

BASIC PNF COURSE

PNF 1+2

The main objective of the PNF 1+2 is an introduction into the PNF concept, its philosophy, tools and application on the patient.

The PNF Basic Course consists of two blocks of five days referred as PNF1 and PNF2, with each 37.5 hours of instruction. Included are at least four hours of patient treatment by the participants and at least four hours of patient demonstration by the instructor(s).

In 1993 it was decided that the block time is up to the individual instructor as long as the contents and the total time meets the requirements. There is a maximum of six months between PNF1 and PNF2.

CONTENTS OF THE BASIC COURSE

1. Introduction into the PNF Concept
2. Neuroanatomy and Neurophysiology
3. Basic Principles and Procedures
4. PNF Techniques
5. PNF Patterns of neck, trunk and extremities
6. Facilitation of mat and other functional activities
7. Facilitation of gait and gait related activities
8. Face and mouth rehabilitation and vital functions
9. Patient assessment, testing procedures and patient treatment based on the PNF philosophy and ICF terminology (demonstration by the instructor(s) and supervised treatment by the participants)

CONTENTS AND OBJECTIVES AFTER THE COURSE

1. Introduction **PNF History and PNF Philosophy**

The participants have knowledge of:

- the historical background in respect of neurophysiology and the roots of PNF
- the evolution of PNF to a holistic concept for the treatment of a wide range of activity limitations and diagnoses.
- the development of the concept during the last decades
- relevant PNF literature, PNF relevant studies, books and videos (see website)

The participants are able to explain

- the PNF-philosophy as important underlying way of thinking

2. Neuro-anatomy and Neurophysiology:

Bases of motor control and motor control systems: receptor systems, postural control system, equilibrium system, locomotor system, spinal subsystems and reflexes, bases of motor learning, muscle physiology.

The participants:

- are able to name the stimuli which are used in PNF in order to facilitate motor control
- are able to describe the different motor (sub-) systems which contribute to motor control
- are able to describe reflexes which contribute to motor control

- are able to describe the receptor systems which contribute to motor control
- are able to describe motor development, postural reflexes and reactions and equilibrium reactions
- have knowledge of principles of motor learning and how they can be used within the PNF concept
- are able to describe different kinds of muscle function (concentric, eccentric and static)
- are able to integrate this knowledge in their practical skills

3. Basic procedures and principles:

Exteroceptive stimuli:

- Tactile stimulation
- Visual stimulation
- Verbal/auditive stimulation

Proprioceptive stimuli

- Resistance
- Approximation and Traction
- Elongation and stretch-stimulus

Irradiation

Reinforcement

Timing

Body Mechanics

The participants are able:

- to name and apply the extero- and proprioceptive stimuli which are used in PNF
- to describe the neurophysiologic effects of each stimulus
- to describe the importance of each stimulus for motor learning and motor control
- to explain irradiation, its importance in relation to motor control and its purpose of use in the therapy

4. PNF Patterns

Introduction into PNF Patterns: their characteristics (diagonal, three dimensional, moving in all joint components), components, purpose and timing.

- Scapula and Pelvis Patterns including their different combinations in side lying
- All 12 Arm Patterns (except Thrust and Withdrawal) in supine,
- All 12 leg patterns in supine,
- Chopping/Lifting in supine and sitting
- Lower trunk in supine
- Trunk and neck patterns in sitting

Introduction to bilateral patterns

Introduction to application of patterns in other positions

All patterns taught are analyzed in respect of Activities of daily Life (ADL), their potential irradiation and their use in the therapy.

The participants are able:

- to name all joint components of the patterns
- to explain the "groove" and the correct timing of the pattern
- to perform the patterns with
 - a correct grip,
 - a correct starting position and elongation
 - an adequate and correct timing
 - correct resistance
 - an ergonomic body mechanic

- to name to each pattern a functional activity where a similar muscular activation or motion occurs
- to plan, analyze and describe the irradiation which a pattern can create
- to name and demonstrate examples of their use in a treatment on structural level
- to plan and choose the possible use of each pattern in the therapy.

5. PNF Techniques

Their definition, procedure, objectives

- Rhythmic Initiation
- Agonistic Reversal / Combination of isotonic
- Repeated Stretch from the beginning of range
- Repeated Stretch through Range
- Replication
- Contract - Relax
- Hold - Relax
- Dynamic Reversal
- Stabilizing Reversal
- Rhythmic Stabilization
- Timing for emphasis with different techniques

The participants are able:

- to name the objectives of each technique
- to describe the procedure of each technique
- to demonstrate correctness in the practical performance of each technique with different patterns in different positions

6. Mat and functional activities

Normal motor development as a basis of the mat activities.

Rolling from supine to side lying to prone and vice versa with trunk flexor or extensor activity using scapular pelvic and/or extremity patterns.

Prone activities: transitions from prone to stand and vice versa.

Supine activities: bridging, sitting up from supine into long sitting.

Sit to stand and vice versa

The participants are able:

- to recognize dysfunctions and their underlying impairments
- to explain and demonstrate the use of all basic procedures and techniques in all mat activities
- to explain and demonstrate different ways to facilitate rolling from supine to side lying and prone and vice versa using PNF patterns
- to demonstrate ways to facilitate a person to get up from the floor and vice versa
- to demonstrate use of different positions on the mats to facilitate weight bearing activities, postural control, stabilization of trunk and the major joints, mobilization of trunk and major joints, stimulation of selected muscular activities
- to facilitate the transfer from sit to stand and vice versa
- to perform a basic mat progression adapted to the patient

7. Gait

Introduction into normal gait

Gait Analysis: Normal gait cycle and its gait phases: pre-requisites for gait, joint motions, muscular activities, assessment of gait

Facilitation of gait: Stance, weight shifting, stepping forward and backward, one leg standing, gait: forward, backward, sideways, braiding, stairs

The participants are able:

- to name and describe the gait phases according to J. Perry, also in respect of the main joint positions/motions and main muscular activities
- name criteria of the assessment of gait
- to facilitate weight shifts in standing, one leg standing, taking a step, forward, backwards and sideways walking
- to recognize major gait deviations and their underlying impairments
- to plan an adequate gait training

8. Vital functions

Assessment and treatment of oro-facial dysfunctions

Facilitation of breathing

The participants are able:

- to recognize facial and vital dysfunctions and their underlying impairments
- to facilitate facial functions using PNF-Techniques
- to facilitate function of tongue and jaw motion using PNF-techniques
- to facilitate breathing in different positions

9. Patient treatment

Demonstration by the instructor

Supervised patient treatment by the participants

Assessment

ICF classification and clinical reasoning

The participant are able:

- to assess and analyze activity limitations and participation restrictions and their underlying causal impairments in order to set a basic PNF treatment plan
- to integrate the ICF- terminology
- to describe the difference between Participation restriction, Activity Limitation and Causal Impairment
- to use basic treatment-goal oriented PNF (Basic principles, Pattern, Techniques) in direct and indirect approach on a patient
- to integrate test and re-tests during the treatment as a continual process.
- to work within the PNF Philosophy