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### The Nutritional Biomarkers for Individuals with Down Syndrome by Graham Lott

While attending the CDSS conference in Hamilton, I attended the above breakout session on Saturday, May 19, 2018 at 3:30pm The speaker was Dr. Anthony Martin. Dr. Martin is a Doctor of Natural Medicine with over 40 years of experience. He has treated tens of thousands of patients. His talk focused on general nutritional deficiencies he sees in the general population but in almost 100% of patients with Down Syndrome. Individuals with Down Syndrome have a lower ability to absorb nutrients so it is more critical to ensure good nutrition.

The 5 areas Dr. Martin based his talk on were as follows:

- Vitamin B12
- Vitamin D
- Magnesium
- Omega 3 For Inflammation
- Probiotics

Dr. Martin suggested that 40% of the population is deficient vitamin B12. The number 1 symptom of B12 deficiency is low energy. Other symptoms can include poor memory, bad digestion and a weak immune system. Dr. Martin stated that 99% of the effect of B12 is lost if the vitamin is swallowed in a pill form. The preferred method is by sublingual form.

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6,000- 12,000 mg per day is the target range. A saliva test is the best way to determine vitamin B12 deficiency.

Dr. Martin also stated that everyone should be supplementing Vitamin D. The 2 key reasons are the ability to inhibit inflammation and to bolster the immune system. The increase in our exposure to chemicals every day is a prime reason for inflammation. A second reason is an out of balance hormonal system. Vitamin D can help in both areas.

Vitamin D levels tend to be lowest in individuals during the winter months. This lowers the immune system leading to increased colds and the flu. If sufficient levels of Vitamin D were maintained in the winter, the need for a flu shot would be reduced or eliminated. 20 minutes in the sun can produce 10,000 IU's of Vitamin D. Individuals should look to supplement 4,000 IU's per day.

Magnesium is a mineral that is needed in your blood. Magnesium in the blood stream relaxes the muscles and also the brain. It lowers anxiety. Anxiety has become the number 1 diagnosed condition surpassing depression. Magnesium keeps Cortisol, the major stress hormone, in check. B12 is also a vitamin that helps address stress.

1000mg per day is the recommended intake. This can be taken through supplementation, or through Epsom salt baths or by a gel rub.

Omega 3 is a major fighter against inflammation. Dr. Martin was unapologetic when he said steak was a great overall food that was very high in Omega 3. Fish was also a good source. He said DHA from the Omega 3 complex was used in the brain. 2-3 grams of Omega 3 per day were recommended.

Dr. Martin said an effective probiotic is essential to good health. He said an effective probiotic needs to have a wide spectrum with 10+ bacterial strains. Yogurt is of no effect due to pasteurization. We need to replace bacteria constantly. Antibiotics kill good gut bacteria. Probiotic concentration should be 150 billion bacteria initially with a 50 billion maintenance level.

Low levels of gut bacteria have been linked to Leaky Gut Syndrome. The increase in permeability of the small intestine has been linked to low gut bacteria. Low levels of gut bacteria allow the bowel to leak into the bloodstream. This means bacteria, toxins and parasites get into the bloodstream and they were never meant to be there. When the small intestine stops functioning properly overall health suffers. Healthy gut bacteria levels counteract this effect.

Overall Dr. Martin was an enthusiastic speaker with a very entertaining talk and discussion. He offered a lot of practical advice. More information is available on his web site [www.martinclinic.com](http://www.martinclinic.com).