

#### **CLAYTON: A CASE STUDY IN THE BODY-MIND EFFECT**

The following story comes from <u>The UltraMind Solution</u> By Mark Hyman, MD

An exasperated, professional woman finally found her way to my office with her 12-year old son, Clayton. Clayton, labeled with a multitude of both psychological and physical diagnoses by a myriad of highly specialized physicians, seemed to be a walking embodiment of "bad luck – poor kid."

In the realm of psychiatry Clayton was "diagnosed" with Attention Deficit Hyperactivity Disorder (ADHD), a behavioral disorder. He could not focus in school, "zoned out", and was disruptive. Like many other children labeled with ADHD or on the autism spectrum, Clayton's writing was nearly illegible. On the other hand he excelled in math.

Physically, Clayton was diagnosed with asthma, suffered from "environmental" allergies, sinus congestion, postnasal drip, sore throats, eczema, nausea, stomach pain, diarrhea, headaches, anal itching, canker sore, muscle aches, muscle cramps, hypersensitivity of noises and smells, sneezing, hives, itchy skin with bumps and frequent infections. He slept poorly and breathing at night. He also suffered from anxiety, fearfulness, and carbohydrate cravings.

All of his symptoms were being treated with 7 different medications by 5 different doctors including Ritalin for ADHD, allergy medicine and inhalers for his asthma and hives, acid blocking medication for his stomach problems, pain killers for his headaches.

This is quite a drug cocktail for a 12 year old and he still didn't experience much relief from his physical, mental, or behavioral symptoms. But this is how we approach things in medicine—divide it all up into parts, farm them out, and pile on the pills. What a life for both Clayton and his family!

Most psychiatrists not only lack the training to address any physical issues but also feel these are irrelevant to the mental "diagnosis" at hand. I, however, believe these physical ailments are the most important findings and these clues will provide the causes and appropriate treatment to repair his and others disordered brain function.

Today the list of medications and the untested cocktails and combinations have grown to frightening proportions. Children who present with mental, behavioral, or emotional problems like the ones Clayton had now get anti-psychotic medications like Ripserdal; anti-seizure medications, like Trileptal; and anti-depressants like Prozac—all on top of their stimulant medications like Ritalin, Concerta, and Adderall.

I recently visited a local school nurse. After seeing a large box on the floor filled with empty pill bottles the nurse told me that 63 percent of the children were on some type of medication.

My challenge is to organize all the symptoms, not into separate diagnoses but into the 7 keys of UltraWellness. That is how I lead my patients to an UltraMind.



#### **CLAYTON'S ULTRAMIND SOLUTION**

As we dug below the surface we found and treated the causes of his symptoms—imbalances in the 7 Keys to UltraWellness that form the basis of *The UltraMind Solution*. Here is what we found and what we did. Clayton's story represents to one degree or another, all of our stories. It illustrates both the despair and the delivery from our epidemic of broken brains.

Lets look at some of the essential keys affected in Clayton's case.

#### **NUTRITIONAL DEFICIENCIES**

Like most kids and especially those on the spectrum of ADHD and autism, Clayton lived on and craved junk food. His typical diet included trans fat, food additives and an overload of carbohydrates and refined sugar. This has been associated with ADHD. Blood tests confirmed significant deficiencies in many important fats, vitamins, antioxidants, and minerals. Clayton had no omega-3 fats and very low levels of tryptophan, B6, vitamin A, vitamin D, anti-oxidants (vitamin E and beta carotene), zinc and magnesium.

**Omega-3 fats**, eicosapentanoic acid (EPA) and docosahexanenoic acid (DHA) are essential for brain function. In fact 60 percent of the brain consists of DHA. A lack of these fats is strongly associated with ADHD, as well as eczema and immune deficiency.

**Tryptophan** is an amino acid (building block of protein) needed to make serotonin, the chemical in the brain for a relaxed and happy mood, and melatonin, the chemical for sleep. **B6** is crucial to convert tryptophan into serotonin. Clayton's unstable mood, sleep disturbance and ADHD were clues to a B6 deficiency. Some of his prescriptive medications were actually further depleting his B6 supply.

A clear indication of low vitamin A and omega-3 fat deficiency were "bumps" on the back of his arms called hyperkeratosis pilaris. His low level of vitamin D led to lowered immunity. Deficiencies of other vitamins such asvitamin E and beta carotene indicated he ate a diet high in junk food and low in vegetables and whole grains.

