

## EYE TEAMING WITH BRAIN GYM

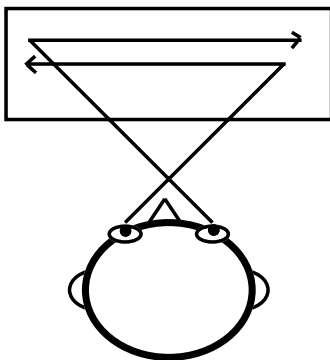
Kathy Brown, Arizona, U.S.A.

The Brain Gym® activities can often significantly improve the way we receive and process visual information. Skills such as eye teaming (the cooperative use of both eyes), tracking, and focus improve naturally when we do Brain Gym movements and balances\*. This results in easier reading and processing of all kinds, and sometimes remarkable shifts in eye function as well. (See figure 1.)<sup>1</sup>

These kinds of deep shifts occur through Brain Gym's innovative methods of working with learners to draw out from within any change they want to make in how they do a task. This is different from the traditional "diagnose and fix" model of observing a client's challenges and then determining for him or her which techniques to employ. Using the drawing-out model, Brain Gym practitioners support their clients in choosing goals for learning, noticing what techniques they experience as most effective and appropriate to use in moving toward this new learning, and then noticing each shift as it occurs. All of this deeply anchors the new learning, and in this way the client and practitioner cocreate every Brain Gym balance session.



Kathy Brown



*The right eye tracks most easily from left to right. The left eye tracks most easily from right to left, against the flow of our written language.*

Knowing ourselves to be educators, not optometrists, we Brain Gym practitioners facilitate vision training only when the client chooses this as a priority in the context of his or her goal. We use feedback from the client to determine such variables as which specific vision techniques to use, and in what way.

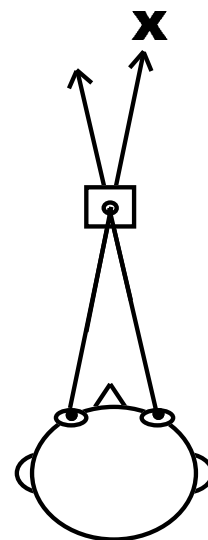
<sup>1</sup>Although not physiologically precise, these graphics and descriptions of the visual skills required for reading, adapted from the seminal work of Paul and Gail Dennison, help to simplify and explain a complex process. For more information about reading and visual skills, see *Edu-K for Kids* by Dennison and Dennison, 1987.

## A CLASSIC READING CHALLENGE

"Anna just hates to read. She's in the sixth grade, but reading at only the third grade level. I make sure her assignments are easy enough, but it still takes her forever to do any work." These words from Anna's teacher presented a very common scenario, and set the stage for my day's work as a visiting Brain Gym Consultant at Anna's school.

As I began my session with Anna, we chatted about school, and she shared that she really wished she could read better. "Everything would be easier if I could just read," she said. I asked Anna why she didn't like reading, and she replied, "It gives me a headache, and I get kind of dizzy. It takes real work to get my eyes across the page, and by then I've forgotten what I read so I have to read everything at least twice."

When I asked Anna for a sample of her reading, she chose a simple storybook and read in a flat, mechanical tone, often skipping or repeating words. Twice she skipped whole lines of print, and once, apparently without noticing, she repeated an entire line she had just read. She told me that her eyes skipped around a lot when she read, and often simply jumped to the wrong line. Watching her eyes, I could actually see this happening. "I don't know why I have to work so hard to keep my eyes on the right line," she said.



