BrainDance

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The BrainDance, developed by Anne Green Gilbert, is an effective full body and brain warm-up for people of all ages. It is composed of eight developmental movement patterns human beings are programmed to move through from 0-12 months that wire the central nervous system. As babies, we did these movements on our tummies on the floor. However, cycling through these patterns standing or sitting has also been found to be beneficial. By moving through these developmental patterns, children and adults oxygenate and reorganize their brains.

Benefits of the BrainDance

Neurological Re-patterning
Humans are programmed to move through certain movement tasks in the first year of life. These developmental movement patterns wire the central nervous system laying a foundation for appropriate behavior and attention, eye convergence necessary for reading, sensory-motor development and more. When patterns are missed due to birth trauma, illness, environment, head injury, or not enough "tummy time" on a non-carpeted surface there may be missing gaps in a person's neurological development. These gaps may cause neurological dysfunction that may later appear as learning disabilities, behavior disorders, memory problems, sleep disorders, speech, balance or filtering problems, and a host of other difficulties that may disrupt the flow of normal development. Cycling through these patterns on a daily basis may correct flaws in a person's perceptual process and reorganize or re-pattern the central nervous system.

Body Connectivity and Alignment
The BrainDance reviews for us the early baby patterns that lay down structure in the neuromuscular system, influence brain development, and help us cope with the world in an embodied way. These patterns, done in an orderly progression, help us remember the parts of our visceral and muscular system that support our body structure. Each pattern underlies and supports the next pattern and when done in succession bring a wholeness, aliveness and connectivity to our use of the body, which reflects an integration of body and mind. By separating the eight patterns we become more aware of each pattern. This allows us to discover when it might be helpful to focus fully on a particular pattern to help us with ease of movement or blocked body/mind areas. By doing the patterns in succession we connect and align all parts of the body. This leads to wholeness and integration.

Broad Assessment
When doing the BrainDance with your students, you will see individuals who may have trouble performing one or two patterns smoothly. These individuals may appear to move in a less integrated way than many of their peers. This lack of integration may indicate one or more missing gaps in the wiring of the central nervous system that may cause problems in behavior, social skills, attention, or reading. These individuals may show improvement in these areas over time by doing more work in all the patterns on a daily basis. Instead of focusing on students who are having difficulties, present the BrainDance to the whole class, giving constructive feedback to the entire group. A student who has a problem with a specific pattern needs to strengthen the earlier patterns before the problem pattern may improve. Some individuals will find it helpful to work with a therapist or somatic educator who is familiar with sensory integration, neurodevelopmental patterning, and/or vision therapy.

How the Patterns Developed

The baby does his or her own BrainDance very naturally in the first twelve months of life if put on a smooth, non-carpeted surface on his or her tummy. Baby's first **breath** starts the wires growing from the brain cells. **Tactile** stimulation begins with the first touch of skin on skin and is essential for promoting appropriate behavior and emotional and social intelligence. In the first two months of life the baby will reach into space in order to connect with her environment and curl back into the womb position, demonstrating the **core-distal** pattern. At two months the baby has better head control and will lift and turn the head in both directions continuing the **head-tail** pattern begun at birth. Discovering the **upper and lower body halves** is next as the baby pushes with the arms and hands and then with feet and knees. Between five and seven months, the baby reaches with one **side of the body**, moving left or right side of the body as one unit and then the other side. As the baby crawls on her belly she will develop horizontal eye tracking. Between seven to nine months, baby pushes herself up onto hands and knees and begins a **cross-lateral** reach from the upper body. Vertical eye tracking is part of the growth triggered by creeping on hands and knees. The convergence of horizontal and vertical eye tracking is essential for reading. From one-year onward cross-lateral patterns appear in walking, running and eventually skipping. The **vestibular** system begins developing in utero and continues to be very active through the first fifteen months. The vestibular system analyzes movements through the whole body, helps us know where we are in space and links up to all forms of sensory information. This very important system is used when we read, hear, speak, touch, balance and move.

