

# Brain Gym©

- UMCA Spring Conference
- Springdale, Utah
- April 14, 2010

# Water: So important

- Water makes up 70% of your body
- Water is needed for EVERY biological process, chemical reaction and mechanical action that takes place in your body
- Is the delivery system for oxygen in your blood
- Carries away waste products
- Enables joint movement
- Helps digestion
- Essential for development of nerve network during learning

# More about water

- You're always losing water
  - Breathing
  - Perspiration
  - Elimination
  - Air conditioning

On a typical day, 2 – 3 ½ QUARTS of water leave your body. Add exercise or heat and another quart goes away.

# Last bit about water

- **How can you tell you're dehydrated?**
- **Thought processes slow down**
  - **Can't think of the word**
  - **Mouth and brain disconnect**
  - **Confusion**
  - **Stupor**
- **Body functions slow down**
  - **Digestion, cooling, waste**
- **Physical distress**
  - **Joint pain and stiffness**
  - **Headache, dizziness, fainting**
  - **Cottonmouth, bad breath**
- **Severe dehydration requires hospitalization – it'll kill you**

**Take frequent sips of water all day!**

# About the Brain

- Neurons (nerve cells) – you're born with all the brain neurons you're ever going to get and you'll die with whatever is left.
- Neurons develop communication skills and pathways through repeated use
- The cerebellum, 10% of brain in size, gets more than half the neurons in your brain – it controls movement, balance, coordination and posture...and
- ...the same part of your brain that processes movement processes learning!
- Neurons can be up to 3' long!
- “Movement activates the neural wiring throughout the body, making the whole body the instrument of learning. What a step away from the idea that learning occurs just in the brain.” (Carla Hannaford, Ph.D)

# More about the Brain

- Two Hemispheres are physically separate, joined by the corpus collosum (which is more fully developed in women than men)
- Right Brain – Good
  - ‘Unconscious awareness’/intuition
  - Comprehension of body language and social cues
  - Creativity and insight
  - Visual-spatial processing
- Left Brain – Good
  - ‘Linguistic awareness’
  - Talking, reading, writing, spelling
  - Processing math, typing, grammar, logic, analytic reasoning
- Integrated Brain – Better
  - Synergistic improvement of all skills
- Hydrated Integrated Brain – Best
  - Everything works better and faster

# 7 easy minutes

1. Water – sip
2. Belly Breathing 4-8 breaths
3. Brain Buttons 4-8 breaths
4. Hook-ups 4-8 breaths
5. Brain Integration Movement  
4-8 breaths
1. Positive Points 4-8 breaths
2. Cross Crawl 10-25 repetitions

# Belly Breathing

- Place your hands on your abdomen . Exhale through your mouth in short puffs, as if keeping a feather in the air, until your lungs are empty.
- Inhale as though you're using a drinking straw, filling your body like a balloon. If you arch your back, you can inhale more deeply.
- Slowly and fully exhale, puffing. Repeat this inhalation and exhalation in a natural rhythm for at least four full breaths.

Belly breathing improves the supply of oxygen to your whole body, especially the brain, via the blood. It relaxes the central nervous system and increases your energy level. Diaphragmatic breathing improves reading and speaking ability. The puffing exercises your diaphragm.

# Brain Buttons

- Put one hand so that there is as wide a space as possible between the thumb and index finger.
- Place your index and thumb into the slight indentations below the collar bone on each side of the sternum. Press lightly in a pulsing manner.
- At the same time put the other hand over the navel area of the stomach. Gently press on these points for about 2 minutes.
- Brain buttons stimulate the carotid arteries that supply oxygenated blood to your brain. They help re-establish directional messages from parts of the body to the brain and the visual system, thus improving the brain's 'cross-talk' for reading, writing, speaking or following directions.

# Hook-ups

## Part One

- Sit in a chair, resting your left or right ankle in top of your other knee. Grasp your ankle with your opposite hand, and the ball of your foot with the same hand. As you inhale, place your tongue flat against the roof of your mouth, about one-quarter of an inch behind your front teeth. Relax your tongue as you exhale. Close your eyes and rest in this posture, enjoying deep relaxation for 4-8 complete breaths.