*With both eyes open, look through a small hole in a card toward an object in the distance. Only the "lead" eye will be aiming at the object. This person leads with his left eye. The brain ignores the information from the eye that does not lead.*

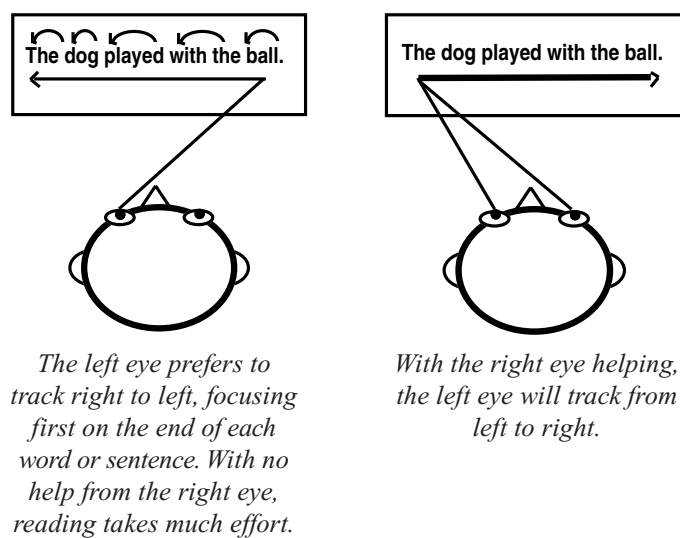
I immediately suspected that Anna was reading primarily with her left eye rather than her right, so I took her through the steps of a simple Edu-K eye-lead check. I handed Anna a card with a half-inch-diameter hole in it and asked her to hold it out vertically at arm's length, directly in line with her nose. Then I asked her to keep both eyes open and look right through the hole at a small toy duck across the room. I asked her to close one eye (she closed her right), then open it and close the other (her left). At this point she laughed and said, "Where did the duck go?"

With her left eye now closed, she could no longer see the object. This told me that Anna's left eye was doing the primary "pointing" at the duck, and very likely also when she read; her right eye was offering only supplemental information.

If Anna had not been able to close either eye comfortably, I could have had her look through the hole directly at me, rather than at an object across the room. Looking back at Anna, I would have clearly seen her left eye pointed at me through the hole, indicating that she was doing her primary visual aiming with that eye.

## A LEFT EYE LEAD AND READING

Because we have two eyes, we might naturally assume that we use both eyes together. This is not necessarily true. Until we learn eye-teaming skills, we actually bring in primary information through only one eye (right or left); this eye will point directly at the object of our attention, and helps us keep our place when reading. This phenomenon is often called eye "dominance."<sup>2</sup> Our other eye, in Edu-K called the "blending" eye, offers supporting information from its own unique perspective, but it is not the key player in reading. Most people lead with their right eye, but about 20 percent of the population naturally lead with their left eye.



Our two eyes are inclined to track in opposite directions. The right eye is most comfortable tracking from left to right, in the same direction as our written language. The left eye is most comfortable tracking from right to left, directly opposite to the flow of our written language. This means that the left eye's tendency is to "swim upstream" against the flow of print. Under optimal conditions (with full blending support from the right eye) this does not create a problem. Without full blending support of the right eye, reading can take a tremendous amount of effort as the leading left eye jerks backward again and again, sometimes even skipping from line to line. It's all but impossible to

comprehend material read in this way. For this reason, people who lead with the left eye often end up with significant challenges in school.

The solution lies in having both eyes active and contributing, which requires having both brain hemispheres active and communicating with each other. This allows the right eye of a person with a left-eye-lead to be a stronger partner in the reading mix, so that it can lead the left eye in the correct direction of flow.

In Brain Gym we call on a variety of movements and processes to support the learner in developing the integrated brain state that makes reading easier. As we proceeded with Anna's session, I took her through the steps of Dennison Laterality Repatterning\*, a process for reawakening pattern-sensing skills that strengthens the communication between the two hemispheres and takes about ten minutes to accomplish. When this process was complete, Anna picked up her book again, and this time she read fluently and with expression. She joyfully read paragraph after paragraph, not skipping or repeating a single word or line. I watched her eyes flow smoothly from left to right. When she set down the book, she said, "Wow! Reading can really flow! And the words all mean something now! This is neat!"

