PT 567.01: Principles of Adult Neurological Rehabilitation

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PT-567 (Fall)
PRINCIPLES OF ADULT NEUROLOGICAL REHABILITATION

Instructor: Chuck Leonard PT, PhD
PT-567/568
PRINCIPLES OF ADULT NEUROLOGICAL REHABILITATION

I. PT- Principles of Adult Neurological Rehabilitation

II. Credit: 5 Credits

III. Instructor: Chuck Leonard, Ph.D., PT

IV. Clock Hours: 5-6 hours per week for 5 weeks
   Class meets M: 8-10, 1-2
   W: 10-12; F: 10-12

V. Course Description: Various medical and societal aspects of adult-onset stroke are presented in addition to physical therapy and medical rehabilitation procedures. Pathophysiology, prognosis, spasticity (mechanisms and treatment), gait assessment, motor control issues, functional outcome measures, and various treatment approaches are discussed.

VI. Required Reading:
   Faculty Packet
   Introduction to the Neurological Examination by M. Nolan
   The Neuroscience of Human Movement by CT Leonard

VII. Schedule and Course Content (subject to change)

Week 1

Impact of Stroke on the Health Care System
Stroke Risk Factors
Pathophysiology of CVA
Neuroscientific Principles Related to CVA
Principles of Neurological Examination
Definitional Terms
Spasticity
Processes of Recovery
   Pediatric vs. Adult
Principles of the Neurological Examination
Chart Documentation
**Week 2**

Gait Analysis of the Hemiplegic Patient

Shoulder/Hand Syndrome Following CVA
Reflex Sympathetic Dystrophy

**Prognosis**
- Time course of recovery from acute to chronic stages.
- Treatment implications.

**Patient Presentation #1** (Students are expected to dress in a professional manner for these presentations)

**Week 3**

Measurement of Functional Outcomes

LAB- (Spasticity Reduction, Balance, Coordination, Transfers, Trunk, UE, LE.

**Patient Presentation #2**

**Week 4**

Motor Control/Learning Theory and Techniques

Constraint Induced Therapies
Treadmill Training
Computer/Robot Assisted Therapies

**Patient Presentation #3**

**Week 5**

Guide to PT Practice (Adult CVA)

Miscellaneous Interventions
- Biofeedback; Inhibitive Casting; Medications to decrease spasticity; PNF; Dorsal Root Rhizotomies;
- Weird Science/Continuing Educ. in Neuro Rehab.

Hospital Neurological Ward Rounds or Patient Presentation or Physician (Neurologist or Physiatrist) Lecture

**Final Examination**
VIII. Objectives: See attached

IX. Course Requirements and Methods of Evaluation:
   Cumulative written final: 80%
   Laboratory observation: 10%
   Classroom participation: 10%