Integrating Tonic Labyrinthine Reflex: An exercise for children with learning disabilities

Do you have students who....

- Are very disorganized?
- Can't tell a good story from beginning to end?
- Can't read an old fashioned clock?
- Mix up words related to time like yesterday and tomorrow?
- Have skinny arms and legs?
- Have no muscle tone and are weak in their upper body?
- Find it most comfortable to slouch in their chair?
- Hate to lie on their tummies to read or watch TV?

If you responded yes to several of the above questions, the child may have a retained Tonic Labyrinthine Reflex (TLR).

What is Tonic Labyrinthine Reflex?
TLR is a primitive reflex in newborns. Normally, a baby spends time on their tummy with head and arms up and out. While doing this, a baby develops the muscles in their neck, shoulders, and back. These muscles are necessary for later stages of development. If a child has a retained TLR, they may have passed too quickly through this stage of development in infancy and retained the TLR.

What does this mean?
During the time TLR is developing, other areas in the body are also growing and maturing, including:

- The vision system for convergence - the ability to refocus near to far

and back again easily
- The ability to use the entire foot for walking (instead of toe-walking)

A later stage of development, Asymmetrical Tonic Neck Reflex (ATNR), is integrated by doing combat crawl. In order to do this, the baby needs to have developed strong muscles during the TLR stage to be able to pull herself across the floor. Crawling requires even more muscles as the arms must be able to hold up the weight of the body.

In order to have healthy and complete development, the stages must be adequately entered and worked through. When TLR is retained and the muscles haven't properly developed, a child may appear uncoordinated in their movement, have a tendency to walk on their toes, and hang their head forward while sitting (making concentration difficult and uncomfortable for a learning child).

TLR and Brain Development
During TLR, the connections to the temporal lobe are starting to be developed, setting up the brain to be able to sequence. We use sequencing for reading (keeping sounds in order), writing (keeping letters, words, and thoughts in order) and math (step-by-step directions, counting, telling time).

A retained TLR can lead to difficulties learning reading, writing and math.

What to do?
By replicating the stage of development and completing easy, daily exercises, we can train our body to work through the retained TLR. While 30 days of exercise may be enough to make changes in a child's sequencing ability, it may take up to six months of daily exercise to fully develop the muscles.

Here's one daily exercise to help integrate TLR:

Simple Fly to the Moon exercise to integrate Tonic Labyrinthine Reflex

1. Every day, have the student lie on their stomach, up on their elbows. Hold for 30 seconds at a time, working up to 3 minutes a day.

2. In order to isolate the muscles in the upper body, the legs and buttocks should be resting. It may be very difficult at first—have the child do this at their own capability, but each day challenging for more.

3. This must be done at least 5 days a week in order to make real changes in the brain and the body.

4. When the child is ready, have them see if they can hold both elbows up off the floor, causing the entire upper body to be off the floor.

5. Start with however long they can accomplish this—even if only 10 seconds. Challenge each day to go a little longer.

The goal is to be able to sequence well, and most children achieve this in 30 days. Physically, the goal of being able to hold up the upper body without pain for 3 minutes may take longer, as much as 6 months.

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This blog was brought to life by PESI speaker Kathy Johnson, MS Ed.

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Success, is a nationally recognized expert in multiple therapy methods including: Primitive Reflex Training, Therapeutic Listening, Samonas Listening, PACE, Phono-Graphix, Irlen Syndrome, Brain Gym 101, and An Introduction to Rhythmic Movement.

Kathy started The Hunter School of Ballston Spa where struggling third through eighth grade students received required academics along with intensive therapy. She is also the owner of an educational consulting business to screen and remediate student struggles individually. Kathy earned her Master's degree from the State University of New York at Albany where she instructed faculty and staff, was an adjunct professor at Schenectady County Community College, and taught at The Adirondack School of Northeastern New York.

Tags: Tonic Labyrinthine Reflex (TLR)