

JANUARY - FEBRUARY 2009

# AUTISM

ASPERGER'S DIGEST MAGAZINE



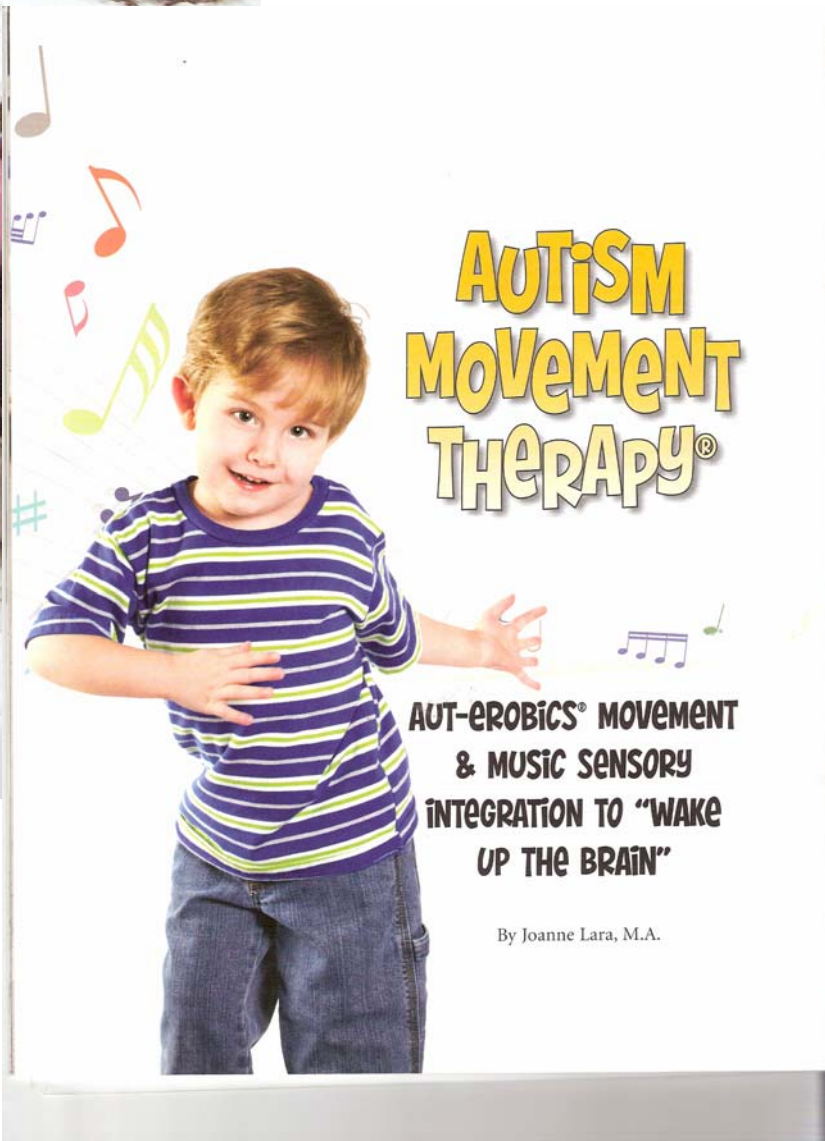
## Early (and Later!) Intervention Basics

**Punishment**  
The No Return Strategy

**Autism Movement Therapy**  
Effective ... and Fun!

**If Only I'd Known**  
Sharing Hard-Won Wisdom

**Get Yourself Some (New) Friends!**



## AUTISM MOVEMENT THERAPY®

**AUT-EROBICS® MOVEMENT  
& MUSIC SENSORY  
INTEGRATION TO "WAKE  
UP THE BRAIN"**

By Joanne Lara, M.A.

The brain is an information processing wonder. We process and store information in either long term or short term areas of the brain. When we need that information again, we retrieve it via a pathway (white brain matter) in the mapping area (gray matter) of the brain. Brain mapping is an interesting process. In a nutshell, it's like this. Say you move into a new home. You don't know where to find the grocery store, the dry cleaner, the gas station or any other neighborhood establishments you need on a daily basis. But within a short period of time you've found these places and you no longer have to think about the specific directions to get to any of these places. You get in your car and drive right to the spot, almost as though you're on "automatic pilot." Daily we map hundreds of pieces of information by placing them in a file in our brain. Without even having to think about it, when we need the information we retrieve the file by going straight to it, via cognitive maps or highway pathways.

