

## ADVANCED TRAINING IN NEUROLOGY APPLIED TO OSTEOPATHY



**Prof. Dr. Victor M. Castro**

**Intensive Program – 4 days**

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### **General Presentation**

This training offers an in-depth approach to clinical neurology applied to osteopathy, focused on the functional assessment of the nervous system and the management of neurological disorders, particularly peripheral nerve compression syndromes.

Its aim is to establish a coherent link between fundamental knowledge in neuroanatomy and neurophysiology and their clinical application through specific osteopathic techniques, thereby improving diagnostic and therapeutic reasoning.

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### **Learning Objectives**

At the end of the training, participants will be able to:

- Perform a complete and structured neurological examination
  - Identify clinical signs of neurological disorders
  - Establish a differential diagnosis (truncal, plexus, radicular, and central lesions)
  - Understand the mechanisms of nerve compression (entrapment) and *double crush*
  - Integrate modern neurophysiology concepts into osteopathic practice
  - Select and apply appropriate osteopathic techniques (shortening, inhibition, neurodynamic techniques)
  - Adapt therapeutic management to specific conditions (TOS, radiculopathies, myelopathies, TMJ disorders, etc.)
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### **Training Structure (4 days)**

#### **Day 1 – Neurological Examination and Clinical Reasoning**

This first day is dedicated to acquiring the essential foundations of neurological clinical analysis:

- Introduction to clinical reasoning based on real cases
- Performing the neurological examination:

- Sensory assessment (lemniscal and extralemniscal pathways)
  - Motor and reflex analysis
  - Study of major neurological syndromes:
    - Pyramidal, extrapyramidal, and cerebellar
  - Cranial nerve semiology
  - Introduction to nerve compression mechanisms
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## **Day 2 – Peripheral Nerve Compression: Cervical Region and Upper Limb**

This day addresses the main peripheral conditions and their management:

- Anatomical and clinical study of cervical nerves
  - Analysis of upper limb syndromes:
    - Median nerve (carpal tunnel syndrome, lacertus fibrosus, pronator teres)
    - Radial nerve (radial tunnel, deep branch)
    - Ulnar nerve (cubital tunnel, Guyon's canal)
  - Identification of compression sites and etiologies
  - Demonstration of adapted osteopathic techniques
  - Introduction to *Golgi shortening* and neurovascular techniques
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## **Day 3 – Peripheral Nerve Compression: Pelvis, Lower Limb and Plexuses**

Further development of lower limb conditions and associated structures:

- Study of major nerves:
    - Ilioinguinal, genitofemoral, femoral, obturator
    - Sciatic, pudendal, tibial, fibular
  - Approach to plexopathies:
    - Lumbosacral plexus
    - Thoracic outlet syndrome
  - Analysis of low back pain of neurological origin
  - Practical application of techniques based on diagnosis
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## **Day 4 – Radiculopathies, Myelopathies and Technique Review**

Final day focused on synthesis and integration:

- Radiculopathies and sclerotomal involvement
- Myelopathies:
  - Spinal cord syndromes (Brown-Séquard, central cord syndrome, etc.)
- Neurological diseases:
  - Multiple Sclerosis (MS), Amyotrophic Lateral Sclerosis (ALS), syringomyelia

- Specific techniques:
    - Neurodynamic techniques
    - Disc techniques
    - Shortening and drainage
  - Comprehensive review using recorded clinical cases
  - Integration of clinical and therapeutic reasoning
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## **Teaching Methodology**

The training is based on an active and integrative approach:

- Structured theoretical lectures
- Practical demonstrations
- Case-based learning (CBL)
- Problem-based learning (PBL)
- Supervised practice

### **Techniques taught:**

- Golgi Shortening Techniques
- Neurovascular Shortening Techniques
- Inhibition techniques
- Fascial techniques

### **Clinical integration:**

- Complex cases
  - Therapeutic reasoning
  - Selection of the most appropriate techniques
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## **Skills Developed**

- Mastery of neurological examination
  - Advanced clinical reasoning ability
  - Accurate identification of neurological syndromes
  - Safe application of osteopathic techniques
  - Integration of neuro-osteopathy into clinical practice
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# Target Audience and Prerequisites

## Target audience:

- Portuguese osteopaths with professional license
- International osteopaths (non-residents in Portugal)
- Final-year osteopathy students

## Prerequisites:

- Knowledge of neuroanatomy and neurophysiology
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## Workload

- Intensive 4-day training ( $\approx$  32 hours) or 2 blocks of 2 days
  - Balanced combination of theory and practice
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## Format and Conditions

The training can be delivered:

- In 2 weekend cycles (Portuguese language)
  - Or in 1 cycle of 4 days (Wednesday to Saturday), in:
    - Portuguese
    - French
    - English (upon request)
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## Number of Participants

- Maximum: 8 participants
  - Minimum: 4 participants
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## Fees

- Standard fee: €1200
  - AOST members: €1000
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## **Conclusion – High Clinical Value Training**

This training is part of an advanced clinical development approach, meeting the current demands of modern osteopathic practice.

It represents a true tool for professional excellence for practitioners wishing to deepen their expertise in neurology.