# **Nutritional Wellness**

Providing authoritative, cutting-edge nutrition, herb and homeopathy information

### The Science of Optimizing Health

by Alex Vasquez, DC, ND, DO



**Bio:** Alex Vasquez began his professional training at Texas Chiropractic College and later graduated from University of Western States in Portland, Oregon with his Doctor of Chiropractic degree in March 1996. He then attended the Naturopathic Medicine Program at Bastyr University near Seattle, Washington and graduated as a Doctor of Naturopathic Medicine in September 1999. Over the next few years, Dr Vasquez maintained a private practice (first in Seattle, then in Houston, Texas), taught Orthopedics and Rheumatology at Bastyr University, and pursued his constant review of Medline for the continuous compilation of his biomedicine, nutrition, and physiology database. After deliberating between pursuing a PhD in Physiology or Biochemistry versus attending medical school, Dr Vasquez decided on medical school and attended and graduated from University of North Texas Health Science Center--Texas College of Osteopathic Medicine as a Doctor of Osteopathic Medicine in May 2010.

## Implementing the Five-Part Nutritional Wellness Protocol for the Treatment of Various Health Problems

In my last article, I described a five-part nutritional protocol that can be used in the vast majority of patients without adverse effects and with major benefits. For many patients, this basic protocol, consisting of: 1. the Paleo-Mediterranean diet; 2. multivitamin/multimineral supplementation; 3. additional vitamin  $D_3$ ; 4. combination fatty acid therapy, with an optimal balance of ALA, GLA, EPA, DHA, and oleic acid; and 5. probiotics (including the identification and eradication of harmful yeast, bacteria and other "parasites"), is all the treatment they need. For patients who need additional treatment, this foundational plan still serves as the core of the biochemical aspect of their intervention. Of course, in some cases, we have to use other lifestyle modifications (such as exercise), additional supplements (such as policosanol or antimicrobial herbs), manual treatments (including spinal manipulation), and occasionally, select medications (such has hormone modulators) to obtain our goal of maximum improvement.

The following examples show how the five-part protocol serves to benefit patients with a wide range of conditions. For the sake of saving space, I will use only highly specific citations to the research literature, since I provided the other references in the September 2005 issue of *Nutritional Wellness* and elsewhere.<sup>1</sup>

A man with high cholesterol. This patient is a 41-year-old, slightly overweight man with very high cholesterol. His total cholesterol was 290 (normal < 200), LDL cholesterol was 212 (normal <130), and triglycerides were 148 (optimal <100). I am quite certain nearly every medical doctor would have put this man on cholesterol-lowering statin drugs for life. Treatment: In contrast, I advised a low-carb Paleo-Mediterranean diet, because such diets have been shown to reduce cardiovascular mortality more powerfully than "statin" cholesterol-lowering drugs in older patients.<sup>2</sup> Likewise, fatty acid supplementation is more effective than statin drugs for reducing cardiac and all-cause mortality.<sup>3</sup> I added probiotics, because supplementation with *Lactobacillus* and *Bifidobacterium* has been shown to lower cholesterol levels in humans with high cholesterol.<sup>4</sup> Finally, I also prescribed 20 mg of policosanol, for its well-known ability to favorably modify cholesterol levels.<sup>5</sup> Results: Within one month, the patient had lost weight, felt better, and his total cholesterol had dropped to normal at 196 (from 290!); LDL was reduced to 141, and triglycerides were reduced to 80. Basically, this treatment plan was "the protocol + policosanol." Drug treatment of this patient would have been more expensive, more risky, and would not have resulted in global health improvements.

The basic five-part nutritional wellness protocol consists of the Paleo-Mediterranean diet; multivitamin/multimineral supplementation; additional Vitamin  $D_3$ ; combination fatty acid therapy; and probiotics.