Individuals with autism have difficulty accessing and retrieving information in long and/or short term memory banks. Either the pathway does not exist or the transmitters are impaired. This makes learning especially difficult for them. The analogy is that our kids' brains function like a library where none of the information is stored in any organized, categorized way. Think of the confusion this would cause! The good news is that scientists now know we can often jumpstart impaired informational pathways or even create new pathways through a process called cognitive redirection. This "waking up the brain" is what Autism Movement Therapy is all about.

## What is Autism Movement Therapy®?

AMT is an *empowering* sensory integration strategy that connects both the left and right hemispheres of the brain (interhemispheric integration)

by combining patterning, visual movement calculation, audile receptive processing, rhythm and sequencing into a "whole brain" cognitive thinking approach that can significantly improve behavioral, emotional, academic, social and speech and language skills.

The primary goal of AMT is that after 12 -14 weeks of two or three 12 minute sessions a week, the individual will be more compliant when asked to complete on-task activities, will interact with typical general education peers more frequently, and will be using both sides of his brain for processing. Increased overall self-determination awareness, along with healthier, improved self-esteem is the ultimate goal.

## What is the theory behind Autism Movement Therapy®?

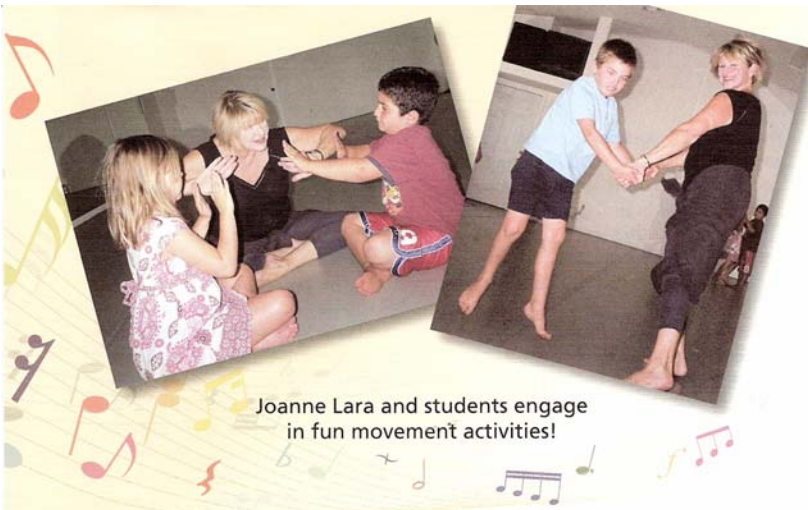
In individuals with autism the left and right brain hemispheres are more often than not, not communicating with each other. The left (analytic) or logical hemisphere of the brain is: verbal, responds to word meaning, is sequential, processes information linearly, responds to logic and plans ahead, recalls people's names, speaks with few gestures, is punctual, prefers formal study design, prefers bright lights while studying. The right (global) or artistic hemisphere is: visual; responds to tone of voice, is random and processes information in varied order, responds to emotion, is impulsive, recalls people's faces, gestures when speaking, is less punctual, prefers sound or music in the background while studying and prefers frequent mobility while studying.

Information travels across the corpus callosum, which serves as the conduit or bridge between the left and right hemispheres. Studies indicate that this bridge can be strengthened.

AMT is designed to cognitively redirect or re-map the brain. It uses repetition of movement patterns and

sequences to establish legitimate pathways or highways for the information to travel along. This helps individuals with autism in processing, storing and retrieving information in a more efficient and effective manner. How can this be possible? Think of it this way. You buy a new home with a guest house in the back yard. No one has ever lived in the guest house, and the back yard grass is green, lovely and covers the entire yard. Someone moves into the guest house, and they use your laundry room, located at the back of your house. After a while, inevitably a pathway forms from the guest house to the laundry room. This is how we make new pathways in the brain, by having the information travel back and forth, over and over again, along the same white brain matter transmitters until the brain establishes that the traveled route is the preferred pathway to the stored information. Doesn't sound so impossible after all, right?

