

# 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.

## A Five-Part Nutritional Wellness Protocol That Produces Consistently Positive Results

When I am lecturing here in the U.S., as well as in Europe, doctors often ask if I will share the details of my protocols with them. Thus, in 2004, I published a 486-page textbook for doctors that includes several protocols and important concepts for the promotion of wellness and treatment of musculoskeletal disorders.<sup>1</sup> In this article, I will share with you what I consider a basic protocol for wellness promotion. I've implemented this protocol as part of the treatment plan for a wide range of clinical problems. In my next column, I will provide several case reports of patients from my office to exemplify the effectiveness of this program and show how it can be the foundation upon which additional treatments can be added as necessary.

Nutrients are required in the proper amounts, forms, and approximate ratios for essential physiologic function; if nutrients are lacking, the body cannot function normally, let alone optimally. Impaired function results in subjective and objective manifestations of what is commonly labeled as "disease." Thus, a powerful and effective alternative to treating diseases with drugs is to re-establish normal/optimal physiologic function by replenishing the body with essential nutrients.

Of course, many diseases are multifactorial and therefore require multicomponent treatment plans, and some diseases actually require the use of drugs. However, while only a relatively small portion of patients actually need drugs for their problems, I am sure we all agree that everyone needs a foundational nutrition plan, as outlined and substantiated below.

**1. Health-promoting diet:** Following an extensive review of the research literature, I developed what I call the "supplemented Paleo-Mediterranean diet," which I have described in greater detail elsewhere.<sup>2</sup> In essence, this diet plan combines the best of the Mediterranean diet with the best of the Paleolithic diet, the latter of which has been detailed most recently by Dr. Loren Cordain in his book, *The Paleo Diet*, and his numerous scientific articles.<sup>3</sup> This diet places emphasis on fruits, vegetables, nuts, seeds, and berries that meet the body's needs for fiber, carbohydrates, and most importantly, the 8,000+ phytonutrients that have additive and synergistic health benefits.<sup>4</sup>

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Preferred protein sources are lean meats such as fish and poultry. In contrast to Cordain's Paleo diet, I also advocate soy and whey for their high-quality protein and anticancer, cardioprotective, and mood-enhancing benefits. Rice and potatoes are discouraged due to their relatively high glycemic indexes and high glycemic loads, and their lack of fiber and phytonutrients (compared to other fruits and vegetables). Generally speaking, grains such as wheat and rye are discouraged due to the high glycemic loads/indexes of most breads and pastries, as well as the allergenicity of gluten, a protein that appears to help trigger disorders such as migraine, celiac disease, psoriasis, epilepsy, and autoimmunity.<sup>3</sup> Sources of simple sugars such as high-fructose corn syrup (e.g., cola, soda) and processed foods (e.g., "TV dinners" and other manufactured snacks and convenience foods) are strictly forbidden. Chemical preservatives, colorants, sweeteners and carrageenan are likewise prohibited.

In summary, this diet plan provides plenty of variety, as most dishes comprised of poultry, fish, soy, fruits, vegetables, nuts, berries, and seeds are allowed. The diet also provides plenty of fiber, phytonutrients, carbohydrates, potassium, and protein, while simultaneously being low in fat, sodium, arachidonic acid, and "simple sugars." The diet must be customized with regard to total protein and calorie intake, as determined by the size, status, and activity level of the patient, and individual food allergens should be avoided. Regular consumption of this diet has shown the ability to reduce hypertension, alleviate diabetes, ameliorate migraine headaches, and result in improvement of overall health and a lessening of the severity of many common "diseases." This diet is supplemented with vitamins, minerals, and fatty acids as described below.

**2. Multivitamin and multimineral supplementation:** Vitamin and mineral supplementation finally received endorsement from "mainstream" medicine when researchers from Harvard Medical School published a review article in *Journal of the American Medical Association* that concluded, "Most people do not consume an optimal amount of all vitamins by diet alone. ...It appears prudent for all adults to take vitamin supplements."<sup>5</sup> Long-term nutritional insufficiencies experienced by "most people" promote the development of "long-latency deficiency diseases" such as cancer, neuroemotional deterioration, and cardiovascular disease.<sup>6</sup> Impressively, the benefits of multivitamin/multimineral supplementation have been demonstrated in numerous clinical trials.

