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The Other Top 3 Nutrient Deficiencies I See In Clients

Message from Milly

Autumn Greetings!

About six months ago we sent out a newsletter on the top 3 nutrient deficiencies I see in clients. Which are: zinc, B12, and magnesium.

This was one of our most popular topics to date. And ever since, I've wanted to do a "Part 2" covering three *more* common nutrient deficiencies in adults and children.

So today, we'll focus on (drum roll please!):

#1: Vitamins D3 and K2---which I'm listing as "one" because of their synergistic relationship
#2: Essential fatty acids (EFAs)
#3: Iodine

We'll cover why so many people are deficient---or trending in that direction, best food and supplement sources, and the latest research on how these nutrients help keep us healthy and prevent disease.

On a side note: I hope everyone is enjoying the beautiful, mild fall weather we've been having. I know people flock to the Northeast to watch the leaves change, but I think our beautiful city-of-trees and state are a best-kept secret when it comes to fall beauty.

Blessings and warm wishes to all!

-Milly

1. Vitamin D3 & K2

It's almost unbelievable, especially in the warmer months of abundant sunshine, that Vitamin D deficiency or insufficiency is rampant throughout the country.

Studies have published that the overall rate of Vitamin D deficiency in adults and children is as high as 41.6%

[1], [2]. In addition, in 2012 the Mayo Clinic published a review that showed a decline in adults with Vitamin D sufficiency from 60% between 1988 and 1994 to 30% between 2001 to 2004 in Caucasians and 10% to 5% in African Americans [3].

Why are we deficient?

That's a good question, and there are several factors involved.

One review discusses causal factors including: the lack of Vitamin D found in our food supply, a lack of food fortification, the extensive use of sunscreen, cultural habits or dress which block the skin from natural sun exposure, and the lack of proper UVB exposure in higher latitudes [3]. Looking at these individually or in combination, there is no wonder a large percentage of our population is coming up short.

I would also add that very few of us spend enough time outdoors (adults and children). Which greatly decreases our exposure to our best source of Vitamin D: the sun!

Known and studied diseases of Vitamin D insufficiency range from osteoporosis to cardiovascular diseases, cancers to diabetes. They've even found a link to neurological and psychiatric diseases[4].

The Vitamin K2 connection

As with anything in the human body, no one nutrient lives in a vacuum. When it comes to Vitamin D, its best-friend/business partner/sidekick is the lesser-known Vitamin K2.

These two nutrients have a special synergistic relationship when it comes to the transportation and absorption of calcium.

You see, Vitamin D enhances the amount of available calcium in the body. Which is why it's often recommended for preventing bone disease. However, without Vitamin K2 in the mix, that calcium is like a tourist in a town without a map or tour guide! Vitamin K acts as a guide to help that calcium get to where it's supposed to go (your bones) without getting stuck where it shouldn't be (like your kidneys or arteries).

There are copious studies showing how Vitamin K2 improves the utilization of calcium in the body and promotes the flexibility to the arteries by preventing its accumulation of calcium, thus improving cardiovascular health [5].

More so, there are potential benefits of K2 to improve insulin sensitivity with diabetic disorders [6].

Best sources of Vitamin D

- Sunshine
- Cod Liver Oil. We recommend Nordic Naturals which is tested for heavy metals and other impurities.
- Mushrooms
- Fish (especially salmon but best to seek out wild-caught red sockeye, canned is fine)
- Supplements: Vitamin D3 (in combination with K2). We recommend Energetix' D3/K2 Spray

Best sources of Vitamin K2

- Kale
- Swiss chard
- Collards
- Cheeses (preferably from grass-fed sources).
- Raw milk from pasture-raised cows.
- Supplements: Vitamin K2 (in combinations with D3). We like Energetix D3/K2 Spray.

References:

1. https://pubmed.ncbi.nlm.nih.gov/21310306/
2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3316459/
3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2912737/
4. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5440113/
5. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4566462/
6. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3161300/

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2. Essential Fatty Acids (Omega-3 in particular)

Essential Fatty Acids (deemed "essential" because we must get them from foods) used to be abundant in the diets of traditional cultures. From wild game to wild fish, nuts and seeds, and organ meats our ancestors didn't lack adequate and balanced amounts of Omegas 3, 6, and 9.

Why are we deficient?

