



Brain Gym®

What is it?

Brain Gym® is a series of easy, gentle and enjoyable movement activities, which bring improvements in concentration, memory, listening and physical coordination. They are energy and mental alertness enhancing. Brain Gym® movements stimulate the flow of information within body and brain, freeing our innate ability to learn and function at top efficiency.

Who would benefit?

Everyone, from preschoolers to seniors will benefit! Brain Gym® is an effective energizing tool, to positively change previously learned, ineffective, stressful behaviours.

What are the benefits to everyday life?

Brain Gym® provides practical tools for decreasing effort and stress in such activities as: reading, writing, comprehending, speaking, memory, decision-making, test-taking, playing an instrument, organizing, parenting, and physical co-ordination.

How can I experience, or learn Brain Gym®?

1. Introductory Workshops
2. Brain Gym® certification courses which enable you to use "balances" to achieve specific goals
3. Private Sessions

What is available?

1. Introductory workshops are available, varying in length from one hour to a full day. We are available to travel to your area for large groups, full day.
2. Private sessions are dynamic and vary in length, according to individuals needs.
3. The 24 hour Brain Gym® certified course and the 32-hour Brain Gym® for Educators Course, leading to Professional Status.
4. Mental Fitness for Seniors. Course length tailored to your group's need.

To Learn More Contact:

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A SIMPLE STATEMENT OF BRAIN GYM EFFECTIVENESS

Brain Gym activates all areas of the neo-cortex, especially the frontal lobe, the primary motor area, on both hemispheres of the brain. When doing Brain Gym, brain wave activity and electrical energy are directed away from the survival areas of the brain (the brain stem and the limbic system) to the neo-cortex where understanding and high level thought processes can occur. The person is able to process information both from the whole to the parts, and from the parts to the whole with ease.

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In general, the neo-cortex has the following basic areas:

- Sensory areas: interpret sensory impulses
- Motor areas: control muscular movements
- Association areas concerned with emotional & intellectual processes

Brain Gym activates a diffusion effect across all the lobes of the brain through neuron connections so that whole understanding occurs.

Frontal lobe: Primary Motor Area - controls specific muscles or groups of muscles
Premotor Area - concerned with learned motor activities of a complex and sequential nature requiring skilled movements, i.e. writing
Frontal Eye Field Area - controls voluntary scanning movements of the eyes
... searching for words
Broca's Area - translation of thoughts into speech and development of inner speech

Parietal Lobe: General Sensory Area - touch, pressure, pain, heat, cold and proprioception
This area localizes exactly the parts of the body where sensations originate
Somesthetic Association Area - integrates and interprets sensations - determines shape and texture of an object without visual input, orientations of objects, relationship of one body part to another and storage of memories of past sensory experiences
Gustatory Area - sensations related to taste

Temporal Lobe: Primary Auditory Area - interprets the basic characteristics of sound: pitch and rhythm
Auditory Association (Wernicke's Area) - determines if a sound is speech, music or noise and interprets the meaning of speech by translating words into thoughts
Primary Olfactory Area - interprets sensations related to smell

Occipital Lobe: Primary Visual Area - receives sensory impulses from the eyes and interprets shape, colour and movement
Visual Association Area - relates present to past visual experiences with recognition and evaluation of what is seen

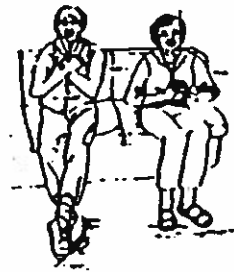
SOSOH Stressed Out, Survival-Oriented Humans!
(Carla Hannaford, "Smart Moves- Why Learning is Not All in Your Head" page

From *Smart Moves - Why Learning is Not All in Your Head* by Carla Hannaford, Ph.D.
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I PACE myself with.

HOOK-UP'S FOR POSITIVE

- 4 Activates sensory and motor cortex's in both hemispheres of cerebrum simultaneously. Tongue connects limbic and frontal lobes

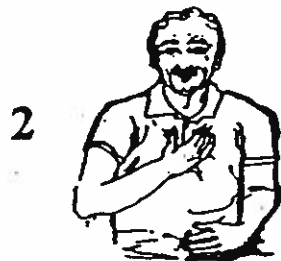


CROSSCRAWL FOR ACTIVE



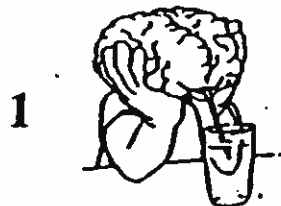
Activates both hemispheres of neocortex simultaneously (motor and sensory cortex's of parietal and frontal lobes). Done slowly in order to activate vestibular system for balance.

