

Hope-Based Medicine (2): The Impact of Diagnoses

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The saying "All I know is that I know nothing" [1], attributed to the Greek philosopher Socrates by Plato, resonates with me as I explore the intricate web of genetic interconnections. While it might seem somewhat exaggerated to express myself this way, contemplating gene expression underscores the depth of knowledge I have yet to acquire. It's important to acknowledge that although genetics and DNA are considered crucial, they don't unveil all the mysteries of life, leaving many unresolved questions in biology. Nevertheless, they raise inquiries that are intricately linked to the studies central to my role as a doctor and constitute a fundamental component of my daily practice. While the concept of gene support gains increasing attention, orchestrating the symphony of genes through dietary interventions and supplements to optimize gene expression remains a challenging task. However, gradual progress is underway, and the notion of "gene food" [2] is becoming more widespread. This is the foundation of Nutrigenomics [3-6]. Nutrigenetics, on the other hand, represents a branch of nutritional genomics specifically focused on how individual genetic variations influence responses to nutrients and dietary constituents [3,4,6]. It investigates the impact of genetic disparities on nutrient absorption, metabolism, and utilization, as well as their broader implications for health, disease susceptibility, and nutritional requirements [3,4,6]. Though seemingly similar, these disciplines diverge: nutrigenomics charts a course from diet and supplements to gene expression, while nutrigenetics explores the influence of genes on responses to diet and supplements. Both avenues offer invaluable insights for enhancing well-being. As detailed in my previous articles, my approach emphasizes health maintenance over merely disease prevention and treatment. Within this framework, specific disease names become less relevant. Instead, I prioritize the comprehensive study of each patient's genetic profile. This allows for the creation of personalized dietary plans and supplementation aimed at optimizing long-term health through continuous and systematic care.

THE ROLE OF EMOTIONS

Positive emotions are vital components in the maintenance of health, playing an essential role in the overall process [7]. Moreover, when emotions are allowed to be freely experienced and expressed without judgment or

attachment, they tend to flow fluidly, positively impacting our well-being [7]. Conversely, the suppression of emotions, particularly those that are fearful or negative, can drain mental energy, detrimentally affecting the body and potentially leading to health issues [7]. In fact, negative attitudes and feelings of helplessness or hopelessness can induce chronic stress, disrupting the body's hormonal balance, depleting essential brain chemicals associated with happiness, and damaging the immune system [8,9]. This article seeks to explore the repercussions of certain diagnoses that individuals may perceive as existential threats or lifelong sentences, even though these diagnoses could be inaccurate or subject to change over time. We contend that such diagnoses can contribute to the perception of illness, making individuals feel indistinguishable from their conditions and leaving them with a sense of powerlessness to overcome them. Through illustrative cases, rather than detailed case reports, our aim is to emphasize the significant impact that certain diagnoses can have on patients' lives.

CASE 1

I once had a 31-year-old patient who worked as a gardener in an affluent neighborhood. Despite being physically fit, with a favorable fat-to-muscle composition, he experienced occasional headaches. Seeking relief, he consulted a physician who promptly diagnosed him with arterial hypertension, prescribing lifelong medication. This diagnosis deeply affected him, leading to anxiety crises, a condition he had never experienced before. However, hesitant to immediately embrace medication, he sought a second opinion, particularly given the absence of familial hypertension history and his lack of regular blood pressure monitoring. Upon assessment in my office, his initial blood pressure reading measured 140/90 mmHg [10], decreasing to 130/70 ten minutes later. I considered that the white coat

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syndrome [11] might have played a role. Instead of rushing into medication, I opted for a comprehensive assessment, focused on nutrition, metabolism, and hormones. Addressing deficiencies in magnesium, potassium, vitamin D, and calcium, I also advised adjustments to his lifestyle. These included regular 30-minute sea baths, 20-minute grounding sessions, respiratory breathing and Qi gong exercises to learn how to deal with the flow of energy in his body. I also recommended increased vegetable consumption, and daily intake of green juice, prepared with parsley, kale, mint, celery or escarole, pineapple or orange, ginger and lemon [12,13]. Additionally, I emphasized the importance of maintaining a regular circadian rhythm with a set sleep routine, as much as fostering quality time with his family. These simple interventions, he attested, markedly improved his well-being. Unfortunately, this narrative is all too common, with many individuals potentially benefiting from lifestyle changes and better nutrition rather than immediate therapeutical interventions. He is used to saying that I had a positive impact on his life, and his blood pressure has remained consistently under control. Reflecting on his experience, it was wise not to blindly accept lifelong medication for hypertension.

