

Nutritional deficiencies

An Educational guide

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Vitamin B12

Vitamin B12 (cobalamin) is an essential nutrient for **brain and neural functioning, energy metabolism, DNA synthesis, methylation**, as well as **protein, lipid, and carbohydrate synthesis**.

Deficiencies in vitamin B12 have been associated with increased risk for **anaemia, neurological conditions, mental health disorders, and raised homocysteine levels**.

There are certain genetic enzymes involved in the absorption of Vitamin B12. Some of them can interfere with the absorption of Vitamin B12 which can impact the gut microbiome and decrease the secretion of intrinsic factor. It can also increase **intestinal permeability**.

Some Genetic alleles are associated with lower serum (Blood levels) of vitamin B12 levels and an increased risk for life-long lower vitamin B12 and higher homocysteine levels.

Most Celiac's are prone to Vitamin B12 deficiency . If you have the genetics that predispose you to a risk for B12 absorption, this can be detrimental and result in multiple problems in the body and mind. A Methylated version of B12 would need to be taken. (Genetic tests can test for these alleles that predispose one to these problems. Contact me for more information)

Vitamin D

Vitamin D is a fat-soluble prohormone that undergoes certain metabolic reactions in the body to become the physiologically active steroid hormone (1,25-dihydroxyvitamin D) that is essential in many life processes.

It is required for the absorption of calcium, phosphate and magnesium and is essential in healthy bone development.

Vitamin D deficiency has been associated with an increased incidence and progression of a broad range of diseases including osteoporosis, rickets, cardiovascular disease, autoimmune disease, multiple sclerosis, and cancer.

Carriers of certain alleles that control Vit D are associated with lower levels of circulating vitamin D. Contact me for more information.

References:

[Celiac Disease and Vit D deficiency](#)

Zinc

Zinc is essential for skin health, immune function, and cell growth and may protect against acne, inflammation, and other conditions.

The body doesn't naturally produce zinc, you must obtain it through food or supplements.

Zinc is required for numerous processes in your body, including:

- gene expression
- enzymatic reactions
- immune function
- protein synthesis
- DNA synthesis
- wound healing
- growth and development

Zinc decreases oxidative stress and reduces levels of certain inflammatory proteins in your body.

Symptoms of mild zinc deficiency include diarrhea, decreased immunity, thinning hair, impaired taste or smell, dry skin, fertility issues, and impaired wound healing.

Folate [B9]

Folate is a water-soluble vitamin classified as part of the B group of vitamins. Being water soluble, its content is significantly reduced when cooked; the processing of whole grain wheat into flour, for example, removes 68% of the folate content.

It has been estimated that only about 20-25% of the folate content of food is biologically available.

Your body uses folate to:

- make and repair DNA
- help cells grow, divide, and work properly
- produce certain proteins
- help red blood cells mature
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Folate deficiency can lead to many health problems, including:

- anemia
- an increased risk of heart disease and certain cancers
- developmental irregularities in infants if pregnant people don't get enough folate
- depression, schizophrenia, and other mental health conditions.

Folic acid is the synthetic form of Folate

Calcium

Vitamin D and calcium go hand in hand. Vitamin D is required for the absorption of Calcium

Your body needs calcium for:

- blood circulation, move muscles, and release hormones. Calcium also helps carry messages from your brain to other parts of your body.
- It makes your bones strong and dense. If you don't get enough calcium in your diet, your body will take it from your bones.
- strong teeth.

Too little calcium can increase your risk of developing osteoporosis, or frail and porous bones that easily fracture.

Iron

Iron helps to makes hemoglobin which transports oxygen around the body.

A deficiency can result in:

- iron deficiency anemia
- Fatigue, low energy, poor concentration and memory, shortness of breath

Genetics and Vitamin Metabolism

There are **thirteen essential vitamins** that one's body requires to carry out essential life processes.

When referring to an essential nutrient, it means that our body is not able to manufacture it on its own and we must get it from our diet.

These vitamins that our body needs are the **fat soluble vitamins A, D, E and K**, and the **water soluble vitamins being vitamin C and the B vitamins: thiamine (B1), riboflavin (B2), niacin (B3), pantothenic acid (B5), pyroxidine (B6), biotin (B7), folate (B9) and cobalamin (B12)**.

Vitamin requirements are dependent on a number of factors, from gender to age, life-cycle stage such as pregnancy or lactation, as well as co-morbidities and genetics. The genes that are reported in this area are related to vitamin A, vitamin D, vitamin C and vitamin B12 requirements.

Take the **DNA Health Test** to get your genetics on these important vitamins. Remember genetics show you what risks or conditions you are predisposed to but also an advantage. Genes can be altered, (what we call a mutation) deleted or inserted. You still need to get blood serum tests for the vitamins to show the current status. Contact me for more information.

References

PMC3820055

Vitamin Deficiencies may be the only sign of CD

Nutritional Deficiencies

[Crash course on Vitamin B12](#)

Clinical Trial on B12

About Me:

I have Celiac Disease and have been living with this condition for 9 years. In 2020 during lockdown of the COVID pandemic, I started a home bakery selling my gluten-free bakes. I began also trying to educate and create more awareness about Celiac Disease via my social media pages. This got me thinking about how I could this on a more personal level.

It was early in 2022 that I studied with the Institution for Sports and Science and got my certification as a **Health Coach**. I also studied to become a qualified and accredited **DNAylsis genetic practitioner**.

I am a Celiac, a mom who has raised a child with Celiac, a self-taught gluten-free baker and recipe developer, health coach and genetic practitioner as well as a background in Skin therapy (lymphatic drainage, skin treatments, and Endermologie) I hope I bring a bit of uniqueness to the Health coaching world with my range of knowledge and experience.

My aim in coaching is to help my clients **navigate a gluten-free lifestyle in a practical way** but also in a way that empowers them on an **emotional level** as the emotional effects of such a drastic lifestyle change can be great. I use a holistic approach in my approach and we explore many different avenues: **stress management, weight management, time management, diet and nutrition education, exercise education, goal setting, habit formation, emotional and self care exploration, genetics, lifestyle and environment factors and gut health**.

Disclaimer:

I am not a Doctor nor do I claim to be. The information provided is not meant to diagnose, cure or treat any condition or take the place of any medical treatment. I provide links to the necessary research to back up what I say where possible and try make sure these links point to reputable sources and are based on medical and scientific evidence or studies. If you are unsure about anything mentioned here, it is your responsibility to check with your relevant health care provider and to do your own research.

Thank you!

I hope you found this interesting and useful. If you need further assistance in transitioning to a gluten free lifestyle, then don't hesitate to contact me. My coaching services are centered around people who have gut issues, gluten intolerance, Celiac Disease and food sensitivities.



Do You Need More Help?

Book an appointment

As a health coach, I help people who have been diagnosed with this condition. I have personally been on this journey and know how hard it is to navigate. Please contact me if you would like to benefit from health coaching