BRAIN BUTTONS FOR CLEAR



Below are the carotid arteries supplying fresh oxygenated blood to brain. K-27 points in acupuncture for lung/brain function. Hand on navel brings attention to gravitational center of body (vestibular /RAS /neocortex activation).

WATER FOR ENERGETIC



Makes up 76% of body weight, ionizes salt increasing electrical potential across membranes, essential for protein form and function in nerve-nets, and increases oxygen uptake by hemoglobin greatly.

↑↑
⇒⇒ **BEGIN AT THE BOTTOM OF THE STAIRS** ↑↑

- PACE:** A: Increases oxygen amount and flow to the brain. Though 1/50th of body weight, brain uses 1/5th of its oxygen
B: Increases and balances electrical energy to the neocortex away from the survival centers in the brain.
C: Increases polarity across cell membranes, for more efficient thought processing and focused attention

Why Water?



Water makes up about the same percentage of our bodies as it does of our planet - approximately 70 percent. And, since our bodies are continually using water, a conscious effort to maintain hydration by replacing lost water is vitally important. All of the electrical and chemical actions of the brain and central nervous system are dependent on good conduction of electrical currents to pass messages between the brain and the sensory organs.

As a major component of blood, water is the delivery system that gets oxygen to each cell of the brain and body. Within the lymphatic system, water carries away waste products as well. It ionizes salts, producing the electrolytes necessary for electrical activity across the cell membranes. Water is essential for the proper use of protein in the body, and for the development of nerve network during learning.

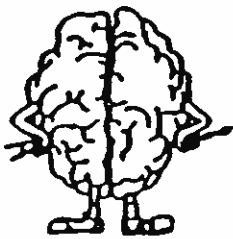
Hemoglobin, the iron-rich protein pigment in red blood cells, ferries oxygen throughout the body. Until recently, hemoglobin has baffled scientists because it grabs on to oxygen in the lungs more readily than its molecular structure would suggest. Now, three biophysicists at the National Institute of Diabetes and Digestive and Kidney Diseases in Bethesda, Md., have found that at least 60 water molecules latch on to a hemoglobin molecule as it takes up oxygen in the lungs. Oxygen molecules then attach to the hemoglobin more easily, report Parsegian, Rau, and Colombo.

The wetting action seems to cause the hemoglobin to relax and open up, increasing the protein's affinity for oxygen by a factor of 100 to 1,000.

Science News, Vol. 139, 3/30/91, reports the scientists say they do not yet know how quickly the water molecules attach to hemoglobin, but they think it is a rather sudden event.

- psychological or environmental stress depletes the body, leaving cells dehydrated
- all food or juice, other than water is processed in the body as food
- traditionally, determine one ounce of water per day for every 3 pounds of body weight and double in times of stress

Water is especially important; *When Improved Concentration is Needed:*



- * when Driving, when Test Taking, when under Stress
- * when working with electronic equipment such as a typewriter, computer, watching TV or video games
- * when learning - we are all lifetime learners
- * in all Brain Gym activities

THE THINKING CAP

This activity helps the student focus attention on his hearing. It also relaxes tension in the cranial bones. The student uses his thumbs and index fingers to pull the ears gently back and unroll them. He begins at the top of the ear and gently massages down and around the curve, ending with the bottom lobe.

TEACHING TIPS

- The student keeps his head upright, chin comfortably level.
- The process may be repeated three or more times.

VARIATIONS

- Do the Thinking Cap in conjunction with the Energy Yawn.
- Include sounds (e.g., yawning sounds or vowel sounds).
- Do the movement while looking over a spelling list.