CASE 2

This time I had as a patient a woman in her forties, a business professional, grappling with the overwhelming demands of her daily life. Her relentless schedule left her little time for rest and enjoyment. She had recently undergone a basic biochemical evaluation, resulting in a diagnosis of hypothyroidism due to elevated TSH levels and lowered levels of T4 and T3 [14], the hormones produced by the thyroid gland. Consequently, she was advised to begin continuous thyroid hormone therapy to address her non-habitual tiredness. However, upon conducting a comprehensive biochemical, metabolic, and hormonal assessment, a different picture emerged. It uncovered indications of a severe Chronic Fatigue Syndrome with: (a) debilitating fatigue that was not relieved by rest; (b) fatigue associated with at least four physical symptoms, such as impaired memory and concentration, muscle pain, polyarthralgia and tender lymph nodes; (c) severe fatigue lasting longer than six months [15]. Additionally, she exhibited low-normal hemoglobin levels, deficiencies in essential nutrients such as selenium, zinc, vitamin D, and alarmingly low levels of vitamin B12. These deficiencies, coupled with unrefreshing sleep, limited physical activity, and an inadequate diet based on pre-packaged food, collectively contributed to her mental and physical exhaustion. Further investigations were conducted to explore intestinal health, gluten intolerance, and thyroid antibodies, aimed at ruling out an autoimmune condition. Although no conclusive evidence was found, attention was drawn to potential issues with intestinal barrier function. In response, my initial recommendation prioritized a retreat such as a hydrothermal spa to facilitate relaxation, meditation and

massage therapy, allowing her to disconnect from her demanding lifestyle. Supplemental interventions included methylcobalamin (B12) injections and a carefully selected regimen of supplements, including adaptogens, probiotics, omega-3 fatty acids, vitamin D, magnesium, zinc, selenium, and B complex vitamins. Specific active compounds were also prescribed to target restorative sleep and mitochondrial support. I said clearly that she would have to take care of her health in the long run before she would have to take care of some serious conditions. Following the three-month treatment plan, her thyroid hormone levels were optimized, and she experienced a notable improvement in her overall well-being. Like in the previous case, continuous use of medication was indicated before a holistic approach was recommended, but ultimately her condition was effectively resolved through a few months of nutrient therapy and lifestyle adjustments.

CASE 3

At any age, a cancer diagnosis, even if deemed non-aggressive, can instill a sense of imminent threat in most individuals. For an 84-year-old man, it may feel like death knocking at the door. However, significant strides have been made in understanding the mechanisms underlying malignant diseases. Factors such as chronic inflammation [16-18], suppressed immune response, genetic mutations, emotional distress, environmental exposures, viral infections and hormonal influences [19-24] may all play a role. In this particular case, my patient had a complex medical history, including Paget's Disease, diabetes mellitus, high blood pressure, dyslipidemia, and benign prostatic hyperplasia. Reviewing his medical history, I identified chronic low-grade inflammation that had been overlooked and under-treated for years. He was already on a regimen of common medications when an MRI raised suspicion of prostate cancer, prompting the recommendation for a transrectal prostate biopsy. However, his daughter, who had experienced traditional cancer treatments herself, advocated for a holistic approach. She insisted that her father should try alternative treatments for three months before considering any invasive procedure. If no improvement was observed within this timeframe, she was willing to reconsider, but she strongly endorsed my approach as the initial step towards restoring his health. It involved a comprehensive strategy focused on anti-inflammatory, antioxidant, antiglycant, alkalinizing and pro-methylation supplements, as long as detox and mitochondrial support. Following a three-month treatment regimen, his health markedly improved, with noticeable enhancements in his physical well-being and appearance. I also addressed his emotions, instilling confidence and reassurance in him. The results were evident not only to him but also to his relatives and friends, who noticed his improved self-image, increased vitality, and rejuvenated appearance. All in all, it was a highly gratifying outcome. But, I wonder, would he have experienced a gradual decline in his health if he had received a looming

cancer diagnosis with little hope for improvement?

CASE 4

The focus now shifts to a woman in her sixties, living with a longstanding diagnosis of Sjogren's Syndrome - an autoimmune condition recognized for its hallmark symptoms of dry eyes (keratoconjunctivitis sicca), mouth, and skin, possibly accompanied by other complaints, such as rashes, vaginal dryness, fatigue, and joint pain [25]. Enduring this diagnosis for decades, she maintained regular appointments with a specialist on a yearly basis. However, since 2016, she agreed on seeking regular care from me every four months. Over time, we embarked on a journey aimed at bolstering her immune system, fortifying the integrity of her intestinal barrier, addressing Chronic Fatigue Syndrome, and optimizing her nutritional status. This holistic approach yielded gradual yet significant results over time. In recent years, she has not exhibited evident signs or symptoms of Sjögren's Syndrome. Still, she continued to refer to her condition as "my Sjögren," almost as if it became ingrained in her identity. During our last encounter, I gently challenged her perception, suggesting: "What if you no longer have Sjögren's at all? Perhaps it has quietly gone, allowing you to vibrate positivity and embrace a new chapter of your life, a chapter of health." Initially she put on a look of skepticism, but she soon entertained the possibility, realizing the profound shift in perspective it offered. The notion that Sjogren's Syndrome may no longer exert control over her life ignited a spark of hope and freedom. Autoimmune conditions can indeed fluctuate in severity and even go into remission or relapse over time [26]. Perhaps we, doctors, could actually play a more assertive role in promoting a positive approach in these cases.

