

Punched in the Gut: Now I Can't See

Vittorio Mena*

Advanced Clinical Director: Special Olympics L.C.I.O.E., International Sports Vision Association Member, Sports Vision Director: Optical Academy, USA

***Corresponding Author:** Vittorio Mena, Advanced Clinical Director: Special Olympics L.C.I.O.E., International Sports Vision Association Member, Sports Vision Director: Optical Academy, USA.

Received: October 27, 2023; **Published:** November 17, 2023

It is time for us to take charge of our own health since this will ultimately help us not only with our minds to think clearly but also to see the world a lot more clearly! We all know that nutrient deficiencies have become more common in our society as well as even amongst the people who “eat well”. And it all comes back to the soil our food is grown in. We have all heard the phrase “you are what you eat” but what we really are is whatever the thing we have eaten has eaten. With mineralization not what it used to be since the early 1950’s and also with cows and chickens being fed corn and other types of feed which is not part of their everyday diet; foods are less nutrient dense and can be hazardous overall to our health. But instead of eating twice the amount of food just to get the right amount of nutrients we need the goal is to find out exactly what you can be doing on a daily basis to correct these deficiencies.

The father of modern medicine Hippocrates once stated that “all disease begins in the gut”. The great news about this is that the disease can also be stopped there! According to the CDC in 2017 the United States prevalence of people who were “overweight was 30.7%, obesity was 42.4% and severe obesity was 9.2%” [1]. If we tally up the numbers for someone being overweight and obese that means 73.1% of the United States population has a body mass index (BMI) greater than 25 which puts them at risk not only for debilitating diseases and vision problems down the road but also death at a sooner date than the patient might like. The cause of these issues comes down to inflammation, oxidation as well as nutrient deficiencies. Nutrition is considered “as one of the strongest and most adjustable environmental factors that could be used to reduce the burden of disease during an individual’s entire life” [2]. If someone develops metabolic disease the underlying cause comes down to poor nutrition, a sedentary lifestyle as well as poor sleeping habits. Our brain is a “3-lb command center that relays neurotransmitters back and forth to every part of the body, while in the process consuming about 20% to 30% of the calories in our diet” [3]. Our gut is considered our “second brain” since the brain and gut are tied together via the vagus nerve, cranial nerve #10, the longest nerve in our entire body and the reason why it is called the wanderer nerve. Two of the most prominent neurotransmitters are serotonin, typically known as the happy molecule, which helps to regulate our mood and melatonin, a hormone, that helps with the timing of our circadian rhythms. The reason this is important is because “more than 90% of our serotonin is located in our gut” [4] and for melatonin there is “approximately 10 - 100 times more in the gastrointestinal tissues than in the blood and 400 times more in the gut than in the pineal gland” [5]. When patients suffer because of their gut-brain axis not being in alignment this will cause patients to suffer from dry eye disease because of autoimmune issues, glaucoma, diabetic and hypertensive retinopathy, age related macular degeneration and even cataracts earlier on.

As optometrists and ophthalmologists or anyone in the eyecare field our recommendation to patients is to seek out a gastroenterologist to rule out the possibility of leaky gut. Leaky gut, also known as gastrointestinal permeability, occurs when our gastrointestinal lining starts to develop microscopic holes which allows unwanted particles to move freely in and out of our lining into the bloodstream. This tends

to happen because of foods we eat such as lectins, wheat germ agglutinin, fried foods that causes advanced glycation end products and free radical formation and also from medicines we take such as oral antibiotics or oral non-steroidal anti-inflammatories. However, with sending to gastroenterologists according to a study published in 2022 there was a 25 question survey to the members of the American College of Gastroenterology and these were the results: “clinicians treating patients with irritable bowel syndrome (IBS) reported that only 56% felt that they were trained to provide nutrition education and 46% said that they sometimes, rarely, or never offered to help patients with their menu planning, label reading, or grocery shopping. 77% said that they spent 10 minutes or less counseling patients on nutrition. Though almost all respondents 91% said that having access to a dietitian would help them better manage patients with IBS, 42% said that they lack access to one” [6]. Since the medical communities are not teaching a lot about nutrition in schools it is up to us to read up on the latest research and to also recommend our patients to not only gastroenterologists but also nutritionists but more importantly medical personnels who are trained in functional medicine. One great resource is the institute for functional medicine (IFM) where you go on their website and with their practitioner tab can locate someone who is trained in this area from all around the world to help restore these patients with these mineral deficiencies.

One last mention is the importance on sleep and also sleep quality. According to Jeffrey Kahn a sports performance scientist stated that “sleep is the most potent performance enhancing activity that we know of.” In a molecular psychiatry study stated that “shorter sleep duration among children with increased risk of depression, anxiety, impulsive behavior and poor cognitive performance” [7]. An oxford study showed that higher levels of omega-3 in the diet associated with better sleep” [8]. Lastly, according to the American academy of ophthalmology people with sleep apnea tend to “develop glaucoma more often than those who do not suffer from that condition” [9]. In the end getting the appropriate amount of rest each night between 7 - 9 hours, eating nutritious foods, drinking more water and staying active on a daily basis are the keys to optimal health and longevity with life.

Bibliography

1. Fryar CD., *et al.* “Prevalence of overweight, obesity, and severe obesity among adults aged 20 and over: United States, 1960–1962 through 2017–2018”. NCHS Health E-Stats, Centers for Disease Control and Prevention (2021).
2. Bailey RL., *et al.* “The epidemiology of global micronutrient deficiencies”. *Annals of Nutrition and Metabolism* 66 (2015): 22-33.
3. Kuzawa C., *et al.* “Metabolic costs and evolutionary implications of human brain development”. *Proceedings of the National Academy of Sciences of the United States of America* 111.36 (2014): 13020-13015.
4. Martin CR., *et al.* “The brain-gut-microbiome axis”. *Cellular and Molecular Gastroenterology and Hepatology* 6 (2018): 133-148.
5. Bubenik GA. “Gastrointestinal melatonin: Localization, function, and clinical relevance”. *Digestive Diseases and Sciences* 47 (2002): 2336-2348.
6. Scarlata., *et al.* “Utilization of dieticians in the management of IBS by members of the American College of Gastroenterology”. *The American Journal of Gastroenterology* (2022).
7. Cheng W., *et al.* “Children with less sleep experience increased depression, anxiety, decreased cognitive performance”. *Molecular Psychiatry* (2020).
8. University of Oxford. “Higher levels of omega-3 in diet associated with better sleep”. *Science Daily* (2014).
9. Boyd K. “Sleep apnea and glaucoma”. *American Academy of Ophthalmology* (2022).

Volume 14 Issue 12 December 2023

©All rights reserved by Vittorio Mena.