



MNRI® Visual & Auditory Reflex Integration

Introduction:

The visual and auditory systems work independently, in combination with each other, and with the remaining sensory systems to inform and guide the body's internal and external actions. The auditory system provides the body access to sounds and vibrations from nature, voices (others and their own), instruments, machines and more; distinguishing differences in volume, timbre, rhythm, pitch, modulation and frequency. When focus is required, auditory reflexes instantaneously block out unnecessary sound frequencies, and when general auditory awareness is required, the auditory reflexes just as quickly expand sound frequency access to ensure the central nervous system is provided with all the information it needs to respond appropriately. The visual system distinguishes variations in shape, color, brightness, movement, helping to distinguish familiar people, places and things from unfamiliar, to determine relative location, and detect visual input important to daily function and general survival. Visual reflexes adjust instantaneously from static and dynamic visual input that is near or far, blocking out extraneous visual input when visual concentration and focus are required, while remaining vigilant to unusual visual input important to productive functioning and general safety. While the visual and auditory sensory systems each provide the body access to unique forms of stimulus input, they also work together to coordinate "seeing-hearing" information and in combination with the other sensory systems to inform and prioritize input for the central nervous system to guide and direct action in response to ever-changing conditions. Due to congenital issues or trauma (in utero, at birth or anytime after birth) the auditory and visual systems can become hypersensitive or hyposensitive as defined below, or simply not function; leading to a number of auditory and visual challenges.

Hyper-sensitive Reactions

- *Auditory hyper-sensitivity* can result in an over-reaction or intolerance to loud sounds, high or low frequencies of sound, or other sound characteristics that do not cause disruption to others. People with a hyper-sensitive auditory system often cover their ears and will in reaction to the discomfort various sounds cause
- *Visual hyper-sensitivity* can result in an over-reaction or distraction to visual input that typically does not cause disruption to others, i.e. bright or low lights, bright colors or complex graphic designs, static or dynamic visual stimulus relating to people, animals, objects, and more. People

Hypo-sensitive Reactions

- *Auditory hypo-sensitivity* results in an under-reaction to sounds that typically engage others to act. Often auditory hypo-sensitivity causes an individual to miss information important to learning, remaining safe and productively functioning in the world. People with this challenge often remain oblivious to sounds that cause others to negatively react.
- *Visual hypo-sensitivity* results in an under-reaction to visual input that typically engages others to take action. A person who is experiencing hypo-sensitive vision might look directly at bright lights that would cause other's to cover their eyes, might not react to movement that could cause harm, or have difficulty following people or objects with their eyes.

When auditory or visual challenges lead to reactions bigger or smaller than normal conditions would dictate, it is likely the challenged system is not appropriately engaged or integrated. The emotions and behavior of a person experiencing auditory or visual challenges often appears dys-regulated to outside observers. MNRI Visual and Auditory Integration Program techniques work to engage and integrate the visual and auditory sensory systems to improve sensory system function, which in turn, can improve behavioral and emotional regulation, and enhance learning.

Professionals, parents, and caregivers working with clients or children facing visual or auditory challenges are encouraged to attend the MNRI Visual and Auditory Integration course. The course explores in great detail the physiology and psychology of the visual and auditory systems, the developmental effects of hyper- and hypo-sensitive challenges, and the important role the visual and auditory systems play in the integration of all motor reflex movements and patterns. Visual and Auditory Reflex Integration course participants can expect to learn about:

- Visual and Auditory reflexes as they relate to automatic motor reflexes and important body systems
- Binocular vision and visual perception, binaural hearing, auditory perception and postural control, visual and auditory concentration and attention span, seeing/hearing and hearing/seeing coordination systems and the conditions necessary for optimal functioning
- The role auditory reflexes play in establishing the foundation for future motor, communication and cognitive development, and emotional and behavioral regulation
- The reflex points important to visual and auditory reflex integration, movement coordination activities and the coordination

necessary between the auditory and visual systems in the body

- MNRI techniques developed to assess, pattern and integrate visual and auditory reflexes and related primary motor reflex movements and patterns

Course Objectives:

Upon successful completion of the three-day, 24-hour Visual and Auditory Integration course participants will:

