Chiropractic and Naturopathic
Mastery of Common Clinical Disorders

Concepts, Perspectives, Algorithms, and Protocols

The art of co-creating wellness while effectively managing acute and chronic health disorders

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Dedications: I dedicate this book to the following people in appreciation for their works, their direct and indirect support of this work, and for their contributions to the advancement of authentic healthcare.

- **To the students and practitioners of chiropractic and naturopathic medicine**, those who continue to learn so that they can provide the best possible care to their patients
- **To the researchers** whose works are cited in this text
- **To Drs Alan Gaby, Jeffrey Bland, Ronald LeFebvre, Robert Richard, and Gilbert Manso,** my most memorable and influential professors and mentors
- **To Dr Bruce Ames**[1] **and the late Dr Roger Williams**[2], for helping us to view our individuality as biochemically unique
- **To Dr Chester Wilk**[3,4] **and important others** for documenting and resisting the organized oppression of natural, non-pharmaceutical, non-surgical healthcare[5,6,7]
- **To Jorge Strunz and Ardeshir Farah,** for artistic inspiration

Acknowledgments for Peer and Editorial Review: Acknowledgement here does not imply that the reviewer fully agrees with or endorses the material in this text but rather that they were willing to review specific sections of the book for clinical applicability and clarity and to make suggestions to their own level of satisfaction. Credit for improvements and refinements to this text are due in part to these reviewers; responsibility for oversights remains that of the author.

- 2009 Edition of *Chiropractic and Naturopathic Mastery of Common Clinical Disorders*: Julia Marie Liebich (NUHS DC4), Heather Kahn MD, Robert Richard DO, James Leiber DO, David Candelario (UNT-HSC TCOM DO4)
- 2007 Edition of *Integrative Orthopedics*: Barry Morgan MD, Dennis Harris DC, Richard Brown DC (DACBI candidate), Ron Mariotti ND, Patrick Makarewich MBA, Reena Singh (SCNM ND4), Zachary Watkins DC, Charles Novak MS DC, Marnie Loomis ND, James Bogash DC, Sara Croteau DC, Kris Young DC, Joshua Levitt ND, Jack Powell III MD, Chad Kessler MD, Amy Neuzil ND
- 2006 Edition of *Integrative Rheumatology*: Amy Neuzil ND, Cathryn Harbor MD, Julian Vickers DC, Tamara Sachs MD, Bob Sager BSc MD DABFM (Clinical Instructor in the Department of Family Medicine, University of Kansas), Ron Mariotti ND, Titus Chiu (DC4), Zachary Watkins (DC4), Gilbert Manso MD, Bruce Milliman ND, William Groskopp DC, Robert Silverman DC, Matthew Breske (DC4), Dean Neary ND, Thomas Walton DC, Fraser Smith ND, Ladd Carlston DC, David Jones MD, Joshua Levitt ND
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[1] Ames BN, Elson-Schwab I, Silver EA. High-dose vitamin therapy stimulates variant enzymes with decreased coenzyme binding affinity (increased K(m)): relevance to genetic disease and polymorphisms. *Am J Clin Nutr*. 2002 Apr;75(4):616-58 http://www.ajcn.org/cgi/content/full/75/4/616
[2] Williams RJ. Biochemical Individuality: The Basis for the Genetotrophic Concept. Austin and London: University of Texas Press; 1956
[3] Wilk CA. Medicine, Monopolies, and Malice: How the Medical Establishment Tried to Destroy Chiropractic. Garden City Park: Avery, 1996
[4] Getzendanner S. Permanent injunction order against AMA. *JAMA*. 1988 Jan 1;259(1):81-2 http://optimalhealthresearch.com/archives/wilk.html
[5] Carter JP. Racketeering in Medicine: The Suppression of Alternatives. Norfolk: Hampton Roads Pub; 1993
[6] Morley J, Rosner AL, Redwood D. A case study of misrepresentation of the scientific literature: recent reviews of chiropractic. *J Altern Complement Med*. 2001 Feb;7(1):65-78
[7] Terrett AG. Misuse of the literature by medical authors in discussing spinal manipulative therapy injury. *J Manipulative Physiol Ther*. 1995 May;18(4):203-10

Format and Layout: The format and layout of this book is designed to efficiently take the reader though the clinically relevant spectrum of considerations for each condition that is detailed. Important topics are given their own section within each chapter, while other less important or less common conditions are only described briefly in terms of the four "clinical essentials" of 1) definition/pathophysiology, 2) clinical presentation, 3) assessment/diagnosis, and 4) treatment/management. Each expanded section which details the more important/common conditions maintains a consistent format, taking the reader through the spectrum of primary clinical considerations: definition/pathophysiology, clinical presentations, differential diagnoses, assessments (physical examination, laboratory, imaging), complications, management, and treatment.