BrainDance

The BrainDance is an effective, full body/brain warm-up exercise based on eight developmental movement patterns humans move through in the first year of life to wire the central nervous system. Many of us missed a pattern, but by moving through these patterns weekly or daily we repattern our brains, align our bodies, develop better focus and concentration, and strengthen social and emotional skills. This exercise prepares all students for learning. The BrainDance may be used with all ages (toddlers to seniors), and in all teaching situations.

The BrainDance variation described below is the standing BrainDance for ages 5-adults. However, these patterns may also be performed sitting on the floor or in a chair, lying down, traveling through space, mirroring or shadowing a partner, and with a prop. Many variations for all ages, including the rhyming BrainDance for ages 0-5, are described in *Brain-Compatible Dance Education (2006)* and may be viewed on the *BrainDance* DVD, available at www.creativedance.org/store.

1. **Breath:** take four to five deep breaths in through the nose and out through the mouth. **Benefits**: increase flow of oxygen to the brain; awareness of importance of breath for ease and flow of movement.
2. **Tactile:** With your hands, squeeze strongly each arm and each leg and the torso, back, head (whole body). Then tap lightly whole body, then slap or pat whole body, and then brush (scratch, pinch, tap, rub, etc.) whole body. Touch all surfaces - topside and bottom side of arms and hands, face, head, neck, front torso and back torso, front and back of legs, feet. **Benefits**: strengthen bonding; develop sensory integration.
3. **Core -Distal:** Move from the center (naval) out, through and beyond the fingers, toes, head and tail (pelvis). Then curl back to torso as you engage core muscles. Movement that grows and shrinks, stretches and curls in big "X"s and little "o"s is great! **Benefits**: develop a sense of "twoness" by relating to self & others (beginning of socialization); develop full body extension and awareness of core for correct alignment.
4. **Head -Tail:** Move the head and tail (lowest part of spine or coccyx) in different directions. Play with movement that brings head and tail/pelvis together curving forward and backward (yoga cat-cow) and side-to-side. Keeping the knees bent when standing helps to release the pelvis. Wiggle and jiggle spine from head to tail. **Benefits**: increase spine flexibility and neck strength for a "lively" spine; move through space with ease; create an open path for central nervous system to fully function.
5. **Upper-Lower:** Ground the lower half of body by pressing legs into floor with a slight knee bend. Swing arms in different directions and stretch and dance upper body (arms, head, spine) in different ways. Ground upper half by reaching arms out into space with energy as though you were hugging the earth. Dance with lower half – try marching in place or through space, do simple knee bends, jumps, leg brushes and other actions. Lying on stomach with legs extended, curl toes under and rest on elbows – push forward and back from lower to upper. **Benefits**: articulate body halves for mobility/stability, function and expression; develop emotional grounding – one reaches for goals and sets boundaries in this pattern.
6. **Body-Side:** Make a big X with your body. Dance with the left side of your body while keeping the right side stabile (still). Then keep the left stabile and dance with the right side. Try bending, stretching, swinging, and twisting motions. With knees and elbows slightly bent like a "W" bring the left half of the body over to meet the right half and vice versa (like a book opening and closing). Follow your thumb with your eyes as it moves right to left and left to right. Do the lizard crawl with arms and legs open to the sides – reach left arm and knee up then right arm and knee up like a lizard crawling up a wall. Move your eyes right to left and left to right (looking at the thumb near your mouth helps) to develop horizontal eye tracking. **Benefits**: articulate body sides; balance both sides of the body; develop horizontal eye-tracking and side dominance; working in the pattern helps one make choices in life.
7. **Cross-Lateral:** Do a parallel standing crawl with knees and hands in front of you. Let your eyes travel up and down looking at one thumb as it reaches high and low for vertical eye tracking. Do a cross-lateral dance finding many ways of moving cross-laterally in front and in behind such as touching right knee to left elbow, left hand to right foot, right hand to left knee, left hand to right hip, skipping, etc. When space is available, crawl on belly and creep on hands and knees. **Benefits**: integrate brain hemispheres; develop vertical eye-tracking; create complex, three dimensional movements and "robust" thinking.
8. **Vestibular** (this pattern may also be done at the beginning of the BrainDance): Choose a movement that takes you off balance and makes you dizzy. Vary the movements you do each week. Swing upper body forward and backward and side-to-side. Make sure head is "upside down." Tip, sway, roll, and rock in different directions and on different levels in and through space. Spin 15 seconds one direction, breathe and rest 15 seconds, then spin 15 seconds the other direction. Take three to four deep breaths to center yourself after spinning! **Benefits**: develop spatial awareness, proprioception, balance and coordination; strengthen the system that controls the five senses.

