Sonnenberg Consultants August 2009

Company News

- If you are interested in more hours please let your Senior know.
- The fall schedule will soon be upon us- please give your Senior your availability.
- Shifts should not be cancelled unless you are sick. Schedule a make-up time when calling in.
- Mark team meetings on your time sheet.
- At the bottom of your time sheet, mark if all hours were completed for all houses.

Upcoming Events

Dylan's Run
Sunday, Sept. 13
2 mile run/walk
For more info. go to
Dylansrun.com

Bike for Autism
Saturday, Sept. 19
Spring Green, WI
Family Rides starting at only 5 miles!
A ride for all levels of biking!
For more info. go to
bikeride.com/calendar/event

Definition of the Month: Expanded Trial

An expanded trial is used when a child is saying an answer before the tutor has a chance to even ask in Mass Trial.
The tutor will ask the SD, then do something with the child to get his/her mind off of the item for a second. This can be done by doing something goofy with the child or a very strong mastered item. The tutor then asks the acquisition item again.
Mark this in data as ET (instead of MT).
Progression remains the same as it is still technically in Mass Trial.

Magnetic fields test 'reflexes' of autism Method may pave way for treatment

By Carolyn Y. Johnson June 8, 2009 Boston Globe

Scientists are trying a new approach to unravel the workings of the autistic brain: the neurological equivalent of banging a patient's knee with a hammer to test reflexes.Instead of a hammer, though, researchers are pressing a flat paddle against patients' heads and creating a magnetic field that triggers brain cell activity.As the quest to understand autism has grown more urgent, researchers have used brain scanners to peer into autistic minds, searched for faulty genes, and scrutinized the play of 1-year-olds. The work has provided theories - but few concrete answers - about what goes awry to cause social isolation, repetitive behaviors, and communication problems that afflict an estimated one in 150 children with autism

spectrum disorders. The hunt has focused on everything from "mirror neurons," brain cells some re searchers think enable people to understand other's actions and intentions, to an overgrowth of local connections in the brain.

Now a small but growing number of researchers see hope in a tool called transcranial magnetic stimulation, which lets scientists spark activity in specific areas of the brain and watch what happens to patients' behavior. The technology may illuminate some of the biology behind the disease, and some specialists speculate it may one day offer a treatment.

"There's a lot of mystery about autism - it's not as if there's a well-understood story of what's going on at all, and there's a huge variety of autism, too," said John Gabrieli, a neuroscientist at Massachusetts Institute of Technology. Transcranial magnetic stimulation "is fantastic for identifying brain regions that are essential for specific mental functions. . . . I think if we can start to use it more systematically with autism, one could hope we'd understand a lot more about what's going on."Gabrieli said he hopes to team up with researchers at Beth Israel Deaconess Medical Center who are already getting preliminary results with the technology, finding that autistic brains appear to be more malleable than those of other people.

Researchers at the Boston hospital's Berenson-Allen Center for Noninvasive Brain Stimulation used rapid, repetitive stimulation to simulate what happens in the brain when people learn a new task. Then they gave a single pulse of stimulation and measured minute muscle twitches that told them how long people's brains maintained connections formed by the initial stimulation.

In people with no evidence of autism, changes lasted about 30 minutes, on average. But in people on the autism spectrum, the initial stimulation caused brain changes that lasted much longer - on average an hour and a half. "As they're going through their world, their brains are changing their circuits much more and much longer," said Lindsay Oberman, a postdoctoral researcher at Beth Israel Deaconess. "They're making connections, just not breaking them at the same rate as normal people." Researchers in the laboratory are also investigating whether stimulating a specific area of the brain improves language skills.

Use of transcranial magnetic stimulation to investigate autism is in its early days, but the technology is well-established. In the noninvasive procedure, a current travels through two loops in a figure-eight-shaped paddle, creating a changing magnetic field. The paddle is pressed against the patient's head, and the changing field induces an electrical current in brain tissue. Transcranial magnetic stimulation was approved by the US Food and Drug Administration as a depression treatment last fall. The main side effect is a risk of seizure, but the risk is low, researchers say, because years of research have provided insight into how to use the technology safely.

Dr. Manuel Casanova, a neuroscientist at the University of Louisville, began using the technique on patients a few years ago.Casanova was interested in groups of brain cells called minicolumns, which are abnormally small in autistic people and seem to lack what he calls an inhibitory "shower curtain" that prevents activity from spilling into the rest of the brain. His idea was to boost the shower curtain using the stimulation.

Casanova reported last year in the Journal of Autism and Developmental Disorders that when he used

repetitive stimulation on 13 high-functioning people with autism spectrum disorder, the treatment seemed to improve synchronization between brain regions. The patients were also able to sit still longer, follow directions better, and reduce repetitive behaviors. Initially, he paid for the research out of his own pocket, but last week he received gratifying validation - a grant from the National Institutes of Health to support his work over the next four years.

"These are just the very first steps - it's the first man on the moon just collecting rocks and looking at the composition of the rocks," Iacoboni said. "There is a very strong rationale for doing this; that's why it's promising. But people shouldn't hope we've found anything yet."