ACTIVATES THE BRAIN FOR

- crossing the auditory midline (including auditory recognition, attention, discrimination, perception, memory)
- listening to one's own speaking voice
- short-term working memory
- silent speech and thinking skills
- increased mental and physical fitness
- hearing with both ears together
- switched-on reticular formation (screens out distracting sounds from relevant ones)

ACADEMIC SKILLS

- listening comprehension
- public speaking, singing, playing a musical instrument
- inner speech and verbal mediation
- spelling (decoding and encoding)

RELATED SKILLS

- mental arithmetic
- concentration while working with a computer or other electronic device

BEHAVIORAL/POSTURAL CORRELATES

- improved breathing and energy
- increased voice resonance
- relaxed jaw, tongue, and facial muscles
- improved left-and-right head-turning ability
- enhanced focusing of the attention
- improved equilibrium, especially in a moving vehicle
- a better range of hearing
- expanded peripheral vision



RELATED MOVEMENTS

The Elephant, p. 8
The Owl, p. 17

See also: The Energy Yawn, for jaw or facial tension, p. 29
Water, p. 24

HISTORY OF THE MOVEMENT

This auricular exercise, used in Touch for Health, Applied Kinesiology, and acupressure systems, stimulates over 400 acupuncture points in the ears. These points are related to every function of the brain and body. Dr. Dennison discovered this activity to be particularly effective in the integration of speech and language. The Thinking Cap stimulates the reticular formation of the brain to tune out distracting, irrelevant sounds and tune in to language or other meaningful sounds. With the Thinking Cap, the meanings of words are more immediately accessible. Rhythm, sound, and imagery are simultaneously comprehended.

NOTE: For some people, excessive exposure to electronic sounds (e.g., headphones, radio, TV, a computer, video games) will switch off the ears.

Brain Gym® Improves Reading !!

Study shows 55 to 89 Percentile Point Increase in One Year

Cecilia Freeman, M.Ed., a Brain Gym consultant in Ventura, California, has recently announced her findings from a year long study of Brain Gym and its effects on reading scores. She and her project partner, Joyce B. Sherwood, M.A., worked with teachers and students at Saticoy Elementary School in Ventura, California, over the 1998-1999 school year.

Twelve teachers of grades K, 2, 3, 4 and 5 were given Brain Gym instruction every Monday after school for one hour throughout the school year. In these sessions they learned how to determine which Brain Gym movements and activities were called for in relation to various academic situations and how to guide the students in doing them.

The teachers then taught the children in their classes how to determine for themselves which Brain Gym movements they would benefit from at any time. The children became quite self-sufficient in the use of Brain Gym movements to help them be more productive in any of their academic subjects. Each participating classroom did a minimum of 15 Minutes of Brain Gym per day. Cecilia and Joyce also did classroom presentations as well as one-on-one instruction (October through January) with children who were having the most difficulties in school.

The study was based on the children's reading scores on The Stanford 9 test, a standardized achievement test given to all children in grades 2 through 11 in California. It compared the children's reading percentile scores from May 98 (the end of the previous school year), to those of May 99 (the end of the "Brain Gym" school year). A percentile score shows "relative standing" and works this way: A child scoring in the 30th percentile for reading scored higher than only 30% of the other children at his/her grade level (in schools across the country) and lower than the other 70%.

For the purposes of this study, scores of the 90 grade 3-4-5 children from "control" classes were compared with those of 90 randomly-selected grade 3-4-5 children from the "Brain Gym classes".

The results were nothing short of phenomenal. During that year, the reading scores of the "Brain Gym group" improved 55 to 89 percentile points, while the scores of the control group that received no Brain Gym support improved 0 – 16 percentile points.

Cecilia is quick to point out that gaining percentile points on reading scores is only one indicator of the improvement that the children made through their use of Brain Gym (albeit the most easily measured one).

Not so easy to measure, but clearly evident to the participating teachers, children, parents and school administrators, was the shift in self-esteem and attitude toward school that came along with the children's developing abilities. One portion of the published study is filled with comments from children who were amazed to be learning more easily, teachers who were more energized and effective in the classroom, and parents who were grateful and delighted in the growth they were seeing in their children.

Perhaps the greatest legacy of this project is reflected by an experience that Cecilia had recently when she visited the school, almost a year later after her last student-contacts there. As she arrived, she saw children here and there doing Brain Gym movements as a spontaneous and natural support for their learning process. As children integrate Brain Gym throughout their days, they take on the experience of personal wholeness and self-esteem that will support them throughout their lives.

