Brain Gym® (Part 2)

Tom Maguire

In Part 1 of this article we talked about the background to Brain Gym and the success stories that it has made possible in sport and education. In this article we want to give you the references and tools to enable you to try out Brain Gym for yourself.

In her review of the literature on Brain Gym in a study done for Strathclyde University, Scotland, Margaret Dunn states that Brain Gym consists of simple movements similar to the movements which in fact are natural in the first three years in life. She says we can consider it a useful tool in a classroom situation because it does not require sophisticated pieces of equipment or large areas of space.

Dunn says that Levine (1987) affirms that writing is, still, an important method of learning and expressing knowledge in schools and that the motor act of writing involves a broad array of fine motor and visual-motor skills. Furthermore, Arter et al. (1996, p26) state:

> *"No child will be able to produce the fine motor movements for writing with a pencil until he or she is able to control ……. larger movements."*

Likewise, Thomas (1997) noted that the Physical Education curriculum in France plays an important part in the teaching of handwriting and P.E

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teachers use physical activities which are closely linked to the teaching of handwriting.

Rosenbaum, (1998) also suggests that studies of the development of children with disorders of motor functions afford opportunities to understand the importance of motor function to overall child development

Ms. Dunn's study concludes that normal classrooms depend on activities which utilise verbal or analytical intelligence but that when a child is allowed to use the body, it encourages the brain to make use of a variety of intelligences including rhythmical and visual-spatial intelligence. Further, long-term recall also seems to be enhanced by this kind of practice.

Dr. Dennison was the person who discovered the empowering effects of Brain Gym movements One of the basic references of his model is that of Laterality. This is the ability to coordinate one side of the brain with the other, especially in the visual, auditory and kinesthetic midfield, the area where the two sides overlap. The vertical midline of the body is the necessary reference for all bilateral skills and midfield coordination is fundamental to the ability to read, write and communicate. It is also essential for fluid whole-body movement and for the ability to move and think at the same time.

To ensure coordination in this crucial midfield area Dennison developed The Midline Movements which help to integrate binocular vision, binaural hearing, and the left and right sides of the brain and body. Many learners beginning school are not developmentally prepared for the bilateral, two-dimensional skills of near-point work required in reading and writing, for example. Sometimes a student is coordinated for play or sports activities

(which involve three-dimensional space and only demand binocular vision beyond arm's length), yet is not ready to use both eyes, ears, hands, and brain hemispheres for near-point work, such as reading, writing and other skills involving fine-motor coordination. Other students show coordination for academic skills or near-point activities, yet are not ready for whole-body coordination on the playing field. The Midline Movements enable learners to integrate fine-motor and large-motor skills.

Cross-motor activities have been used to activate the brain since our understanding of laterality began over a century ago. Noted authorities such as Orton, Doman, Delacato, Kephart, and Barsch have used similar movements successfully in their learning programs. Dr. Dennison drew from his knowledge of these programmes in developing the Midline Movements series. Some of them have also been adapted from behavioural optometry activities used to increase brain-body coordination. Others are borrowed from sports, dance, or exercise programs. Others are totally unique to Edu-Kinesiology and are the innovations of Dr. Paul Dennison.

Whole Brain Integration Edu-K, helps people of all ages to experience more integrated learning, body co-ordination, sports performance and daily living. The importance of movement across the midline of the body is the focus of Whole Brain used to quickly and easily correct homolaterality – the lack of left/right brain integration,. In order to read fluently and with comprehension; to write creatively; to spell and remember; to listen and think at the same time; or to perform at our athletic peak, we must be able to cross the midline which connects the left and right brain.

It’s interesting to note that among the population identified as "learning disabled" we find that 80% or more fall into the homolateral category. Living in a homolateral state leads to frustration and the need for extreme effort, often resulting in “acting-out" behaviours. Academic achievement is very difficult. Brain Gym® movements help repattern both brain hemispheres to work simultaneously and cooperatively, creating the smooth neural functioning that leads to emotional ease - and academic effectiveness.

A recent study (Dr. Robert Eyestone, 1990) found that more than 95 percent of individuals in groups labelled as "at risk" (teen mothers, juvenile detention, ADD/ADHD, in learning disabilities classes, drug rehabilitation, alcohol support groups) were operating in a homolateral state, as compared to 8 to 13 percent in random groupings.

As we saw in the first part of this article dramatic changes in behaviour are seen when this homolateral state is addressed and an integrated neural state is achieved. Whole Brain Integration can help this group to join the laterally integrated population, which is able to learn with the whole brain more easily. Being integrated helps us to remain calm and alert, even in stressful situations (exams, job interviews, performances, etc.). When we are relaxed and calm we make better decisions, we feel better about ourselves, and those we interact with, and we are more productive.

If you feel that Brain Gym could enable your students and would like to experiment by building Brain Gym exercises into your own classroom practice Ruth Schmid has a practical proposal. She recommends you start

with the Brain Gym Mini-Menu below. For best results she advocates doing them twice each day in the order outlined below.)

Water.

Drink a glass of water. This increases energy, improves production, concentration and test taking ability.

Brain Buttons.

This exercise stimulates the blood flow through the carotid arteries to the brain to "switch on" the entire brain before a lesson begins. The increased blood flow helps improve concentration skills required for reading and writing. It also increases overall relaxation.

Make a 'C' shape with your thumb and index finger and place at either side of your breastbone, just below the collar bone. Gently rub for 20 or 30 seconds while placing your other hand over your navel. Then change hands and repeat.

Cross Crawl.

This exercise helps coordinate right and left brain by exercising the information flow between the two hemispheres. It is useful for spelling, writing, listening, reading and comprehension. It also improves left/right coordination.