Low **zinc** levels are associated with lowered immunity, poor heavy metal detoxification and ADHD. This was consistent with Clayton's frequent infections, eczema and allergies as well as the hyperactivity symptoms. Low **magnesium** levels lead to headaches, anxiety, insomnia, muscle spasms, cramps and aches and hypersensitivity to noises.

Nutrients have a multi-factorial effect and work in synergy. It is important to attempt to correct all the deficiencies as you can see they all interact and overlap.

#### **IMMUNE AND INFLAMMATORY IMBALANCES**

Clayton had asthma, allergies, hives, sinusitis, itchy skin, canker sores, a history of intolerance to baby formula, diaper rash, frequent ear infections. These are all clear evidence of **immune and inflammatory imbalances**.

These should not be thought of as separate conditions but rather **one** immune system highly annoyed by one or more triggers such as food or environmental allergens, molds, toxins, chronic low-grade infections, or perhaps a combination of these factors.

Special testing for delayed, low-grade food allergies (IgG food sensitivity) showed Clayton's immune system (and likely his brain , ) was reacting to 18 foods including, dairy, peanuts, yeast, citrus and especially gluten creating more inflammation.

**Gluten** can trigger a low-grade, chronic immune response that inflames the brain and many other systems. Canker sores were just another clue pointing to celiac disease or gluten intolerance. Indeed, his IgG antigliadin antibodies were elevated. In a later chapter you will learn more about why gluten was a major clue in Clayton's healing process.



#### **DIGESTIVE IMBALANCES**

Nausea, diarrhea, stomachaches, anal itching and sensitive stomach were clear symptoms of Clayton's **digestive Imbalances**. The use of frequent antibiotics for the many infections led to a yeast overgrowth and abnormal gut flora. This resulted in a leaky gut (also called intestinal permeability). This condition gives way to the above mentioned food allergies, systemic allergies and inflammation. So we can see why his immune system was so pissed off.

### **DETOXIFICATION IMBALANCE**

Metal toxicity indicates poor detoxification. Tests showed that Clayton had high levels of **mercur**y and **lead**. His exposure was probably similar to other children of his age, however he nutritionally and/or genetically could not eliminate the metals from his body and stored them in his tissues.

Mercury has been associated with a myriad of gastrointestinal as well as autoimmune and cognitive problems. Children born between 1989 and 2001 were all exposed to mercury in the form of thimerosol in the multitude of vaccines they were given at a very early age (this mercury preservative was removed from the vaccines in 2001). As you will learn, other sources of mercury include coal burning industrial plants, many large predatory fish, river fish, and even "silver" dental fillings.

Lead toxicity has been associated with cognitive and behavioral problems in children. In a recent groundbreaking study lead toxicity and environmental toxins are clearly linked to ADHD. By living in a polluted world, playing with toys painted with lead paint made in China, and crawling around on the floor where shoes drag in the lead pollution from the outside, Clayton was exposed to the dangers of the industrial revolution.

He may also have suffered from other environmental toxins like mold toxins from the black mold in his house and food additives we could not measure.

Clearly, Clayton's problem was not a Ritalin deficiency or bad parenting! The cause of all these problems lay in the dietary and environmental pollutants that throw the 7 underlying systems in our body out of balance.

### THE SIMPLICITY OF TREATMENT

It is not any ONE thing that caused Clayton's ADHD, abnormal handwriting, hives, asthma, or stomachaches. It was the total load of all the stresses on his system interacting with his unique genetic susceptibilities, which thus led to his abnormal brain function and health problems.

Clayton's treatment was disarmingly simple.

By deliberately and carefully working to find the cause or **source of the irritation to his system** (nutritional deficiencies, toxic foods, food allergies, gluten, environmental toxins, food additives, yeast overgrowth) and identifying **the missing ingredients** needed to restore normal physiological function (a multivitamin, omega-3 fats, B6, zinc, magnesium, vitamin D, healthy gut bacteria, 5hydroxytryptohan for sleep and anxiety), Clayton's health and brain function could finally start to normalize.

I recommended a whole-foods diet free of additives, sugar, trans fats, processed foods, and his particular allergic foods—gluten, dairy, citrus, peanuts, and yeast. This is the diet that *The UltraMind Solution* is founded on.



Then we got rid of the low-grade yeast problem he developed after years of taking antibiotics (it showed up as anal itching) with an anti-fungal medication.

He was also given the raw materials for normal cellular, enzyme, and biochemical functioning: a multivitamin, additional zinc, magnesium glycinate, a special form of B6 (pyridoxal-5-phosphate), omega-3 fatty acids, vitamin D3, 5-hydroxytryptophan which is a building block of serotonin, and a probiotic to put healthy bacteria back into his gut.