## DEVELOPING PATTERNS FOR TRUE EYE TEAMING

On another visit to this same school, I worked with Celana, a fifth grader. Celana is a sweet girl who said she loved school—she just wished it were easier. She had significant issues with eye teaming; in fact, her right eye would consistently drift off to the right, while the left stayed focused on a specific point or object. Not surprisingly, Celana had great difficulty in reading. She chose a book of very simple poems for her reading pre-check, yet she read haltingly and with little inflection.

Following the educational model that I have learned in Edu-K, I did some basic checks of Celana's eye function, which included asking her to look in different directions. Her eyes never moved quite in unison and, once settled on a given point, the right eye would drift off to the right. It was as if her eyes were willing to move relatively together but there was nothing to anchor the vision of the right eye in its new position. Internally, I questioned whether Celana was even focusing with that eye and bringing in information through it.

The processes called for in Celana's Brain Gym balance session included Creative Vision training\*, a technique from the Edu-K In Depth course. This process, accomplished in just a few minutes, brings powerful results. It includes determining whether one needs to work on central or peripheral vision and which vision points on the body should be held while doing the processing, and then leading the eyes in a variety of movement patterns following an object of a specific color.

At the end of the session, Celana's right eye still tended to drift. However, in her post-check she read quite fluently and with spirited inflection. She said, "Now I see where the rhymes are!" I left the school that day wishing I'd seen a greater shift in Celana's eye teaming, but reminded myself to be satisfied with her significant shift in reading.

One month later I was at Celana's school again, and she was first on my list. She ran in quite excitedly and burst out, "It

<sup>2</sup>For more information about brain dominance and brain organization, see page 14 of the *Optimal Brain Organization* course manual by Dennison and Dennison, 2004.

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(CONTINUED FROM PAGE 11)

happened the next day—I felt my right eye come on! I didn't know before that it wasn't working, but I can tell now that it is. And everything's easier now!" We celebrated together, and then I repeated the same vision checks we had done at the last session. Celana's eyes now appeared to focus together no matter where she was looking. She was delighted. We worked together for about forty-five minutes on her next goal—to improve in math—and during that time her right eye did not drift once.

This experience reinforced for me the understanding that sometimes the eye muscles need time to make actual physical shifts, once the intention for this change has been put into place through Brain Gym® activities.

## THE BRAIN CAN REORGANIZE FOR IMPROVED VISION

On a vacation to New England, I had the opportunity to work with Corey. At age thirty, and now working in construction, Corey—despite his very high intelligence—had barely made it through high school due to the extreme challenge posed to him by reading and writing. His parents had spent thousands of dollars on assessment through a highly regarded university, and thousands more on therapies and learning systems of all kinds. Still Corey struggled with sound-symbol recognition. Additionally, I learned that as an infant Corey had skipped the crawling stage, the time when the brain develops major cross-hemisphere motor patterns that facilitate communication between the two hemispheres (and therefore communication between both eyes for proper teaming).

Because of an accident eight years before, Corey actually had little vision in his left eye. Doing a simple eye-lead check with him was not possible. So I used the Edu-K technique of muscle checking\*. As I had suspected, this check indicated that his damaged left eye functioned as the leading eye and his intact right eye was the blending eye.

During Corey's reading pre-check, he stumbled over very basic words and read aloud haltingly, word by word, with little flow or inflection. He barely made it through the first sentence and was happy to stop.

Corey's session called for a number of Edu-K processes, most significantly Three Dimension Repatterning\*, which took about fifteen minutes. This repatterning creates strong, efficient connections within the brain in all three dimensions: side to side, top to bottom, and front to back. Corey was quite challenged by some of the physical-coordination aspects of certain steps of this process, which indicated how much difficulty he was having with brain integration. By the time we concluded, he could do each step fluidly, which showed how much learning he had accomplished.