## Part Two

Uncross your legs, placing your feet flat on the floor. Lightly join the fingertips of both hands together as though enclosing a ball. Keep your eyes closed as you continue to lift your tongue on the inhalation and lower it on the exhalation, relaxing in this position for 4 -8 complete breaths.

Part one simultaneously connects all the energy circuits in the body and helps unblocks 'stuck' energy. Part two balances and connects the two hemispheres of the brain. This strengthens the body's electromagnetic energy.

# Alternate Hook-ups

- This works well for nerves before a presentation or speech. Any situation which will cause nervousness calls for a few "hook ups" to calm the mind and improve concentration.
- Stand or sit. Cross the right leg over the left at the ankles.
- Take your right wrist and cross it over the left wrist and link up the fingers so that the right wrist is on top.
- Bend the elbows out and gently turn the fingers in towards the body until they rest on the sternum (breast bone) in the center of the chest. Stay in this position.
- Keep the ankles crossed and the wrists crossed and then breathe evenly in this position for a few minutes. You will be noticeably calmer after that time.

# Brain Integration Movement

- Extend your arms out as wide apart as is comfortable.
- Picture bringing your left and right brain hemispheres together as you bring your two hands together.
- Enjoy this connection for 4 -8 breaths.
- Using your right and left brain together stimulates creativity as well as logical thinking.

# Positive Points

- The positive points are located above the center of each eyebrow and halfway to the hairline. You might find a slight bulge at each point. Lightly place three fingers of each hand on these points. (Some people, when holding their own points, will prefer to cross their hands so the right hand goes to the left side of the forehead.) Close your eyes and hold the points lightly during the course of 4 – 10 slow, complete breaths.
- You can hold your own points or have a friend hold them for you. To further release stress, hold the points while reviewing stress-producing situations and considering alternative possibilities.
- Positive points are acupuncture points specifically known for diffusing the fight-or-flight reflex, thus reducing emotional stress. Touching these points transfers the brain response from the midbrain to the frontal lobe, allowing a more rational response.

# Cross Crawl

- Standing, “march” in place, alternately touching each hand to the opposite knee. Continue during the course of 4 -8 complete breaths. A variation can be done sitting down, by raising the knee off the chair and touching your elbow or hand to your knee.
- Cross crawl activates both brain hemispheres simultaneously. It engages the brain for coordinating visual, auditory and kinesthetic abilities, thus improving such skills as listening, reading, writing and memory.

This is a very good exercise to use when you are confused, bored, can't focus or feel ungrounded. #

# “Work outs”

- Interpreting legal codes and language: Brain buttons, Earth Buttons, Lazy 8s , Positive Points
- Spelling: Earth Buttons, The Elephant, The Thinking Cap, The Owl
- Staying on schedule: Belly Breathing, Earth Buttons, Balance Buttons, Positive Points, Hook ups
- Setting priorities: Space Buttons, The Thinking Cap, Cross Crawl, Hook-ups
- Effective writing: The Calf Pump, The Footflex, The Owl, The Energy Yawn
- Public speaking: The Elephant, The Owl, The Energy Yawn, The Thinking Cap, Cross Crawl, Hook-ups, Positive Points
- Composing letters: The Calf Pump, The Footflex, The Owl, The Energy Yawn
- Filing: Balance Buttons, Earth Buttons, Space Buttons
- Accessing memory: The Elephant, The Owl, the Thinking Cap

# Balance Buttons

- Place two or more fingertips behind one ear, about three finger widths away from the ear. Put your other hand on your navel and hold for 30 seconds to one minute as you breath deeply. If you're tense behind the ear, make small circles with your nose, which presses your head against your fingertips. Change hands and repeat on the other side.
- Balance buttons stimulate the body's balance system in the inner ear. This restores your sense of equilibrium, relaxing your eyes and the rest of your body. This frees your attention for easier thought and action. Decision making, concentration and problem solving all improve as body organization improves.

