Consent for Neurodevelopmental Program
Rehabilitation Center for Neurological Development
&
Nicholas School

The neurodevelopmental program is a highly structured program of developmental locomotive therapies designed to influence overall brain organization. In addition, hemispheric integration is promoted; cortical dominance is achieved and the vestibular area in developed.

Each level of brain development is influenced by a specific set of exercises. Each exercise has a specific, stylized form and is neurologically based. A student is encouraged to complete program exercises according to his/her capability.

A neurological program should be done often enough, hard enough and long enough to promote the healthy brain cells to perform at an optimal level. By completing the program, neurological organization will improve.

The neurological program is done with gentle, slow, precise movements. At times, up to 5 staff members may assist students to achieve the correct form.

Achieving neurological organization can improve reading, coordination, attention, focus, increase self-esteem, vision and speech. Following is an explanation of neurological exercises.

<u>Spinal Movements</u>

- The spinal movements stimulate low brain stem levels of neural organization. In addition these movements influence midbrain organization and can assist to reduce ADHD symptoms. Spinal movements also assist with developing spatial orientation, achieving bowel and bladder control and improve body awareness.
- Fish Tail: swing legs as far as possible to each side - keep upper body as still as possible - be sure feet stay together as they move
- Rag Doll: bend upper body from waist as far as possible to each side - keep as still as possible from the waist down - palms flat on floor at all times - legs straight - feet together - head/eyes toward bended side
- Sleepy Bear: both sides - in position: knees bent - hands touching - feet together - head tucked - out position: full extension of body - back arched
- See Saw: hands and feet move the same direction at same time - hands up - palms up - head on floor - knees bent and palms down arms down by side - feet slide along floor - feet flat on floor at all times
- Reverse See Saw: hands and feet go opposite direction - hands go down as feet come up - when hands are up palms are up

<u>In Place Patterns</u>

- Patterning is a program of movement, which helps with brain development. The patterns stimulate brain organization at the sub cortical level.
- 3 patterns - Homolateral - Cross Reverse - Regular Cross
- Specific patterned movements of arms, legs and head - rhythm is smooth - not too fast
- Assistance is provided to achieve correct form
- Homolateral pattern positon: position on belly, same arm and leg needs to be up and head turned to same side, slide foot and hand down to switch while turning head

- Homolateral patterning tends to influence the speech centers of the brain and is the pattern of choice for the child with speech delays, including non-verbal, articulation difficulties and expressive language disorder

Crawling Down Ramp

- Develop pons area of brain. Reinforces all areas of development at the pons level and improves overall physical coordination. Influences vision and auditory development.
- On stomach bending leg at knee - pushing with toes - opposite arm extending forward - vision toward forward/extended hand

Stylized Creeping in Cross Pattern

- Creeping develops the midbrain. "Visual development at the midbrain level is greatly enhanced by cross pattern creeping. Hyperactive children tend to become calmer and more attentive and their distractibility decreases significantly when the midbrain level is mastered. This is probably the result of increased integrative ability, which in many areas of function is the province of the midbrain." source Non Coping Child by Sister Mary Consilia pg 187-188
- Moving forward in a cross pattern form with specific hand and foot placement while on hands and knees - maintain eyes and head turned to forward hand

Knee Walking

- Knee walking promotes brain organization at sub cortical level and cortical and right and left brain integration.
- Maintain proper technique - cross pattern (opposite arm and leg) - vigorous arm swing - head/eyes looking forward - good consistent toe drag - knees appropriate width apart - fingers pointing downward with thumb pointing straight

Ball Activities

- Promotes eye hand coordination - assists with impulsivity

Vestibular Activities

- A variety of vestibular movements including balance beam and rolling promotes balance and body awareness.

Cortical and Other Activities

- Higher level exercises at the cortical level promote hemispheric integration include stylized walking, skipping, jumping rope and trampoline.

Attendance

- The concepts of frequency, intensity and duration are important and vital for consistent progress and for improving level of cooperation.

Student/Client Name: _____

I have read the above neurodevelopmental program information and fully understand the contents therein and give permission for my child to participate

Signature of Parent/Guardian

Name: _____
(Print)
Signature: _____

Date: _____