



Nutritional Deficiencies and Imbalances: An Overlooked Cause of ADHD (Part 2: Minerals)



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In my last blog, I wrote about B-vitamin deficiencies and the role they play in the symptoms of ADHD. In this blog, I'd like to continue discussing nutritional deficiencies and ADHD – concentrating on mineral deficiencies and imbalances. Specifically, magnesium deficiency...zinc/copper imbalance...and iron deficiency. Let's look at them mineral by mineral.

Magnesium to the Rescue

I devote the first chapter of my book *Finally Focused* (forthcoming from Harmony Books, May 9) to the mineral magnesium. Why?

Well, as I write in the book, I've been treating children and adults with ADHD for thirty years – and I can't remember one patient with the disorder who didn't benefit from taking a magnesium supplement. How can one nutrient make such a big difference in the symptoms of ADHD?

Magnesium plays a role in more than three hundred enzyme systems, biochemical spark plugs that ignite cellular activity. For example, if magnesium is minimal, so is ATP, the fundamental fuel that powers every cell. Blood sugar isn't regulated. The immune system is weakened. Most importantly for ADHD, the brain is compromised.



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Too little magnesium weakens the brain because the mineral plays a key role in the formation of neurotransmitters, chemicals that help send messages between brain cells. The end result of a magnesium deficiency can be...poor concentration...irritability and anxiety...depression and apathy...mood swings...fatigue...and sleeping problems, like insomnia.

And too little magnesium is common in ADHD children and adults. In one study, a shocking 96% of children were deficient. My clinical experience is that 9 out of 10 ADHD patients are low in the mineral. (That statistic is a little less “shocking” when you realize ADHD medications deplete the body of magnesium.)

Studies also show that supplementing the diet with magnesium eases hyperactivity, inattention and impulsivity, balances brain waves, and restores deep sleep. It can also reverse side effects from ADHD drugs.

In my book *Finally Focused*, I discuss magnesium in-depth, providing a complete “Plus-Minus” Action Plan” for supplementation in children, adolescents and adults.

The Zinc-Copper Seesaw

Chapter 4 in *Finally Focused* is an in-depth look at the zinc-copper balance in the body: if the level of zinc goes up, the level of copper goes down.

And a balance of these two minerals is a must. Too-high copper levels can hurt the brain, while normal levels of zinc are a must for a healthy brain. But nearly half the ADHD children I see in my practice have too much copper and too little zinc!

In the book, I discuss research which shows that ADHD children are low in zinc...that those with the lowest levels have the highest levels of inattention, distractibility, hyperactivity, impulsivity, anxiety, and other symptoms of ADHD...that low zinc levels interfere with the effectiveness of ADHD medication...and that zinc supplements often improve the symptoms of ADHD.

As with magnesium, *Finally Focused* provides a complete Plus-Minus Action Plan to balance zinc-copper levels. I describe the telltale symptoms of a zinc-copper imbalance. (One such symptom: ADHD medication didn’t work and may have made your child worse.) How to test for the imbalance. And the best dosages of zinc if tests show low levels of zinc and high levels of copper.

Iron and the ADHD Brain

You’ve probably heard of iron-poor blood. But have you heard of an iron-poor brain...?

Well, it’s common in ADHD. And since iron is a must for a healthy brain-studies show that iron-deficient children score poorly in math and language tests, for example – a lack of iron can cause or worsen the symptoms of ADHD.

Here’s one fascinating study on iron and ADHD that I discuss in *Finally Focused*. Researchers at the Center for Biomedical Imaging at the Medical University of South Carolina used sophisticated tests to evaluate iron levels in the brains of children with or without ADHD, reporting their findings in the August, 2014 issue of *Radiology*. They found that those with ADHD who had never taken Ritalin had “significantly lower” levels of brain iron. However, those with ADHD who had taken Ritalin had

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normal levels of brain iron. The researchers theorized that one way Ritalin works is by boosting iron levels in the brain.

As I explain in *Finally Focused*, lab work is needed to detect an iron deficiency, and iron should not be taken unless there's a test-proven deficiency. Additionally, it's possible to take too much iron, and dosing needs to be carefully monitored by a doctor.

If your child has ADHD...or you are an adult with ADHD...I sincerely hope that you'll order my book *Finally Focused*...read about possible mineral deficiencies and imbalances...and put my Plus-Minus Treatment Plan to work for your child or for you.

For focus and full potential,

James Greenblatt, MD

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Internal Medicine Resident physician

Thanks Dr. Greenblatt for the information. It amazes me when I see such dedication in ADHD. I will be ordering the book.

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Wonderful article!!

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