

Media/Research Updates:

ABC News New Clues to Autism's Existence! WASHINGTON (AP) - Harvard researchers have discovered half a dozen new genes involved in autism that suggest the disorder strikes in a brain that can't properly form new connections. The findings also may help explain why intense education programs do help some autistic children - because certain genes that respond to experience weren't missing, they were just stuck in the "off" position. The genetics suggest that "what we're doing makes sense when we work with these little kids -- and work and work and work -- and suddenly get through," he said.

But the study's bigger message is that autism is too strikingly individual to envision an easy gene test for it. Instead, patients are turning out to have a wide variety, almost a custom set, of gene defects.

"Almost every kid with autism has their own particular cause of it," said Dr. Christopher Walsh, chief of genetics at Children's Hospital Boston, who led the research published in Friday's edition of the journal *Science*. It's clear that genes play a big role in autism, from studies of twins and families with multiple affected children. But so far, the genetic cause is known for only about 15 percent of autism cases, Walsh said.

All the genes seem to be part of a network involved in a basic foundation of learning -- how neurons respond to new experiences by forming connections between each other, called synapses. In the first year or two of life --

when autism symptoms appear -- synapses rapidly form and mature, and unnecessary ones are "pruned" back. In other words, a baby's brain is literally being shaped by its first experiences so that it is structurally able to perform learning and other functions of later life.

"This paper points to problems specifically in the way that experience sculpts the developing brain," explained Dr. Thomas Insel, director of the National Institute of Mental Health, which helped fund the work. Some earlier research had pointed to the same underlying problem, so these newly found genes "join a growing list to suggest that autism is a synaptic disorder," he said.

If that sounds discouraging, here's the good news: The missing DNA didn't always translate into missing genes. Instead what usually was missing were the on/off switches for these autism-related genes. Essentially, some genes were asleep instead of doing their synapse work.

"I find that hopeful" because "there are ways that are being discovered to activate genes," Walsh said. "This might be an unanticipated way of developing therapies in the long term for autism: Identifying these kids where all the right genes are present, just not turned on in the right way."

Penn. Governor Signs Autism Insurance Bill into Law

Pennsylvania Governor Ed Rendell signed into law the most comprehensive autism insurance bill in the nation yesterday. The new law provides \$36,000 a year for Applied Behavior Analysis (ABA) and other necessary treatments, and goes

beyond many state insurance reform measures by mandating coverage up to age 21 with no lifetime cap. It also creates, for the first time under Pennsylvania law, an expedited appeals procedure for denied claims as a safeguard to ensure compliance by insurance providers. Private insurers will be required to provide coverage beginning in July 2009. Autism insurance reform legislation has now been enacted in eight states across the country, with many others currently considering legislative action.

Experts Convene to Discuss Autism and Mitochondrial

Disease On June 29, a panel of 15 experts convened in Indianapolis to discuss the co-occurrence of mitochondrial disease and autism. The Hannah Poling case has brought this issue to the public and into focus as a priority for researchers and clinicians. An important outcome of this meeting was the initiation of a dialog between researchers in autism and mitochondrial disease, increasing future collaborative research in this area. The promise of further collaboration was encouraging to an audience comprised of scientists and advocates interested in seeing more research at the interface of these two complex disorders.

Excerpts from an Interview with Daniel Tammet

Daniel is a savant with a super-human ability for math. He can calculate complex sums in his head faster than many of us can do on a calculator. He has a talent for languages, learning Icelandic in a week. He has a prodigious memory and was able to recite the number pi up to the 22,514th digit. Despite this, his ability to think abstractly and communicate with others is impaired. Daniel is the subject of the movie Brainman, has been featured on CNN, 60 Minutes and much more.

You are known as "Brain Man" and a prodigious savant. Can you tell us about some of the abilities you have?

I visualize numbers as shapes, textures and colors. Manipulating these shapes in my head I can perform complex calculations. I also visualize words in colors and textures. As an example, the word "word" is blue. I have a large vocabulary. I write for a living and also compose poetry. I also enjoy learning foreign languages.

Did you ever have a problem with eye contact? If so, how did you teach yourself to overcome this?

Yes I did as a very young child. I remember finding it uncomfortable to look someone directly in the eye and having to force myself to do so. With practice it became less uncomfortable and more natural for me to do.

Did you ever engage in self stimulatory behavior such as hand flapping? If so, did this lessen with age and how did you deal with this in public?

Yes, I had self stimulatory behavior such as hand flapping and clapping, as well as pulling at my lips. These did lessen with age. I remember being teased by my peers for these behaviors and I became increasingly self-conscious about them. They gradually disappeared around the age of 10 or 11.

Do you have any sensory challenges? If so, can you describe what some of these are and how they affect you?

I don't like too much noise, which can be unsettling for me. Certain noises - such as manual tooth brushing - are especially uncomfortable for me, so I use an electric toothbrush which makes a gentle buzzing noise instead.

Do you have specific routines you like to keep and what coping strategies do you use when things change unexpectedly?

I do have certain routines which I try to keep, such as eating oatmeal for breakfast every day and drinking tea at specific times throughout the day. When things change unexpectedly I can feel flustered and uncomfortable. One strategy I use is to count to myself - a repetitive action that I find comforting.

To read Daniel's full interview visit:

<http://www.nlconcepts.com/autism-tammet.htm>

Company updates: (w/ families)

- ✦ Keep hours consistent; only cancel if your child is sick!!!! All hours need to be made up if the therapist cancels!
- ✦ Thanks Melinda Floore for the fundraising, we can buy stimuli for the company. It is greatly appreciated and your support is always so wonderful! Thanks again!
- ✦ Raises go into effect on July 25th!
- ✦ If you want extra hours please contact your Senior.
- ✦ There will be a new gas incentive coming soon! Ideas are welcome!

Joke of the month:

What time is it when an elephant sits on the fence?

Time to fix the fence!

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