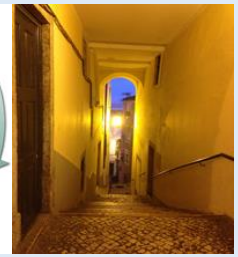
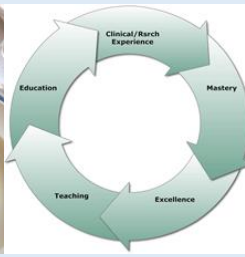
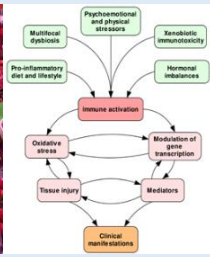


# INTERNATIONAL JOURNAL OF HUMAN NUTRITION AND FUNCTIONAL MEDICINE

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**Tutorial & Editorial • Scientific Writing • Journal Editing • Professional Experience • Video**

## How to Improve Scientific Writing and Journal Editing: A Short Narrative-Video Guide, Part I

Alex Vasquez DO ND DC FACN

### Introduction

“Hello everyone, Dr. Alex Vasquez here, and today I’m going to start a different series of videos, and this time the conversation is going to focus around journal editing and writing. I’m calling this “*Editing and Writing Tips #1*”, and I’m going to start with a few of my own perspectives and experiences, then I’ll talk about a few basics, and a few influential ideas. In later videos, I will talk about some more specific examples, and then perhaps at some point we will have a review and conclusion.

### Early Experiences and Influences

Very briefly I’ll talk about some of my own experiences, and the reason for my doing this is to share with you and segue into some examples that I think are very important. Basic though they might be, a lot of our success in various fields of life actually comes from respecting and appreciating and utilizing those basic concepts.

Let us start here with some of my initial experiences. I started becoming aware of language and the fact that I had some facility for it, first, when I was about 12 years old. I remember writing a poem in class, and again this is somewhat peripheral to the main topic of today, but I do remember that experience, and that was kind of my entryway, I think, into writing. I remember that our assignment was to write a poem, and I just remember writing this poem in class and it just kept going on and on, and—compared with some of my classmates—I just realized that writing for me was actually pretty easy.

Then again, when I was 18 years old and in military school, I remember in our English class we were

being asked questions, and I remember just how the answers to understanding grammar and language just came very easy to me, and I do remember feeling like I had some facility for the structure of language.

Another influential experience I had when I was about 11 years old, totally unrelated to language, is that we took, in the late 1970s or early ‘80s, a Computer Science class in our elementary school, and I remember that class also specifically having some influence on me, in terms of structuring logic. We basically had to write our own computer programs and this was back when computers were very

new. Obviously today everybody has computers; back in the late ‘70s, computers were a novelty. I consider myself lucky to have taken this Computer Science class; it was obviously extremely basic, but we did have to write some code and what I remember from that is just the sequential manner in which communication has to take place in order to be successful. In this case, we were writing programs for computers and doing basic graphics and moving illustrations and things like that. Again, it did have some influence on me.

Also very important in my upbringing was that my father gave me some of audio cassettes when I was in my teens, and I’ll share with you two very specific examples here.

1. **Earl Nightingale, *Lead the Field*:** One was from Earl Nightingale, and you can find audio recordings of

“Writing comes from the entirety of one’s experience.”

Dr Alex Vasquez



Earl Nightingale quite freely and widely on the internet, and I'll provide a few excerpts from those audios later in this video and in some upcoming videos. One of the things that really helped me develop my writing ability and perhaps even public speaking ability was what Earl Nightingale called the “castle technique.” The example that he gave was using the image in your own mind of what you want to communicate. In your own mind, when you are communicating with someone, you have—or in my case, *I have*—certain ideas or perhaps even a certain image or paradigm or model that I am trying to share with someone, or that you are trying to share with someone. The image that Earl Nightingale shared was that in your mind you have this huge idea, somewhat analogous to a castle. And your goal is to transfer that castle from your mind into the mind of your reader or listener. The analogy that he used was, transferring that castle, brick by brick, in a sequential and logical manner, so that eventually you have transferred your castle, piece by piece, into the mind of the other person. I found that to be a very useful analogy. I have used that technique mentally when I am constructing arguments or presenting at conferences and of course in writing books and articles. So before leaving that point, I will just read it word for word: Earl Nightingale discussed using the castle technique of communicating whereby the communicator imagines transferring a castle, which is the overall idea, to the other person brick-by-brick, that is idea-by-idea, building each upon the other in a logical sequence. Again, I will add some audio excerpts within these videos.



“Earl Nightingale discussed using the castle technique of communicating whereby the communicator imagines transferring a castle, which is the overall idea, to the other person brick-by-brick, that is idea-by-idea, building each upon the other in a logical sequence.”

Dr Alex Vasquez

Video: <https://www.ichnfm.org/journal2019a>

## 2. Denis Waitley, *The Psychology of Winning*:

Another audio cassette that I kind of “apprenticed myself to” very early was a series of audio cassettes, and also a book, from Denis Waitley PhD, who taught that “Winners take full responsibility for the success in the communication process. ... Winners take full responsibility for being certain that you understand what they are saying.”<sup>1</sup> I will here use a recent example from my journal editing experience: I just read and reviewed an article for publication wherein the authors assumed that the reader had supremely detailed knowledge about a certain subject that most educated readers would not have, and people who are unfamiliar with the topic would have no chance at all of understanding this article. So obviously that is an article that needs to be at least partially rewritten or at least fine-tuned, but what I could see very clearly in this particular article is that the authors were assuming a certain level of knowledge that was really inappropriate for even for an educated audience, let alone an audience that may not have known the specifics of what they were discussing. So again, any time I am writing, or any time you are writing, we collectively need to take full responsibility for that communication process. For example, when introducing new terms in an article or a presentation, we have to define those terms. Now if I am presenting to an audience of doctors, I can assume they know certain things of course, so I don't have to start from Biology 101. But even in that setting, a quick review of some basics often helps to set the stage and refamiliarize people with the language and the vocabulary that we are going to be using as I develop the more advanced concepts. So again, responsibility is with the author to ensure that they have structured the conversation, the book, the article, the presentation in such a way that they attendee or the reader or the listener has a chance of following along without too much effort. Again, going back to that article that I recently reviewed: even I as the editor, found myself struggling to understand what these authors were saying. I could only imagine that someone perhaps distracted or marginally disinterested would give up on such an article, even though it was only a few pages. **If the effort required to read something on a voluntary basis is too much, especially these days when people have a million distractions, people will not persevere through that process. And ultimately that means a failure of the communication process.** Because a **writer—and the reader—only succeeds, at best, if the person reading the article actually finishes reading the article** and actually has a chance to consider the argument being proposed. But in this particular case,



the language was so cumbersome and the terminology was so undefined that I think most readers would simply bail out of that experience.

"The successes of the writer (attempting to teach) and the reader (attempting to learn) both depend on the reader's reading of the article. A poorly written article denies that opportunity to both persons."

Dr Alex Vasquez

Some other early experiences I had are that I started writing articles in my early 20s and also reviewing for the *Journal of Naturopathic Medicine*. And what I'll state later is that writing certainly helps the editing process. So, if I'm a writer and then I'm tasked with editing an article, the fact that I have writing experience obviously helps me edit that article, but the reverse is also true. Editing is a critical process of reviewing someone else's work, pretty much word for word, and looking at it from the author's perspective, from one's own perspective, and also trying to kind of intuit the experience of the reader so that as a good editor one has to imagine what would this reading experience be like for someone who doesn't have a specialty degree in this topic, or for someone who works in whatever field that is, whether they are a nutritionist or a dietician or a nurse practitioner, or a physician, or a politician. **"Good editing" requires that perspectivism and gaining that perspectivism** as a reviewer or editor will also help the writing process as well because a characteristic of **being ultimately what is considered "a good writer" is writing in such a way that your message, or the message, is accepted and accessible by a larger audience.**

Here is another citation. Early in my 20s I read a book called *Zen in the Art of Writing* by Ray Bradbury. One of the things he said that I remembered from that book is, "Read poetry every day of your life." I am sure most of us would like to have time to do so; I certainly do not. I don't read poetry *every day*, but I do read some poetry and I certainly do read a lot of what we might just call "literature." And I'll give you two citations to that as well, especially with regard to the work of Ayn Rand and Friedrich Nietzsche. So, as I've already alluded, I've certainly reviewed and edited for many journals and professional magazines by now. I have also published approximately [100 articles and letters](#) and also [books ranging from small letters and introductions and overviews](#) to my largest book, which in *Inflammation Mastery*, which is 1200 pages and I have estimated it to be about 1.5 million words, plus diagrams.

Nonliterary experiences, which I feel are important to my own writing ability and my perspective, include some of the following. I do think, and Nietzsche says this as well, and I'm sure other authors have said this as well, **writing comes from one's entire experience.** So you know anything that you've lived through or in my case anything that I've lived through is going to find its

way out in the things that we talk about and the things that we think are important. For example, I read a lot of psychology and philosophy. I am sure that anybody who's followed my work knows that intuitively whether I say it outright or not. Philosophy and psychology are kind of woven into my work, even if I'm talking about nutrition and biochemistry and physiology and pathophysiology.

I think the fact that I grew up in the '80s and listened to punk rock when I was a teenager, I think that influences my writing even now as a mature, older adult. In fact some of the music that I listened actually segued into the books that I read and specifically when I was about 18 or 19 years old I read a book—*One from None*—by a punk rock artist or singer named Henry Rollins.<sup>2</sup> That book actually totally changed my life and that was probably my formal introduction into writing by reading his work which modeled some ideas for me. Also, growing up as I did in the '70s and the '80s in Texas, I think that that influenced me. Skateboarding, I also participated in martial arts—kung fu, jiu jitsu, and tae kwon do—when I was younger. Also, I went to military school. And in military school we took a series of classes called Leadership Development and, of course as you would expect, part of Leadership Development is clear communication.

By now I've published, again, somewhere around [100 articles in various publications](#), and I have listed some of those here (in the video presentation) as well. I've written books; I've written articles. Those feed one into the other because I use my articles to justify what I'm saying in the book and to peer-review that information. When I write books, that is my way of consolidating a lot of information which then I use for rapid publications when the time arrives for me to publish an article.