# Earth Buttons

- Rest two fingers of one hand under your lower lip. Place the heel of your other hand on your navel, with fingers pointing downward. Breathe deeply as you look at the floor. Moving only your eyes, look gradually from the floor to the ceiling, then down again. Repeat for 3-4 complete breaths, as your eyes and body relax.
- Earth buttons are located on the body's front midline, the central point of reference across which all tasks involving both sides of the body must be coordinated. Holding these points stimulates the brain and relieves mental fatigue, as well as increasing organizational skill and enhancing the ability to focus on near objects.

# Space Buttons

- Rest two fingers above your upper lip. Place your other hand, pointing downward, on your lower back, with your fingers touching your tailbone. Breathe deeply as you look up at the ceiling, moving only your eyes. Gradually lower your gaze to the floor, then look up at the ceiling again. Repeat 3-4 times as your eyes and body relax.
- Space buttons are located near the top and bottom of the central nervous system, which includes the spinal column, hindbrain, midbrain and cerebral cortex. Holding the two points stimulates movement throughout the system, which improves attention, focus, motivation, and intuition for decision making.

# Focus buttons

- Sitting down, place the thumbs and fingers of each hand on each side of your knee, with your palms resting on the tops of your legs.
- Press inwards with your thumbs and second fingers, finding the 'place' on the inside of your legs that feels slightly tender. Breathe.
- Press long enough that you feel your eyesight and hearing sharpen. Try not to bruise yourself.

# The Thinking Cap

- With one hand at the top of each ear, gently ‘unroll’ the curved part at the outer edges of both ears at the same time. Continue all the way to the bottom of the ears and pull your earlobes gently away from your head. Repeat 3-4 times.
- Thinking Cap helps you tune out distracting noises and tune into meaningful sounds, such as speech and music. This movement increases listening ability, short-term memory and abstract thinking skills.

# The Elephant

- Stand with your feet about shoulder-width apart. Face a wall across the room, and on it picture a large figure 8 on its side (infinity sign.) Bend your knees and extend your left arm out in front of you. Tilt your head, touching your left ear to your left shoulder.
- Lifting from the waist, point the index finger of your extended arm and begin to trace the 8 by moving your left hand up the center of your body and to the left. Breathe deeply as you focus your eyes past your hand (ideally, you will see a double image of your hand.) Continue to trace 3 -4 more 8's, then repeat with the right arm.
- The Elephant releases neck tension, which may inhibit the perception of sound. It restores neck flexibility, it integrates the left and right sides of the brain for increased listening comprehension, short and long term memory and abstract thinking.

# The Energizer

- Sit on a chair in front of a table, resting your forehead on the table. Place your hands palms down on either side of your head. Slowly lift your head until your chin points upward as far as comfortable, inhale deeply, breathing into the base of your spine. Your torso and shoulders should stay relaxed. As you exhale, tuck your chin down into your chest and begin moving your head down toward the table while lengthening the back of your neck. Rest your head on the table as your relax and breath deeply. Repeat 3-4 times.
- This movement keeps the back muscles toned and the spine supple, flexible and relaxed. Doing the Energizer improves posture, concentration and attention and is especially useful during work at a computer.

# Arm Activation

- Reach with your right arm straight up toward the ceiling. Place your left hand above your right arm muscle, above your armpit. Slowly and gently exhale through your mouth while pressing your right arm isometrically against your left hand for about 8 seconds in a forward direction. Inhale as you relax pressure. Continue this process by exhaling as you move your left hand to press in all three other directions: toward your ear, away from your ear and toward the back wall. (Move your hand to the back of your arm for that motion.) Repeat the entire sequence for the other arm.
- Arm activation lengthens the muscles of the upper chest and shoulders.. This movement relaxes and coordinates shoulder and arm muscles and frees the mind for ease of handwriting, spelling and writing.

