



Vitamin D Deficiency and Autism

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Have you noticed lately that the temperatures are starting to get warmer and the sun is shining more in the Flathead? Things are starting to get that “hustle and bustle” spring tone and life is moving along at much faster pace now that the brutal cold winter days and nights are disappearing. If you’re one of the 80% of the Flathead Valley residents that are considered Vitamin D deficient, now is a good time to not only work on your tan, your body and mind, but a good time to look towards your future health. Vitamin D deficiency is now proven to increase the chances of a person getting many types of cancers, chronic heart disease, MS (multiple sclerosis), fibromyalgia, PAD (peripheral artery disease) and many other types of ailments and diseases. In this month’s article we would like to tell you about new research linking Autism to Vitamin D deficiency.

What is Autism? Autism or the Autistic Spectrum Disorders (ASD) is a neurological disorder in the brain that causes a child to have poor social and verb functioning skills, accompanied by repetitive or stereotyped behaviors. It has increased 30 fold in the last 20 years and most experts now argue that our behavior towards the environment could be one of the causes for this increase. Autism is especially prevalent in the “higher latitude” countries and tends to be focused in areas that receive high amounts of precipitation annually. A study released in Britain in 2006 concluded that 1 out

of every 86 children met the criteria for Autism or ASD. What are the citizens of these climates doing different that could contribute to an increase in Autism rates? Dr. John Cannell, executive director of the Vitamin D Council and a forensic psychiatrist at Atascadero State Hospital in California is at the forefront of the research into the causes of Autism. In an article published in Life Extension Magazine, he argues and makes the case that our environment and genetic structure have not undergone any dramatic changes in the last 20 years that would cause an epidemic of brain dysfunction. He points to evidence suggesting that our attitude towards the environment can be what is actually causing this epidemic. It is the one thing that has undergone a radical transformation, he argues that we have become excessively “sun-phobic” in our efforts to reduce skin cancer and in turn have caused a new epidemic. Couple this with our decreasing natural exposure to sunlight as we’ve moved from agricultural to manufacturing to service-based activities and you have the “perfect storm” for Vitamin D deficiency.

Vitamin D is created naturally in the body when the skin is exposed to sunlight or UV Light. The active form calcitriol, is a potent neurosteroid that is responsible for healthy brain growth and function since the first days of embryo formation. If an expectant mother has a vitamin D deficiency at the time of conception, it could hurt the formation

and function of the embryo's brain. Because of its relevance in brain functioning and formation, researchers in 2001 labeled Vitamin D deficiency a "candidate risk factor." Researchers have now concluded that Vitamin D offers neuroprotection, antiepileptic effects, immunomodulation, [impact on] several brain neurotransmitter systems and hormones. Calcitriol protects brain tissue by reducing inflammatory cytokine levels which, when elevated are strongly associated with cognitive impairment and oxidative stress. Vitamin D produces the antioxidant glutathione, an important tool used by the body to detoxify and excrete heavy metal toxicity. In a study performed by Dr. Jill James, children with regressive autism demonstrated a severe imbalance in the ratio of active to inactive glutathione, compared with healthy children. Regressive autism occurs when previously healthy children lose acquired language or behavioral skills and go on to develop autism. The study concluded that it was oxidative stress that was causing the children to be more vulnerable to heavy metals. This evidence could explain the link between autism and heavy metal toxicity.

Autism s

eems to prefer boys over girls and it is the sex hormones estrogen and testosterone that could be direct contributors to this. A recent study concluded that estrogen tends to help calcitriol with neurohormonal growth-stimulating effects and increases the healthy benefits of Vitamin D for the brain; it also increases calcium binding neurons that help with central nervous system development. The conclusion is, estrogen is better at increasing Vitamin D's beneficial effects than testosterone and since females have more estrogen, males can be affected more. If the maternal mother has high blood levels of Vitamin D the effects of estrogen over testosterone would not be relevant, therefore she could decrease the risks that her child will have autism. If her blood levels of Vitamin D are low, then the estrogen will be

a factor and the autism chances increase.

One way to raise Vitamin D levels is with UV light. Whether you raise your levels through supplementation or tanning, you need to make sure you do something! An (8 minute) session in one of our tanning beds will create approx. 20,000IU of Vitamin D in the body (About 200 glasses of milk) or 50 standard prenatal vitamins. Supplementation or exposure to UV light, tend to be the best way to get enough Vitamin D to raise your blood levels. A recent study found that expectant mothers who ate a diet rich in seafood and fish during their pregnancies, tend to have children with better cognitive brain function.

If you are pregnant, get a blood test and make sure to discuss your options with your doctor. Because diet and daily vitamins do not do enough, the AMA is recommending that children be given 2000IU (internal units) of Vitamin D daily. If you know of anyone who is planning a pregnancy, pregnant, has an autistic child or suspects their child may be autistic, pass this info along to them. The study is in the April issue of Life Extension Magazine. We will post the article on our website as soon as we receive permission and will also be making copies to have available at our salons.

At Club Sun we are Smart Tan Certified to help you achieve a beautiful tan on your appropriate tanning schedule. Our salons have been voted as "Salon of the Month" in July 2008 for North America by the ITA (International Tanning Association) and recently picked as "One of the Top 250 Salons" in America by Looking Fit Magazine. On top of our education, awards and customer service we strive to make your tanning experience the best you've ever had. We look forward to seeing you soon!

Spreading Sunshine, It's What We Do!