Multivitamin/multimineral supplementation has been shown to improve nutritional status and reduce the risk for chronic diseases,<sup>7</sup> improve mood,<sup>8</sup> potentiate antidepressant drug treatment,<sup>9</sup> alleviate migraine headaches (when used with diet improvement and fatty acids<sup>10</sup>), improve immune function and infectious disease outcomes in the elderly<sup>11</sup> (especially diabetics<sup>12</sup>), reduce morbidity and mortality in patients with HIV infection,<sup>13,14</sup> alleviate premenstrual syndrome<sup>15,16</sup> and bipolar disorder,<sup>17</sup> reduce violence and antisocial behavior in children<sup>18</sup> and incarcerated young adults (when used with essential fatty acids<sup>19</sup>), and improve scores of intelligence in children.<sup>20</sup> Vitamin supplementation has anti-inflammatory benefits, as evidenced by significant reduction in C-reactive protein, (CRP) in a double-blind, placebo-controlled trial.<sup>21</sup> The ability to safely and affordably deliver these benefits makes multimineral-multivitamin supplementation an essential component of any and all health-promoting and disease-prevention strategies.

Vitamin A can result in liver damage with chronic consumption of 25,000 IU or more, and intake should generally not exceed 10,000 IU per day in women of childbearing age. Iron should not be supplemented except in patients diagnosed with iron deficiency by a blood test (serum ferritin).<sup>1</sup> Additional vitamin D should be used, as described in the next section.

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**3. Physiologic doses of vitamin D<sub>3</sub>:** The prevalence of vitamin D deficiency varies from 40 percent (general population) to almost 100 percent (patients with musculoskeletal pain) in the American population. I described the

many benefits of vitamin D<sub>3</sub> supplementation in the previous issue of *Nutritional Wellness* and in the major monograph published last year.<sup>22</sup>

In summary, vitamin D deficiency causes or contributes to depression, hypertension, seizures, migraine, polycystic ovary syndrome, inflammation, autoimmunity, and musculoskeletal pain such as low-back pain. Clinical trials using vitamin D supplementation have proven the cause-and-effect relationship between vitamin D deficiency and these conditions by showing that each of these could be cured or alleviated with vitamin D supplementation. In our review of the literature, we concluded that daily vitamin D doses should be 1,000 IU for infants, 2,000 IU for children, and 4,000 IU for adults. Cautions and contraindications include the use of thiazide diuretics (e.g., hydrochlorothiazide) or any other medications that can promote hypercalcemia, as well as granulomatous diseases such as sarcoidosis, tuberculosis, and certain types of cancer, especially lymphoma. Effectiveness is monitored by measuring serum 25-OH-vitamin D, and safety is monitored by measuring serum calcium.

**4. Balanced and complete fatty acid supplementation:** A detailed survey of the literature shows there are at least five health-promoting fatty acids commonly found in the human diet.<sup>2</sup> These are alpha-linolenic acid (ALA; omega-3, from flaxseed oil), eicosapentaenoic acid (EPA; omega-3, from fish oil), docosahexaenoic acid (DHA; omega-3, from fish oil and algae), gamma-linolenic acid (GLA; omega-6, most concentrated in borage oil), and oleic acid (omega-9, from olive oil, also flaxseed and borage oils). Each of these fatty acids has health benefits that cannot be fully attained from supplementing a different fatty acid. The benefits of GLA (borage oil) are not attained by consumption of EPA and DHA (fish oil); in fact, consumption of fish oil can actually promote a deficiency of GLA.<sup>23</sup> Likewise, consumption of GLA alone can reduce EPA levels while increasing levels of proinflammatory arachidonic acid<sup>23</sup>; both of these problems are avoided with co-administration of fish oil any time borage oil is used. Using ALA (flaxseed oil) alone only slightly increases EPA but generally leads to no improvement in DHA status and can lead to a reduction of oleic acid; thus, fish oil, olive oil (and borage oil) should be supplemented when flaxseed oil is used.<sup>25</sup>

Obviously, the goal here is a balanced intake of all of the health-promoting fatty acids; using only one or two sources of fatty acids is not balanced and results in suboptimal improvement, at best. In clinical practice, I routinely use combination fatty acid therapy comprised of ALA, EPA, DHA, and GLA for essentially all patients. The product also contains a modest amount of oleic acid, and I encourage use of olive oil for salads and cooking. This approach results in complete and balanced fatty acid intake, and the clinical benefits are impressive.

