Traditional Views
   B. Current Views
   and Behaviors
II. Maslow’s Hierarchy of Needs
    A. Human Needs
    B. Broad Categories
    C. Hierarchy
III. Stress and Adaptation
    A. External
    B. Internal
    C. Physical
    D. Emotional
IV. General Adaptation Syndrome
    A. Coping
    B. Adaptation
    C. Homeostasis
V. Health Promotion, Disease Prevention, & Health Maintenance
    A. Goals for Healthy People 2020
VI. Concept of Illness
    A. Acute vs. Chronic
    B. Illness Behavior
    C. Sick Role
VII. Impact of Illness on Family
VIII. Implications for Nursing Care
     A. Prevention
        1. Primary
        2. Secondary
        3. Tertiary
     B. Consumer Education and Awareness
     C. Practices to Prevent Illness
IX. Complementary & Alternative Therapies: Nurse’s Role

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OBJECTIVES

Upon completion of this unit the student will:

1. Describe physical and chemical barriers.
2. Describe how inflammatory changes act as bodily defense mechanisms.
3. Identify the signs and symptoms of inflammation.
4. Discuss the process of repairing and healing.
5. Differentiate infection from inflammation.
6. Discuss the actions of commonly found infectious agents.
7. Describe the ways that infections are transmitted.
8. Identify the signs and symptoms of infection.
10. Describe the Centers for Disease Control and Prevention (CDC) standard precautions guidelines for infection control.
11. Describe the CDC isolation guidelines for airborne, droplet, and contact precautions.
12. Discuss diagnostic tests used in the assessment and monitoring of a patient with infection.
13. Discuss the nursing and collaborative care of patients with infections.
14. Discuss nursing care adaptations for patients who are immunocompromised.

PLAN OF LESSON

I. Introduction
   A. Early Treatment

II. Physical and Chemical Barriers
   A. First Line Defense
   B. Second Line Defense

III. The Inflammatory Process
   A. Actions Involved
   B. Signs and Symptoms

IV. Wound Healing

V. Infectious & Communicable Disease

VI. Common Infectious Agents
   A. Bacteria
   B. Viruses
   C. Retroviruses
   D. Fungi
   E. Prions
   F. Parasites

VII. Transmission of Infection

VIII. Local & Generalized Infections
   A. Localized Signs & Symptoms
   B. Generalized Signs & Symptoms

IX. Community & Healthcare Acquired (Nosocomial) Infections

X. Community: Collaborative Care Management
   A. Communicable Diseases
   B. Prevention & Control
   C. Immunizations

XI. Diagnostic Tests

XII. Nosocomial: Collaborative Care Management
   A. Early Treatment
   B. Isolation

XIII. Immunocompromised Patients

XIV. Nursing Care of Patients with Infections
OBJECTIVES

Upon completion of this unit the student will:

1. Describe the immune response.
2. Identify the cells and organs involved in immunity.
3. Compare natural and acquired immunity.
4. Differentiate between humoral and cell-mediated immunity.
5. Describe the nursing care of patients with immunodeficiency.
6. Describe the nursing care of patients with allergies and anaphylaxis.
7. Describe the process of autoimmunity.

PLAN OF LESSON

I. Immunity
   A. Natural
   B. Acquired
   C. Cells and Organs Involved

II. Nonspecific Defenses

III. Specific Defenses
   A. Antibody-Mediated (Humoral) Immunity
   B. Cell-Mediated Immunity

IV. Immunodeficiency
   A. Etiology
   B. Risk Factors
   C. Medical Treatment
   D. Nursing Care

V. Hypersensitivity and Allergy
   A. Etiology
   B. Medical Treatment
   C. Nursing Care

VI. Anaphylaxis
   A. Etiology
   B. Medical Treatment
   C. Nursing Care

VII. Autoimmune Diseases
   A. Etiology
   B. Medical Treatment
   C. Nursing Care
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Describe the location and functions of body fluids, including factors that affect variations in fluid compartments.
2. Explain the principles of osmosis, diffusion, active transport, and filtration.
3. Describe how thirst, the organs of homeostasis (kidneys, heart and blood vessels, lungs, adrenal glands, pituitary gland, and parathyroid glands), and hormones function to maintain fluid homeostasis.
4. Describe the functions, regulation, sources, and losses of the main electrolytes of the body.
5. Differentiate between fluid volume deficit and fluid volume excess.
6. Discuss age-related fluid balance changes.
7. Assess a client fluid and electrolyte balance.