"Sports and games teach us to respect forms, styles, rules, and structures for the purposes of participation and success. They teach us to "master the territory" within a given sphere."

Dr Alex Vasquez

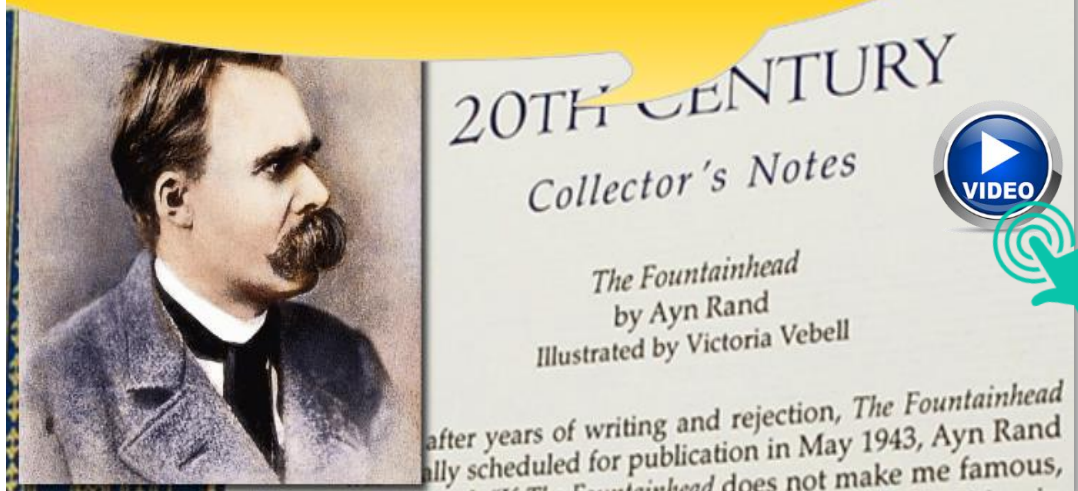
### List #1: How to Improve Scientific Writing

On the next page let's get into some specific writing and editing tips, and again I'm calling this basically "Presentation #1" or "List #1."

1. **Work to the develop the skill of writing, even if you have natural ability:** First of all, and perhaps obvious, is that writing is a skill. Some people have natural talent, just as with athletics, and fluidity with words and a natural instinct for logic. Other people don't have this and they either do or don't develop these abilities, but certainly all of us can improve our abilities and that improvement is a continual process. So one thing I will say is to not expect that you have writing talent if you've never worked to develop that talent. And certainly getting a PhD or MD degree

does not make one a talented writer. I'm going to emphasize this just a little more so please bear with me: you would never expect to be a good athlete, let's say a triathlete. You wouldn't necessarily expect to even complete a triathlon if you hadn't trained for it. And you would not enter into a mixed martial arts contest if you had not trained for it for years. What I do see in some of my reading and editing is that—I'm guessing—some people have the assumption that having a PhD degree or an MD degree makes them a good writer; in my experience working with many different journals over at least about 20 years now, that is certainly not the case. So, more concretely I'll say a person who has read a book on grammar is going to have certain talents and abilities and fluidity with language and the structure of language more so than a person who has never read a book on grammar. The same thing is true of reading a book on logic or philosophy or rhetoric or psychology. All of those things will improve one's writing to a measurable degree. And, again, that's why I say writing is a skill. That does not simply mean, and it does not have to be limited to, reading books on grammar and basic structure of language. *Any reading* will help one's writing as well, but one has to engage in that process to develop that skill and talent. And, again, the fluidity with language which comes with exposing oneself to language at a certain level and also at a certain frequency. Reading Facebook blogs is not the same as reading Ayn Rand or Friedrich Nietzsche. Many or perhaps most people—first of all—do not read very much these days, and secondly, when they do read—what are they reading? They're reading blogs; they are reading very short articles, or they are reading pulp fiction or some junk entertainment book. That is probably *not* going to develop literary skill in the same way that would reading a famous novel or psychology or philosophy book that has survived for hundreds of years. And I'm certainly not saying there that things that are popular therefore have merit. But in a certain sense some books that are popular have that popularity based on their merit. I will just use a quick but perhaps obvious

Ayn Rand read my Zarathustra, based her book on its main character and themes, then misrepresented my entire philosophy in the introduction to her book. Laughably, she called me a "mystic" even when Martin Heidegger more accurately stated that my work "was the end of metaphysics."



example, and that would be Ayn Rand's The Fountainhead. Ayn Rand's *Fountainhead* has been considered one of the most influential books, especially in American society. Now, I could say that that has good and bad justification, and I can also, in my opinion, say that people have misread that book because the messages contained within that book are often not the messages attributed to that book. The same thing is true of Nietzsche's writing as well. Some books might be popular, but that *popularity does not make them good*, but some books that are popular are popular for a reason. Ayn Rand's Fountainhead is a masterpiece, whether you agree with her or not, or whether you like her or not. I personally do not like her; I find that she has many personal flaws and the people who knew her would also say the same. I am not a fan of her necessarily *as a person*, but her book The Fountainhead is a bonafide literary masterpiece.

2. **Writing will improve your editing, and editing will improve your writing:** As I said before, writing will improve your editing, and editing will certainly improve your writing. Writing talent facilitates editing talent and vice versa. Gain as much experience with critical, logical, structural language as possible to become "well rounded" with various types of experience.
3. **Explain everything, and do so with concision:** My third tip is to make an effort to explain *everything efficiently*. Again, I refer back to Earl Nightingale's concept of the castle technique. Experienced readers do not mind a quick review, and the more scholarly of them will appreciate your concision. If you can, then summarize something very quickly. Let's say we are going to talk about mitochondria in clinical



medicine<sup>3</sup>, and I give a one paragraph or five sentence review of mitochondria: the scholars will *enjoy* that quick review and the novices *need* that introduction in order to orient them to the material that follows. Again, as I say here: the more scholarly readers will appreciate your concision—because the better and best of them appreciate and respect intellectual efficiency and density—and the new students need the definitions and introduction. Make both groups happy and you'll be well received, which of course is your goal. You are responsible. Do not make your reader struggle to understand you—again, unless you are really writing to a specialized audience such as Nietzsche was—because the ultimate result is that **if you make your work too complicated then your work will not be popular, and your work “needs to be popular” in order for you to get your message out.** Do not make your reader struggle to understand you because this will result in your being unread or unpublished, or just not gaining the popularity that you want in order to disseminate your ideas, which of course is your ultimate goal.

4. **Read science to get the rhythm and logical structure of science:** I have read, since my early 20s, thousands of articles and book pages, especially primary research and major reviews, and again even within science we find some authors are notably good with their skill in writing and communication of supremely complex and novel ideas. I have a few authors for example within the rheumatology field and I try to read everything that they write because not only is their work incredibly progressive, but their manner of communicating that work is also what I consider to be a positive influence on my own reading ability, ultimately editing ability, and all of this ultimately comes down to one's thinking ability. So as I said again, read science to get the rhythm and logical structure of science.
5. **Read literature to get a certain style and cadence that lends some style to your work:** Some people are considered masters of language and for good reason. Again I can refer you back to Friedrich Nietzsche's work, arguably quite complicated, especially if you do not have an overview of his psychology and philosophy and what he was trying to accomplish. But Nietzsche was a very talented writer, and he is well-known among philosophers and writers as having a very unique and innovative style of communication. Difficult though that might be at times, reading Nietzsche will make you a better writer and a better reader, just like that experience has done for me. Again, Ayn Rand's *Fountainhead*, an absolute masterpiece; I have probably gone through that particular work somewhere between 50 and 100 times. The more we expose ourselves to excellent

writing, the more we will be intellectually acclimated to excellent writing, and the better will be our writing.

6. **Make every word count:** Nietzsche famously said, **"My ambition is to say in ten sentences what everyone else says in a book..."** When you are writing, make every word count. And one way that you can really learn this discipline is by authoring letters, which I have done from the start of my writing experience. I published my first “formal” kind of “big league” letter when I was about 24 years old. I wrote a letter for the American College of Rheumatology's journal, *Arthritis and Rheumatism*.<sup>4</sup> That was my first experience in writing again kind of a high-level letter. But I have written many, again what I would consider high level letters in other journals, especially more recently. And what I'm trying to communicate in giving you those examples is to say that what writing letters forces you to do, what it forces me to do, is to take a lot of information and compress it into a certain word-limited space, typically 500 words, 250 words, or most recently in my experience with the *New England Journal of Medicine*, 175 words. So, look at my experience of writing books where the space is relatively unlimited; when writing a formal letter, I might have to take ideas that have spanned over 40 or 50 pages and compress those into 500 words or 250 words. Doing that forces me to select every word with ultimate precision. And doing that multiple times has certainly helped me gain an appreciation of how to use language in a more precise and concise manner because ultimately I think one of the goals that a good writer should always keep in mind is what I call **linguistic efficiency** or **intellectual density**—trying to convey the most information possible with the least amount of space and effort and time required by the reader. Ultimately what I want, and ultimately what you want, is for the reader to leave thinking, "Wow. I read in half a page something that completely changed my perspective or changed my life or changed my approach" to whatever that topic might be. That is writing with impact. We do not want to achieve that goal over the course of 500 pages if we can do it in 500 words. And, again, writing letters (tightly limited space) as opposed to articles (fewer limitations) and books (unlimited space and style) helps refine that word-selecting and wordsmithing skill.
7. **Writing is ultimately your logical sequence with the reader in mind:** The more imaginary readers you can accommodate, the better. The more you have cleaned out the cobwebs from your own life and mind, the better will be your writing and editing because your entire existence will seek, embrace, and tolerate nothing less than clarity. Some of that idea actually comes from Nathaniel Branden's work on psychology.<sup>5</sup> And perhaps I'll talk about that more in

an upcoming video, but in the meanwhile just for emphasis let me repeat that last point, number seven. Writing is ultimately your logical sequence with the reader in mind. The more imaginary readers you can accommodate, the better. The more you have cleaned out the cobwebs from your life and mind, the better will be your writing and editing because your entire existence will seek, embrace, and tolerate nothing less than clarity.

