

# The Autism-Thyroid Connection

by Raphael Kellman, M.D.

**A**utism is the fastest growing developmental disability today, affecting more children than cancer, diabetes, and AIDs combined. Another skyrocketing contemporary condition is hypothyroidism, which according to recent estimates affects 20% of the population.

Could the autism and thyroid disease “epidemics” be related? I strongly believe they are! Many health care providers miss the diagnosis of hypothyroidism in children with autism because they rely on unreliable thyroid blood tests. Missing hypothyroidism leaves one of the most significant factors in the etiology of autism untreated.

### The Amazing Thyroid

The thyroid is a tiny gland located in the throat area. It secretes hormones, which are essential for energy production in every cell of the body, and for normal brain development during critical periods beginning in utero. Thyroid hormones, named T3, and T4, all serve to regulate neuronal proliferation, migration, and differentiation in discrete regions of the brain during definitive time periods. Deficiencies in any of these thyroid hormones during critical times especially the first two years of life can have significant deleterious behavioral and cognitive effects.

### Symptoms of Thyroid Dysfunction

Many researchers are beginning to appreciate that thyroid dysfunction may masquerade as autism. One study showed that 45 of 62 children diagnosed with autism were also hypothyroid. Another showed that mothers of children with autism most probably were hypothyroid during pregnancy. The researchers concluded that “thyroid hormone deficiency in early development might cause nervous system damage such that autistic symptoms are likely to ensue.”

Two common links between thyroid dysfunction in children and autism are:

- **Environmental toxins:** Both the brain and thyroid are very susceptible to the increasing burden of environmental toxins such as lead, mercury, PCBs and Dioxin. All can have a profoundly deleterious effect on the developing brain partly through their effects on the thyroid. Lowered thyroid function can lead to impaired detoxification, causing a secondary buildup of toxins.
- **Gluten sensitivity:** Reactivity to gluten is associated with both hypothyroidism and autism. A gluten-free diet often is one of the most effective treatments for children with autism and heals secondary autoimmune disorders such as hypothyroidism.

### Symptoms of Both Thyroid Dysfunction and Autism

Prolonged jaundice  
Feeding and eating problems  
Poor bone development  
Poor muscle tone  
Gastrointestinal abnormalities  
Constipation  
Sleep disturbances  
Speech and other developmental delays  
Distended belly  
Hyperactivity or lethargy  
Dry or pale skin  
Poor hair growth, bald spots  
Frequent infections and allergies  
Cold intolerance and cold extremities  
Weight gain or difficulty gaining weight  
Bed wetting  
Fears and anxiety, depression  
Poor concentration or slow processing

### Testing Thyroid Function

**Routine Tests** – Most blood tests for thyroid function, which measure TSH, T4, and T3, frequently fail to detect a problem. I believe that the TSH reference range relied is too wide, and misses detecting low thyroid in many patients. Also, the upper boundary of “normal” is too high; I believe it should be lowered to 2.5. This step would identify approximately 20% of the population as hypothyroid, and thus accessing treatment.

Many doctors have abandoned routine blood testing altogether, and use the Broda Barnes method of taking body temperature to diagnose hypothyroidism. Unfortunately, this procedure also misses many children with low thyroid, whose body temperature is normal.

**The TRH Challenge Test** – A superior alternative to taking body temperature and routine blood testing is the TRH stimulation test, which I have used in over 15,000 patients. This test employs a hormone called TRH to stimulate the pituitary gland, which, in turn, produces TSH to stimulate the thyroid, and produce thyroid hormones. When the thyroid is sluggish, the pituitary must produce more TSH. However, frequently, in those with hypothyroidism, high levels of TSH do not show up in the blood, rendering the routine thyroid blood test inadequate in a significant percentage of patients. However, even when the blood levels of TSH are normal in hypothyroidism, unequivocally TSH is high in the pituitary gland.

Upon stimulation with TRH, TSH is released on the spot, causing levels to rise, and allowing physicians to make a proper diagnosis, and treat the patient accordingly.

I have found that about 75% of cases of hypothyroidism in children with autism, ASD, PDD, and other developmental disorders, missed by routine testing, are picked up with the TRH stimulation test. With treatment using thyroid hormone the children experienced significant improvement in focus, speech, eye contact, interaction with others, attention, cognition, and mood.

### Prevention

Israeli researchers have shown that many women with fertility issues have hypothyroidism, even though they have normal TSH levels on routine blood testing. When evaluated using the TRH stimulation test, a significant percentage showed an abnormal results.

Commenting on the TRH test, a mother of one of my patients voiced the conviction of so many “autism moms,” “Dr. Kellman, this was the one test has changed my son’s life. Thank you so much!”

*Raphael Kellman, M.D. is an internist and a pioneer in holistic medicine, specializing in the treatment of autism and various developmental disorders since 1995. He has private practices in Manhattan and Westchester County, NY. Learn more about him at [www.raphaelkellmanmd.com](http://www.raphaelkellmanmd.com).*