Alpha1 MZ Foundation - Information & Research

News & Research Update

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Dear Subscribers,

In this issue, we want to inform you about Vitamin D, why most MZs are deficient in this important vitamin, and what you can do about it.

Most people nowadays have heard that Vitamin D serves at least two important functions in the body: calcium regulation and the immune response.

Did you know that Tuberculosis was treated with vitamin D in the past without even knowing it? As you may know, when you had Tuberculosis, you were hospitalized in a sanitorium and exposed to as much sunlight as possible, which, of course, increased your vitamin D level and, as such, helped you to fight off the virus!

What they did not know in the past is now clear: vitamin D has an important role in the immune response. The vitamin D receptor is expressed on immune cells (B cells, T cells, and antigen-presenting cells), and vitamin D can modulate innate (first line of defense) and adaptive immune responses (Lymphocytes).
A vitamin D deficiency is also associated with increased autoimmunity and susceptibility to infection because immune cells in autoimmune diseases are responsive to vitamin D's effects.

But now comes the important part: why do you have a vitamin D deficiency, and what can you do about it?

As mentioned, Vit D has a function in regulating the calcium uptake in your small intestine. This does not sound exciting, but believe me, it is very exciting. Every Alpha1 MZ should understand this regulating mechanism and how to reduce/resolve their vitamin D deficiency.

Let me first explain the regulation mechanism in your body;

Your body needs a neutral PH to be able to function. (neither acidic nor alkaline)
However, when you eat (grains, sugar, soda's etc.) your body needs to compensate by regulating the calcium uptake to keep the PH neutral.

For that purpose, the PH is measured by the parathyroid glands (four of them), which secrete the parathyroid hormone (PTH) depending on the body's pH grade.
The PTH then regulates the synthesis of vitamin D 1,25 (the active form of vitamin D) out of Vit D25, which stimulates the uptake of calcium in the small intestines.

This means that when you have an absorption issue of vitamins and minerals (e.g. calcium) in your small intestines caused by your Alpha1 MZ liver and biliary tract issues, you will use much more Vitamin D compared to healthy persons to keep your body's pH neutral, which in turn may result in a Vitamin D deficiency and as such in immune response issues as

described above.

However, you can help reduce the impact of the absorption issue by changing your diet, increasing the amount of calcium in your diet, and reducing the amount of sugar, white bread, etc.

You can measure your calcium regulating system by testing your blood on PTH and Vit 1.25 and see if they are within the normal range. (preferably on the low side)
Please note that it is best to measure this in the afternoon after eating. (so not in the morning, having no breakfast yet)

Of course, you can also increase your sun exposure and take vitamin D3 supplements. However, be very careful !! when supplementing high amounts of Vitamin D3, typically prescribed by physicians.
The reason is that the vitamin D3 you supplement needs to be converted to vitamin D25 by your liver. When your liver has issues or a reduced capacity (which is the case for many MZs), the load on the liver may just be too high, resulting in liver failure.
So, instead of taking a very high prescribed weekly dose, take a lower dose, e.g., twice daily, to avoid these unnecessary high liver loads.

I hope this helps you to understand and manage your vitamin D level!

Another fact to remember is that when there is insufficient calcium in your food, the calcium will be taken from your bones, leading to osteoporosis, which increases your risk of bone fractures.

And, like always, enjoy the ride !!

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