Copies of this study are available from Cecilia Freeman, M.Ed. at P.O. Box 198 Ventura, CA, 93002.

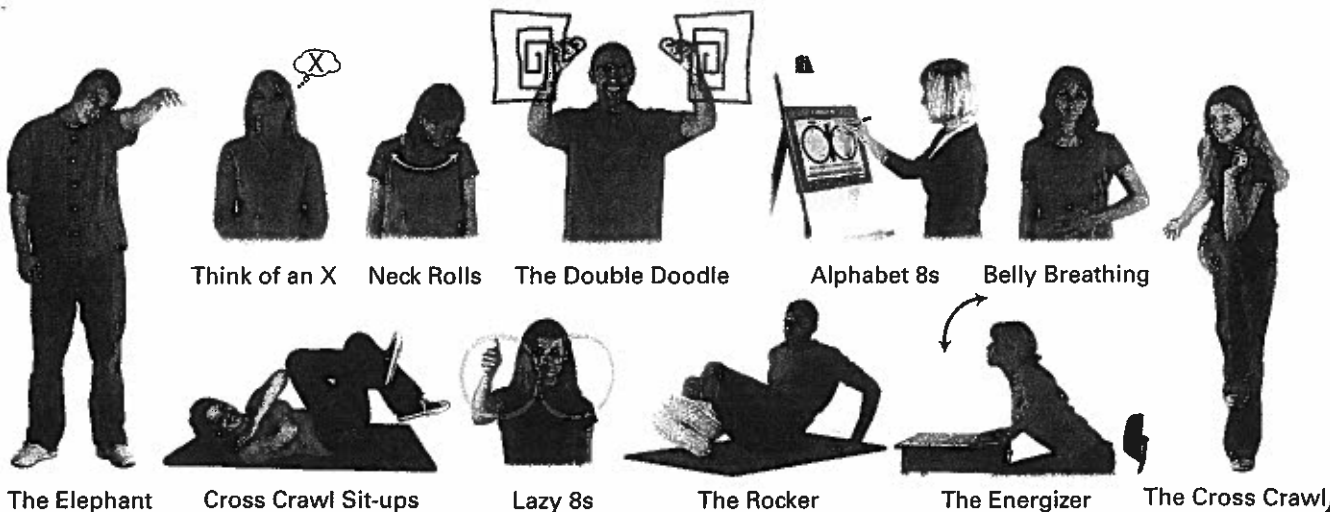
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The Learning Menu for the Brain Gym® Course

The Midline Movements



Think of an X Neck Rolls The Double Doodle Alphabet 8s Belly Breathing

The Elephant Cross Crawl Sit-ups Lazy 8s The Rocker The Energizer The Cross Crawl

The 26 Basic Movements

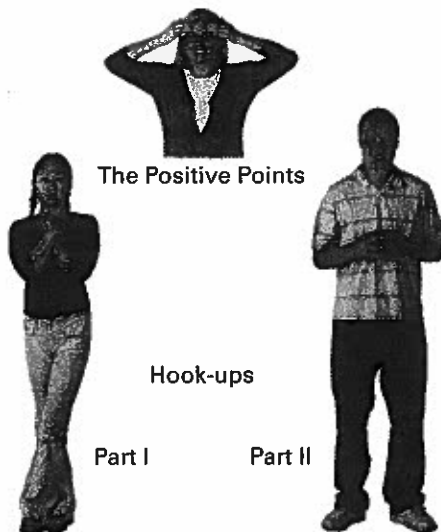
The Energy Exercises



Sipping Water The Energy Yawn The Thinking Cap

Space Buttons Earth Buttons Brain Buttons Balance Buttons

Deepening Attitude



The Positive Points

Hook-ups

Part I Part II

The Lengthening Activities



The Owl Arm Activation The Footflex The Gravity Glider The Calf Pump The Grounder

Repatterning:
 Dennison Laterality Repatterning
 Three-Dimension Repatterning



Theory Behind the Edu-K Process

How Children Learn to Use the Whole Brain

Infants are in a natural state of learning. They are totally responsive to their immediate and care-giving surroundings, taking in tremendous amounts of information and transforming it into speech and action in a remarkably short period of time. If the infant is free to move, explore, see and make sounds, learning occurs to the extent that the child receives the love and feedback which reward its efforts. The infant's brain is in an open and receptive state. Through this whole-to-parts process, discriminations can be made, modified and internalized.