Helpful Hints for BrainDancing

- Spend 5-20 minutes (may be extended to 30-60 minutes) moving through the patterns. Do shorter BrainDances with higher energy for a more aerobic exercise, increasing the flow of blood and oxygen to the brain.
- Do all eight parts, at least once a day, in the developmental order from Breath to Vestibular. (Vestibular may also be performed at the beginning of the BrainDance.)
- Any movements that fit within each pattern are appropriate. Ask students for ideas.
- Start the day or class with the BrainDance. Do before tests and during long periods of sitting.
- Select several patterns throughout the day to do as quick movement moments or transitions between subjects or rooms.
- BrainDance may be done standing, sitting on the floor, sitting in a chair, and even lying down. It may be performed in one spot or traveling around the room. It may be done mirroring or shadowing a partner or partners. Some variation is important. Music may be motivating. Props such as small scarves or stretchy bands add novelty as well as tactile and visual support.
- Allow students to improve at their own rate. Give feedback and cues to the class as a whole. When appropriate, refer special needs students to a neurodevelopmental movement or vision therapist.

A Few BrainDance Variations (adapted from *Brain-Compatible Dance Education*, Anne Green Gilbert. 2006)

Lying, Sitting, Standing: Create a BrainDance sequence that is performed lying and/or sitting on the floor or in a chair. Move through the patterns lying on your stomach, back, and sides, on hands and knees, and sitting. If you are familiar with the Bartenieff Fundamentals, yoga positions, Pilates exercises, etc. incorporate them into the BrainDance. Also, incorporate your floor barre into the BrainDance. The lying down variation is most successful when done on a smooth, non-carpeted surface. Another variation is to perform the first four patterns sitting on the floor and the last four standing.

Traveling: Perform all the patterns traveling through general space instead of standing in self space, or alternate self and general space. Moving the patterns through space will lead to many new ways of dancing, and new discoveries such as the difference between a body-side walk and a cross-lateral walk.

Mirroring and Shadowing: Once your students are familiar with the BrainDance, have them mirror or shadow each other instead of copying you. (You can call out the patterns if necessary.) Have students work in pairs, trios, and quartets. Change leadership with each pattern or repeat each pattern with a new leader. Play with relationship, asking partners to stand near and far from each other.

Music and Rhymes: Vary the music used as background for the BrainDance. *BrainDance Music* CD was created especially for BrainDances and contains a variety of narrated and instrumental pieces as well as rhymes for young children. Experiment with lively music to energize the students and slower music to calm the students, or try the BrainDance without music. I always use nursery rhymes and songs with very young children, but sometimes it is fun to use them with older students as well! Explore and experiment.

With Props: Props add a new dimension to the basic BrainDance. Dancers might hold two small scarves of different colors, one in each hand. The scarves will be a visual and tactile aid for distinguishing the different patterns. Foam sticks may also be used for tactile stimulation, and when held or manipulated with different body parts, they help students feel and visualize the various patterns. Stretchy bands and body socks made from spandex material are other fun props with which to experiment. The push and pull of the stretchy material helps dancers connect body parts, halves, and quadrants.

Integrating Dance Concepts: After you and your students feel comfortable doing the basic BrainDance, it is beneficial to integrate a Space, Time, Force or Body concept into the BrainDance. The BrainDance becomes more interesting and challenging when concepts are integrated. The novelty of the concept brings attention to the BrainDance. It is also a good way to embody the concept. Integrating the concepts helps the students discover more movement possibilities within each pattern, which they might choose to recreate when improvising or creating choreography later in the lesson. This conceptual exploration of the BrainDance patterns deepens the understanding of body mechanics. This helps students develop dance skills and technique.

