

Functional Management for Adults with Neurological Disorders

1. Course Description:

An online course designed to introduce participants to the updated views of the assessment and treatment of adults with neurological/ neuromuscular dysfunctions in consistence with the evidence-based practice. The course includes lectures, presentations and discussion of different case studies with a strong emphasis on observational skills, movement analysis and clinical reasoning.

The course includes two modules, with an assignment at the end of the course. Module (I) focuses on basic principles and assessment of neurological conditions. In module (II), we will discuss principles of rehabilitation & intervention strategies to achieve an optimum plan of care for patients with neurological disorders. A live discussion session will be conducted at the end of each module.

2. Target Population:

This course is suitable for junior and senior physiotherapists who are interested to update and promote their knowledge in the assessment and treatment of patients with different neurological conditions.

3. General Course Objectives:

- 1. To discuss the updated evidence-based practice in the assessment and treatment of **adults** with neurological or neuromuscular dysfunction.
- 2. To enhance skills of observation and clinical reasoning in the management of neurological cases.
- 3. To link the theoretical bases of neurological rehabilitation with clinical practice.

4. Learning outcomes:

By the end of this course, participants should be able to:

- 1. Understand the basic principles of motor control, motor learning, and neural plasticity as a foundation for neural recovery after neurological insult.
- 2. Define the systems controlling normal movement as a base for clinical reasoning & problem solving.
- 3. Recognize the difference between normal and efficient movements essential for appropriate movement task analysis.
- 4. Organize thinking during the process of patient examination, prioritize problems list and relevant outcome measures in the light of the "ICF" model.
- 5. Develop an integrated plan of care & formulate the appropriate patient' centered treatment goals.
- 6. Obtain the basic knowledge of problem solving and clinical reasoning in the most common neurological cases.
- 7. Identify, select & modify the intervention strategies with regards to neurological impairments, patient responses and intended treatment goals concerning clinical guidelines and evidence based practice.



5. Speakers:

- Dr. Bassam Elnassag. PhD, Lecturer of PT, Cairo Univ. Certified Bobath Therapist
- **Dr. Amina Awad.** PhD, Lecturer of PT, Cairo university

6. Contents:

Module I "Basic principles & assessment of neurological conditions"

	Lecture Title	Instructor	Time
1	Introduction: principles, theories & constraints of motor control.	Dr. Bassam Elnassag	15 min
2	What are systems controlling our movement?	Dr. Bassam Elnassag	20 min
3	What do you see? Normal versus efficient movement.	Dr. Bassam Elnassag	15 min
4	The "ICF" model as a framework for neurological assessment.	Dr. Amina Awad	10 min
5	Functional movement task analysis: Case study (1).	Dr. Amina Awad	15 min
6	Critical understanding of the process of neurological examination and PT diagnosis.	Dr. Bassam Elnassag	15 min
7	The relevant outcome measures and evidence-based practice.	Dr. Bassam Elnassag	15 min
8	Priorities in problems list, goals of rehabilitation & integrated plan of care.	Dr. Bassam Elnassag	10 min
9	Case study 2 (Management of a patient with Stroke)	Dr. Bassam Elnassag	15 min
	Live session (1)		

Module II "Basics of treatment for different neurological conditions"

	Lecture Title	Instructor	Time
1	Clinical applications of neural plasticity & motor learning principles in treatment of neurological patients.	Dr. Bassam Elnassag	15 min
2	The evidence-based NeuroRehabilitation approaches.	Dr. Bassam Elnassag	20 min
3	Treatment strategies for different neurological disorders (Upper Motor Neuron lesions).	Dr. Bassam Elnassag	20 min
4	Treatment strategies for different neurological disorders (Lower Motor Neuron lesions).	Dr. Amina Awad	15 min
5	Robotics & Assistive Technology to promote patient's Rehab & Quality of Life.	Dr. Bassam Elnassag	10 min
6	Case study 1 (Management of a patient with Ataxia)	Dr. Amina Awad	15 min
7	Case study 2 (Management of a patient with SCI)	Dr. Bassam Elnassag	15 min
	Assignment		
	Live session (2)		

7. References

Relevant course pre-readings and scientific articles will be provided.

8. Educational Methods:

Online presentation, video presentation, case studies, and open discussion

Course fees only 25 USD include:

- Pre-readings materials and scientific articles.
- Access to audiovisual materials (16 pre-recorded lectures).
- 2 live discussion sessions will be at the end of each module.
- Final assignment (Online MCQ).
- Digital certificate (after successful passing of exam)



