

# Integrated Low Gear: The Missing Piece in Learning

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**Do you remember** learning to do something that required a lot of focus or coordination? Perhaps you remember learning to ride a bike—your first wobbly trials, when you were learning to coordinate the movement of your feet on the pedals while maintaining balance and actually steering where you wanted to go. Then, one day you found yourself simply pedaling down the road, thinking about something else entirely. You had mastered the skill of riding a bicycle and it didn't need your focused attention anymore.

Anything we do easily we do automatically, without having to think about it. In Brain Gym® we call this state “integrated high gear,” which means that we can move and think about something else at the same time. Into this category fall all kinds of things that we do effortlessly, like sign our name, brush our teeth, drive the route home from work. You could think of this as “cruising on autopilot.”

When we learn something new we must slow down, so we can safely explore the bits of it at our own pace and make them our own in a very natural way. In Brain Gym we call this state “integrated low gear,” one where we can stop and think when we need to. Into this category fall all kinds of new learning, from figuring out how to multiply fractions, to operating a new computer program, to the tasks of a new job. You could think of this as “safely slowing down to explore.”

**It's important to be able to move fluidly between these two gears.** I like to illustrate this kind of shifting between integrated high gear and integrated low gear by thinking about driving on holiday. Imagine you are driving through a part of the world you've always wanted to explore. You're on the freeway (cruising) and you spot a lovely little town in the distance, which you decide to visit. You certainly can't cruise through this town at freeway speed, so you exit the freeway on the appropriate

off-ramp, slow down, and find your way to the town. You drive slowly through the town exploring all the picturesque buildings and shops. Perhaps you even park the car so you can get out and walk about on foot (safely slowing down to explore), to find that lovely café to have lunch or afternoon tea, and purchase a remembrance or two. When you're all finished with your exploration you get back into your car and return to cruising on the freeway again, taking with you all you learned about that little town.

**This is the way true learning works:** the learner moves seamlessly between integrated high gear and integrated low

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gear, as needed. When reading a story, he can slow down to figure out the meaning of a word, and return effortlessly to fluent reading. When learning a new mathematical algorithm, she can effortlessly call on the math facts she knows while slowing down to figure out which numbers go where as she computes the answer. This kind of learning requires communication between all parts of the brain. In Brain Gym we call this an “integrated state,” and we support this kind of integration through using Brain Gym movements and balancing to activate the connections within the brain.

**What happens when a child (or an adult) is not operating in an integrated state?** This kind of learner

will end up moving compulsively: (“Help! I can't slow down!”) or sitting listlessly (“Help! I can't get moving!”) The learner who can't slow down will miss details and move on compulsively, with poor, scattered outcome in the product; she will act thoughtlessly and create havoc in her surroundings. The learner who can't get moving will start late and need prodding to finish; he may blend into the background or stare off into space.

When these behaviors occur to a mild degree they simply get in our way a bit, and we learn to manage them with compensations. But in the extreme, these are the very behaviors that end up being labeled as ADHD (Attention Deficit Hyperactive Disorder) or ADD (Attention Deficit Disorder).

Brain Gym movements and Brain Gym balancing sessions will help such learners develop the connections they need in their brain, so they can develop both integrated high gear and integrated low gear, and move easily between the two.

**It's very important** to be able to move effortlessly between integrated high gear and integrated low gear. Yes, it's lovely to do things quickly and automatically—but *integrated low gear is the only state where we can learn something new*. Without integrated low gear we careen through life, “trying” to do things, without without first developing a foundation through safe exploration at our own pace.

**Of all the processes of Brain Gym**, in my experience the ones that most directly support easy movement between integrated high gear and integrated low gear are Dennison Laterality Repatterning (DLR) and Three Dimension Repatterning (3DR). These processes, developed by Dr. Paul Dennison, are what I call “the crown jewels of Brain Gym.” These repatterning help the learner develop more fluid connections throughout his or her brain. The final outcome of either



repatting is both an integrated high gear and an integrated low gear state, which the learner can now call on at will, and between which he or she may easily move. (Both DLR and 3DR are learned in the Brain Gym® 101 course.)