PLAN OF LESSON

I. Homeostasis and Fluid Spaces
II. Physical Mechanisms for Fluid Movement
   A. Osmosis
   B. Diffusion
   C. Active Transport
   D. Filtration
   E. Lymph
III. Hormonal Regulations
   A. Aldosterone
   B. ADH
   C. Atrial Natriuretic Factor
IV. Body Fluids
   A. Sources of Intake
   B. Sources of Loss
V. Electrolytes
   A. Ions
      1. Cations (+)
      2. Anions (-)
   B. Major Lytes
      1. Functions
      2. Sources & Losses
      3. Regulation
      4. Measurement
VI. Fluid Volume Deficit & Excess
VII. Age-Related Changes
VIII. Assessment of Client’s Status
      A. History
      B. Physical Assessment
      C. Psychosocial Assessment
      D. Diagnostic Assessment
OBJECTIVES

Upon completion of this unit, the student will be able to:

1. Identify clients at risk for fluid imbalances.
2. Use laboratory data and clinical manifestations to assess fluid balance and imbalance.
3. Apply appropriate nursing techniques to promote comfort and safety in the client with dehydration.
4. Prioritize nursing care for the client with dehydration.
5. Explain why different types of intravenous fluids are used to treat different types of dehydration.
6. Develop a community-based teaching plan to prevent dehydration in the older client at continuing risk for fluid loss.
7. Analyze changes in clinical manifestations to determine the effectiveness of therapy for the client with dehydration.
8. Prioritize nursing care for the client with overhydration.
9. Analyze changes in clinical manifestations to determine the effectiveness of therapy for the client with overhydration.
10. Identify clients at risk for imbalance of potassium.
11. Use laboratory data and clinical manifestations to assess potassium balance and imbalance.
12. Prioritize nursing care for the client with potassium imbalance.
13. Explain the effects of potassium imbalance on the activity of digoxin.
14. Differentiate diuretics that increase potassium loss from those that reduce potassium loss.
15. Analyze changes in clinical manifestations to determine the effectiveness of therapy for the client with potassium imbalance.

PLAN OF LESSON

I. Dehydration
   A. Types
   B. Health Promotion & Illness Prevention
   C. Collaborative Management
      1. History
      2. Assessments
         a. Physical
         b. Psychosocial
         c. Laboratory
      3. Analysis
      4. Nursing Diagnoses and Collaborative Problems
      5. Plan of Care

II. Overhydration
   A. Types
   B. Health Promotion & Illness Prevention
   C. Collaborative Management
      1. History
      2. Assessments
         a. Physical
         b. Psychosocial
         c. Laboratory
      3. Analysis
      4. Nursing Diagnoses and Collaborative Problems
      5. Plan of Care

III. Hypokalemia
   A. Pathophysiology
   B. Etiology
   C. Collaborative Management
      1. History
      2. Assessments
         a. Physical
         b. Psychosocial
         c. Laboratory
      3. Analysis
      4. Nursing Diagnoses and Collaborative Problems
      5. Plan of Care

IV. Hyperkalemia
   A. Pathophysiology
   B. Etiology
   C. Collaborative Management
      1. History
      2. Assessments
         a. Physical
         b. Psychosocial
         c. Laboratory
      3. Analysis
      4. Nursing Diagnoses and Collaborative Problems
      5. Plan of Care
OBJECTIVES

Upon completion of this unit, the student will be able to:

16. Identify clients at risk for imbalance of sodium.
17. Use laboratory data and clinical manifestations to assess sodium balance and imbalance.
18. Prioritize nursing care for the client with sodium imbalance.
19. Identify drugs that contain large amounts of sodium.
20. Differentiate diuretics that increase potassium loss from those that reduce potassium loss.
21. Analyze changes in clinical manifestations to determine the effectiveness of therapy for the client with sodium imbalance.
22. Identify clients at risk for imbalance of calcium.
23. Use laboratory data and clinical manifestations to assess calcium balance and imbalance.
24. Prioritize nursing care for the client with calcium imbalance.
25. Analyze changes in clinical manifestations to determine the effectiveness of therapy for the client with sodium imbalance.

