

Acute and Chronic Neurological Diseases: Quick Notes



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Functional Health Patterns (53%): This domain involves applying the nursing process to optimize the restoration and preservation of the patient's health and holistic well-being across the lifespan. It also includes promoting optimal psychosocial patterns and coping and stress management skills of the patients and caregivers, optimizing the patient's functional ability, managing the patient's neurological and other complex medical conditions, promoting optimal nutrition and hydration, optimizing the patient's elimination patterns, and optimizing the patient's sleep and rest patterns.

Neurological Conditions

- ▶ **Multiple Sclerosis**
- ▶ **Parkinson's Disease**
- ▶ **Guillain-Barré Syndrome**
- ▶ **Myasthenia Gravis**
- ▶ **Amyotrophic Lateral Sclerosis**
- ▶ **Postpolio Syndrome**

Objectives

Participants will be able to:

- ▶ **Describe scope of each neurological disease/condition**
- ▶ **State Symptoms of each neurological disease/condition**
- ▶ **Identify the Goals of the Rehabilitation Nurse related the specific neurological disease/condition**
- ▶ **Describe the Nursing Interventions for each neurological condition**

Other topics

- ▶ Diabetes Mellitus
- ▶ Cancer
- ▶ HIV and AIDS
- ▶ Obesity

Diabetes Mellitus :

Epidemiology

Category	Key Points
Global Prevalence	Over 537 million adults (2021); projected to reach 643 million by 2030
Incidence	Rising globally, especially in low- and middle-income countries
Gender Distribution	Affects both sexes; slightly higher in men
Age of Onset	Type 1: childhood/adolescence; Type 2: typically >40, but rising in youth

Diabetes Mellitus : Epidemiology



Category	Key Points
Ethnicity & Race	Higher in Hispanic, Black, Native American, and South Asian populations
Geographic Patterns	Highest in Western Pacific, Southeast Asia, and Middle East
Trends	Increasing due to obesity, sedentary lifestyle, and aging

Common Symptoms: Diabetes Mellitus

- Polyuria (frequent urination)
- Polydipsia (excessive thirst)
- Polyphagia (increased hunger)
- Fatigue
- Blurred vision
- Slow wound healing
- Numbness or tingling in hands/feet (neuropathy)
- Recurrent infections

Management/Treatment: Diabetes Mellitus

Treatment Options

- **Type 1:** Insulin therapy (basal-bolus, pumps), glucose monitoring
- **Type 2:** Lifestyle changes, oral agents (metformin, SGLT2 inhibitors, GLP-1 agonists), insulin
- **Supportive:** Nutrition counseling, exercise, foot care, cardiovascular risk management



Rehabilitation Nursing Focus:

- **Preventing disability** through glycemic control to reduce complications (e.g., neuropathy, retinopathy, amputations).
- **Functional training** for patients with vision loss or limb loss.
- **Foot care education** to prevent ulcers and infections.
- **Self-management support:** insulin administration, glucose monitoring, diet planning.
- **Psychosocial support** for depression, anxiety, or diabetes distress.

Cancer (General Overview):



Epidemiology

Category	Key Points
Global Prevalence	~20 million new cases/year (2022); expected to rise to 28 million by 2040
Incidence	Varies by cancer type; lung, breast, colorectal, prostate most common
Gender Distribution	Some cancers are sex-specific; others vary in prevalence
Age of Onset	Risk increases with age; most common >50

Cancer (General Overview):



Epidemiology

Category	Key Points
Ethnicity & Race	Disparities exist in incidence and outcomes (e.g., higher mortality in Black populations)
Geographic Patterns	Higher in high-income countries; rising in developing regions
Trends	Increasing globally; improved survival due to early detection and treatment

Common symptoms: Cancer

(varies by type, but common symptoms include)

- Unexplained weight loss
- Fatigue
- Debilitation
- Post Surgical Complications
- Pain
- Persistent cough or hoarseness
- Changes in bowel or bladder habits
- Unusual bleeding or discharge
- Lumps or masses
- Skin changes