**Meet Parker**, a young client who was simply a small hurricane in tennis shoes. He is five years old and developmentally delayed, having missed a number of important neurological milestones. His mother, a physical therapist, had described to me some of his behavior and processing challenges, but nothing had quite prepared me for the way Parker hurtled into my office and set about seeing and touching everything. I could see immediately that I'd have to work very quickly and intuitively, and said, "Hey, Parker! Come lie down here on the carpet!" Parker's mother, Cristy, had just taken the Brain Gym® 101 course and I found myself saying, "Cristy, I think it's time for a DLR with Parker!" She sat down with me to help with this process.

There are five main steps of DLR, which involve various combinations of arm and leg movement, eye direction, and other elements, in a specific sequence. Parker was able to do the first step fairly easily: it included Cross Crawl (the Brain Gym movement that involves bringing the elbow to the opposite knee), which Cristy had been helping him learn to do. This part of the repatterning process helps develop the integrated high gear state. However, when it was time for Parker to do the second step, which included raising and lowering his *same-side arm and leg simultaneously*, he simply could not do it. This part of the repatterning process helps develop the integrated low gear state—the ability to stop, think, and safely explore.

Then it struck me—Parker was a whirlwind of activity, and he could not do this movement: Parker simply had not the smallest particle of integrated low gear—he was *neurologically incapable of slowing down!* What would happen once this repatterning was complete? What would Parker be able to learn, once his system could slow down and feel safe enough to explore at his own pace?

Cristy and I carried on by "motoring" Parker through this movement—she'd raise his left arm and left leg together and lower them, then I'd raise his right

arm and right leg together and lower them, back and forth, back and forth. Finally, Parker began participating in the process and started moving his arms and legs in that pattern on his own, first awkwardly and out of sync, then more fluidly. We completed the rest of the repatterning process in this same very simplified way, taking about fifteen minutes in all.

When the process was complete Parker rolled onto his side and curled up, very content and very still. A feeling of serenity filled the air. My sense was that Parker's body was absorbing this new experience of integration, and Cristy said that this was the longest she'd ever seen Parker be still, when he wasn't asleep.

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**In addition, some other remarkable things were occurring.** I mentioned above that Parker had missed some important developmental milestones, and one of them was nursing properly. As he lay there, he spontaneously began sucking motions with his mouth, which continued off and on for the next several days. Also, his next bathroom visit, a few minutes later, produced his first authentic, complete bowel movement of his life; Cristy said he'd never used the core muscles of his lower torso in that way before. These very basic steps are huge milestones in the life of a developmentally delayed child, and indicate that Parker had made several very important shifts through that very quick and spontaneous repatterning process.

The next day Parker went with his father to the mall. Ordinarily he would be "everywhere at once," but on that day he stayed right by his father's side, calmly looking at the things around him, despite the noise and distraction. This child, who had been stuck in the "Help! I can't stop!" state, was now stopping,

thinking, and choosing. After that one DLR, Parker was no longer living a life of such compulsive action, he was able to slow down and process at his own pace.

**Since that time** (two months ago) Parker has continued to grow and develop, making improvements in language expression, chewing, acceptance of new foods, tolerance of noise and disruption, and auditory discrimination, and ability to dress himself. He has also returned to some earlier developmental behaviors (the "clingy" stage of two-year-olds, for example). I believe he is spontaneously "backing up to move forward," this time completing each step more fully. Parker will certainly benefit from more balancing sessions, but this beginning to his journey with Brain Gym created a powerful foundation for future changes.

Not every child has Parker's extreme challenge with integrated low gear, but many children (and many adults) have this challenge to different degrees. Teachers describe with dismay the increasing number of children with impulsive behaviors, for whom it takes tremendous effort to sit still or keep their hands to themselves; prescriptions for ADHD medication are at an all-time high. Articles abound on the speed of life today, and how many adults are "spinning out of control." How many of us are dealing with lack of access to an integrated low gear state, where we can simply slow down and choose? Brain Gym balancing is a wonderful support for anyone who wants to make this kind of change.

**It's important to remember** that as teachers and parents it's our responsibility to support learners in taking time to safely explore, and become familiar with the elements of the new subject or area of endeavor. We validate integrated low gear by honoring the ability to slow down and safely explore by providing time for it, and resisting the need to pressure for mastery right away. We also validate integrated low gear by allowing ourselves to slow down, to enjoy the exploration and model this for others as well.

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