When we had finished this process, Corey read again, beginning with the same sentence. There was still a word he didn't recognize, but he read much more smoothly and with voice inflection. He went on to read the rest of the paragraph, with few hesitations and little help. He couldn't believe the

difference, both in his reading and in the relaxed state of his body while he read.

After this I checked Corey's eye lead, again using muscle checking. This check showed his eye lead to be reversed and that he was now leading with his right eye and blending with his left eye. This indicated that during the balance process his brain had actually reorganized itself to lead with the right eye, his undamaged eye. If this were so, it would mean that Corey's right eye was now available to bring in information more fully. And, since this eye has the optimal left-to-right tracking, it could now support his reading.

I was again struck by how intelligent the mind-body system is: Even if Corey's right eye had been a more willing blending partner, there was no functioning vision in his leading left eye for it to support. His brain had simply—and elegantly—reorganized so the right eye could do the leading itself. This was a truly extraordinary occurrence.

My travel plans required that I leave the next day, so I was not able to do any follow-up work with Corey. I left him with instructions for doing PACE\* (the Brain Gym warm-up), and gave him resources for finding a Brain Gym consultant in his area. This was an excellent start for Corey. To make further progress, he will want to address his challenge over time.

## HOW DO THESE CHANGES OCCUR?

Without brain scans and detailed testing, it's impossible to know for sure what happened for Anna, Celana, or Corey that allowed for such shifts in function and ability. Shifts of this kind never cease to amaze me, because they demonstrate the body's resilience and its innate intelligence at work. Scientists today often refer to the plasticity of the human brain and how it can reorganize after damage or surgery, with other portions taking on the tasks of damaged ones.

In Brain Gym we rely on feedback from the learner (regarding, for example, release of body tension, improved ability, more fluid coordination), in addition to our own observations, to assess the changes made through any Brain Gym session. Through this kind of observation, we regularly see shifts that are consistent with reorganization for more efficient brain function.

Ultimately, anyone who wants to support children in reading well must pay attention to vision: how the eyes are cooperating, how well they flow from left to right, how easily they move in all directions of visual range. We don't need to be vision professionals to do activities with children (or adults) that help them release muscle tension and that promote comfortable eye movement and tracking. Often, all we need are the simple movements and processes of Brain Gym to support learners of all ages in reading more easily.

*Kathy Brown, M.Ed., founder and developer of Center Edge, is a licensed Brain Gym® practitioner and instructor. Her innovative consulting program, Total Team Effectiveness<sup>SM</sup>, brings the strengths of Brain Gym to the workplace. Kathy draws on her studies of aikido, karate, hatha yoga, and their underlying philosophies in teaching how to access inner strength and focus and put into active practice a calm, centered state. ▲*



## Classic Articles on Brain Gym®

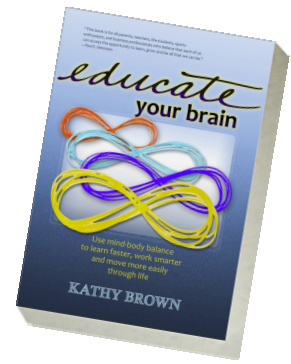
### And Reading

By Kathy Brown, M.Ed., author of the 2012 Book


# Educate Your Brain

www.EducateYourBrain.com

This article was written in 2004 as Kathy was trying to understand and explain in simple terms why reading was difficult for some students and how Brain Gym processes could help. Her most current information is presented in an extensive, 22-page chapter in her book, *Educate Your Brain: use mind-body balance to learn faster, work smarter and move more easily through life*.



In the Brain Gym®/EduK program, the terms "dominant" and "lead" are often used interchangeably.



The right eye most naturally tracks left to right. The left eye most naturally tracks right to left.

Our right and left eyes have opposite tracking preferences. On its own, the right eye prefers to scan left-to-right, the same direction as written languages of the western world. The left eye, however, most naturally scans right-to-left. This would come in handy if you're learning Hebrew or Arabic; it's less helpful for English.