PLAN OF LESSON

V. Hyponatremia
A. Pathophysiology
B. Etiology
C. Collaborative Management
   1. History
   2. Assessments
      a. Physical
      b. Psychosocial
      c. Laboratory
   3. Analysis
   4. Nursing Diagnoses and Collaborative Problems
   5. Plan of Care

VI. Hypernatremia
A. Pathophysiology
B. Etiology
C. Collaborative Management
   1. History
   2. Assessments
      a. Physical
      b. Psychosocial
      c. Laboratory
   3. Analysis
   4. Nursing Diagnoses and Collaborative Problems
   5. Plan of Care

VII. Hypocalcemia
A. Pathophysiology
B. Etiology
C. Collaborative Management
   1. History
   2. Assessments
      a. Physical
      b. Psychosocial
      c. Laboratory
   3. Analysis
   4. Nursing Diagnoses and Collaborative Problems
   5. Plan of Care

VIII. Hypercalcemia
A. Pathophysiology
B. Etiology
C. Collaborative Management
   1. History
   2. Assessments
      a. Physical
      b. Psychosocial
      c. Laboratory
   3. Analysis
   4. Nursing Diagnoses and Collaborative Problems
   5. Plan of Care

IX. Phosphorus Imbalances
X. Magnesium Imbalances
OBJECTIVES

Upon completion of this unit the student will:

1. Describe the role of buffer systems and respiratory and renal mechanisms in achieving and maintaining acid-base balance.
2. Apply the principles of acid-base balance to the interpretation of arterial blood gas (ABG) measurements.
3. Analyze components of ABGs to identify type of acid-base disturbance.
4. Describe the causes and effects of each type of acid-base imbalance.
5. Describe the management of patients with acid-base imbalances and fluid and electrolyte imbalances.
6. Formulate a plan of care for the patient with an acid-base imbalance based on ABG findings.

PLAN OF LESSON

I. Introduction
II. Acids and Bases: pH
III. Physiology
   A. Chemical Buffering
      1. Bicarbonate Buffers
      2. Intracellular Buffers
      3. Phosphate Buffers
      4. Bone Buffers
   B. Respiratory Regulation
   C. Renal Regulation
   D. ABG
   E. Lab Values
      1. Electrolytes
      2. Albumin
IV. Arterial Blood Gases
   A. Values of Components
   B. Guidelines for Analysis
      (T and ROME)
V. Acid-Base Disturbances
   A. Respiratory Acidosis
   B. Respiratory Alkalosis
   C. Metabolic Acidosis
   D. Metabolic Alkalosis
      1. Causes
      2. Assessment
      3. Clinical Manifestations
      4. Treatment
      5. Collaborative Care
      6. Plan of Care
OBJECTIVES

Upon completion of this unit the student will:

1. List the principles of emergency and first aid care.
2. List the steps of the initial assessment and interventions for the person requiring emergency care.
3. Describe the components of the nursing assessment of the person requiring emergency care.
4. Outline the steps of the nursing process for emergency or first aid treatment of victims of cardiac/respiratory arrest, choking, shock, hemorrhage, traumatic injury, burns, heat or cold exposure, poisoning, bites, and stings.
5. Describe biologic agents and discuss the role of the nurse in relationship to bioterrorism and natural disasters.
6. Explain the legal implications of administering first aid in emergency situations.

PLAN OF LESSON

I. General Principles of Emergency Care
   A. ABC
   B. CPR as Needed
   C. Uncontrolled Bleeding
   D. Assess for Injuries Head to Toe
      1. Immobilize Spine & Limbs as Indicated
      2. Medical Tag
II. Guidelines for First Aid
    A. Nursing Assessment
    B. Physical Examination
III. Nursing Process for Emergency Aid
     A. CPR
     B. Choking (Airway Obstruction)
     C. Shock
     D. Hemorrhage
     E. Traumatic Injuries
IV. Bioterrorism/Natural Disasters
    A. Biologic Agents
    B. Nurse's Role
V. Emergency Care: Legal Implications
   F. Thermal Exposure
   G. Poisoning
   H. Bites
   I. Stings