## Closure

This brings us to the end of writing and editing tips number one. In the future we will of course talk about writing tips number two. I will provide some more examples, some more excerpts, and at some point perhaps provide a review and conclusion to these ideas. Thank you very much for your attention and I look forward to sharing the next video with you. ✂

## Selected citations—see video for more citations: <https://www.ichnfm.org/journal2019a>

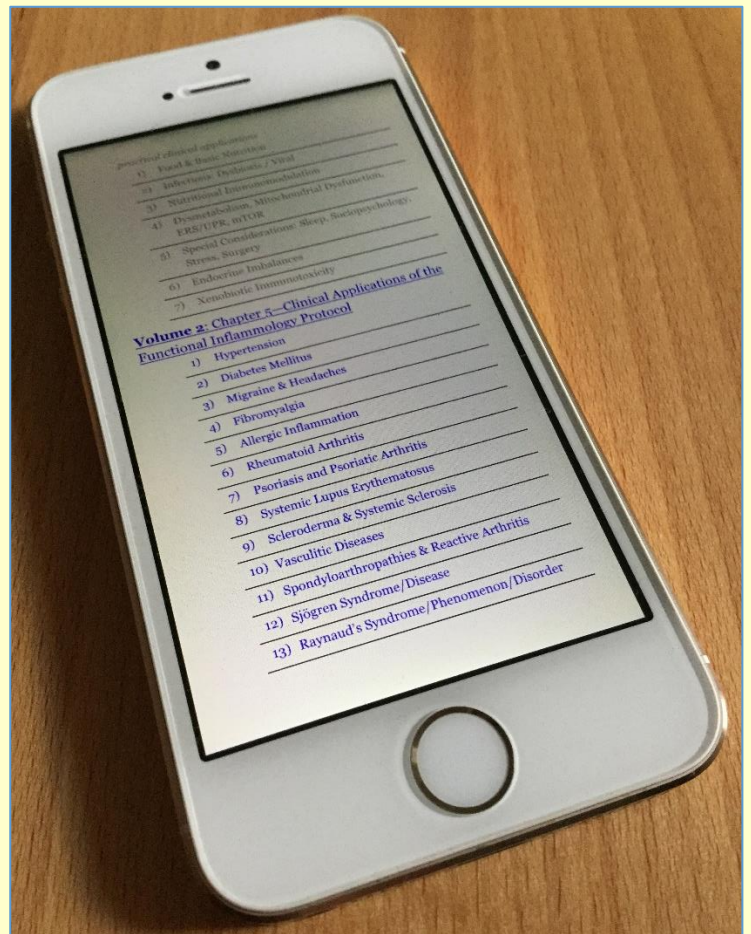
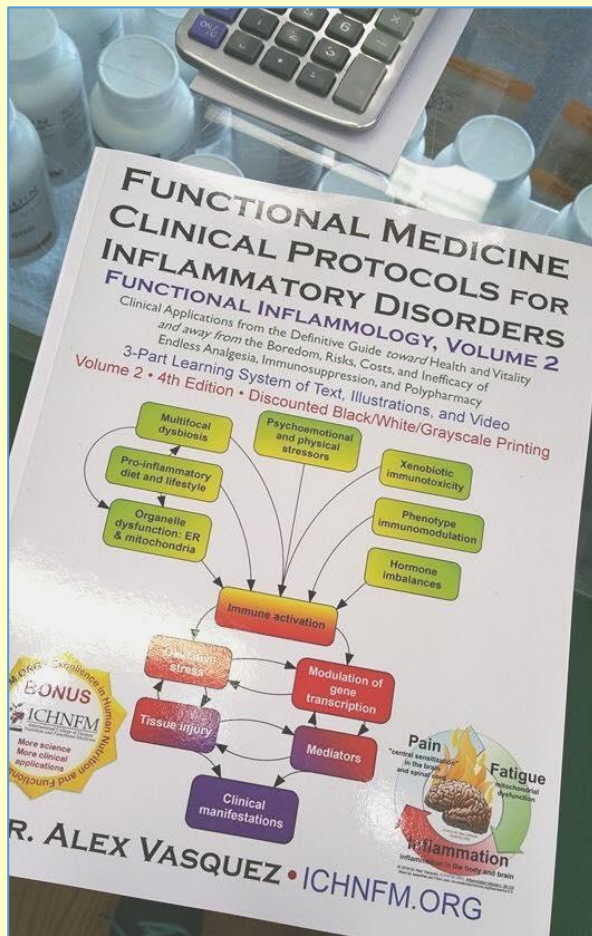
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## About the author and presenter: Alex Kennerly Vasquez DO ND DC (USA), Fellow of the American College of Nutrition (FACN), Overseas Fellow of the Royal Society of Medicine: An award-winning clinician-scholar and founding Program Director of the world's first fully-accredited university-based graduate program in Human Nutrition and Functional Medicine, Dr Alex Vasquez is recognized internationally for his high intellectual and academic standards and for his expertise spanning and interconnecting many topics in medicine and nutrition.

Dr Vasquez holds three doctoral degrees as a graduate of University of Western States (Doctor of Chiropractic, 1996), Bastyr University (Doctor of Naturopathic Medicine, 1999), and University of North Texas Health Science Center, Texas College of Osteopathic Medicine (Doctor of Osteopathic Medicine, 2010). Dr Vasquez has completed hundreds of hours of post-graduate and continuing education in subjects including Obstetrics, Pediatrics, Basic and Advanced Disaster Life Support, Nutrition and Functional Medicine; while in the final year of medical school, Dr Vasquez completed a Pre-Doctoral Research Fellowship in Complementary and Alternative Medicine Research hosted by the US National Institutes of Health (NIH). Dr Vasquez is the author of many textbooks, including *Integrative Orthopedics* (2004, 2007 2012), *Functional Medicine Rheumatology* (Third Edition, 2014), *Musculoskeletal Pain: Expanded Clinical Strategies* (commissioned and published by Institute for Functional Medicine, 2008), *Chiropractic and Naturopathic Mastery of Common Clinical Disorders* (2009), *Integrative Medicine and Functional Medicine for Chronic Hypertension* (2011), *Brain Inflammation in Migraine and Fibromyalgia* (2016), *Mitochondrial Nutrition and Endoplasmic Reticulum Stress in Primary Care, 2<sup>nd</sup> Edition* (2014), *Antiviral Strategies and Immune Nutrition* (2014), *Mastering mTOR* (2015), *Autism, Dysbiosis, and the Gut-Brain Axis* (2017) and the 1200-page *Inflammation Mastery 4<sup>th</sup> Edition* (2016) also published as a two-volume set titled *Textbook of Clinical Nutrition and Functional Medicine*. "DrV" has also written approximately 100 letters and articles for professional magazines and medical journals such as *TheLancet.com*, *British Medical Journal* (BMJ), *Annals of Pharmacotherapy*, *Nutritional Perspectives*, *Journal of Manipulative and Physiological Therapeutics* (JMPT), *Journal of the American Medical Association* (JAMA), *Original Internist*, *Integrative Medicine*, *Holistic Primary Care*, *Alternative Therapies in Health and Medicine*, *Journal of the American Osteopathic Association* (JAOA), *Dynamic Chiropractic*, *Journal of Clinical Endocrinology and Metabolism*, *Current Asthma and Allergy Reports*, *Complementary Therapies in Clinical Practice*, *Nature Reviews Rheumatology*, *Annals of the New York Academy of Sciences*, and *Arthritis & Rheumatism*, the Official Journal of the American College of Rheumatology. Dr Vasquez lectures internationally to healthcare professionals and has a consulting practice and service for doctors and patients. DrV has served as a consultant, product designer, writer and lecturer for Biotics Research Corporation since 2004. Having served on the Review Boards for *Journal of Pain Research*, *Autoimmune Diseases*, *PLOS One*, *Alternative Therapies in Health and Medicine*, *Neuropeptides*, *International Journal of Clinical Medicine*, *Journal of Inflammation Research*, *BMC Complementary and Alternative Medicine* (all PubMed/Medline indexed), *Integrated Blood Pressure Control*, *Journal of Biological Physics and Chemistry*, and *Journal of Naturopathic Medicine* and as the founding Editor of *Naturopathy Digest*, Dr Vasquez is currently the [Editor \(2013-\) of International Journal of Human Nutrition and Functional Medicine](#) and [Editor \(2018-present\) of Journal of Orthomolecular Medicine](#), published for more than 50 consecutive years by the International Society for Orthomolecular Medicine.



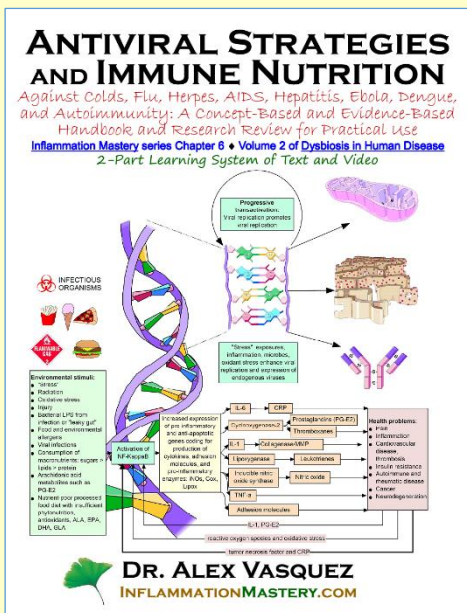
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"The purpose of life is to live it, to taste experience to the utmost, to reach out eagerly and without fear for newer and richer experience."