Certainly many parents and professionals will find the following "mis-association" example familiar. A child with autism goes to the park with his father. He sees a dog and as he leans down to pet it, his father looks up at the sky and says, "What a lovely blue sky." A month later the boy sees a dog at a friend's home. He immediately rushes over and as he lovingly pets the dog he says, "blue sky" - the words he cognitively mapped and stored in his memory bank during his trip to the park. Because he is now re-experiencing the same activity, one that he enjoyed, his brain retrieves the words (speech) he heard from his father (receptive audio information) that were stored along with the picture of the dog (language) and the action of petting the dog (gross motor). When the child says "blue sky" adults then misinterpret and misunderstand the child as thinking the name of the dog is "Blue Sky." In actuality, the image of the dog was the visual trigger for the retrieval of the stored information in the boy's brain.



Joanne Lara and students engage in fun movement activities!

Each of us processes information in this same manner. The difference between processing the correct information and/or misinformation, as in the above example, is dependent on the negative or positive interpretation of the information. We process through audio, visual and natural cues, which in turn become triggers. A visual image can be a trigger as well as audio or sound information, and many times both become triggers for the retrieval information process. Autism Movement Therapy utilizes these different forms of information processing and triggers in remapping the brain. It requires that kids use receptive language to hear the music, visual processing to see the physical image and gross motor skills to reproduce what they see.

### What does an Autism Movement Therapy® session look like?

AMT is fun, involving music and dance that appeals to all ages! The program is available through live sessions or through an instructional DVD. AMT is divided into three levels that take approximately 12-15 minutes to complete, with a fun Hip Hop level at the end. Each of the three levels is further divided into five sub-sections: A warm-up, stationary movement, locomotion

movement, improvisation and relaxation or cool down. More importantly, each of the three levels are designed to scaffold on the level in the previous section, 3 on 2, and 2 on 1. The student begins with Level 1 and through repetition and predictability moves to the next level when he has mastered the movement sequence and patterns, tempo and rhythm in the current section. In other words, he moves on when he has "mapped" the sequence and patterns (information), and when his body will reliably respond to that information (triggers).

Level 1 is designed for individuals with EMERGINIG gross and fine (motor), and cognitive skills. Level 1 introduces and trains the individual to "map" by listening to the music (using his right brain), visually interpret the movement or form of the demonstrator's body (using his left brain), and consequently move his body in space to the music (the whole brain approach). Level 1 is essentially "Listen, See and Do skills."

Level 2, the DEVELOPING skills level, is designed for the individual who is more advanced in his fine, gross, and cognitive abilities and who has mastered the Level 1 section. Level 2 focuses on longer sequences, more complex patterns, and an overall general appreciation of the dance form.

Level 3, the PROFICIENT level, is designed for the advanced student

who has mastered the skills in Level 1 and Level 2. This section involves more complex sequencing and patterning and combines improvisation with more challenging movement.

Level 4 is the HIP HOP level or the independent instructional level. This level is designed for the student to dance to the beat, using the rhythm and tempo skills they have acquired in the previous three levels and to HAVE FUN! Our kids so often feel left out at parties and family gatherings and this creative, improvisational level helps in being more spontaneously engaged.

The goal is for the student to move easily from Level 1 to Level 3 over time. How long that takes depends on each student, how easily the brain responds to the remapping, and how quickly transmitters are being reprogrammed. The ultimate goal is that the student is able to execute combinations independently, without the adult model.

Cognitive redirection or re-mapping requires dedication, perseverance, along with repetition and predictability, all keys to successful interhemispheric sensory integration. We want our kids to perform well and work on-task; mastering these basic skills can have an enormous impact in all other areas of learning. We also want them to be the best they can be. AMT stimulates the brain and wakes up areas that are dormant. But, like life, it's a process and no two kids respond in exactly the same manner. The program can be used with children as young as age three, yet has been shown to be effective when started with teenagers too. As we all say in our clinic, don't get discouraged, get active! Retrain your brain! ■

**Joanne Lara** is the creator of AMT and a Professor at National University. She has appeared on abc 7, KCSN 88.5, Health Net Radio, Autism One Radio, KBUL 970AM, WVNJ Sam Greenfield Show, For the People w/ Chuck Harder, George Putnam Show, and in the Denver Post, at UPI.com and in Forbes Magazine. Visit [www.AutismMovementTherapy.com](http://www.AutismMovementTherapy.com).