1. Learn about the Masgutova Neurosensorimotor Reflex IntegrationSM (MNRI) Method
 - a. The innate nature of the motor reflex system
 - b. The role of a reflex and its sensory, motor and central nervous system mechanisms
 - c. When, why, and how the brain engages in protection versus learning and development
 - a. The role the visual and auditory systems play in motor reflex integration and advanced learning
2. Learn about the vision system and its function, exploring through course lecture:
 - a. Anatomical components of the visual system and the role each plays in the vision process
 - b. Visual reflexes and the role each plays in maturational and developmental processes
 - c. The challenges created by dysfunctional visual reflexes
 - d. MNRI techniques available to address challenged visual reflexes
 - e. The importance of natural vision skills and the eye movements necessary to establish a coordinated visual system
3. Learn about the auditory system and its functions, exploring through course lecture:
 - a. Anatomical components of the auditory system and the role each plays in the auditory process
 - b. Auditory reflexes and the role each plays in maturational and developmental processes
 - c. The challenges created by dysfunctional auditory reflexes
 - d. MNRI techniques available to address challenged auditory reflexes
 - e. The connection between the hearing and vestibular system
4. Learn and implement MNRI assessment techniques to determine the integration state (i.e. integrated, dysfunctional or pathological) of each visual and auditory reflex
 - a. Demonstrate through supervised hands-on-application the ability to conduct an MNRI assessment and adequately determine the state of each visual and auditory reflex
5. Learn and implement the MNRI techniques to integrate each visual and auditory reflex
 - a. Learn through demonstration and hands-on-practice the MNRI techniques to activate and integrate non-integrated visual and auditory reflexes
 - b. Learn through course discussion and instructor demonstration how to deal with unique and challenging client situations using MNRI method techniques
 - c. Demonstrate for the course instructor the ability to appropriately apply integration procedures for each visual and auditory reflex
6. Learn to use course knowledge to create and apply an individual MNRI program for clients with various challenges
 - a. Develop an individual MNRI program based on assessment results and targeted individual challenges
 - b. Explore with client family the potential impact the individualized program can have on
 - Supporting the integration of archetype motor movements, primary motor reflex patterns and other body systems
 - Body structure, posture, and motor system maturation
 - Motor, communication and cognitive learning abilities and emotional and behavioral regulation
7. Explore, evaluate, and develop strategies to incorporate the use of the MNRI Visual and Auditory course content into daily client and home practice

Reflexes & Techniques Addressed in this Course:

Primary Motor Reflex Patterns

- Asymmetric Tonic Neck Reflex (ATNR) • Symmetric Tonic Neck Reflex (STNR)

Additional Motor Reflexes

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|--------------------------|---------------------|----------------------------------|
| • Accommodation | • Core Tendon Guard | • Primary Sounds |
| • Acoustic | • Eye Tracking | • Sound Source/Space Orientation |
| • Auditory Figure-Ground | • Head Righting | • TMJ Leveling |
| • Breathing | • Oculo-kinetic | • Vestibular Leveling |
| • Convergence-Divergence | • Oculo-vestibular | • Visual Figure-Ground |

Auditory Visual Integration Techniques

- Body Cross Relaxing
- Green Light Tendon Guard Release
- Auditory Figure-Ground
- Middle Clavicle Pendulum
- Cheek Bone Stretching
- Circles Around the Eyes
- Opening Windows
- Temporal Bone Tapping
- Foramen Points Stimulation
- Head Arch
- Eye Points Stimulation
- Eye Infinite Eights
- Ear Proprioception Activation
- Hearing Proprioception Activation
- Ear Plugs
- Visual Patterns Reflex Activation
- Vestibular-Ocular Reflex Activation
- Opti-Kinetic Reflex Activation

Prerequisites: No prerequisites required; however, Masgutova recommends attending the Dynamic & Postural Reflex Integration course first, whenever possible, to help provide broader context prior to attending other foundation courses.

Course Length: The course covers a period of three days and requires a minimum of 24 hours of direct classroom instruction to complete.

Curriculum Design: The course curriculum consists of a combination of historical and theoretical lecture, case study slides and videos, technique demonstration and applied practice, and class discussion.

Course Materials: The Visual and Auditory Reflex Integration course manual, written by Svetlana Masgutova, Ph.D., is the primary source for content presented in class. Supplementary course content draws from a variety of articles and MNRI case studies, and is referenced as needed upon presentation in class. The course manual is included as part of the course fee and is distributed to course participants at initial course check-in.

Approved Continuing Education Course for: AOTA