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*Additional articles and book excerpts have been amended to the previous publication in order to provide context and orientation to the author's main works.*

### **BOOK EXCERPTS, CHAPTERS:**

- <https://www.amazon.com/Dr-Alex-Vasquez/e/B00AT5764Y>
- <https://www.ichnfm.org/im4>
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**PDF articles:** Full-text archives of the author's articles are available per the following:

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**VIDEOS:** Access to public videos is available per the following:

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- See also: <https://www.ichnfm.org/public>
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**SOCIAL MEDIA UPDATES:** Note that updates are made on a regular basis to the following social media pages, with some overlap but also some topic-specific specialization, which is self-explanatory by the titles of these pages:

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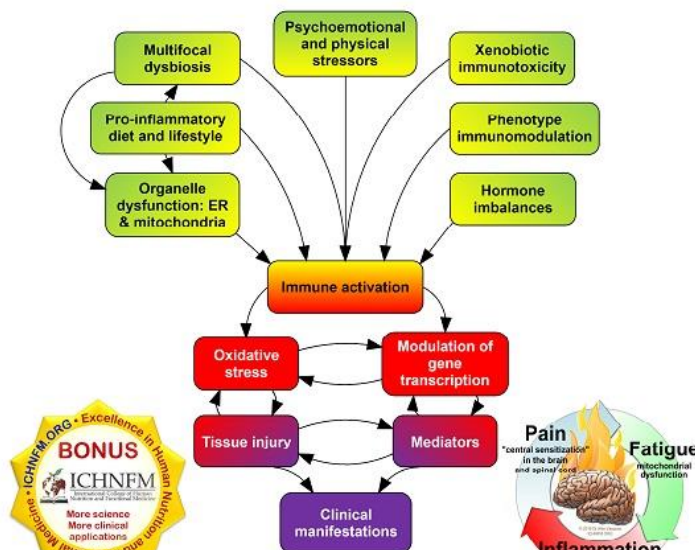
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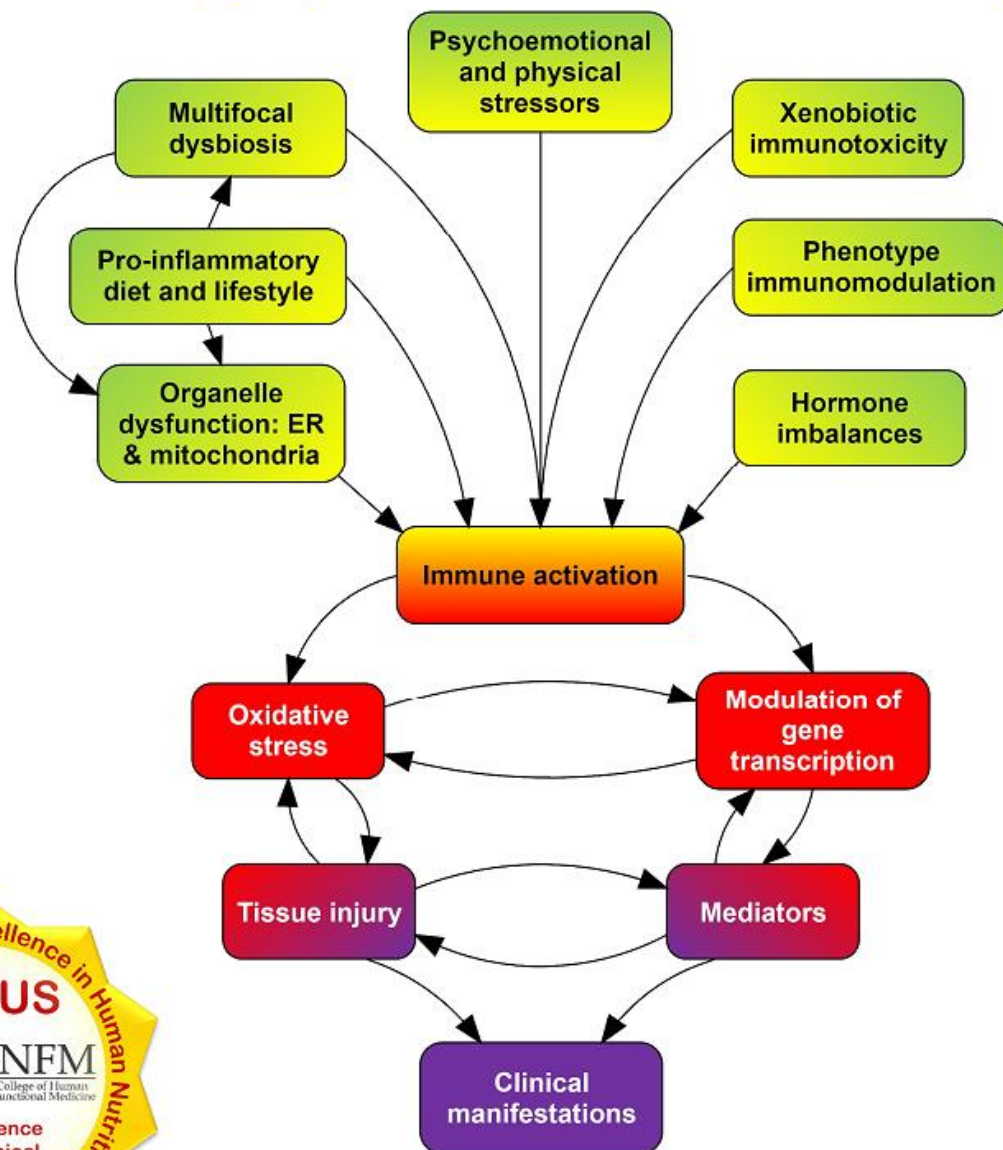
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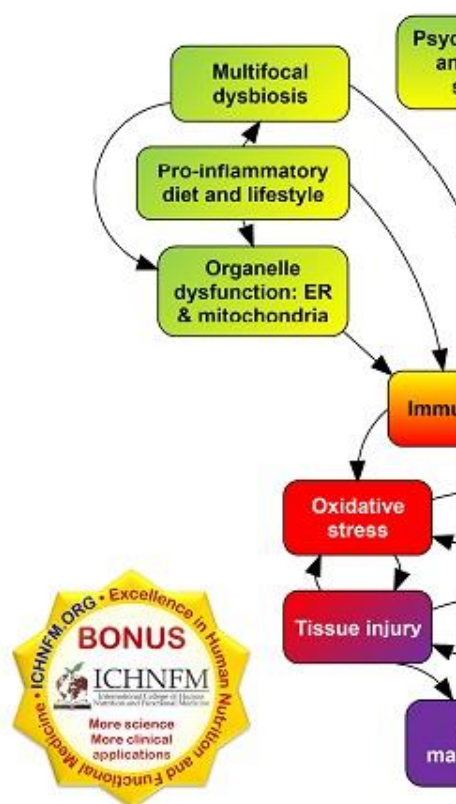
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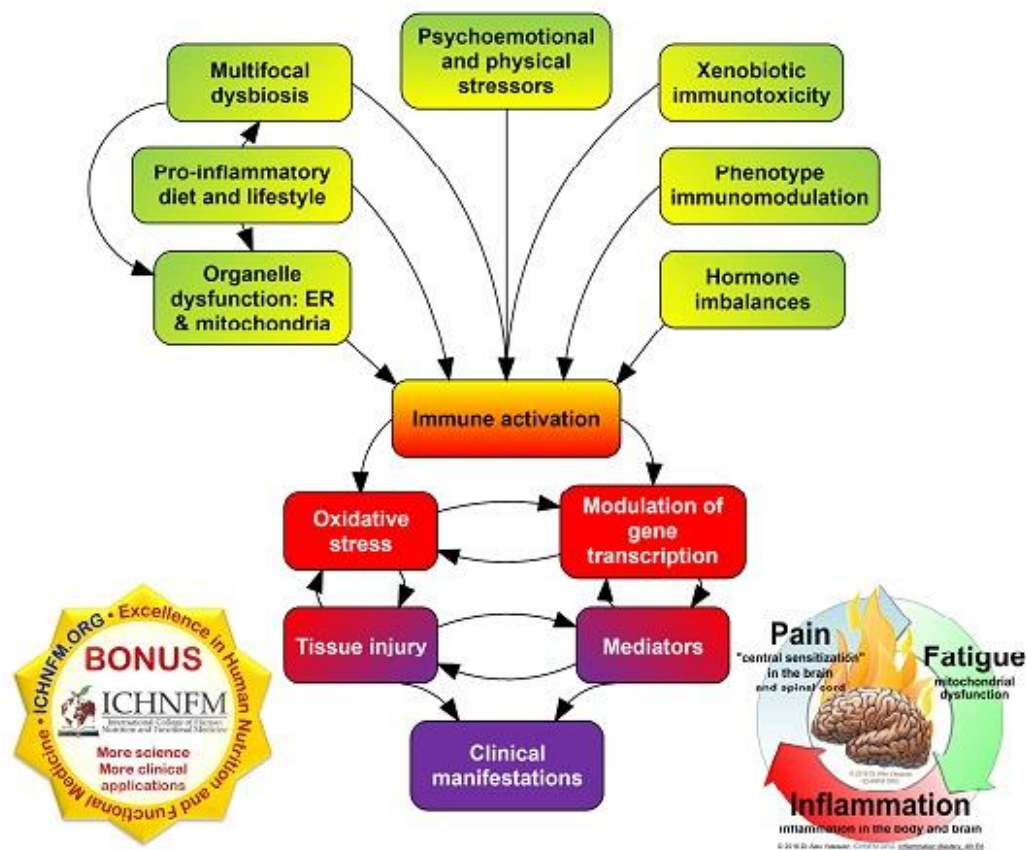
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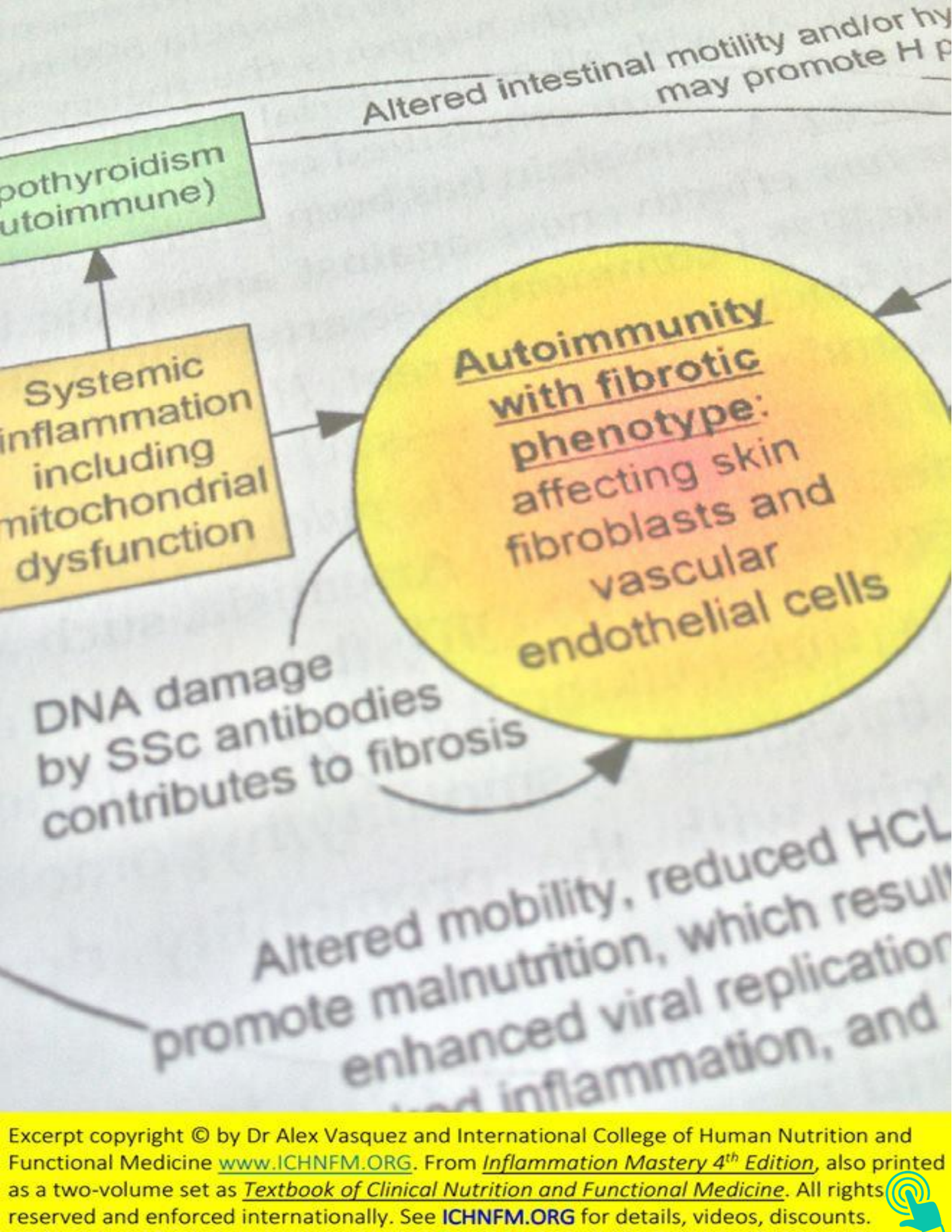
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- Doctor of Naturopathic Medicine, graduate of Bastyr University (1999)
- Doctor of Chiropractic, graduate of University of Western States (1996)
- Fellow of the American College of Nutrition (2013-present)
- Former Overseas Fellow of the Royal Society of Medicine
- Editor, *International Journal of Human Nutrition and Functional Medicine* [IntJHumNutrFunctMed.org](http://IntJHumNutrFunctMed.org). Former Editor, *Naturopathy Digest*; Former/Recent Reviewer for *Journal of Naturopathic Medicine*, *Alternative Therapies in Health and Medicine*, *Autoimmune Diseases*, *International Journal of Clinical Medicine*, and *PLOS One*
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- Consultant Researcher and Lecturer (2004-present), Biotics Research Corporation
- Teaching and Academics:
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  - Founder and Former Program Director of the world's first accredited university-affiliated graduate-level program in Functional Medicine
  - Adjunct Professor, Integrative and Functional Nutrition in Immune Health, Doctor of Clinical Nutrition program at Maryland University of Integrative Health
  - Former Adjunct Professor (2009-2013) of Laboratory Medicine, Master of Science in Advanced Clinical Practice
  - Former Faculty (2004-2005, 2010-2013) and Forum Consultant (2003-2007), The Institute for Functional Medicine
  - Former Adjunct Professor (2011-2013) of Pharmacology, Evidence-Based Nutrition, Immune and Inflammatory Imbalances, Principles of Functional Medicine, Psychology of Wellness
  - Former Adjunct Professor of Orthopedics (2000), Radiographic Interpretation (2000), and Rheumatology (2001), Naturopathic Medicine Program, Bastyr University
- Author of more than 100 articles and letters published in *JAMA—Journal of the American Medical Association*, *BMJ—British Medical Journal*, [TheLancet.com](http://TheLancet.com), *JAOA—Journal of the American Osteopathic Association*, *Annals of Pharmacotherapy*, *Journal of Clinical Endocrinology and Metabolism*, *Alternative Therapies in Health and Medicine*, *Nutritional Perspectives*, *Journal of Manipulative and Physiological Therapeutics*, *Integrative Medicine*, *Current Allergy and Asthma Reports*, *Nutritional Wellness*, *Evidence-based Complementary and Alternative Medicine*, and *Arthritis & Rheumatism*: Official Journal of the American College of Rheumatology