CASE 5

While numerous scenarios come to mind where the revelation of a diagnosis could have been or has been detrimental to some patients, I will conclude this article by sharing the profound impact of the term "pre-diabetes" on a woman in her sixties. Terrified with the idea of developing diabetes, she removed all carbohydrates from her diet upon discovering she was at high risk due to elevated levels of fasting glucose, 2 h glucose levels in oral glucose tolerance test and glycated hemoglobin [27]. Consequently, she underwent consistent weight loss, transitioning from a healthy body composition to a state of undernourishment, and eventually fell into severe depression. By the time she sought my assistance, it may have been too late, as she visited me only once, and subsequent attempts to contact her were unsuccessful. Although her whereabouts remain unknown, her image of fragility and desperation lingers in my memory, as she tearfully expressed her fear of facing a life with diabetes. Would she have reacted differently if she were advised to change her diet, take some supplements, do some physical exercises regularly and adhere to some anti-

stress techniques?

PICK UP YOUR CHERRIES

Let's raise some reflections upon these matters. In the medical landscape of the XXI century, is it appropriate for us, doctors, to use the phrase "for the rest of your life" when giving a diagnosis and recommending continuous medication to our patients? Do you agree that gene expression can be dynamic, with genes switching on and off over time, as elucidated by studies in epigenetics [28]? Is it true the concept "change your brain, change your life" proposed by the American neuropsychiatrist Daniel Amen [29], suggesting that we can alleviate negative emotions, cultivate new positive neural pathways and, therefore, make it more likely to maintain health through the years? What is the psychological impact of telling someone they have an incurable disease and must cope with it indefinitely? Are they truly immutable? Can we confidently make such assertions? I believe this is a time of profound change. We must reflect on the remarkable advancements achieved in recent decades in many fields. We should embrace simple habits, such as sea baths, sauna, grounding, meditation, and so on as routine advice, which can bring lightness and balance to everyday life. With the knowledge about the genes, we can all be more assertive on prescribing diet and supplement recommendations. Furthermore, the age management approach [30] cultivates a proactive attitude among both doctors and patients toward maintaining health, prioritizing overall wellness over solely focusing on prevention and treatment of diseases. May doctors of all areas apply this knowledge in their practice. Medical courses should consider dedicating more time to instructing their students on the importance of exercising care when diagnosing patients, acknowledging the potential for varied reactions. Embracing a positive approach could probably yield better outcomes for our patients' health compared to dwelling on the negative aspects of diseases. The pharmaceutical industry, in turn, will need to adapt itself, developing new formulations and combinations of nutrients to address our genetic needs. It is a whole world that opens right ahead of us. Let's welcome changes, seizing the opportunities that come our way. Through conscious decision-making, we can nurture a life rich in rewards and fulfillment.

REFERENCES

1. The Collector. "All I Know Is That I Know Nothing": What Did Socrates Mean? Available online at: <https://www.thecollector.com/all-i-know-is-that-i-know-nothing-socrates/>
2. Find the diet that works for you. Available online at: <https://www.mygenefood.com/>
3. Farhud D, Zarif Yeganeh M, Zarif Yeganeh M (2010) Nutrigenomics and nutrigenetics. Iran J Public Health 39(4): 1-14.