**5. Probiotics /gut flora modification:** Proper levels of good bacteria promote intestinal health, proper immune function, and support overall health. Excess bacteria or yeast, or the presence of harmful bacteria, yeast, or "parasites" such as amoebas and protozoas, can cause "leaky gut," systemic inflammation, and a wide range of clinical problems.<sup>1</sup> Intestinal flora can become imbalanced by poor diets, excess stress, immunosuppressive drugs, antibiotics, or exposure to contaminated food or water, all of which are common among American patients.

Thus, as a rule, I reinstate the good bacteria by the use of probiotics (good bacteria and yeast), prebiotics (fiber, arabinogalactan, and inulin), and the use of fermented foods such as kefir (in patients not allergic to milk). Harmful yeast, bacteria, and other "parasites" can be eradicated with the combination of dietary change, drugs, and/or herbal extracts. For example, oregano oil in an emulsified, time-released form has proven safe and effective for the elimination of various parasites encountered in clinical practice.<sup>26</sup> Likewise, the herb *Artemisia annua* (sweet wormwood) commonly is used to eradicate specific bacteria and has been used for thousands of years in Asia for the treatment and prevention of infectious diseases, including malaria.<sup>27</sup>

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**To reinstate good bacteria, try using probiotics, prebiotics and fermented foods such as kefir (in patients not allergic to milk).**

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## Conclusion

In this brief review, I have outlined and scientifically substantiated a fundamental protocol that can serve as effective therapy for patients with a wide range of "diseases." Customizing the Paleo-Mediterranean diet to avoid

food allergens, using vitamin-mineral supplements along with physiologic doses of vitamin D and broad-spectrum balanced fatty acid supplementation, and ensuring gastrointestinal health with the skillful use of probiotics, prebiotics, and antimicrobial treatments provides an excellent health-promoting and disease-eliminating foundation and lifestyle for many patients. Often, this simple protocol is all that is needed for the effective treatment of a wide range of clinical problems. For other patients with more complex illnesses, of course, additional interventions and laboratory assessments can be used to customize the treatment plan. However, we must always remember that the attainment and preservation of health requires that we meet the body's basic nutritional needs. This five-step protocol begins the process of meeting those needs.

In my next article, I'll give you some examples from my clinical practice and additional references to show how safe and effective this protocol can be.

