

Al-Al Bayt University
Princess Salma Faculty of Nursing
Adult Health nursing

Course Title :Pathophysiology

Course Number :1001202

Credit Hours :3

Pre requisite :1001210

Placement :

Instructor: m_khalaileh ,

Course Description :

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General objectives :

Course Objectives:

• Discuss the pathophysiologic changes that occur as a result of altered health states in selected basic concepts commonly encountered in nursing practice.

• Define the components of the disease process: etiology, pathophysiology, clinical manifestations, treatment, and prevention.

• Describe the general pathologic mechanisms producing signs and symptoms of specific disease processes commonly encountered in nursing practice

• Identify how each organ system participates in the total regulatory and homeostatic mechanisms of the body.

• Discuss the risk factors that affect the person in different body functions.

• Discuss the different treatment modalities for selected pathological conditions.

Course outline :

Cellular adaptation

Cellular Adaptation, Injury, and Death and wound healing.

- Cellular adaptation.
- Cell Injury and Death
- Mechanism of cell injury
- Tissue Repair and wound healing

Hematology

Hematopoietic Function

- Composition of blood and formation of blood cells.

Alteration in hemostasis

- Mechanism of hemostasis
- Hypercoagulability states
- Bleeding disorders
- The Red Blood Cell
- Production
- Destruction
- Cell metabolism and hemoglobin oxidation.

- White Blood Cell

- Bone marrow and Hematopoiesis.

- Lymphoid Tissues.

Immune system

Infection, Immunity and inflammation.

- Infections disease

- Mechanism of infection.

The inflammation responses

- Immune system
- Immunodeficiency Diseases
- Allergic and hypersensitivity Disorders
- Transplantation Immunopathology
- Autoimmune diseases
- Acquired Immunodeficiency syndrome
- Pathophysiology
- HIV infection

Cardiovascular system

Cardiovascular Function

Organization of the systemic circulatory system

Neural control of circulatory function

- Baroreceptors
- Chemoreceptors
- Autonomic regulation of cardiac function
- Autonomic regulation of vascular function
- Autonomic neurotransmitters
- Autonomic response to circulatory stress

Alteration in Blood Flow in the Systemic Circulation

Disorders of the arterial circulation

- Hyperlipidemia
- Atherosclerosis
- Aneurysms

• Alteration in Blood pressure

• Hypertension

• Essential hypertension

• Secondary hypertension

• Malignant hypertension

Alteration in cardiac function

Coronary heart disease

- Coronary circulation and pathogenesis of coronary heart disease
- Chronic Ischemic heart diseases
- Acute coronary syndromes

Disorders of cardiac conductive system and rhythm

- Cardiac conductive system
- Action potential
- Electrocardiography
- Types of dysrhythmias

Heart Failure and Circulatory shock

Heart failure

Physiology of HF

Congestive HF

Acute pulmonary edema

 Carcinogenic shock

Respiratory system

Alteration in Respiratory Function

Respiratory Infections

- influenza

- pneumonia

- tuberculosis

- fungal infections

 Obstructive Airway Disorders

- Bronchial asthma

- Chronic obstructive pulmonary diseases

 Pulmonary Vascular Disorders

- Pulmonary embolism

- Pulmonary hypertension

- Acute respiratory distress syndrome

 Respiratory failure

Renal system

Renal Function

- The nephron

- Urine formation

- Regulation of renal blood flow

Alteration in renal function

Urinary tract infections

Disorders of glomerular function

- Nephrotic syndrome

- Chronic glomerulonephritis

 Tubulointerstitial Disorders

- renal tubular acidosis

- pyelonephritis

Renal Failure

- Acute renal failure

- Chronic renal failure

GIT

Gastrointestinal Function

- Secretary Function

Attrition in gastrointestinal function

- Manifestation of GI disorders

- Disorders of the stomach

- Hepatic and Biliary Disorders

Endocrine

Endocrine Function

Endocrine system

- Hormones

- Control of Hormones levels

Alteration in endocrine function

Diabetes Millitus

Classification and Etiology

Manifestations

Acute and chronic complication

Neural

Neural Function

Nerve cell communication

Organization and control of somatosensory function.

- Pain
- Pain theories
- Mechanisms and pathways
- Threshold and Tolerance

Disorders of function

Mechanism and manifestations of brain injury

Cerebrovascular Disease

- Stroke (Brain attack)
- Aneurismal subarachnoid Hemorrhage

MSS

Musculoskeletal Function

Injury and Trauma of Musculoskeletal Structure

Bone infections

Osteonecrosis

Metabolic Bone diseases

- Osteopenia
- Osteopraxis
- Osteomalacia
- Paget’s disease
- Osteoarthritis syndrome

Evaluation methodology :

First Exam.....20

Second Exam.....20

Assisngment.....10

Final exam.....50

References :

*Concept of altered health states6, lipincott,

Course Schedule :

Topic_____ **Hours**

No Information Available...