

Before You Give Any Supplements to Your Child with Down Syndrome, Here are 10 Things Your Doctor Won't Tell You.

By Kent MacLeod, B.Sc.Phm.

The most common thing I hear from parents is “I want to try vitamins for my child with Down syndrome, but my doctor says there’s no proof”.

And we're conditioned to believe doctors. Doctors undergo thousands of hours of **medical** training, but the average doctor usually only has a few hours of nutrition courses, and even less training, if any, about nutritional supplements.

With overwhelming patient caseloads, few doctors have the time to thoroughly research the topic of Down syndrome and supplementation. But I can assure you there is **plenty of evidence** to support the use of vitamin supplements in Down syndrome.

If you're lucky enough to find a doctor that has been able to take the time to learn about the role of vitamin supplements in Down syndrome, your doctor might tell you about the importance of zinc in helping keep the immune system healthy, and how antioxidants help protect the body from the damaging effects of oxidative stress.

Your doctor is a critical part of your child's health care team, and for medical issues, they should be your “go-to” person. But right now, I'm going to tell you the 10 things that your doctor won't tell you about nutritional issues in Down syndrome, that you need to know to **ensure the best health for your child.**



When researchers have studied the diets of children with Down syndrome, they have found that the recommended intakes of several nutrients are not adequate, including iron, vitamin C, vitamin E, calcium and zinc.

Read on...

What your doctor won't tell you...

1. The classic antibody test for celiac disease is only 35% accurate – it tests positive when the disease is well-established and has done damage to the intestine. But for people that are gluten sensitive, or in the early phases of the disease, the antibodies to gluten may be absent from the blood. And there may be no symptoms in the bowel. If you suspect your child may be gluten sensitive, even if the classic test for celiac disease was negative, I recommend you do stool testing through enterolab.com. They have a precise method for detecting gluten sensitivity that is highly accurate and no blood draw is required.

2. There is controversy about what is “normal” in thyroid testing. In the US, a normal range for adults is 0.35 to 3 units and in Canada, 0.35 to 5 units. But other data suggests that anything above 2.5 units should be considered hypothyroid. Children normally have higher levels of TSH and children with Down syndrome are particularly susceptible to hypothyroidism. If your child is testing at the upper end of normal, and showing symptoms of thyroid dysfunction (low energy, lack of focus and attention, obesity, constipation), then further investigation of thyroid function is needed.

3. Zinc has been proven to improve thyroid function in Down syndrome. It would make sense that if zinc is effective in Down syndrome, that you should try zinc supplements before using hormone therapy.

4. Probiotics are essential for kids with Down syndrome if they are chronic antibiotic users or if they are prone to gastrointestinal problems. Long term antibiotic use will create havoc in the gastrointestinal tract, giving opportunistic bacteria and yeast a chance to thrive. A lot of drugs are given when gastrointestinal issues arise, but there are more natural and safer ways to improve digestive health, including the use of enzymes, stool softeners, and of course, probiotics.

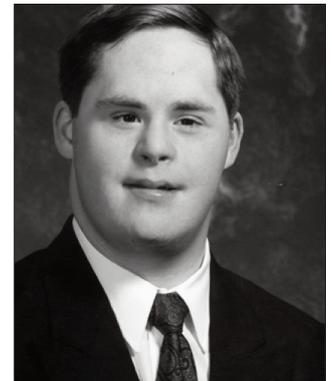
5. Osteoporosis is more common in adults with Down syndrome and individuals with Down syndrome are just as likely to have vitamin D deficiency as the general population, depending on how much sun exposure they receive. I have seen depressed levels of vitamin D in many individuals with Down syndrome in Canada. If you live in a climate where sun exposure is limited during the fall and winter or you don't get outdoors much, vitamin D should be part of your daily supplement routine – this applies to all individuals, not just those with Down syndrome.

6. Iron is essential for growth, development, and a healthy immune system.

Iron deficiencies are proven to affect IQ and focus in children. Since iron excess can lead to enhanced damage through oxidative stress, it is important to be tested for iron. Measuring blood levels of ferritin is the best way to evaluate how much iron is stored in the body, and whether or not you are deficient.

