How are Brain Timing Circuits And ADHD Related?

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ADHD (Attention Deficit Hyperactivity Disorder) is a condition which is diagnosed by long term presence of six or more symptoms from the following three categories:

- **Inattentive** (doesn't listen when spoken to, little attention or attends to wrong things, "space cadet", doesn't finish tasks, avoids tasks, careless mistakes, disorganized, easily distracted, forgetful, and needs constant reminders)
- **Hyperactive** (fidget and squirm, difficulty staying seated, runs around, climbs on things, too loud, constantly "on the go", and talks too much)
- **Impulsive** (blurts out, cannot wait his turn, interrupts others, cannot wait, does things without thinking, doesn't consider consequences, and constantly bored)

Estimates of ADHD in the population (children and adults) range between 5% and 11%. Actual diagnosis of ADHD in the population is less, because many never are diagnosed.

We have worked with hundreds of ADHD children and adults since early 2001. Our work is to teach rhythmicity. Our experience is that about 70% of those who have completed our rhythmicity training program have achieved improvement in the conditions surrounding ADHD.

Building new Brain Circuits

We believe our training program rebuilds certain timing circuits in the basal ganglia of the brain. Our program involves many tens of thousands of repetitions of physical movements which are highly rhythmic. These movements provide proprioceptive signals which the brain uses to build new circuits.

Our brains are malleable. When we repeat some activity, the brain builds circuits to manage this activity. This is how we get good at doing something new. As we repeat this new activity, the brain builds new circuits to manage it. This is how we learn everything as a newborn. This is how we get good at any task.

Our program uses this ability of the brain to build the new timing circuits. We provide exercises which are highly rhythmic. As people perform these exercises,

the brain recognizes the repetition and builds new circuits to support this highly rhythmic activity.

These new circuits establish the timing relationships between the brain and body. These circuits become the timing distributor for all motor planning and sequencing tasks. They provide the signals for all activity at the appropriate time.

But, how does this relate to ADHD?

When these circuits are not rhythmic, they provide signals at inappropriate times. This leads to poor coordination and poor performance. When these circuits are erratic, this leads to erratic performance of any task, as well as bouncing from one task to another.

When these circuits pop-out, this leads to inability to stay at a task until completion. It also leads to being easily distracted and easily bored.

When these circuits are not stable, this leads to behavior which is not stable. Sitting still is an example of stable behavior. If a person cannot sit still or fidgets or squirms, these circuits are sending signals that cause this non-stable behavior.

Problems in these circuits lead to all of the behaviors described as ADHD symptoms. When we teach rhythmicity we make those circuits stable, smooth, precise, and without pop-out. After these circuits are stable, smooth, precise, and without pop-out, those ADHD behaviors stop.

Our rhythmicity training program involves 40,000 to 50,000 repetitions of increasingly precise rhythmic exercises. All of these reps provide enough proprioceptive signals that the resulting timing circuits are fat, strong, and dependable.

Are the new timing circuits permanent?

These circuits become the central timing circuits for all motor planning and sequencing tasks for the person. This means these circuits are used to provide timing for all activities involving any voluntary muscles of the body, such as walking, talking, dialing a phone, driving, etc. . . . When the person does anything they are exercising and using these new timing circuits. As long as these circuits are used to perform all tasks, these circuits will be reinforced every day. As long as these circuits are continually reinforced, they will remain in force.

From our own experience, those who complete rhythmicity training, continue to benefit from the improved circuits for years. Our own clients continue with their new capabilities for many years.