

Anatomy, Neuroanatomy, and Neurophysiology Basis for MNRI®



Dates: July 21-23, 2018

2.4 CEUs / 24 Contact Hours

Course Overview

This 24-hour class will give a brief introduction on how anatomy and neurophysiology knowledge is used in the Masgutova Method® programs aimed at effects the functioning of the neurosensorimotor reflex integration used. It also shows the structure of this traditional knowledge in unique application to reflex integration concept.

Learning Objectives: Anatomy and Neurophysiology Basis for MNRI®

1. Describe the structure of gross human anatomy including the following areas of the body: trunk, upper and lower limbs, head and their sub-areas.
2. Explain the definition of Osteology as the science of bones and their structure and functions.
3. Explain how the following functions within neurosensorimotor reflex integration:
 - a. Skeletal system: Trunk bones, spine, vertebrae (neck, thorax, lumbar parts), sacrum, coccyx
 - b. Thorax system: ribs, sternum
 - c. Skull: occipital, parietal, frontal, sphenoidal, temporal, ethmoid bones
4. Describe the following as part of the upper body Osteology system to support the Masgutova Method:
 - a. Facial skull: nasal, lacrimal, vomer, maxilla, mandible, palatine, cheekbone
 - b. Skull sutures
 - c. Upper limb bones: scapula, clavicular, humeral, elbow bone
 - d. Wrist bones, fingers bones
5. Describe the following as part of the lower body Osteology system to support the Masgutova Method:
 - a. Pelvic, os ilium, os ischii, os pubis
 - b. Lower limb bones: femoral, shin, patella
 - c. Foot bones
6. Explain the Osteology system and its development in utero and infancy with the following:
 - a. Newborn skull
 - b. Embryologic, developmental including age features of bone development

7. Explain Arthrology as the science of joints and links of segments of the body and its support for neurosensorimotor reflex integration.
8. Describe the types of joints in the Arthrology systems and their functions in movement system
9. Explain how ligaments in human body and Ligament Guard Response effect neurosensorimotor reflex integration.
10. Explain skeletal trunk connections, spinal connections and spinal connections biomechanics and movements for postural control.
11. Explain the Atlante vertebra's biomechanics and movements and its connections and the functions of the spine.
12. Explain the Thorax connections, rib cage biomechanics and movements as it relates to their role in breathing reflexes functions.
13. Explain the upper limb connections, biomechanics and movements and their effect on the sternoclavicular joint, acromioclavicular joint, shoulder joint, elbow joint, and wrist joints.
14. Explain the Lower limb connections, biomechanics and movements and their effect on the pelvic connections, sacroiliac joint, coxofemoral joint, knee joint, and foot joints.
15. Describe how the Atlante vertebra affects embryologic, and development of joints and motor development.
16. Explain Myology as the science of muscle, fascia, tendons fibers and descending pathways of a reflex circuit.
17. Explain how Myology effects embryologic development of joints and motor development.
18. Explain how the following are used during reflex integration:
 - a. Muscles of trunk
 - b. Back muscles
 - c. Spine muscles
 - d. Fascia of back muscles
 - e. Thorax muscles: superficial, deep muscles
 - f. Diaphragm
 - g. Belly muscles
 - h. Neck muscles
 - i. Upper limb muscles
 - j. Lower limb muscles
19. Describe how the neuroanatomy of the following effect MNRI reflex arch:
 - a. Spine: External structure
 - b. Grey and white matter
 - c. Brain: cerebrum, diencephalon, mesencephalon, rhombencephalon, medulla, cerebellum.

- d. Main pathways of brain and spine: Ascending (lat. ascendance), Descending (lat. descendants) pathways
 - e. Cranial nerves: I – XII
 - f. Spinal nerves
 - g. Neuroanatomy maturation equality for reflex circuit development
 - h. Embryologic, developmental /age features of joints and motor development.
20. Explain the physiology behind neurosensorimotor reflex integration including:
- a. Electrophysiology and the reflex circuit
 - b. Synapse physiology and the reflex circuit
 - c. Muscles physiology and the reflex circuit
 - d. Motion physiology and the reflex circuit
21. Describe the Neurophysiology of the Masgutova Method including:
- a. General CNS physiology (neuron, reflex arc and circuit, coordination of CNS functions)
 - b. Physiology of autonomic nervous system (hypothalamus, vegetative system)
 - c. Sensory physiology (psychology of perception, general sensory physiology) and reflex circuit
22. Explain how superficial, proprioceptive, interoceptive sensitivity affects pain, protective reflexes and reflex circuits.
23. Explain the physiology of higher mental functions including behavior, cortex, brain activation, emotions, cognitive functions, executive functions, and conscious and unconscious decision making.
24. Analyze the role of reflex circuit/s in the development of higher mental functions.

Course Agenda:

Day 1

Hour 1: Movement as basis of Natural

Hour 2: Gross Human Anatomy

Hour 3: Skeletal system, thorax system, and Skull functions within the neurosensorimotor reflex system

Lunch 1 hour

Hour 4: Upper Osteology system to support the Masgutova Method

Hour 5: Lower Body Osteology system to support the Masgutova Method

Hour 6: Osteology system and development in utero and infancy

Hours 7-8: Arthrology

Day 2

Hour 1: Ligament Guard Response

Hour 2: Skeletal connections

Hour 3: Atlas vertebrae biomechanics

Hour 4: Thorax connections

Lunch 1 hour

Hour 5: Upper Limb Connections

Hour 6: Atlas vertebrae

Hours 7-8: Myology

Day 3

Hour 1: Areas used during reflex integration

Hours 2-3: Neuroanatomy and the reflex arch

Hour 4: Physiology behind MNRI

Lunch 1 hour

Hours 5-6: Neurophysiology of MNRI

Hours 7-8: Physiology of higher mental functions

Suggested Hotels

Staybridge Suites Orlando Airport South

7450 Augusta National Dr.

Orlando, FL 32822

(407) 438-2121

Contact Carolina Lopez to get special rate: clopez@dhmhotels.com

SpringHill Suites Orlando Airport

5828 Hazeltine National Drive

Orlando, Florida 32822

Residence Inn Orlando Airport

7024 Augusta National Drive
Orlando, Florida 32822
(407) 816-5533

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Special Needs Requests: If you require special accommodations, please notify SMEI at events@masgutovamethod.com at the time of registration so that needed accommodations can be made prior to the course.

Target audience:

Speech Language Pathologists, Speech Language Pathologist Assistants, Occupational Therapists, Certified Occupational Therapy Assistants, Nurses, Physical Therapists, Physical Therapist Assistants, Educators, Psychologists, Physicians, Massage Therapists, Mental Health Counselors, Other Health Care Providers, Parents.

Criteria for Certificate of Completion and any available Credit Hours or CEUs:

- Full attendance to the entire course
- Participation in practice with instructor feedback
- Post course evaluation



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