BrainDance Feedback – a small sampling

In my final project, I wanted to test the BrainDance. That is, to see it's effect with my own eyes. Unfortunately time was short for such a project, but instead I mixed it with creative dance. In the end the project became an attempt to document if there is a development when children dance. I had 7 children at the age of 6, one hour 3 days a week for 5 weeks. I started every session with the BrainDance and then continued with creative dance. And the results have been very convincing. 4 of the children showed very clear progress in areas such as social behavior, concentration, physical abilities, self esteem, speech, etc. One of them has benefited so much you could call him a new child, so to speak. So, absolutely a success! -*Sille Kamara, Denmark*

I am using the BrainDance with my Down syndrome adult dancers in my Tennessee Arts Commission residency. They love the movements and are beginning to remember and verbalize the work. -*Ann Shea, PhD*

Just wanted to let you know that everyone at Westside Elementary in Roanoke (all 650+ children and 70+ faculty) has learned the BrainDance. My principal asked me to do an assembly for 3rd and 5th graders as a testing strategy for forward, going through each of the 8 patterns. We rocked instead of spinning for vestibular to prevent any serious injuries. When we finished the dance, the most amazing thing happened. I was able to talk to all of the children in a quiet voice about how movement can settle us down and focus our energy. The children recalled the 8 patterns as a the Standards of Learning. I was overwhelmed when the 150 or so very loud and energetic children were left to me alone to direct. Limbic override engaged. Many felt awkward and acted out, increasing my anxiety but I pushed summarizing activity and listened without speaking or interrupting until I finished. One teacher, who is one of the louder, more high stress faculty members in the classroom, approached me and told me she needed an hour a day of that for her own body. Another told me yesterday that she had Malik (a large, overweight behavior problem-sits-in-front-of-the-principals-office-a-lot! boy) lead the BrainDance for her class – she had trouble recalling the patterns and the children were wild because a snow storm was on the way. Anyway, Malik lead the class through each pattern, and they returned to their seats calmer. The teacher was quite impressed, especially by Malik who up to now was a thorn in her side but she was able to see him in a new light. -*Wendi Wagner, Roanoke, Virginia*

I taught a Wolf Trap seminar for music people this summer and used BrainDance to start us off. One of the women was able to take this movement and use it in a workshop with a disabled woman in Canada. After the cross-lateral exercises the woman said "I just realized that I haven't been able to write a song since I lost the ability to cross my center line." That was day two of the workshop. By day 4, Jane had written 2 songs. -*Jody Cassell, Washington, D.C.*

I'm having a meeting with my principal tomorrow morning to talk about teaching the BrainDance to the whole staff. My kids from last year have told this year's teachers that they NEED the BrainDance every day. The music teacher from last year told me that my class is the only class she had ever been able to teach certain skills to in all the years she has taught music. We both gave credit to the BrainDance. -*Chris Henich, Oregon*

My son, who has learning difficulties, has been doing the brain dance daily and I have already noticed an improvement in his writing and focus. - *Maeve Larkin, Australia*

The Brain Dance is an amazing sensory integration tool and it's become a standard part of my sensory work and presentations. *Ida Zelaya, Baltimore*

Jenny Burnett and I have been meaning to write to you and tell you what an EXTRAORDINARY DIFFERENCE the BrainDance and the concepts have made in our teaching. We are seeing results in the first few weeks of school as opposed to the first few months. -*Marlene Leber, OH*

We have done the BrainDance every day since the first day of school. When it is a holiday or weekend, my students share that they do it at home. One boy said he tried to do it in the car during a long family trip. My students have taught it to our PE teacher, parents, principal, vice principal and anyone who visits our classroom. I have noticed that my own balance, which was greatly effected by a neurological virus several years ago, has much improved as well. -*Karen Konrad, WA*

I have been using the BrainDance with my students since the beginning of school. It has revolutionized my life! I have seen so many benefits for myself. I have recommended it to numerous teachers. - *Susan Edenfield*