About seventy percent of people are right-eyed; thirty percent are left-eyed.<sup>6</sup> However, in my experience, left-eye lead is incredibly common among children in special-education classes. During a day of consulting at one school, I was asked to work with nine children who were being assessed for special help. *Eight of them were left-eyed.* I can only assume that the left eye's tracking preference (combined with lack of integration) is at the root of many "learning disabilities."


### The importance of teamwork

Regardless of which eye we lead with, our two eyes are meant to work together. This is called "eye-teaming" and can happen only if both brain hemispheres are easily sharing information.


A left-eye-dominant reader whose eyes are not teaming will almost certainly struggle in school. He may look at the word "dog" and, scanning right-to-left, start by saying the sound "guh." Children who lead with their left eye may end up straining to track the line of print, since their eyes tend to jerk back to the left, again and again, sometimes even jumping to a different line. It's all but impossible to comprehend material read this way. A little reading like this is tiring; a lot is exhausting.

### Whole-brain integration is the key

So, is a left-eye-dominant child destined to a life of reading failure? Not at all. If a child's two brain hemispheres are sharing information effectively, his two eyes will be able to communicate as well. For many left-eye-dominant folks, patterning for this kind of communication happens naturally in childhood, through crawling and other cross-lateral movement. Many highly skilled and academically proficient people I know have been surprised to recognize that they are left-eyed; they were fluent readers from the start. "In fact," Paul



This boy's dominant left eye wants to keep jumping "backwards" along the line of print.



When both hemispheres are communicating, both eyes team and track easily.

100 - Ready for Reading



Left-eyed girl Right-eyed boy

Just noticing which eye you close first may be a clue to eye dominance. Most people are inclined to close (or wink) their non-dominant eye. This would leave their dominant eye more consistently open.

### Checking another person

Some people (especially young children) cannot easily check themselves, perhaps because they have a challenge closing one eye or the other. In this case, I do the check a bit differently. I have the person assume the very same position (hands overlapped, elbows straight, both eyes open, looking through the space between their hands). But instead of looking across the room at an object, I stand a distance away and have him look *at my nose*. Then I can look through that space, directly at the only eye that's truly aimed at me: his dominant eye. In the case of this girl, you can see only her left eye, which is spotting the camera used to photograph her. The boy, in contrast, is spotting with his right eye.

After following these instructions, some parents or teachers say, "I realize now that my child (or student) leads with her left eye. *How do I fix that?*" There is nothing to "fix" about being left-eyed, any more than we need to "fix" being left-handed. Remember, many fine readers are left-eyed! Balance is the key. If a child (or adult) has sufficient cross-lateral integration, it doesn't matter which eye she leads with, since both eyes are working fluidly together.

These are very simple eye-check techniques, and we humans are complex. For example, some people lead with one eye for near vision and the other for distance. Other people may learn stress-based compensations and appear to be right-eyed when, indeed, they're left-eyed. It can take time and training to learn all the ins and outs of this topic. For now, I invite you simply to notice the vision-related challenges you experience (or those of the children, students, or clients in your care) and see what happens when you introduce movement!

### The Stress Connection

Even when we're wired for efficient eye-teaming, we may not have full access to this ability for an entirely different reason: stress. This is true even for right-eye-dominant readers like me.

Survival takes first call on our body's resources, and the main job of our dominant eye is to scan for danger. When I'm under stress, my dominant eye ends up looking *out there somewhere* rather than at the words I need to read or write.<sup>10</sup> Eye-teaming vanishes, and I end up struggling with just my left eye, which tends to "swim upstream" against the flow of the written page. The result? Reversals and choppy reading.



Our dominant eye's first job is to be on the lookout for danger. This right-eyed girl, under stress, will tend to read with her left eye.

104 - Ready for Reading