7. Many nutrients have been shown to be low in children with Down syndrome.

When researchers have studied the diets of children with Down syndrome, they have found that the recommended intakes of several nutrients are not adequate, including iron, vitamin C, vitamin E, calcium and zinc. Decreased levels of zinc, selenium, vitamin A and vitamin E are found in the blood of children with Down syndrome.



“...Daniel P., started on the MSBPlus supplement when he was one year old, and continued to take it for over 20 years”.

8. Randomized double-blind placebo controlled studies show that multivitamins have a positive impact on nonverbal I.Q. and that the effect is particularly dramatic in children who are malnourished. The children in these studies did not have Down syndrome, but given the multiple effects of Down syndrome on the body's ability to absorb, process and utilize nutrients, it is logical to believe that supplementation can have a positive effect on the IQ of children with Down syndrome.

9. Children with Down syndrome may have a functional deficiency of folate, which is one of the B vitamins. What does this mean? Your child may be getting enough folate in their diet but the body's ability to use that folate is inefficient. So the child ends up with problems because all the processes in the body that need folate, in particular one pathway known as the SAM cycle, do not have enough. This can even result in abnormally large red blood cells (a condition known as macrocytosis). To ensure the metabolic processes work efficiently, folinic acid, the active form of folic acid, can be supplemented.

10. Studies show that individuals with Down syndrome have altered levels of neurotransmitters. Many of these kids will begin to have adverse mood changes in their teens as a result of this. A variety of nutrients including folic acid, magnesium, iron, copper, vitamin B12 and amino acids are essential for forming these neurotransmitters.

So after reading the above 10 issues, you may be thinking “Okay, I need to supplement my child with zinc, iron, selenium, vitamins A, C, D and E, folinic acid, copper, B12, magnesium – but why can't I just buy a regular multi-vitamin?”

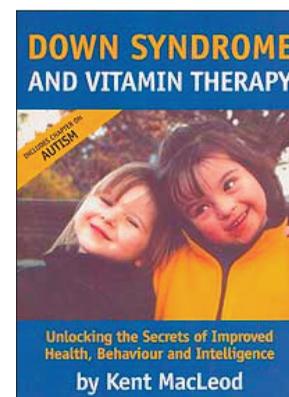
You are right, a regular multi-vitamin might address some of the nutritional issues. But **this will not compensate for the metabolic disturbances** resulting from the presence of the third copy of chromosome 21 in Down syndrome. This extra chromosome **demand**s that additional consideration be given to ensure all the nutritional co-factors are present in sufficient amounts.

“If anything is well established in biochemistry, it is that nutrients interact with one another...Probably, no single agent exists that is completely sufficient; rather, nutrients act optimally in conjunction with numerous other agents.”

A regular multi-vitamin is not going to have the extra nutrients necessary for proper functioning of the SAM cycle, or adequate levels of antioxidants to help combat oxidative stress. It will not have amino acids that are necessary to make neurotransmitters and hormones. A regular multi-vitamin is designed to address nutritional deficiencies in a person whose metabolism is not genetically altered by an extra chromosome.

If you want to learn more about the science behind the supplements, I will give you a **free copy of my book, “Down Syndrome and Vitamin Therapy”** when you place your first order of MSBPlus. The book was written for parents, and along with all the important nutritional research, is full of wonderful stories about children with Down syndrome, and how MSBPlus has changed their lives. It includes a story about Daniel P, who started on the supplement when he was one year old, and continued to take it for over 20 years.

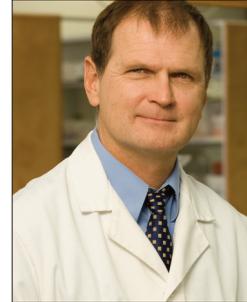
**I urge you to try MSBPlus and see for yourself how your child can benefit.
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“...learn more about the science behind the supplements”.

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