Movement is the child's first teacher. The child moves instinctively in response to the unspoken question: *where am I in space?* The answer to *where* is achieved through coordination of muscle proprioception and brain receptors in the inner ear. The child's eyes and hands open to the surrounding world. *Where am I in relation to objects in my environment?* Only through movement can the body store the spatial mapping information that will answer this question. *What is it?* the child asks. To know with ease, the *what* must build on *where*. The visual, auditory and tactile senses must work together in concert with the kinesthetic intelligence. As these questions are answered through movement experiences, the child can free his or her intelligence to explore *who am I?*

How Brain Gym® Supports Whole Brain Learning

Brain Gym movements are offered in four categories, each addressing a different function of the brain and a different one of these four developmental areas of awareness: *Where am I? Where am I in relation to objects around me? What is it? Who am I?* Brain Gym can help the learner to reactivate the innate visual, auditory and motor patterns that make learning easy and natural.

How Children Learn One-sided Behaviors

The child is uniquely designed to be either bilaterally integrated (two-sided) or homolaterally specialized (one-sided). Our two-sidedness for seeing, hearing or hand-eye coordination allows us to compensate with one side when the other side is lost or injured. If a child relies too much on one side alone, instead of two sides together, unnecessary and stressful demands are placed upon the whole system.

When learning is acquired under stress, the lateralized brain recalls only the one-sided aspects of that learning. When this situation is repeated and reinforced, the learning is anchored to stress, and the "teachable moment" for integration is lost. Brain Gym movements re-establish the natural learning pattern and return automatic, integrated movement to a whole brain state.

The Challenge of Two-Dimensional Activities

One of the most common ways that children learn one-sided habits is through excessive visual involvement in two-dimensional activities. Such activities involve using the eyes to watch a flat surface, like a T.V., video game or a book. If these activities occur before the child has developed the visual skills necessary to shift back to the three-dimensional vision of everyday living, or if they lull him into ignoring his depth perception skills, chronic stress may result. Even under such stress, learning continues. Once this one-sided visual pattern is learned, it becomes difficult to "unlearn," and the child becomes stuck in a stress response.

The developmental response to integrate visual, auditory and motor correspondences may be incomplete due to physical or emotional trauma, lack of water or nourishing foods or excessive exposure to environmental pollutants. Long-term sitting, which interferes with the natural use of back and leg muscles, is another modern challenge to integration. Both activity and relaxation are natural states for muscles. When the child cannot access either activity or relaxation, stress results. Only through movement that integrates visual, auditory and motor patterns can the child return to a stress-free state of learning. *Brain Gym fills the need for such specific movement.*

Brain Gym® is a registered trademark of the Educational Kinesiology Foundation.

Brain Gym® Primary Aims and Outcomes

Brain Gym is Edu-K's readiness program. It prepares students of all ages to practice and master the skills for the mechanics of learning. The program includes a simple teaching format, a language for stress-free learning and a series of movements for integrating learning into the physiology. Brain Gym offers the learner a self-directed system with which to pace individual learning needs, building self-esteem through successful mastery of skills.

This program is distinctive in that it addresses the physical (rather than mental) components of learning. It builds on what the learner already knows and does well; it meets the learner just as he is, without any judgment of his capabilities; it teaches the student key elements of learning theory that he or she will be able to apply. Brain Gym requires little additional training for the classroom teacher, no testing, no technology, and it enhances (rather than replaces) current curriculum. The program is used as effectively in business, sports and the arts, as in the classroom.

Brain Gym outcomes for student or worker include

- 1) increased self-esteem
- 2) the ability to harness motivation
- 3) skills to identify and avoid stress
- 4) increased awareness of and respect for one's own intelligence, body and personal space
- 5) unique tools for building team thinking and cooperation

Specific strategies for improving reading, writing, spelling, math, communication and organization skills are included. Patterns of stress or addiction are explained in terms of the brain and physiology. Tools for alleviating these stresses are included.