A child with intractable seizures. This is a 4-year-old nonverbal boy suffering from 3-5 seizures per day, despite being on two antiseizure medications and having previously undergone several other "last resort" medical and surgical procedures. He also had a history of food allergies. Treatment: Obviously, there was no room for error in this case. We implemented a moderately low-carb hypoallergenic diet, since both carbohydrate restriction<sup>6</sup> and allergy avoidance can reduce the frequency and severity of seizures. Since many "antiseizure" medications actually cause seizures by causing vitamin D deficiency, 8 I added 800 IU per day of emulsified vitamin D<sub>3</sub> for its antiseizure benefit.9 We also used 1 tsp per day of a combination fatty acid supplement that provides balanced amounts of ALA, GLA, EPA, and DHA, since fatty acids appear to have potential antiseizure benefits. 10 Vitamin B6 (250 mg of P5P) and magnesium (bowel tolerance) also were added to reduce brain hyperexcitability. 11 Stool testing showed an absence of Bifidobacteria and Lactobacillus; probiotics were added for their anti-allergy benefits. <sup>12</sup> Results: Within about two months, seizure frequency reduced from 3-5 per day to one seizure every other day: an 87% reduction in seizure frequency. The patient was able to discontinue one of the antiseizure medications. His parents also noted several global improvements: The boy started making eye contact with people, he was learning again, and intellectually he was "making gains every day." His parents considered this an "amazing difference." Going from 30 seizures per week to four seizures per week, while reducing medication use by 50%, is a major achievement. Notice that this was accomplished using the basic wellness protocol, with some additional B6 and magnesium. It's highly unlikely that B<sub>6</sub> and magnesium alone would have produced such a favorable response.

A young woman with full-body psoriasis unresponsive to drug treatment. This is a 17-year-old woman with head-to-toe psoriasis since childhood. She wears long pants and long-sleeved shirts year-round, and the psoriasis is a major interference to her social life. Medications have ceased to help. Treatment: The Paleo-Mediterranean diet was implemented, with an emphasis on food allergy identification. We used a multivitamin-mineral supplement with 200 mcg selenium to compensate for the nutritional insufficiencies and selenium deficiency common in patients with psoriasis; likewise, 10 mg of folic acid was added to address the relative vitamin deficiencies and elevated homocysteine common in these patients. Combination fatty acid therapy with EPA and DHA from fish oil and GLA from borage oil was used for the anti-inflammatory and skin-healing benefits. Vitamin E (1,200 IU of mixed tocopherols) and lipoic acid (1,000 mg per day) were added for their anti-inflammatory benefits and to combat the oxidative stress that is characteristic of psoriasis. Results: Within a few weeks, this patient's "lifelong psoriasis" was essentially gone. Food allergy identification and avoidance played a major role in the success of this case. When I saw the patient again nine months later for her second visit, she had no visible evidence of psoriasis. Her "medically untreatable" condition was essentially cured by the use of my basic protocol, with the addition of a few extra nutrients.

A man with fatigue and recurrent numbness in hands and feet. This 40-year-old man had seen numerous neurologists and had spent tens of thousands of dollars on MRIs, CT scans, lumbar punctures, and other diagnostic procedures. No diagnosis had been found, and no effective treatment had been rendered by medical specialists. Assessments: We performed a modest battery of lab tests, which revealed elevations of fibrinogen and C-reactive markers of acute inflammation. Assessment of intestinal permeability with the lactulose-mannitol assay showed major intestinal damage ("leaky gut"). Follow-up parasite testing on different occasions showed dysbiosis caused by *Proteus, Enterobacter, Klebsiella, Citrobacter, and Pseudomonas aeruginosa* - of course, these are gram-negative bacteria that can induce immune dysfunction and autoimmunity, as described elsewhere. Specifically, *Pseudomonas aeruginosa* has been linked to the development of nervous system autoimmunity, such as multiple sclerosis. Treatment: We implemented a plan of diet modification, vitamins, minerals, fatty acids, and probiotics. The dysbiosis was addressed further with specific antimicrobial herbs (including caprylic acid and emulsified oregano oil such as tetracycline, Bactrim, and augmentin). The antibiotic drugs proved to be ineffective based on repeat stool testing. Results: Within one month, I witnessed impressive improvements in the patient, both subjectively and objectively. Subjectively, the patient reported that the numbness and tingling had

almost completely resolved. Fatigue was reduced, and energy was improved. Objectively, the patient's elevated CRP plummeted from abnormally high at 11 down to completely normal at one. Eighteen months later, the patient's CRP had dropped to less than one and fatigue and numbness were no longer problematic. Notice that this treatment plan was basically "the protocol" with additional attention to eradicate the dysbiosis we found with specialized stool testing.

For many patients, a five-point nutritional wellness protocol can be used as the foundation for treating a wide range of health problems.