Lead and mercury toxicity was addressed using DMSA, dimercaptosuccinic acid, an FDA approved medication to remove lead in children. This part of the treatment was postponed until the gastrointestinal health was restored. This was important so Clayton could properly eliminate the metals as they were chelated (pulled out) of his tissues.

My approach is simple: The first step is to **Take out the bad stuff**; remove what's irritating you. "You need to find all the tacks under your feet to be pain free, removing only one tack will not make you 50 percent better." The second step is to**add the good stuff**; add the specific vitamins and nutrients you need to thrive. These differ from person to person.

#### THE RESULT OF CLAYTON'S TREATMENT

Clayton and his mother were diligent and determined to make changes. At his 2-month follow-up visit, Clayton had discontinued all medications, including Ritalin, antihistamines (Zyrtec and Tagamet), bronchodilators, steroid inhaler, Tylenol (acetaminophen), and Advil (ibuprofen).

His mood and behavior resumed to that of a typical 12-year old. His attention improved, his disruptiveness at home and in school disappeared, and his irritability and anxiety vanished completely.

Clayton found himself free from all his chronic symptoms for the first time in his life. His hives, asthma, chronic runny nose, anal itching, stomachaches, nausea, diarrhea, headaches, muscle cramps, and sensitivity to loud noises all completely resolved. He was also able to finally fall asleep and stay asleep throughout the night. For the first time, Clayton began to succeed in school both socially and academically.

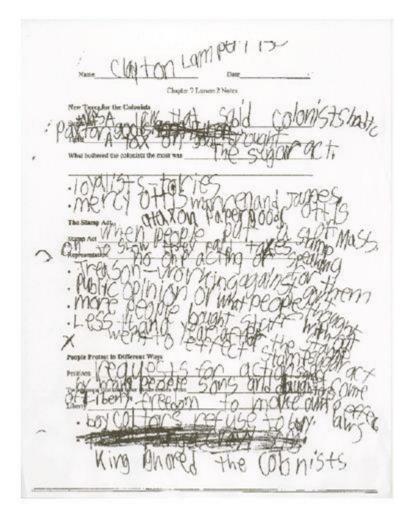
Clayton did not have a neurologic or psychiatric "disease". He had a "broken brain" caused by nutritional imbalances, toxicity, and altered immune, neurotransmitter, and digestive function. Treating those root causes and correcting the imbalances led to the resolution of **all** his symptoms.

Some of these findings and resolutions are subjective therefore, for those skeptics, one irrefutable objective finding underscores the effectiveness of this approach and "proves" the powerful effect the body has on the mind and brain.

Clayton's dysgraphia or abnormal handwriting, completely resolved within 2 months of treatment (see Figure below). Here is his homework before The UltraMind Solution, and 2 months later.



#### **BEFORE TREATMENT**





#### AFTER TREATMENT

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CLAYTON LAMPERT

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(layton Lamperti36 1. I wrote this sentence. 1. I wrote this sentence. 1. I, have several radios. 3. Since when do you havean hav? 4. I am thinking of something. 5. I am better at mith that my Sister. 6. Though the catwas old, it was still very playful. 7. We're all in this together. 8. The water was calm until the alligator attacked. 9. Usually it is guied in my room. 10. I am very happy most of the time. 11. While you were at school. 12. You ate the whole cake [1] 13. I went on a Cruise on the English canal in that hat cs. 14. I am good at math hat cs. 15. I listen to music glot. 16. My Did talk attrice. 18. The old man was not very



Clayton's mother also sent me an email reporting on her meeting with his school. The change was remarkable.

We had a 504 meeting at Clayton's school this morning (where the teachers, school counselor, parents, and principal all get together to review "the plan" for kids with special educational needs—in Clayton's case prompted by the ADHD diagnosis). This was the first time in his entire schooling history that everything seems to be going well. The input from his teachers was that he is "a different kid" than they saw in the first half of the year and that they're amazed by the difference. The school nurse hasn't seen him since March (and he used to be in her office several times a week). The school psychologist said his social skills are very good, age appropriate, and that she sees no problems at all. She also noted that Clayton seems very proud of himself and his new health and that he's taking good ownership of all the changes in his diet. He even seems to be shrugging it off when the other kids at school tell him he's an "alien" because he doesn't drink soda.

This was just such a fantastic meeting and I wanted to pass along the good news and say Thank You!

Read more about Clayton's story and find out how you can help your children optimize their brains.