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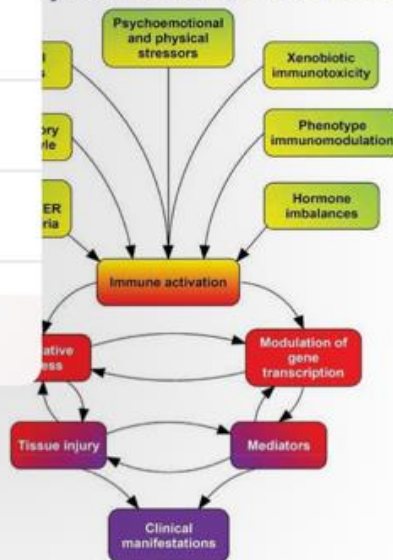


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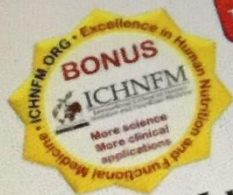
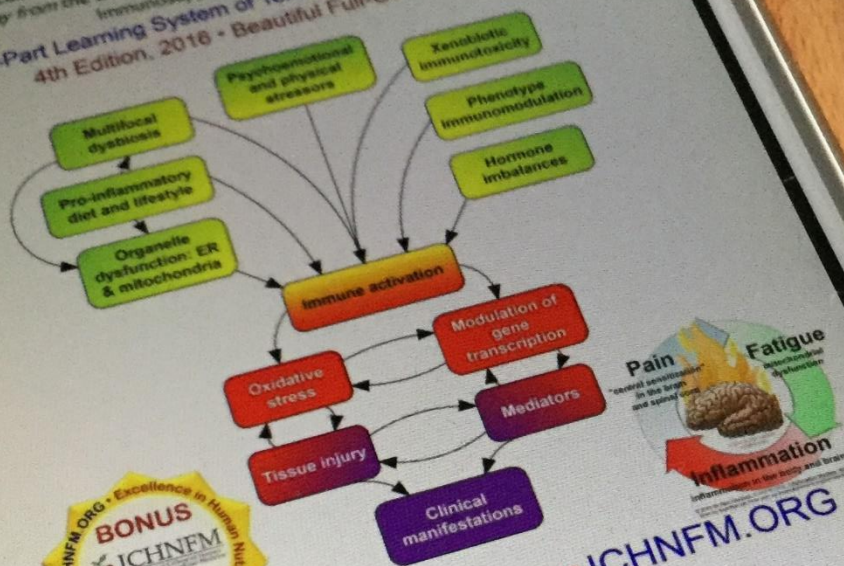
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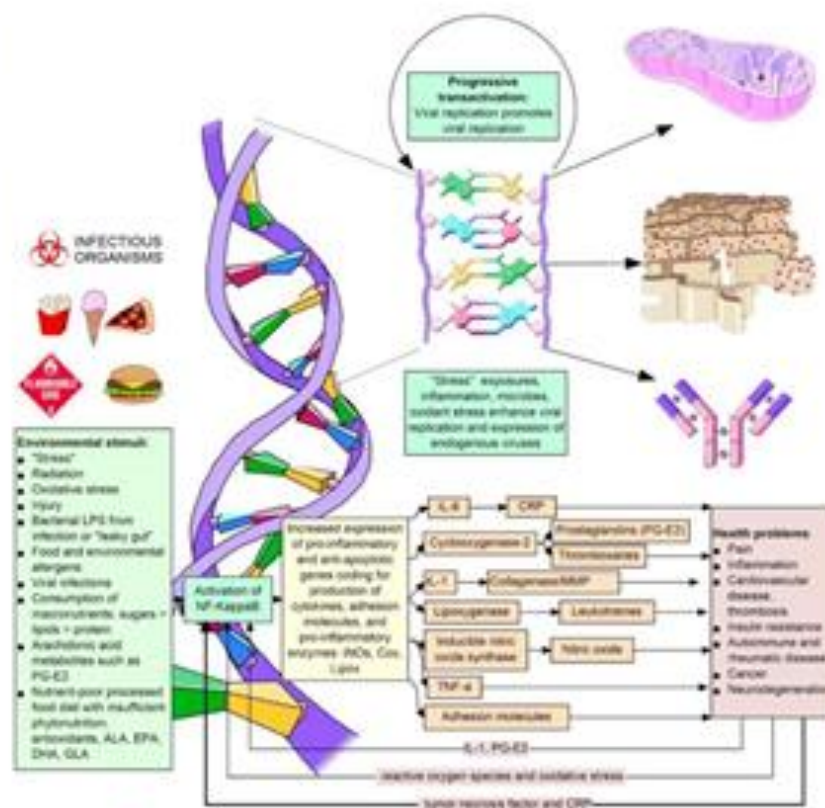


# ANTIVIRAL NUTRITION

Against Colds, Flu, Herpes, AIDS, Hepatitis, Ebola, Dengue,  
and Autoimmunity: A Concept-Based and Evidence-Based  
Handbook and Research Review for Practical use