A 50-year-old man with rheumatoid arthritis. This patient presented with a three-year history of rheumatoid arthritis that had been treated unsuccessfully with drugs (methotrexate and intravenous Remicade). The first time I tested his CRP level, it was astronomically high at 124 (normal is <3). Because of the severe inflammation and other risk factors for sudden cardiac death, I referred this patient to an osteopathic internist for immune-suppressing drugs; the patient refused, stating that he was no longer willing to rely on immune-suppressing chemical medications. His treatment was entirely up to me. Assessments and Treatments: We implemented the Paleo-Mediterranean diet and a program of vitamins, minerals, optimal combination fatty acid therapy (providing ALA, GLA, EPA, DHA, and oleic acid), and 4,000 IU of vitamin D in emulsified form to overcome defects in absorption that are seen in older patients and those with gastrointestinal problems. 19 Hormone testing showed abnormally low DHEA, low testosterone, and slightly elevated estrogen; these problems were corrected with DHEA supplementation and the use of a hormone-modulating drug (Arimidex) that lowers estrogen and raises testosterone. Specialized stool testing showed absence of Lactobacillus and Bifidobacteria and intestinal overgrowth of Citrobacter and Enterobacter, which were corrected with probiotics and antimicrobial treatments, including undycelenic acid and emulsified oregano oil. Importantly, I also decided to inhibit NF-kappaB (the primary transcription factor that upregulates the pro-inflammatory response<sup>20</sup>) by using a combination botanical formula that contains curcumin, piperine, lipoic acid, green tea extract, propolis, rosemary, resveratrol, ginger, and phytolens (an antioxidant extract from lentils that may inhibit autoimmunity<sup>21</sup>). All of these herbs and nutrients have been shown to inhibit NF-kappaB and to thus downregulate inflammatory responses. 22 **Results:** Within six weeks, this patient had happily lost 10 lbs of excess weight and was able to work without pain for the first time in years. Follow-up testing showed that his previously astronomical CRP had dropped from 124 to 7. This was a drop of 114 points in less than

This patient continues to make significant progress. Obviously, this case was complex, and we needed to do more than the basic protocol. Nonetheless, the basic protocol still served as the foundation for the treatment plan. Note that vitamin D has significant anti-inflammatory benefits and can cause major reductions in inflammation, measured by CRP.<sup>23</sup> The correction of the hormonal abnormalities and the dysbiosis, and downregulating NF-kappaB with several botanical extracts, also were critical components of this successful treatment plan.

one month - better than had ever been achieved even with the use of intravenous immune-suppressing drugs!

### **Summary and Conclusions**

These examples show how the five-step nutritional wellness protocol can be used as the foundational treatment for a wide range of health problems. In many cases, implementation of the basic protocol is all that is needed. In more complex situations, we use the basic protocol and then add more specific treatments to address dysbiosis and hormonal problems, and we can add additional nutrients as needed. However, there never will be a substitute for a healthy diet, sufficiencies of vitamin D and all five of the health-promoting fatty acids (ALA, GLA, EPA, DHA, and oleic acid), and normalization of gastrointestinal flora. Without these basics, survival and the appearance of health are possible, but true health and recovery from "untreatable" illnesses is not possible. In order to attain optimal health, we have to create the conditions that allow for health to be attained and we start this process by supplying the body with the nutrients that it needs to function optimally. In the words of naturopathic physician Jared Zeff, "The work of the naturopathic physician is to elicit healing by helping patients to create or recreate the conditions for health to exist within them. Health will occur where the conditions for health exist. Disease is the product of the conditions which allow for it."<sup>24</sup>

Although the chiropractic profession has emphasized spinal manipulation as its primary therapeutic tool, the profession always has appreciated holistic, integrative models of therapeutic intervention, health and disease. Chiropractic was the first health care profession in America to specifically claim that the optimization of health requires attention to the spiritual (emotional, psychological), mechanical (physical, structural), and chemical (nutritional, hormonal) aspects of our lives. Chiropractic's founder, D.D. Palmer, wrote, "The human body represents the actions of three laws - spiritual, mechanical, and chemical - united as one triune. As long as there is perfect union of these three, there is health." Accordingly, these cornerstones are fundamental to the modern definition of the chiropractic profession, recently articulated by the American Chiropractic Association: Doctors of Chiropractic are physicians who consider man as an integrated being and give special attention to the physiological and biochemical aspects including structural, spinal, musculoskeletal, neurological, vascular, nutritional, emotional and environmental relationships."

Regardless of your health profession, the cases I have described in this article demonstrate the importance of attending to the nutritional, hormonal, environmental and gastrointestinal aspects of human physiology for helping our patients attain optimal health.