Fast-forward to modern times, and the vast majority of us are sorely lacking in anti-inflammatory Omega 3s, while simultaneously being overburdened by excess pro-inflammatory Omega 6s (found in refined vegetable oils).

The reason for this imbalance/deficiency is quite simple: our diets aren't what they used to be. For example, grass-fed meats are a good source of Omega 3 fatty acids...but grain-fed meats are not. Same goes for chickens (and their eggs) raised on pasture and dairy products. And fish, many of which are now farmed which means (you guessed it!) they do not contain those precious EFAs.

There's also the issue of refined vegetable oils, which are everywhere in the American diet (dressings, cooking oils, baked goods, restaurant foods, processed foods, etc.) and contain high levels of pro-inflammatory omega-6 fatty acids with zero omega 3s.

How EFAs keep us healthy

Studies have shown how EFAs (particularly DHA and EPA from the Omega 3 group) are critical to fetal development,

supporting the cardiovascular system, and helpful in mild cases of cognitive decline as with Alzheimer's[1]. They also help support cognitive function in adults and children, brain development and mental health[2], normal immunity and inflammatory response[3], and number of cellular processes.

Best sources of EFAs/Omega 3:

- Walnuts
- Hemp seeds
- Wild-caught salmon
- Sardines
- Mackerel
- Chia seeds
- Flax seeds/Flax seed oil
- Pasture-raised eggs
- Grass-fed beef, bison, and wild game.
- For supplements, I like either high-vitamin A cod liver oil or plain cod liver oil from Nordic Naturals as it's tested for heavy metals and has a neutral flavor.
- For a plant-based option, look for supplements sourced from ahi flower and/or algal oil.

References:
1.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3262608/
2: https://pubmed.ncbi.nlm.nih.gov/21775637/
3: https://pubmed.ncbi.nlm.nih.gov/31817726/

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3. Iodine

We talked about the importance of iodine in last month's newsletter on immunity.

Iodine is found in abundance in sea vegetables and shellfish. However, today the most common sources are iodized salt and dairy products...which is why the world has a big iodine deficiency problem.

Why we're deficient

We don't eat enough iodine-rich foods. And the foods we do eat with iodine (salt and dairy products) contain inferior forms which aren't very well absorbed.

How iodine keeps us healthy (women especially, listen up!)

Iodine is an essential mineral involved in a huge variety of bodily processes. It's actually amazing we can function without enough!

Here's a short-list of iodine's health benefits:

- It's critical to healthy brain development in fetuses and babies.[1] Which means you should consider your iodine levels, before and during pregnancy AND when you're breastfeeding. The American Thyroid Association recommends all pregnant and breastfeeding mothers get a minimum of 220 µg iodine per day.
- It supports your immune system[2].
- It is essential for the proper production of thyroid hormones[1].
- It's recently been shown effective in helping prevent breast cancer![3] My guess is this is because of its beneficial effects on immunity.
- It may play a role in reducing your risk of fibrocystic breast disease[4].

Best sources of iodine

- Sea vegetables like seaweed snacks.
- Wlid-caught shellfish like shrimp.
- Pastured egg yolks.
- Grass-fed beef liver.
- Iodine supplements. I like either Iodoral by Optimox for higher-dose supplementation or Pure Encapsulations Iodine with Tyrosine. Liquid nascent iodine is a good source as well. Mamas: keep in mind, not all prenatal multivitamins contain iodine.
- Iodine baths, you can add large pieces of seaweed (like kelp) or some liquid nascent iodine to your bath and your skin will absorb it!

***Note of caution on supplements:** though it's not easy, you can overdo it with iodine! If you're self-supplementing, stick to the RDA, or a little above if you suspect deficiency, which is: 150 mcg for men and women over 19, and 220-290 mcg for pregnant and lactating women. You can find all the RDAs for men, women, babies, children, and teens here. The tolerable upper limit for adults is 1100 mcg, and even then there's very little risk involved in taking that much.[5] If you'd like to discuss this at your next appointment, I can help with custom recommendations. And remember, if you're eating iodine-rich foods daily there's likely no need to supplement.

References:

1: https://www.thyroid.org/iodine-deficiency/

2: https://pubmed.ncbi.nlm.nih.gov/3714096/

3: https://pubmed.ncbi.nlm.nih.gov/28243321/

4:https://pubmed.ncbi.nlm.nih.gov/28243321/

5: https://ods.od.nih.gov/factsheets/Iodine-HealthProfessional/