# Lazy 8s

- Extend one arm straight out in front of you, with the thumb pointing toward the ceiling. In the air, slowly and smoothly trace the shape of a large figure 8 on its side. As you draw, focus your eyes on your thumb. Keep your neck relaxed and head upright, letting your head move slightly with the motion of the 8.
- Start tracing your Lazy 8 by beginning at eye level, directly in front of the center of your body. Move your arm up and over to the left, around and back to center, then to the right. Do three full 8s with one hand, then three with the other, and finally, three with both hands clasped together.
- Lazy 8s integrate the left and right visual fields, thus increasing left and right hemispheric integration while improving balance and coordination. Reading, writing and comprehension skills improve as the physical mechanics of these tasks become easier.

# Energy Yawn

- Open your mouth to yawn and lightly press the fingertips of each hand against any tight spots you feel where your cheeks cover your upper and lower molars (TMJ area). Make a deep, relaxed yawning sound while gently massaging away any tension. Repeat the energy yawn 3-4 times.
- More than 50 percent of the neurological connections from the brain to the rest of the body pass through the jaw joint. Relaxing the area increases the connection.
- For many, there is a positive relationship between ease of jaw motion, ease of expression and even creative ability.

# The Owl

- With your left hand, grasp the top of your right shoulder muscle, near the neck, and squeeze it firmly. Inhale deeply. Exhale as you turn your head to look comfortably back over your right shoulder; inhale as you return your head to center. Exhale as you turn your head to look back over your left shoulder; inhale to center. Exhale as you drop your chin to your chest, inhale as you raise your head. Repeat for 3 -4 breaths in each position. Change hands and repeat each position for 3-5 breaths.
- The Owl releases tension in the muscles of the neck and shoulder. When your neck relaxes, listening comprehension, as well as thinking and speaking abilities, improves.

# Neck relaxation tips

- Massage therapist trick: If your tongue relaxes, your neck will relax in response. Relax your tongue by sticking it out as far as you can then 'chew' it back into your mouth. Repeat several times until you feel your tongue and neck relax. Trust me, you want to be alone when you do this. You look ridiculous.
- Another MT trick: Some carpal tunnel symptoms are really caused by tension in your neck. All the nerves in your arms pass through a small opening in your neck muscles. Keeping your neck relaxed can reduce numbness and tingling in your hands.
- Physical therapist trick: Fold a hand towel into thirds, horizontally. Wrap towel around your neck and grasp each end firmly, pulling your neck against the towel.

# The Calf Pump

- Stand an arm's length from a wall and place your hands (shoulder-width apart) against it. Extend your left leg straight out behind you, so the ball of your foot is on the floor and your heel is off the floor. Your body is slanted at a 45-degree angle.
- Exhale, leaning forward against the wall while also bending your right knee and pressing your left heel to the floor. The more you bend your knee, the more stretch you'll feel in the other leg. Inhale and raise up, relaxing and raising your heel. Do 3-4 time on each leg.
- The Calf Pump restores a more natural length to muscles and tendons in the back of the body. Improves concentration, attention, comprehension and the ability to bring projects to closure.

# Footflex

- Sitting, rest your right ankle on your left knee. Place one hand behind your right knee, on the end of the calf muscle. The other hand holds the Achilles tendon, right behind the ankle bone. Point and flex your foot five or more times while holding your hands firmly at both positions. Place both feet on the floor and notice how different your legs feel before repeating the movement with your left ankle on your right knee.
- The Footflex restores the natural length of the tendons in the calf. It relaxes the need to hold back while increasing the ability to communicate, concentrate and complete tasks.

# Recommended Reading

- *Brain Gym for Business – Instant Brain Boosters for On-the-job Success* by Gail E. Dennison, Paul E. Dennison, Ph. D; and Jerry V. Teplitz, Ph. D.
- *Smart Moves: Why Learning is Not all in Your Head* by Carla Hannaford
- *My Stroke of Insight* by Jill Bolte Taylor

Web sites: <http://www.braingym.org/>

<http://www.pesoftware.com/Resources/moveLearn.html>

<http://homeworktips.about.com/od/homeworkhelp/a/learningstyle.htm>