Management/ Treatment: Cancer

Treatment Options

- **Surgery, Radiation, Chemotherapy**
- **Targeted therapy, Immunotherapy, Hormonal therapy**
- **Palliative care, psychosocial support, survivorship programs**

Rehabilitation Nursing Focus:

- **Managing treatment-related impairments** (e.g., fatigue, neuropathy, lymphedema, cognitive changes).
- **Restoring ADLs** (activities of daily living) post-surgery, chemotherapy, or radiation.
- **Pain management** and palliative care integration.
- **Vocational rehabilitation** for return to work.
- **Psychosocial support** for body image, anxiety, and survivorship challenges.

Obesity: Epidemiology

Category	Key Points
Global Prevalence	Over 1 billion people obese (2022); includes 650 million adults
Incidence	Rising rapidly in all age groups
Gender Distribution	Slightly higher in women globally
Age of Onset	Increasing in children and adolescents
Ethnicity & Race	Higher in Black, Hispanic, Pacific Islander populations
Geographic Patterns	Highest in North America, Middle East, Pacific Islands
Trends	Global epidemic; driven by diet, inactivity, urbanization

Common Symptoms: Obesity

- Shortness of breath with activity
- Joint pain (especially knees, hips)
- Fatigue
- Sleep apnea
- Skin issues (intertrigo, acanthosis nigricans)
- Reduced mobility
- Psychological effects (depression, low self-esteem)

Management/Treatment: Obesity

Treatment Options

- **Lifestyle:** Diet, physical activity, behavioral therapy
- **Pharmacotherapy:** GLP-1 agonists (e.g., semaglutide), orlistat
- **Surgical:** Bariatric surgery (gastric bypass, sleeve gastrectomy)
- **Supportive:** Counseling, community programs, digital health tools

Management/Treatment: Obesity

Rehabilitation Nursing Focus:

Mobility training and assistive devices for patients with limited mobility.

Exercise therapy tailored to physical limitations (e.g., aquatic therapy, seated exercises).

Behavioral counseling for sustainable lifestyle changes.

Post-bariatric surgery care: wound care, nutrition, body image support.

Fall prevention and ergonomic adaptations in the home or workplace.

HIV and AIDS :

Epidemiology



Category	Key Points
Global Prevalence	~39 million people living with HIV (2023)
Incidence	~1.3 million new infections/year
Gender Distribution	Affects both sexes; higher prevalence in women in sub-Saharan Africa
Age of Onset	Most new infections in 15–49 age group
Ethnicity & Race	Disproportionately affects Black and Hispanic populations in the U.S.
Geographic Patterns	Highest in sub-Saharan Africa
Trends	Declining incidence globally; improved survival with ART

Common Symptoms: HIV and AIDS

- Early HIV: flu-like symptoms (fever, sore throat, rash)
- Chronic HIV: weight loss, fatigue, lymphadenopathy
- AIDS: opportunistic infections (e.g., PCP, TB), cancers (Kaposi's sarcoma), neurological symptoms (HIV-associated dementia)

Management/ Treatment: HIV and AIDS

Treatment Options

- **Antiretroviral Therapy (ART)** – lifelong, combination therapy
- **Prevention:** PrEP, PEP, condom use, harm reduction
- **Supportive:** Opportunistic infection prophylaxis, mental health care, nutrition

Management/ Treatment: HIV and AIDS

Rehabilitation Nursing Focus:

- **Managing chronic disability** from HIV-related complications (e.g., neuropathy, cognitive decline, fatigue).
- **Restoring function** after opportunistic infections or malignancies.
- **Energy conservation** and pacing strategies for fatigue.
- **Cognitive rehabilitation** for HIV-associated neurocognitive disorders (HAND).
- **Stigma reduction** and mental health support to improve adherence and quality of life.