Inflammation Mastery series Chapter 6 • Volume 2 of Dysbiosis in Human Disease

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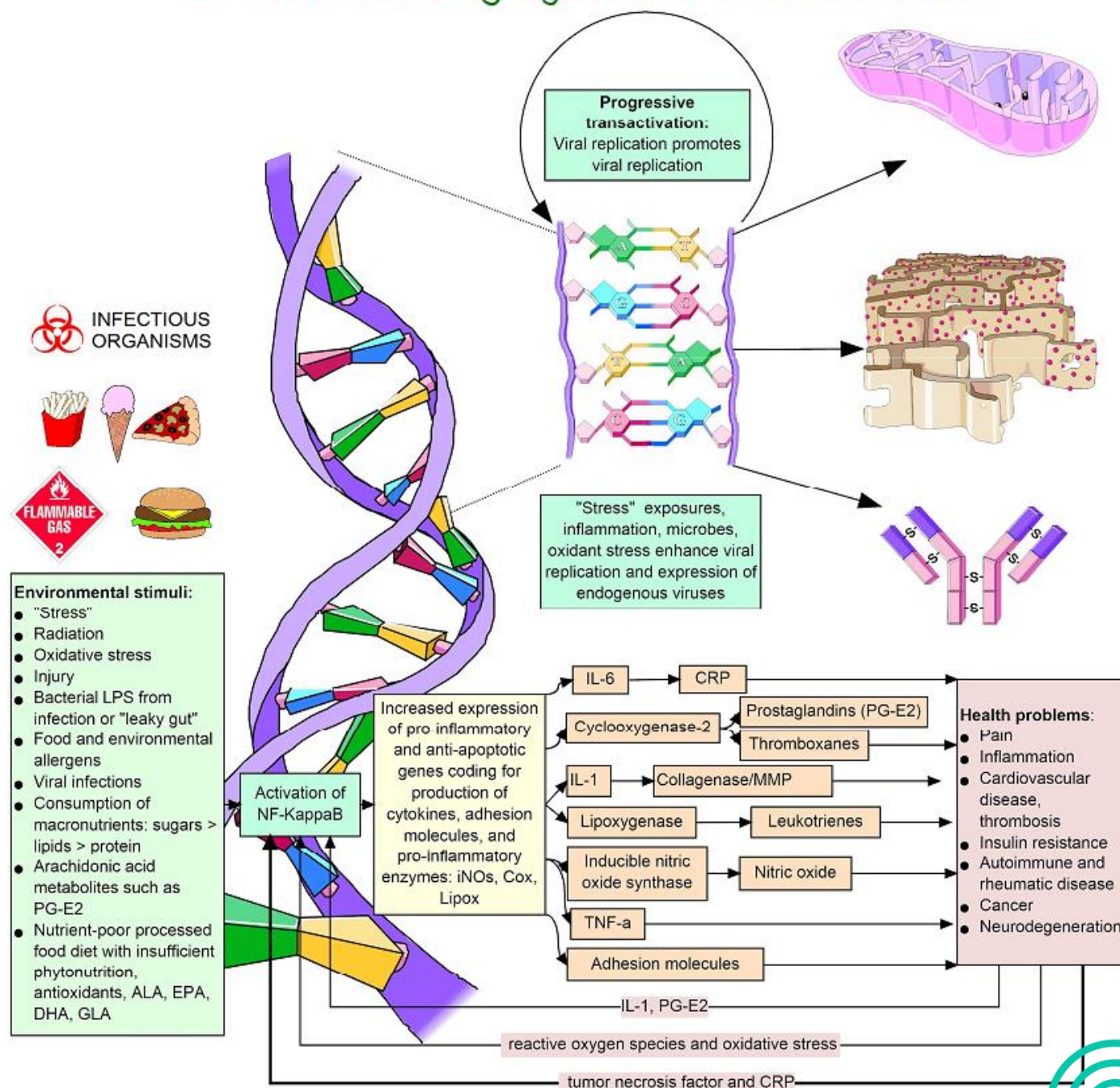


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## THE PATH AHEAD

# Concerns About The Integrity of The Scientific Research Process—Focus On Recent Negative Publications Regarding Nutrition, Multivitamins, Fish Oil And Cardiovascular Disease



Alex Vasquez, DC, ND, DO; Joseph Pizzorno, ND, Editor in Chief

### Abstract

The next step in reestablishing credibility seems to us honesty and recognizing we all share a common goal of the health and wellness of the human community and the planet. Everyone agrees that the current healthcare system, despite its many incredible successes, is also

showing its limitations and is no longer sustainable. We believe the solution starts with us the researchers and editors. A good first step might be formally recognizing the errors and showing how we can and *intend* to get better.

Evidence-based medicine—by definition—requires objective, reliable and accurate research and reviews from which to make the best decisions in patient care and public policy. The causes of inaccurate information, ranging from presumably innocent mistakes all the way to apparently intentional fraud, affect all scientific and biomedical disciplines.<sup>1</sup> While these accidental and intentional errors can derail our understanding of diseases and impact tens of thousands of affected patients, such inaccuracies in the

field of nutrition is worldwide.<sup>2</sup> While a specific disease human population nutrition research particularly concerning nutrition research healthcare professions nutrition. Clinical vast majority of medical training programs are obviously in gastroenterology<sup>7</sup> training in clinical proclaims itself as including the entire and serious problem arises when unskilled and invalid research is published by authors (including nonphysician journalists<sup>11</sup>) in major journals which mischaracterizes the validity of nutrition interventions (e.g., essentially always concluding that nutritional interventions are inefficacious

or potentially hazardous) and then such research is used politically and in the media to disparage, restrict and regulate practitioners and nutrition supplement industry<sup>12</sup> to the detriment of human health.

Several factors disrupting the integrity of nutrition research are commonly found in studies published by “elite” universities in “top-tier” journals, which are then republished and distributed as “headlining news” in newspapers, magazines, and television via which they

ent policy and ons of people. examples of ulations, lists sed solutions. pendent upon stigative and ts of clinical rovements are ignorance in

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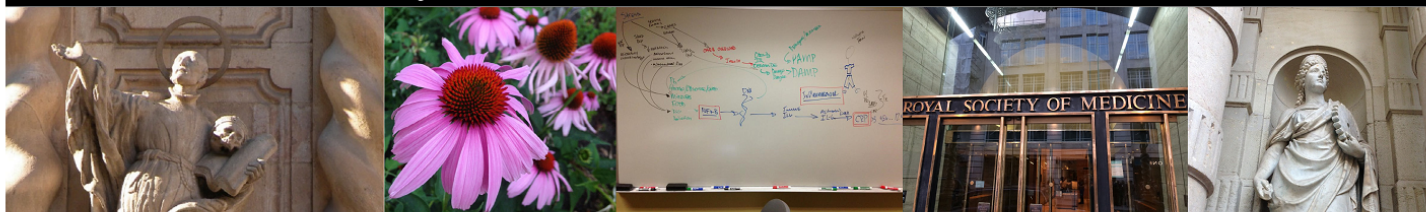
review recent publications

related to nutrition. Perceived shortcomings are documented with both citations here and links to more detailed and authoritative reviews and video presentations. In some instances, speculations regarding the cause and consequences of identified errors are provided.

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**Perspective, Opinion, Editorial • Education • Academia • Wage Theft • Corruption**

## Ending the Exploitation of Experts Begins with Educating Them about Employment, Curbing Enthusiasm to Preserve Enthusiasm

Alex Vasquez DC ND DO FACN

### **My own paths toward and perspectives on Education**

My passion for teaching and education began "formally" when I was about 9 years of age, sitting on the floor of Ms Hall's 4th grade classroom; from that vantage as I sat somewhat near my best friend Robert, I saw the destructive power of bad teaching and discrimination, and from that day I started analyzing teachers, teaching methods, educational and social structures, and ways to convey knowledge and inspire students. Additionally inspired by my teacher of English and Literature in my final years at Riverside Military Academy, I began college with the plan of eventually teaching "something—most likely English and Literature" because I appreciated and valued teaching, proper grammatical structure, and nuanced use of language; I later developed and interconnected my interests in teaching, writing, language, physiology, medicine, and nutrition to complete three doctorate degrees in the health sciences and publish more than 120 articles, letters, rebuttals, monographs, and books on a wide range of topics, with those publications ranging from dense 1-page Letters and Responses to published research up to single-author textbooks of more than 1,180 pages. I have taught at various colleges and universities at the undergraduate, graduate/Masters, and Doctorate levels and have lectured internationally for post-graduate medical education. I see teaching not simply as effective transfer of information, but also as a means to interconnect and inspire generations of people, notably in a reciprocal manner. At its best, teaching and learning are activities that reflect and support love for life itself.

### **Oh, the stories I could tell you**

**Academia, "nonprofits", and "Education"**  
I would be happiest to tell you that Administrators are vanguards of support for fellow Professors, and their commitment is to truth and reality, setting ablaze the passions of those they teach, lead, and supervise in flower fields like a professor.

singing a rhythmical rendition of *"The Hills are Alive...with the...Passions of Education and Intellectual Integrity."* But a Pollyanna representation of my observations would be a misrepresentation of the realities I have seen and experienced. I have seen university presidents lie to their students, expel experts for the sake of maintaining their own petty powers and preferences, and I have seen entire academic administrations lie (misrepresent) in unison to their boards of trustees and their accreditation commissions. I have seen stand-alone academic programs make millions of dollars in profit, while its administrators refuse to pay a living wage to doctorate-level infrastructure and while allowing themselves 6-week European vacations during major institutional initiatives. I have seen administrators lie to accreditors and allow students to cheat their way through graduate programs (by bypassing faulty examination software in online programs), and I have seen accreditors turn a blind eye to obvious university corruption, made worse when the accreditation commission is infiltrated by university administrators—thus did "accreditation" come to lose its value. I have seen "nonprofit educational institutions" underpay their faculty, plagiarize from their faculty, resell the work of other professionals without notice or compensation, and then pay their upper administrators in excess of US\$160,000 for less than part-time work—thus did "nonprofit organization" come to lose its value. I have seen schools blackmail excellent professors and leaders in education with gag orders, legal threats, and financial bribery (range US\$25,000 up to \$250,000) to buy their silence about institutional corruption. I have corresponded

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**Tutorial & Editorial • Scientific Writing • Journal Editing • Professional Experience • Video**

## How to Improve Scientific Writing and Journal Editing: A Short Narrative-Video Guide, Part I

Alex Vasquez DO ND DC FACN

### Introduction

“Hello everyone, Dr. Alex Vasquez here, and today I’m going to start a different series of videos, and this time the conversation is going to focus around journal editing and writing. I’m calling this “*Editing and Writing Tips #1*”, and I’m going to start with a few of my own perspectives and experiences, then I’ll talk about a few basics, and a few influential ideas. In later videos, I will talk about some more specific examples, and then perhaps at some point we will have a review and conclusion.