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## References

1. Vasquez A. *Integrative Orthopedics: The Art of Creating Wellness While Managing Acute and Chronic Musculoskeletal Disorders*. [www.OptimalHealthResearch.com](http://www.OptimalHealthResearch.com).
2. Vasquez A. *Chiropractic and Naturopathic Medicine for the Promotion of Optimal Health and Alleviation of Pain and Inflammation*. <http://optimalhealthresearch.com/major-monograph-05>.
3. Cordain L. *The Paleo Diet*. (John Wiley and Sons, 2002). Also: Cordain L. Cereal grains: humanity's double edged sword. *World Rev Nutr Diet* 1999;84:19-73. <http://thepaleodiet.com/articles.htm>.
4. Liu RH. Health benefits of fruit and vegetables are from additive and synergistic combinations of phytochemicals. *Am J Clin Nutr* 2003;78(3 Suppl):517S-520S.
5. Fletcher RH, Fairfield KM. Vitamins for chronic disease prevention in adults: clinical applications. *JAMA* 2002;287:3127-9.
6. Heaney RP. Long-latency deficiency disease: insights from calcium and vitamin D. *Am J Clin Nutr* 2003;78:912-9.
7. McKay DL, Perrone G, Rasmussen H, Dallal G, Hartman W, Cao G, Prior RL, Roubenoff R, Blumberg JB. The effects of a multivitamin/mineral supplement on micronutrient status, antioxidant capacity and cytokine production in healthy older adults consuming a fortified diet. *J Am Coll Nutr* 2000;19(5):613-21.
8. Benton D, Haller J, Fordy J. Vitamin supplementation for 1 year improves mood. *Neuropsychobiology* 1995;32(2):98-105.
9. Coppen A, Bailey J. Enhancement of the antidepressant action of fluoxetine by folic acid: a randomised, placebo controlled trial. *J Affect Disord* 2000;60:121-30.
10. Wagner W, Nootbaar-Wagner U. Prophylactic treatment of migraine with gamma-linolenic and alpha-linolenic acids. *Cephalalgia* 1997;17:127-30.
11. Langkamp-Henken B, Bender BS, Gardner EM, Herrlinger-Garcia KA, Kelley MJ, Murasko DM, Schaller JP, Stechmiller JK, Thomas DJ, Wood SM. Nutritional formula enhanced immune function and reduced days of symptoms of upper respiratory tract infection in seniors. *J Am Geriatr Soc* 2004;52:3-12.
12. Barringer TA, Kirk JK, Santaniello AC, Foley KL, Michielutte R. Effect of a multivitamin and mineral supplement on infection and quality of life. A randomized, double-blind, placebo-controlled trial. *Ann Intern Med* 2003;138:365-71.
13. Fawzi WW, Msamanga GI, Spiegelman D, et al. A randomized trial of multivitamin supplements and HIV disease progression and mortality. *N Engl J Med* 2004;351:23-32.
14. Burbano X, Miguez-Burbano MJ, McCollister K, Zhang G, Rodriguez A, Ruiz P, Lecusay R, Shor-Posner G. Impact of a selenium chemoprevention clinical trial on hospital admissions of HIV-infected participants. *HIV Clin Trials* 2002;3:483-91.
15. Abraham GE. Nutritional factors in the etiology of the premenstrual tension syndromes. *J Reprod Med* 1983;28(7):446-64.
16. Stewart A. Clinical and biochemical effects of nutritional supplementation on the premenstrual syndrome. *J Reprod Med* 1987;32:435-41.
17. Kaplan BJ, Simpson JS, Ferre RC, Gorman CP, McMullen DM, Crawford SG. Effective mood stabilization with a chelated mineral supplement: an open-label trial in bipolar disorder. *J Clin Psychiatry* 2001;62:936-44.
18. Kaplan BJ, Crawford SG, Gardner B, Farrelly G. Treatment of mood lability and explosive rage with minerals and vitamins: two case studies in children. *J Child Adolesc Psychopharmacol* 2002;12(3):205-19.
19. Gesch CB, Hammond SM, Hampson SE, Eves A, Crowder MJ. Influence of supplementary vitamins, minerals and essential fatty acids on the antisocial behaviour of young adult prisoners. Randomised, placebo-controlled trial. *Br J Psychiatry* 2002;181:22-8.
20. Benton D. Micro-nutrient supplementation and the intelligence of children. *Neurosci Biobehav Rev* 2001;25:297-309.
21. Church TS, Earnest CP, Wood KA, Kampert JB. Reduction of C-reactive protein levels through use of a multivitamin. *Am J Med* 2003;115:702-7.
22. Vasquez A, Manso G, Cannell J. The clinical importance of vitamin D (cholecalciferol): a paradigm shift with implications for all healthcare providers. *Alternative Therapies in Health and Medicine* 2004;10:28-37. Available at [www.bioticsresearch.com/vitD.htm](http://www.bioticsresearch.com/vitD.htm) as of April 5, 2005.
23. Cleland LG, Gibson RA, Neumann M, French JK. The effect of dietary fish oil supplement upon the content of dihomo-gammalinolenic acid in human plasma phospholipids. *Prostaglandins Leukot Essent Fatty Acids* 1990 May;40(1):9-12.
24. Jantti J, Nikkari T, Solakivi T, Vapaatalo H, Isomaki H. Evening primrose oil in rheumatoid arthritis: changes in serum lipids and fatty acids. *Ann Rheum Dis* February 1989;48(2):124-7.
25. 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.
26. Force M, Sparks WS, Ronzio RA. Inhibition of enteric parasites by emulsified oil of oregano in vivo. *Phytother Res* 2000;14:213-4.
27. Schuster BG. Demonstrating the validity of natural products as anti-infective drugs. *J Altern Complement Med* 2001;7 Suppl 1:S73-82.