References and Citations: Major references to texts and articles are listed along with each section; these references are "recommended reading" and form the foundation for the clinical approach delineated in the text. Citations to articles, abstracts, texts, and personal communications are footnoted throughout the text to provide supporting information and to provide interested readers the resources to find additional information. Many of the cited articles are available on-line for free, and when possible I have included the website addresses so that readers can access the complete article.

Language, Semantics, and Perspective: As a diligent student who previously aspired to be an English professor, I have written this text with great (though inevitably imperfect) attention to detail. Individual words were chosen with care. With regard to the he/she and him/her debacle of the English language, I've mixed singular and plural pronouns for the sake of being efficient and so that the images remain gender-neutral to the extent reasonable. The subtitle *The art of creating wellness while effectively managing acute and chronic musculoskeletal/health disorders* was chosen to emphasize the intentional creation of wellness rather than a limited focus on disease treatment and symptom suppression. For the 2009 printing of *Chiropractic and Naturopathic Mastery of Common Clinical Disorders*, this subtitle was slightly modified from "creating" to "co-creating" to emphasize the team effort required between physician and patient. *Managing* was chosen to emphasize the importance of treating-monitoring-referring-reassessing, rather than merely *treating*. *Disorders* was chosen to reflect the fact that a distinguishing characteristic of ***life*** is the ability to habitually create *organized structure* and *higher order* from chaos and *disorder*. For example, plants organize the randomly moving molecules of air and water into the organized structure of biomolecules and plant structure. Similarly, the human body creates organized structure of increased complexity from consumed plants and other foods; molecules ingested and inhaled from the environment are organized into specific biochemicals and tissue structures with distinct characteristics and definite functions. Injury and disease *result in* or *result from* a lack of order, hence my use of the word "disorders" to characterize human illness and disease. A motor vehicle accident that results in bodily injury, for example, is an example of an external chaotic force, which, when imparted upon human body tissues, results in a disruption (disorder) of the normal structure and organization that previously defined and characterized the now-damaged tissues of the body. Likewise, an autoimmune disease process that results in tissue destruction is an anti-evolutionary process that takes molecules of higher complexity and reverts them to simpler, fragmented, and non-functional forms. From the perspective of "health" as *organized structure and meaningful function* and "disease" as *the reversion to chaos, destruction of structure, and the loss of function*, the task of healthcare providers is essentially to restore order, and to acutely reduce and proactively prevent/eliminate clinical-biochemical-biomechanical-emotional chaos insofar as it adversely affects the patient's life experience as an individual and our collective experience as an interdependent society.

Integrity and Creativity: I have endeavored to accurately represent the facts as they have been presented in texts and research, and to specifically resist any temptation to embellish or misrepresent data as others

have done.[8,9] Conversely, I have not endeavored to make this book "normal" or "average" either in content nor in any intentional simplification. Rather I have allowed this text to be unique in format, content, and style, so that the personality of this text can be contrasted with that of the instructor and reader, thus enabling the learner to at least benefit from an intentionally different – though altogether honest – perspective and approach. Students using this text with the guidance of a qualified professor will benefit from the experience of "two teachers" rather than just one.

Peer-review and Quality Control: Peer-review is essential to help ensure accuracy and clinical applicability of health-related information. Consistent with the importance of our goals, I have employed several "checks and balances" to increase the accuracy and applicability of the information within my textbooks:

- Reliance upon authoritative references: Nearly all important statements are referenced to peer-reviewed biomedical journals or authoritative texts, such as *The Merck Manual* and *Current Medical Diagnosis and Treatment*. Each citation is provided by a footnote at the bottom of each page so that readers will know quickly and easily exactly where the information came from.
- Extensive cross-referencing: Readers will notice, if not be overwhelmed by, the number of references and citations. Many important statements have several references. Many references (especially textbooks) are referenced several times even on the same page. The purpose of this extensive referencing is three-fold: 1) to guide you to additional information, 2) to help me (the writer) stay organized, and 3) to help you and me (the practicing physicians) employ this information with confidence.
- Periodic revision: The book is updated and revised on a regular basis. New information is added; superfluous information removed. Inspired by the popular text *Current Medical Diagnosis and Treatment* which is updated every year, I want *Integrative Orthopedics* and *Integrative Rheumatology* to be accurate, timely, and in pace with the ever-growing literature on natural medicine. Any significant errors that are brought to my attention will be posted at OptimalHealthResearch.com/updates; please check this page periodically to ensure that you are working with the most accurate information of which I am aware.
- Peer-review: The peer-review process for *Integrative Orthopedics* and *Integrative Rheumatology* takes two forms. First, select colleagues are invited to review new and revised sections of the text before publication; every section of the book that you are holding has been independently reviewed by chiropractic and naturopathic students and/or practicing clinicians from various backgrounds: allopathic, chiropractic, osteopathic, naturopathic. Second, you - the reader - are invited to provide feedback about the information in the book, typographical errors, syntax, case reports, new research, etc. If your ideas truly change the nature of the material, I will be glad to acknowledge you in the text (with your permission, of course). If your contribution is hugely significant, such as reviewing three or more chapters or helping in some important way, I will be glad to not only acknowledge you, but to also send you the next edition at a discount or courtesy when your ideas take effect. By implementing these quality control steps, I hope to create a useful text and advance our professions and our practices by improving the quality of care that we deliver to our patients. Readers with ideas, suggestions, or corrections can email me from the website at http://OptimalHealthResearch.com/corrections.

Newsletter & Updates

Be alerted to new integrative clinical research and updates to this textbook by signing-up for the free newsletter, sent 4-6 times per year. Contact newsletter@optimalhealthresearch.com or www.OptimalHealthResearch.com/newsletter

How to Use This Book Safely and Most Effectively: Readers are encouraged to complete chapters 1, 2, and 3 of *Integrative Orthopedics* and Chapters 1-5 of *Integrative Rheumatology* before reading and using the

[8] Vasquez A. Zinc treatment for reduction of hyperplasia of prostate. *Townsend Letter for Doctors and Patients* 1996; January: 100
[9] Broad W, Wade N. Betrayers of the Truth: Fraud and Deceit in the Halls of Science. New York: Simon and Schuster; 1982

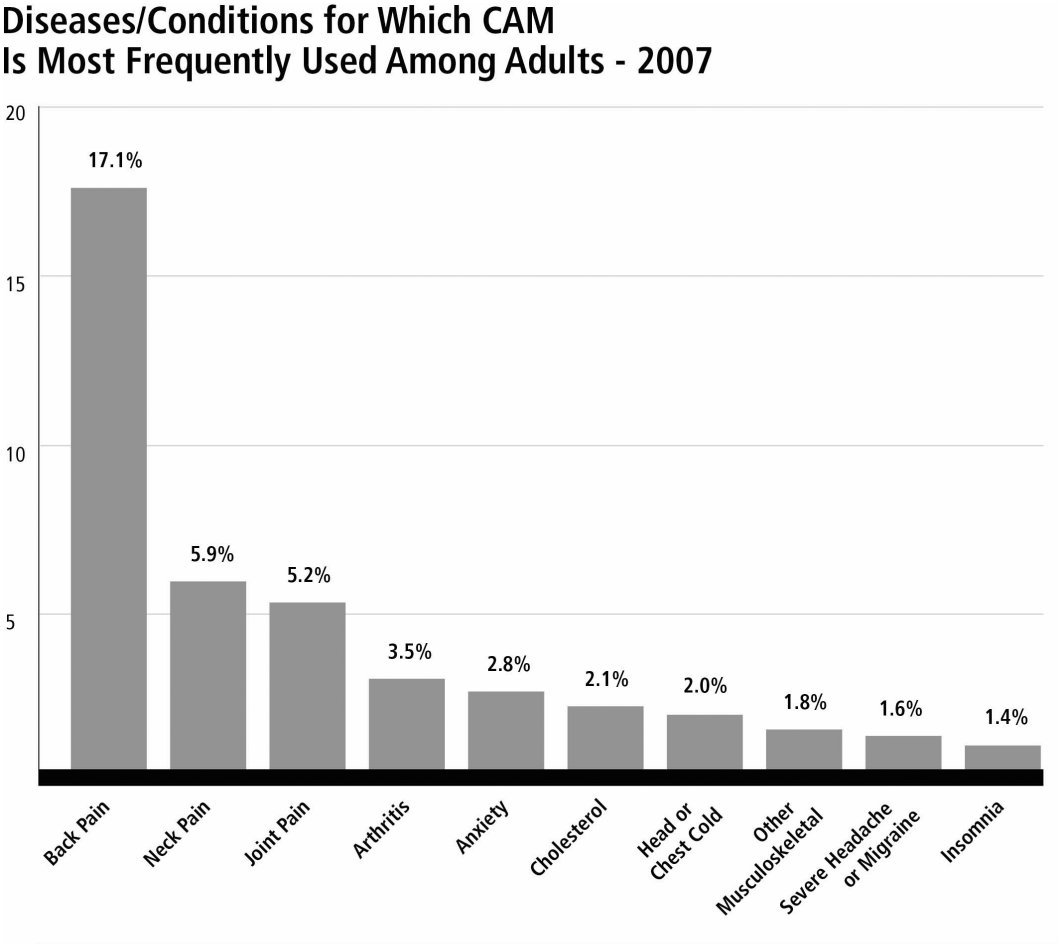
information in the region- and condition-specific chapters that follow these introductory and conceptual chapters. Ideally, these books should be read cover-to-cover within a context of coursework that is supervised by an experienced professor. For post-graduate professionals, they might consider forming a local "book club" and meeting for weekly or monthly discussions to check their understandings and share their clinical experiences to refine the application of clinical knowledge, perceptions, and skills. Virtual groups and internet forums—such as the forum hosted by the Institute for Functional Medicine at www.FunctionalMedicine.org—can provide access to an international group of professional peers where sharing of clinical experience and questions is synergistic. Throughout this book, references are amply provided and are often footnoted with hyperlinks providing full-text access. This book is intended for licensed doctorate-level healthcare professionals with graduate and post-graduate training.