4. Fenech M, El-Sohehy A, Cahill L, Ferguson LR, French TA, et al. (2011) Nutrigenetics and nutrigenomics: Viewpoints on the current status and applications in nutrition research and practice. *J Nutrigenet Nutrigenom* 4(2): 69-89.
5. Kiani AK, Bonetti G, Donato K, Kaftalli J, Herbst KL, et al. (2022) Polymorphisms, diet and nutrigenomics. *J Prev Med Hyg* 63(2 Suppl 3): E125-E141.
6. Simopoulos AP (2010) Nutrigenetics/Nutrigenomics. *Ann Rev Public Health* 31: 53-68.
7. University of Minnesota. Taking charge of your wellbeing. How thoughts and emotions affect health?
8. Mariotti A (2015) The effects of chronic stress on health: new insights into the molecular mechanisms of brain-body communication. *Future Sci OA* 1(3): FSO23.
9. Yaribeygi H, Panahi Y, Sahraei H, Johnston TP, Sahebkar A (2017) The impact of stress on body function: A review. *EXCLI J* 16: 1057-1072.
10. Messerli FH, Williams B, Ritz E (2007) Essential hypertension. *Lancet* 370(9587): 591-603.
11. Pioli MR, Ritter AM, de Faria AP, Modolo R (2018) White coat syndrome and its variations: differences and clinical impact. *Integr Blood Press Control* 11: 73-79.
12. Filippou CD, Tsioufis CP, Thomopoulos CG, Mihas CC, Dimitriadis KS, et al. (2020) Dietary Approaches to Stop Hypertension (DASH) Diet and Blood Pressure Reduction in Adults with and without Hypertension: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Adv Nutr* 11(5): 1150-1160.
13. Ozemek C, Laddu DR, Arena R, Lavie CJ (2018) The role of diet for prevention and management of hypertension. *Curr Opin Cardiol* 33(4): 388-393.
14. Chiovato L, Magri F, Carlé A (2019) Hypothyroidism in Context: Where We've Been and Where We're Going. *Adv Ther* 36(Suppl 2): 47-58.
15. Yancey JR, Thomas SM (2012) Chronic fatigue syndrome: Diagnosis and treatment. *Am Fam Physician* 86(8): 741-746.
16. Grivennikov SI, Greten FR, Karin M (2010) Immunity, inflammation, and cancer. *Cell* 140(6): 883-99.
17. Sokolosky ML, Wargovich MJ (2012) Homeostatic imbalance and colon cancer: The dynamic epigenetic interplay of inflammation, environmental toxins, and chemopreventive plant compounds. *Front Oncol* 2: 57.
18. Zhao H, Wu L, Yan G, Chen Y, Zhou M, et al. (2021) Inflammation and tumor progression: signaling pathways and targeted intervention. *Signal Transduct Target Ther* 6(1): 263.
19. Qian J, Zou Y, Wang J, Zhang B, Massion PP (2015) Global gene expression profiling reveals a suppressed immune response pathway associated with 3q amplification in squamous carcinoma of the lung. *Genom Data* 5: 272-274.
20. Anandakrishnan R, Varghese RT, Kinney NA, Garner HR (2019) Estimating the number of genetic mutations (hits) required for carcinogenesis based on the distribution of somatic mutations. *PLoS Comput Biol* 15(3): e1006881.
21. Xu C, Ganesan K, Liu X, Ye Q, Cheung Y, et al. (2022) Prognostic Value of Negative Emotions on the Incidence of Breast Cancer: A Systematic Review and Meta-Analysis of 129,621 Patients with Breast Cancer. *Cancers (Basel)* 14(3): 475.
22. Bouza E, Martín Jiménez M, Alemany L, Arribas J, Bañares R, et al. (2021) Overview of virus and cancer relationships. Position paper. *Rev Esp Quimioter* 34(6): 525-555.
23. Ding S, Madu CO, Lu Y (2020) The Impact of Hormonal Imbalances Associated with Obesity on the Incidence of Endometrial Cancer in Postmenopausal Women. *J Cancer* 11(18): 5456-5465.
24. Satpathi S, Gaurkar SS, Potdukhe A, Wanjari MB (2023) Unveiling the Role of Hormonal Imbalance in Breast Cancer Development: A Comprehensive Review. *Cureus* 15(7): e41737.
25. Jonsson R, Brokstad KA, Jonsson MV, Delaleu N, Skarstein K (2018) Current concepts on Sjögren's syndrome - classification criteria and biomarkers. *Eur J Oral Sci* 126 Suppl 1(Suppl Suppl 1): 37-48.
26. Pisetsky DS (2023) Pathogenesis of autoimmune disease. *Nat Rev Nephrol* 19(8): 509-524.
27. Long J, Yang Z, Wang L, Han Y, Peng C, et al. (2020) Metabolite biomarkers of type 2 diabetes mellitus and pre-diabetes: A systematic review and meta-analysis. *BMC Endocr Disord* 20(1): 174.
28. Epigenetics: Switching Genes on and off. Available online at: <https://kids.frontiersin.org/articles/10.3389/frym.2020.554136>
29. Amen D (2024) Change your brain, change your life: The Breakthrough Program for Conquering Anxiety, Depression, Obsessiveness, Lack of Focus, Anger, and Memory Problems. Available online at: <https://www.amazon.com/Change-Your-Brain-Revised-Expanded/dp/110190464X>
30. Walker RF (2007) Challenges facing age-management/longevity medicine. *Clin Interv Aging* 2(2): 175-177.