### Early Experiences and Influences

Very briefly I’ll talk about some of my own experiences, and the reason for my doing this is to share with you and segue into some examples that I think are very important. Basic though they might be, a lot of our success in various fields of life actually comes from respecting and appreciating and utilizing those basic concepts.

Let us start here with some of my initial experiences. I started becoming aware of language and the fact that I had some facility for it, first, when I was about 12 years old. I remember writing a poem in class, and again this is somewhat peripheral to the main topic of

today, but I do remember that early on, in that kind of my entryway, I think, in that our assignment was to write a poem, and I remember writing this poem in class, on and on, and—compared with some of the other students—I just realized that writing for me was not a struggle.

Then again, when I was in a military school, I remember in our

being asked questions, and I remember just how the answers to understanding grammar and language just came very easy to me, and I do remember feeling like I had some facility for the structure of language.

Another influential experience I had when I was about 11 years old, totally unrelated to language, is that we took, in the late 1970s or early ‘80s, a Computer Science class in our elementary school, and I remember that class also specifically having some influence on me, in terms of structuring logic. We basically had to write our own computer programs and this was back when computers were very new. Obviously today everybody has computers; back in the late ‘70s, computers were a novelty. I consider myself lucky to have taken this Computer Science class; it was obviously extremely basic, but we did have to write some code and what I remember from that is just the sequential manner in which communication has to take place in order to be successful. In this case, we were writing programs for computers and doing basic

“Writing comes from the entirety of one’s experience.”  
Dr Alex Vasquez

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## Editorial

### Misrepresentations of Clinical Nutrition in Mainstream Medical Media: Growing Importance of Legitimate Expertise in Independent Peer-Reviewed Publications - Part 1

#### 2018 As a Milestone in the Post-Truth Era

Among the various topics that have either interested or fascinated me throughout my youth and well into my adult years, Nutrition has certainly reigned supreme. My personal routine has been to read as much as reasonably and practically possible on the topic, while not doing so to the exclusion of other topics in biomedicine, psychosociology and philosophy. Thus, with roughly 30 years of experience in reading books and primary research in the field of Nutrition, I could not help but notice the radical departures that occurred in 2018 from the previous norms to which I had grown accustomed.

Of course, 2018 was not the first year during which “bad research” was published in mainstream medical journals and then replicated throughout the echo chamber of mass media; one could observe this periodically occurring throughout the past 50 years, starting not at least with the demonization of dietary cholesterol and the glorification of processed foods, especially refined grains and so-called vegetable oils. But in 2018 what many of us observed was not simply poorly performed research but, in some instances, radical departures from any attempt to provide descriptions that could be considered “reasonable” by previous standard.<sup>1</sup> Especially related to the topic of nutrition, mainstream medical journals and the media which parrots their conclusions have begun to make overt misrepresentations of Nutrition with regard for science, logic, biomedical history and

One has to be aware of a few key ironies that characterize mainstream medical discussions of nutrition: that 1) medical physicians receive essentially no training in clinical nutrition in their graduate school education and in their post-graduate residency training<sup>2</sup>, 2) medical physicians and organizations publish “research” and commentaries (both of which commonly conclude that nutritional interventions are inefficacious or unsafe) despite their lack of formal education on the topic, and

stream medical voices consistently call for “regulating the nutrition supplement industry” despite their lack of training on the topic and because of negative conclusions based on their own poorly conducted research and self-serving conclusions. As such, not only are the map-makers blind, but they mislead their blind followers, and then both groups promote themselves as expert cartographers and guides when advising the public on an area that none of them have studied or understood. We should have no surprise whatsoever when the “medical community” publishes poorly conducted and self-serving “research” on the topic of nutrition, to reach their desired conclusion that nutrition is unsafe and inefficacious, and that the profitable market needs to be managed of course by the selfsame “medical community” that is never received a decent 15 minutes on the topic of therapeutic nutrition. Pervasive and persistent ignorance on the topic of nutrition among medical physicians must be understood as intentional and strategic, because otherwise this problem would have been solved 30 years ago when it was first discussed during what was called at the time the “golden age of nutrition.”<sup>3</sup> The easiest way to manipulate people and to keep them in a perpetual state of confusion, ineffectiveness, and dependency is to keep them ignorant on important topics; our educational sys-

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# Mitochondrial Medicine Arrives to Prime Time in Clinical Care: Nutritional Biochemistry and Mitochondrial Hyperpermeability (“Leaky Mitochondria”) Meet Disease Pathogenesis and Clinical Interventions

Alex Vasquez, DC, ND, DO, FACN

Alex Vasquez, DC, ND, DO, FACN, is director of programs at the International College of Human Nutrition and Functional Medicine in Barcelona, Spain and online at ICHNFM.org. (*Altern Ther Health Med.* 2014;20(suppl 1):26-30.)

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E-mail address: [avasquez@ichnfm.org](mailto:avasquez@ichnfm.org)

## MITOCHONDRIAL MEDICINE ARRIVES TO GENERAL PRACTICE AND ROUTINE PATIENT CARE

Mitochondrial disorders were once relegated to “orphan” status as topics for small paragraphs in pathology textbooks and the hospital-based practices of subspecialists. With the increasing appreciation of the high frequency and ease of treatment of mitochondrial dysfunction, this common cause and consequence of many conditions seen in both primary and specialty care deserves the attention of all practicing clinicians.

We all know that mitochondria are the intracellular organelles responsible for the production of the currency of cellular energy in the form of the molecule adenosine triphosphate (ATP). In this time, contemporary clinicians

considered on a routine basis in clinical practice. *Mitochondrial medicine* is no longer an orphan topic, nor is it a superfluous consideration relegated to boutique practices. Mitochondrial medicine is ready for prime time—now—both in the general practice of primary care as well as in specialty and subspecialty medicine. What I describe here as the “new” mitochondrial medicine is the application of assessments and treatments to routine clinical practice primarily for the treatment of secondary/acquired forms of mitochondrial impairment that contribute to common conditions such as fatigue, depression, fibromyalgia, diabetes mellitus, hypertension, neuropsychiatric and neurodegenerative conditions, and other inflammatory and dysmetabolic conditions such as allergy and autoimmunity.

## BEYOND BIOCHEMISTRY

Structure and function are of course intimately related and must be appreciated before clinical implications can be understood and interventions thereafter applied with practical precision. The 4 main structures and spaces of the mitochondria are (1) intramitochondrial matrix—the innermost/interior aspect of the mitochondria containing various proteins, enzymes of the Krebs cycle, and mitochondrial DNA; (2) inner membrane—the largely impermeable lipid-rich compartmentalized membrane that separates the matrix from the intermembrane space; (3) intermembrane space—the space between the inner and outer membranes; and (4) outer membrane—the outermost layer of the mitochondria, which is highly permeable and contains many enzymes and proteins. The inner membrane is very lipid-rich and with active and passive transport systems for select molecules that need to enter and exit the mitochondria. Clinicians need to appreciate that mitochondrial membrane integrity is of the highest importance; just as we have come to appreciate the

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stated during the recent International Conference on Human Nutrition and Functional Medicine<sup>1</sup> in Portland, Oregon, in September 2013, we have collectively arrived at a time when mitochondrial therapeutics and the contribution of mitochondrial dysfunction to clinical diseases must be



## Editorial

### Orthomolecular Medicine, Catalytic Creativity, and the Psychosocial Ecosystem

#### Transitioning From One Year to the Next

Various cultures since time immemorial have marked and celebrated the winter solstice with celebrations, meals with friends and family, and time away from work; transitioning from one calendar year to the next has given people pause and a moment to reflect on the events that happened in the past year and what might be anticipated in the next. Reflection with anticipation along with the realization that the future is somewhat malleable inclines people to imagine how the future might be shaped by the exertion of some modicum of creativity and effort. Any realistic conception of how we might improve the near future must segue from our recent past; we must have an awareness of what is going on around us as we look toward the future to visualize ourselves living within it and also acting upon it. What is going on in the world and how might I act upon that trend and flow in order to improve both its transition and its destination? What should each of us do on a personal level to (in the words of Mahatma Gandhi) be, embody, and materialize the change(s) that we want to see in the world?

#### Salutation and Introduction From the Journal's New Editor

Over the past few years I have reflected on several occasions how much I enjoy editing, and so I was correspondingly surprised and pleased when I was offered the opportunity to be the next Editor for the *Journal of Orthomolecular Medicine*. I began studying nutrition and orthomolecular concepts in my teen years and moved to a health school in the early 1990s. My "nutrition" book that I read as a teenager was *Your Nerves* (1975) by me. This was followed immediately by the lectures of Jonathan V Wright, MD, of whom would later be my mentor at the University. By the mid-1990s, I had read the book by Jeffrey Bland PhD had introduced me to integrative medicine, which I studied for personal and professional reasons. By the late 1990s, I had contained several hundred articles on nutrition and health with another large section on philosophy and psychology. In 1994, I joined the Review Staff of the *Journal*

of *Naturopathic Medicine*, and I started publishing nutrition articles, perhaps most of which might be seen as practice in preparation of an important letter published in 1996 by the American College of Rheumatology in their journal *Arthritis and Rheumatism*. Since those early years and during the course of three doctorate degrees and teaching thousands of students/attendees internationally, I have reviewed for<sup>4</sup> and published in<sup>5</sup> a wide range of refereed journals in addition to publishing commissioned books, chapters, and independent publications and videos. Being an author and reviewer for many different publications—along with my experiences teaching internationally, treating patients in various settings, designing and directing academic programs, and producing educational videos—has given me a wide range of experiences and insights that I hope to bring to the benefit of the *Journal of Orthomolecular Medicine*.