#### References

- Vasquez A. Chiropractic and Naturopathic Medicine for the Promotion of Optimal Health and Alleviation of Pain and Inflammation. http://optimalhealthresearch.com/monograph05.
- Knoops KT, et al. Mediterranean diet, lifestyle factors, and 10-year mortality in elderly European men and women: the HALE project. JAMA, Sept. 22, 2004;292(12):1433-9.
- 3. Studer M, et al. Effect of different antilipidemic agents and diets on mortality: a systematic review. Arch Intern Med 2005;165:725-304.
- Xiao JZ, et al. Effects of milk products fermented by Bifidobacterium longum on blood lipids in rats and healthy adult male volunteers. J Dairy Sci 2003;86:2452-61.
- Cholesterol-lowering action of policosanol compares well to that of pravastatin and lovastatin. Cardiovasc J S Afr 2003;14(3):161.
- 6. Freeman JM, et al. The efficacy of the ketogenic diet-1998: a prospective evaluation of intervention in 150 children. Pediatrics 1998;102:1358-63.
- Egger J, Carter CM, Soothill JF, Wilson J. Oligoantigenic diet treatment of children with epilepsy and migraine. J Pediatr 1989;114:51-8.
- Ali FE, Al-Bustan MA, Al-Busairi WA, Al-Mulla FA. Loss of seizure control due to anticonvulsant-induced hypocalcemia. Ann Pharmacother. 2004;38(6):1002-5.
- Christiansen C, Rodbro P, Sjo O. "Anticonvulsant action" of vitamin D in epileptic patients? A controlled pilot study. Br Med J, May 4, 1974;2(913):258-9.
- Yuen AW, et al. Omega-3 fatty acid supplementation in patients with chronic epilepsy: A randomized trial. Epilepsy Behav September 2005;7(2):253-8.
- Mousain-Bosc M, et al. Magnesium VitB6 intake reduces central nervous system hyperexcitability in children. J Am Coll Nutr 2004;23(5):5458-548S.
- 12. Majamaa H, Isolauri E.Probiotics: a novel approach in the management of food allergy. J Allergy Clin Immunol, February 1997;99(2):179-85.
- Vanizor Kural B, et al. Plasma homocysteine and its relationships with atherothrombotic markers in psoriatic patients. Clin Chim Acta, June 2003;332(1-2):23-3.
- 14. Vasquez A. Reducing pain and inflammation naturally. Part 2: new insights into fatty acid supplementation and its effect on eicosanoid production and genetic expression. *Nutritional Perspectives*, January 2005: 5-16. <a href="https://www.OptimalHealthResearch.com/part2">www.OptimalHealthResearch.com/part2</a>.
- Kokcam I, Naziroglu M. Antioxidants and lipid peroxidation status in the blood of patients with psoriasis. Clin Chim Acta, November 1999;289(1-2):23-31.
- 16. Waldman A, et al. Incidence of Candida in psoriasis a study on the fungal flora of psoriatic patients. Mycoses, May 2001;44(3-4):77-81.
- Hughes LE, et al. Antibody responses to Acinetobacter spp. and Pseudomonas aeruginosa in multiple sclerosis: prospects for diagnosis using the
  myelin-acinetobacter-neurofilament antibody index. Clin and Dia Lab Imm 2001.
- 18. Force M, Sparks WS, Ronzio RA. Inhibition of enteric parasites by emulsified oil of oregano in vivo. Phytother Res, May 2001;14(3):213-4.
- Vasquez A. Subphysiologic Doses of Vitamin D are Subtherapeutic: Comment on the Study by The Record Trial Group. <u>The Lancet.com</u>. Accessed June 16, 2005.
- 20. Tak PP, Firestein GS. NF-kappaB: a key role in inflammatory diseases. J Clin Invest, January 2001;107(1):7-11.
- Sandoval M, et al. Peroxynitrite-induced apoptosis in epithelial (T84) and macrophage (RAW 264.7) cell lines: effect of legume-derived polyphenols (phytolens). Nitric Oxide 1997;1(6):476-83.
- Vasquez A. Reducing pain and inflammation naturally part 4: nutritional and botanical inhibition of NF-kappaB, the major intracellular amplifier
  of the inflammatory cascade. A practical clinical strategy exemplifying anti-inflammatory nutrigenomics. Nutritional Perspectives, July 2005:5-12.
  www.OptimalHealthResearch.com/part4.
- 23. Timms PM, et al. Circulating MMP9, vitamin D and variation in the TIMP-1 response with VDR genotype. QJM, December 2002;95(12):787-96.
- 24. Zeff JL. The process of healing: a unifying theory of naturopathic medicine. Journal of Naturopathic Medicine 1997;7:122-5.
- Palmer DD. The Science, Art, and Phiosoph, of Chiropractic. Portland, OR; Portland Printing House Company, 1910:107.
- 26. American Chiropractic Association. What Is Chiropractic? http://amerchiro.org/media/whatis/. Accessed Jan. 9, 2005.