

## NeuroDevelopment Program

The NeuroDevelopment Profile provides a standard method for measuring and reporting processing abilities. It is an integral part of the comprehensive NeuroGeniSys Procedure and Assessment. The purpose of the profile is to provide a tool for linking Brain Performance Indicators (BPI) of strengths and barriers with processing patterns. The Neurodevelopment Profile section of your report measures and reports age appropriate Neurodevelopment responses to the basic processing systems and their functional cognitive expression. As the pathways develop, the brain's ability to receive, process, learn and integrate information from different perspectives naturally evolves.

### Functional Brain Areas Covered

1. Attention and Executive Functions
2. Tactility Processing
3. Sensory Motor
4. Auditory Processing
5. Visuospatial Processing
6. Language Expression
7. Mobility Expression
8. Vestibular Processing
9. Oral Sensory Processing
10. Arousal System

Our NeuroDevelopment Programs combine primitive reflexes, postural reflexes, motor planning, sequencing, sensory, speech, language and auditory processing exercises, activities and therapies.

- Primitive/Postural Reflexes
- Motor Planning
- Sensory
- Sequencing
- Memory/Retrieval
- Speech/Language
- Auditory Processing

Some of our activities and therapies include:

- Primitive Reflexes repression/ Postural Reflexes emergence
- Oral Motor Challenges
- Sensory Development
- Sequencing Challenge
- Hearing and Listening Challenges
- Auditory Processing exercises
- Conceptualization Development
- Speech and Language Concepts
- Speech Communication for Daily Living

- Memory and Retrieval Challenges
- Motor Planning Challenges

### **NeuroDevelopment Profile Brain Performance Indicators:**

#### Sensory Processing

The Sensory processing profile identifies responses to the basic sensory processing systems and their functional cognitive expression. Auditory Processing

The items included in the auditory section measure responses to things heard. ie: distracted by noise, noises seem too loud, trouble functioning with certain noises, doesn't hear or tunes out.

Visual Processing This section includes items that measure responses to things seen. ie: bothered by bright light, doesn't look directly at objects, doesn't notice light, ignores objects, misses details.

Vestibular Processing This section measures the child's responses to balance and movement, ie: becomes anxious or distressed when feet leave the ground, has trouble walking on uneven surfaces, car sickness, headaches.

Touch Processing The touch section measure the child's responses to touch to the skin, ie: becomes irritated by shoes or socks, itchy material, doesn't like wind blowing on their skin, doesn't feel anything.

Oral Sensory Processing The oral sensory section measures the responses to touch and taste stimuli to the mouth, ie: limits food preference based on texture or temperature, aversion to things in or around mouth, or puts everything in mouth, difficulty with articulation. Eating and oral aversions can be aversions to either hard and crunchy or soft and mushy textures.

Multisensory Processing Items in this section measure the child's response to activities that contain a combined sensory experience, ie: seems overwhelmed in an active environment, meltdown, hyperactive, or catatonic.

Modulation The Modulation section attempts to measure regulation of neural messages through facilitation or inhibition of various types of responses. Modulation is broken down into six areas of sensory modulation:

Sensory Processing Related to Endurance/Tone This section measures a child's ability to sustain performance, ie: tires easily, poor endurance, breath control.

Modulation Related to Body Position and Movement Items in this section measure a child's ability to move effectively, ie: takes movement or climbing risks play that compromise personal safety, or refuses to climb due to fear of place in space.

Modulation of Movement Affecting Activity Level This section measures a child's demonstration of activeness, ie: spends most of the day in sedentary play.

Modulation of Sensory Input Affecting Emotional Responses These items measure the child's ability to use body senses to generate emotional responses, ie: rigid, rituals, overly emotional.

Modulation of Auditory Input Affecting Emotional Responses and Activity Level Items in this section measure the child's ability to integrate auditory stimuli and how it effect their emotional responses, ie: anxiety over loud noises, inattention due to background noise.

Modulation of Visual Input Affecting Emotional Responses and Activity Levels Items in this section measure a child's ability to use visual cues to establish contact with others, ie: stares intensely at objects or people.

Behavioral and Emotional Responses The Behavioral and Emotional Responses section reflects

the child's behavioral outcomes of sensory processing.

**Emotional/Social Responses**

Indicates a child's psychosocial coping strategies, ie: has fears that interfere with daily routine.

**Behavioral Outcomes of Sensory Processing**Indicates the child's ability to meet performance demands, ie: has difficulty tolerating changes in plans and expectations, difficulties in transitions.

**Items Indicating Thresholds for Responses**This section includes items that indicate the child's level of modulation, ie: jumps from one activity to another so that it interferes with play, can't engage with play.