#### We Must Work Together if We Are Going to Succeed

I have to start this conversation with a few hopes, assumptions, and beliefs, namely that you (the reader) and I (the author and new Editor) have a few things in common. On a professional level, by virtue of the fact that you are reading this essay, I will assume that you are interested or actively engaged in healthcare, medicine, nutrition, research and/or public health. I might also imagine that some smaller percentage of our new and established readers are perhaps less inclined toward the mechanisms and more drawn to the *Journal of Orthomolecular Medicine* for its potential humanistic applications; we can reasonably assume that our readers (and competent healthcare providers) are basic to submit a counterargument for all of my assertions, they are and more to the point, my assertions are regardless of personal position—we share some common ground including the following:

and deliver the best health solution. Efficiency of time or money is not the top priority when we are seeking solutions

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**Mini-Review • Continuing Education • Microbiome • Dysbiosis • Infectious Disease**

## Translating Microbiome (Microbiota) and Dysbiosis Research into Clinical Practice: The 20-Year Development of a Structured Approach that Gives Actionable Form to Intellectual Concepts

Alex Vasquez DC ND DO FACN

### Experience and Perspectives

Many years ago when I published my first books<sup>1,2</sup> and articles<sup>3</sup> detailing "dysbiosis", the word could hardly be found in the Medline index, the topic was controversial at best and ethereal at worst, the term "microbiome" (first published in French in 1949 and in English in 1988) was virtually unknown, and I spent most of the time and space in my lectures and articles substantiating and defending the condition's existence. These days, everyone is talking about microbiome, dysbiosis, "leaky gut" (thanks largely to Leo Galland MD), and my 1996 article on "Silent Infections and Gastrointestinal Dysbiosis" has been downloaded at least 4,000 times and is one of the top 1% most popular articles on dysbiosis. In 2010, I found "dysbiosis" more than 1,200 times. The concept has become popular, but to do with it in *International Journal of Human Nutrition and Functional Medicine*, the complete microbiota project, the number of scientific papers linking the microbes that live in our gut to diseases ranging from diabetes and colitis to anxiety and depression has grown exponentially. Yet, these tantalizing connections have yielded few benefits from a therapeutics standpoint.<sup>4</sup> To the extent that this information is being integrated into clinical practice at all, the current level of


### "Dysbiosis" is an important concept, but doctors cannot treat concepts.

We have to define, describe, and deconstruct the microbes, molecules, and mechanisms into their components, then rebuild a conceptual scaffold and intellectual structure that becomes a useful tool that, with study and experience, can be used in a clinical setting to effective benefit.

practical application is a bit indelicate and cumbersome beyond the most commonly repeated advice of advocating probiotics, avoiding antibiotics, perhaps delving into using botanical antimicrobials and laboratory testing. Breath testing (an insensitive test for only one subtype of gastrointestinal popular to the clinical clues. Laboratory testing particular used methods to extract they only to suffering and


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International College of Human Nutrition and Functional Medicine

ICHNFM has many videos on the topics of dysbiosis, persistent infections, and dysbiotic clinical conditions such as fibromyalgia at [www.Vimeo.com/ICHNFM](http://www.Vimeo.com/ICHNFM)



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# CME

## CONTINUING MEDICAL EDUCATION

### THE CLINICAL IMPORTANCE OF VITAMIN D (CHOLECALCIFEROL): A PARADIGM SHIFT WITH IMPLICATIONS FOR ALL HEALTHCARE PROVIDERS

Alex Vasquez, DC, ND, Gilbert Manso, MD, John Cannell, MD

**Alex Vasquez, DC, ND** is a licensed naturopathic physician in Washington and Oregon, and licensed chiropractic doctor in Texas, where he maintains a private practice and is a member of the Research Team at Biotics Research Corporation. He is a former Adjunct Professor of Orthopedics and Rheumatology for the Naturopathic Medicine Program at Bastyr University. **Gilbert Manso, MD**, is a medical doctor practicing integrative medicine in Houston, Texas. In prac-

tice for more than 35 years, he is Board Certified in Family Practice and is Associate Professor of Family Medicine at University of Texas Medical School in Houston. **John Cannell, MD**, is a medical physician practicing in Atascadero, California, and is president of the Vitamin D Council (Cholecalciferol-Council.com), a non-profit, tax-exempt organization working to promote awareness of the manifold adverse effects of vitamin D deficiency.

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#### OBJECTIVES

Upon completion of this article, participants should be able to do the following:

1. Appreciate and identify the manifold clinical presentations and consequences of vitamin D deficiency.
2. Identify patient groups at risk for vitamin D deficiency and hypersensitivity.
3. Know how to implement proper doses and with appropriate monitoring.

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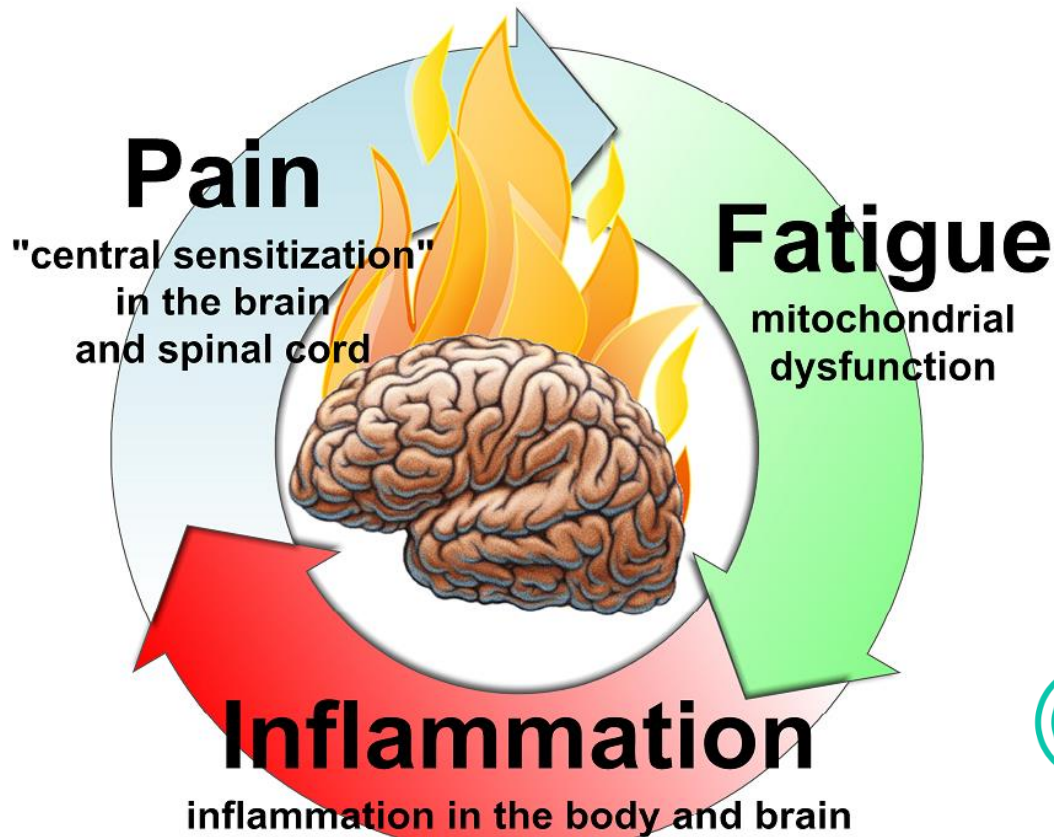
While we are all familiar with the important role of vitamin D in calcium absorption and bone metabolism, many doctors and patients are not aware of the recent research on vitamin D and the widening range of therapeutic applications available for cholecalciferol, which can be classified as both a vitamin and a pro-hormone. Additionally, we also now realize that the Food and Nutrition Board's previously defined Upper Limit (UL) for safe intake at 2,000 IU/day was set far too low and that the physiologic requirement for vitamin D in adults may be as high as 5,000 IU/day, which is less than half of the >10,000 IU that can be produced endogenously with full-body sun exposure.<sup>1,2</sup> With the discovery of vitamin D receptors in tis-

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# BRAIN INFLAMMATION IN CHRONIC PAIN, MIGRAINE AND FIBROMYALGIA

THE PARADIGM-SHIFTING GUIDE FOR DOCTORS AND  
PATIENTS DEALING WITH CHRONIC PAIN



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- INFO: <https://www.inflammationmastery.com/fibromyalgia>
- INFO: <https://www.inflammationmastery.com/migraine>
- From *Inflammation Mastery, chapter 5*, the two sections specific to migraine and fibromyalgia were also published separately as *Pain Revolution* (full-color printing; <https://www.amazon.com/dp/B01AR3NX0S>) and *Brain Inflammation in Chronic Pain, Migraine and Fibromyalgia: The Paradigm-Shifting Guide for Doctors and Patients Dealing with Chronic Pain* (black-and-white printing; <https://www.amazon.com/dp/B01EQ9KMH6/>); both versions are also available in digital ebook format for phone, computer, iPad via the free Kindle software



## Biological plausibility of the gut–brain axis in autism

Alex Vasquez 

Organic abnormalities with neuroinflammation, purine metabolism, neurotransmitter abnormalities, are noted in autism, and many of these abnormalities are metabolites, and heightened serum levels

**Keywords:** gut–brain axis; autism; me

In their recent review, Sherwin and colleagues, among many other issues, the review of the gut microbiome–brain axis with a section subtitled “Microbiota-based interventions for the treatment of autism: hype or reality?” *et al.*<sup>1</sup> largely discuss preclinical studies and the 2017 open-label study by Karpman *et al.*<sup>2</sup> used a sequence of oral vancomycin, rifaximin, and polyethylene glycol laxative, and a placebo group. Human fecal microbiota transplantation was not used. The clinical benefit in subjects with au-

Readers will likely benefit from additional relevant clinical studies, including the publication by Sandler *et al.*<sup>3</sup> showing the effect of autistic manifestations following oral vancomycin, as well as the case report showing positive impact of various antibiotics (metronidazole, ketoconazole, ampicillin) in patients with autism.<sup>4,5</sup> These studies have been shown to have gut dysbiosis as well as *Clostridia* species,<sup>6</sup> the most common group of bacteria noted for their production of neurotoxic substances. International studies have consistently demonstrated that patients with autism have heightened production of 3-(3-hydroxypropionyl)-phenylalanine (HPHPA), a phenylalanine metabolite of *Clostridia* in the gastrointestinal tract.<sup>7,8</sup> HPHPA is reported to be involved with the conversion of dopamine to

# Autism, Dysbiosis, and the Gut-Brain Axis



# An Excerpt from "Deciphering the Gut-Brain Axis in Clinical Practice"

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