

# DallasChild

Beating

# ADHD

With Cowbells



and a Computer





# Beating ADHD With Cowbells and a Computer

*By Shelley Moon*

Elaine Rooney was at her wit's end. Her 9-year-old son, Logan was diagnosed with ADHD when he was a first grader. The family tried medication. They tried diet modifications and even tried homeopathic treatment. Nothing seemed to make a dent in Logan's unruly behavior.

"It just became so frustrating to me that I would cry at night because I didn't know how to help him," Mrs. Rooney recalls.

When she heard about a new therapy, called Interactive Metronome, she was skeptical, but desperate enough to give it a try. Logan, who is now 10, went to the therapy three times a week from October to January.

The therapy literally uses a cowbell and a computer to develop better timing in the brain. It is based on the old-fashioned metronome, an instrument that makes clicking sounds at regular intervals. Musicians use the device to help them mark time and keep a beat.

During each Interactive Metronome therapy session, the child hears a series of rhythmic tones through headphones. The tones sound like cowbells. As the participant listens, he must anticipate the beat and perform repetitive hand and foot exercises to coincide with each beat. A

different set of tones provide immediate feedback to the child, letting them know if the response was on time, too early or too late. Over the course of the treatment, a child completes at least 35,000 repetitions of this task.

The difference between the participant's response and the actual beat is measured in milliseconds. Lower times indicate better timing, rhythm and accuracy. The exercises help a child directly improve their brain's processing abilities.

"They learn to subconsciously improve their timing," explains Robert H. Weiner, Ph.D., a Plano clinical psychologist who offers the therapy. "Children typically come in either too fast ahead of the beat and have to learn to slow down, or if they are inattentive, they daydream and are behind the beat or they may randomly respond both fast and slow."

The therapy involves using both mind and body and a great deal of concentration, thereby limiting opportunities for the child's mind to wander.

"The task requires children to coordinate the auditory beat with different motor actions. They get instant feedback when they start drifting away from the beat, both from the different feedback sounds in their headphones as well as from the thera-

## ADHD Symptoms

Patients diagnosed with ADHD are classified in three ways—predominantly inattentive, predominantly hyperactive-impulsive or combined. To meet the standard diagnostic criteria, there must be six of nine behavioral symptoms present. Some symptoms of ADHD must have been apparent before age 7 and persist for at least six months. Those diagnosed with ADHD have symptoms that cause significant impairment in two or more settings, such as home and school or work.

### Symptoms of predominantly inattentive:

- Failure to give close attention to detail
- Difficulty sustaining attention in tasks or play
- Not appearing to listen when spoken to directly
- Not following through on instructions
- Difficulty organizing tasks and activities
- Avoiding or disliking tasks that require sustained mental effort (such as school or homework)
- Often losing necessary things
- Easily distracted
- Forgetful in daily activities

### Symptoms of hyperactivity-impulsivity

- Fidgeting often with hands or feet
- Often leaves seat in situations where remaining seated is expected
- Runs about inappropriately



pist who is monitoring their responses visually and through a second set of headphones," Weiner says.

A record producer, who noticed that some of his musicians were struggling to keep the beat, developed the theory behind the therapy. It was later tested in clinical situations and has been offered as an alternative therapy since 2000.

The therapy has also shown promise with other physical challenges related to timing, attention and motor planning. These are common issues for individuals with autism, cerebral palsy, learning and motor disorders, brain injury, stroke patients and those with Parkinson's disease.

"It's not just for children who have problems. It's for those who want to improve their performance. It has also

been used to improve one's achievement in academic, as well as one's performance in athletics and the performing arts," Weiner explains.

Parents of ADHD children will likely see a dramatic difference in their child after the first few sessions.

"After the third session we started noticing a difference in him," Mrs. Rooney says of Logan. "He still argues, but it's not belligerent. Now it's more like a typical 10-year-old. He's a lot easier to manage...He's controlling his temper better."

The Rooney's had such success with Logan that they enrolled their older son, Tyler, 13, in the program. He was also diagnosed with ADHD in the first grade, but his symptoms were milder. Rooney says the therapy helped Tyler.

"I noticed he's able to focus better. He will go and do things on his own. I don't have to tell him," she says. "He's actually able to get up on his own and keep a time schedule which he was not able to do before the therapy."

Both boys still take medication for ADHD, but in minimum doses. That's not uncommon, Weiner says. Some patients have been able to decrease or discontinue taking the medication after undergoing metronome therapy.

Rooney says she is letting her boys take a break from the therapy for now, but plans to put them back in for a few additional sessions during the summer.

Weiner says most ADHD children come in for treatment two or three times a week for 45 minutes over the course of at least five weeks. Even though the therapy is simple, it can be exhausting for a child.

"It's not an endurance contest, but there will be a lot of challenge," Weiner says. "It takes a lot of attention for a child going through this. Over time, the child learns to attend for longer and longer periods of time without internal or external interruptions. Children progressively improve their ability to monitor their own mental and physical actions as they are occurring. This new skill translates into their ability to learn new things faster and easier."

Interactive metronome therapy is appropriate for children who are at least 7 years old. Younger children have not developed their motor skills and attention span enough to be successful. Interactive metronome therapy costs \$50-\$130 per session and is not covered by most insurance companies.

The Rooney family says the cost of treatment has been money well-spent.

"As a parent, the load is lifted from your shoulders when you start seeing improvement," Rooney says. "I was trying to do something to benefit my child and in return, I benefited too." dc

- Difficulty playing quietly
- Often on the go
- Excessive talk
- Blurring out answers before questions are complete
- Difficulty awaiting turn
- Often interrupting or intruding on others

## By the Numbers

- 1 in 11 boys ages 13-17 were diagnosed with ADHD in 2001.
- ADHD affects 5 percent to 7 percent of the population.
- The number of children taking psychiatric drugs has tripled during the last two decades. Ritalin and antidepressants are the two most commonly prescribed psychiatric drugs.
- Children with untreated ADHD often engage in disruptive behaviors and consequently may experience peer rejection.
- When adult ADHD goes undiagnosed and untreated, it can lead to procrastination, disorganization and mood swings. They may suffer from low self-esteem, a low tolerance for frustration and poor social skills that can affect both the personal and professional life.