While standing, alternatively touch your left knee with your right hand then the right knee with the left hand. Continue for 10 to 15 repetitions. (Variation 1 - touch opposite elbow to knee. Variation 2 - reach hand behind back to opposite foot.)

Hook-ups

This works well for nerves before a test or special event such as making a speech. Any situation which will cause nervousness calls for a few "hook ups" to calm the mind and improve concentration. Diffuses stress; improves self-esteem; establishes a positive orientation; promotes clear listening and speaking; aids in ability to function calmly in test taking; improves typing and computer work; helps reading, writing and spelling.

Sitting on a chair with legs outstretched, cross one ankle over the other, stretch your arms forward with the backs of your hands facing one another, thumbs down lift one hand over the other (now palms face one another) and interlock the fingers roll the locked hands straight down and in toward the body so they eventually come to rest on the chest rest your tongue on the roof of your mouth behind the teeth (the hard palette).

(This position connects emotions to the limbic system with reason in the frontal lobes of the cerebrum thus giving integrative perspective from which to learn and respond more effectively.)

Another way of introducing Brain Gym into a classroom routine is through balances. A balance is a five-step learning process that models the lesson plan most often used by effective teachers. A short balance can be completed in just minutes; a longer balance may take an hour or more.
A balance involves:

1. Getting ready to learn,
2. Setting a goal or intention,

3. Pre-activities which playfully identify aspects of the learning that need more focus for integration,
4. A way to integrate the learning into physical movement (in this case, through the Brain Gym movements),
5. Post-activities to identify the new learning.

The final, unnumbered step is to "celebrate the new learning." This is the step of play, exploration, innovation and implementation that is essential to creative learning, yet often omitted in the classroom, where learners are pressed to begin a new task before even acknowledging the skill with which the previous one has been accomplished.

There is a variety of Brain Gym movements which you can use to integrate learning through movement. The following are descriptions of how to put them into practice with indications as to the way in which they can influence your students' learning.

Lazy-Eights (or Double Doodle)

Helps with: reading, speed reading, writing, hand/eye co-ordination.

Extend one arm in front of your face. With one thumb pointing upwards, slowly and smoothly trace the infinity sign (∞) in the air. Keep you neck relaxed and your head upright, moving only slightly as you focus on the thumb and follow it around. This relaxes the muscles of the hand, arms and shoulders and helps visual tracking.

Thinking caps

Helps with: spelling, self awareness, short-term memory, listening ability, abstract thinking skills.

With your thumb and index finger, gently pull and unroll the outer part of the ear, starting from the top and slowly moving to the lobe. Pull the lobe gently. Repeat the whole exercise three times.

Calf pumps

Helps with: concentration, attention, comprehension, answering questions, imagination and the ability to finish tasks. This exercise removes the sense of being held back and not being able to join in. It stimulates the reptilian brain.

Stand, arms length away from a wall and place your hands (shoulder-width apart) against it. Extend your left leg straight out behind you so that the ball of your foot is on the floor and your heel is off the floor and your body is slanted at 45 degrees. Exhale, leaning forward against the wall while also bending your right heel and pressing your left heel against the floor. The more you bend the front knee, the more lengthening you will feel in the back of your left calf. Inhale and raise yourself back up while relaxing and raising the left heel. Do the movement three or more times, completing a breath with each cycle. Then alternate to the other leg and repeat.

The Elephant

This activity activates all areas of the mind/body system (highly recommended for children with ADD (attention deficit disorder)

Place the left ear on the left shoulder extend the left arm like the trunk of an elephant with knees relaxed, draw the infinity sign (crossing up in the middle) in front of you switch arms after three to five signs.

Energy Yawn

A great stress reliever. Massage the muscle around the TMJ (temporal-mandibular joint) at the junction of the jaws.

Positive Points

Since much stress is held in the abdomen this deactivates the fight or flight response and allows accessibility to a new response to a situation by stimulating the neurovascular balance points for the stomach meridian. Thus it releases memory blocks, relieves stress, and clears thinking and increases speaking abilities and organization skill.

Lightly touch the point above each eye halfway between the hairline and the eyebrow with fingertips of each hand. Close your eyes and breathe slowly and deeply.

Drink Water

As Carla Hannaford says, "Water comprises more of the brain (with estimates of 90%) than of any other organ of the body." Having students drink some water before and during class can help "grease the wheel". Drinking water is very important before any stressful situation - tests! - as we tend to perspire under stress, and de-hydration can effect our concentration negatively.

All the electrical and chemical reactions of the brain and central nervous system are dependent on the conductivity of electrical currents between the brain and the sensory organs, facilitated by water. Did you know that

• psychological or environmental stress depletes the body of water, leaving cells dehydrated?

• water is essential to proper lymphatic function (the nourishment of the cells and removal of waste is dependent on this lymphatic action)?

• all other liquids are processed in the body as food, and do NOT serve the body's water needs?

• water is most easily absorbed at room temperature?

• excessive water taken less than 20 min. before or one hour after meals may dilute digestive juices?

• foods that naturally contain water, like fruits & vegetables, help to lubricate the system, including the intestines (their cleansing action facilitates absorption of water through the intestinal wall)?

• processed foods do NOT contain water, and, like caffeinated drinks, may be dehydrating?

(Thanks to Brain Gym® teacher, Evelyn Moniram RGN SCM at The Art of Health, 280 Balham High Road, London SW17 7AL. 020 8682 1800. The information of the effects on the brain were provided by Bill Tschirhart of the Canadian Curling Association based on Carla Hannaford's research)

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