Notice: The intention and scope of this text are to provide doctorate-level clinicians with useful information and a familiarity with available research and resources pertinent to the management of patients in a holistic primary care setting. Specifically, the information in this book is intended to be used by licensed healthcare professionals who have received hands-on clinical training and supervision at accredited chiropractic/naturopathic colleges. Additionally, information in this book should be confirmed and used in conjunction with other resources, texts, and in combination with the clinician's best judgment with the intention to "first do no harm" and second to provide effective healthcare. Information and treatments applicable to a specific *condition* may not be appropriate for or applicable to a specific *patient* in your office; this is especially true for patients with concomitant illnesses and those taking pharmaceutical medications. Throughout this text, I describe treatments—manual, dietary, nutritional, botanical, and pharmacologic—and their research support for the clinical conditions being discussed; each practitioner must determine appropriateness of these treatments for his/her individual patient and with consideration of the doctor's scope of practice, education, training, skill, and possible "off label" use of medications and treatments. This book has been carefully written and checked for accuracy by the author and professional colleagues. However, in view of the possibility of human error and new discoveries in the biomedical sciences, neither the author nor any party associated in any way with this text warrants that this text is perfect, accurate, or complete in every way, and we disclaim responsibility for harm or loss associated with the application of the material herein. With all conditions/treatments described herein, each physician must be sure to consider the balance between what is best for the patient and the physician's own level of ability, expertise, and experience. When in doubt, or if the physician is not a specialist in the treatment of a given severe condition, referral is appropriate. These notes are written with the routine "outpatient" in mind and are not tailored to severely injured patients or emergency or "playing field" or "emergency response" situations. Consult your First Aid and Emergency Response texts and course materials for appropriate information. These notes represent the author's perspective based on academic education, experience, and post-graduate continuing education and are not inclusive of every fact that a clinician may need to know. Consult other texts, references, and articles for additional information and perspectives. This is not an "entry level" book except when used in an academic setting with a knowledgeable professor who can explain the abbreviations, tests, physical exam procedures, and treatments. This book requires a certain level of knowledge from the reader and familiarity with clinical concepts, laboratory assessments, and physical examination procedures.

Updates, Corrections, and Newsletter: When omissions, errata, and the need for important updates become clear to me, I will post these at the website: www.OptimalHealthResearch.com/updates. Be sure to access this page periodically to ensure that you are informed of any corrections that might have clinical relevance. This book consists not only of the text in the printed pages you are holding, but also the footnotes and any updates at the website. Be alerted to new integrative clinical research and updates to this textbook by signing-up for the free newsletter, sent 4-6 times per year. Send request via www.OptimalHealthResearch.com/newsletter or newsletter@OptimalHealthResearch.com

Preface to *Chiropractic and Naturopathic Mastery of Common Clinical Disorders*: *Chiropractic and Naturopathic Mastery of Common Clinical Disorders* steps beyond the obviously musculoskeletal focus of my first three textbooks *Integrative Orthopedics*, *Integrative Rheumatology*, and *Musculoskeletal Pain: Expanded Clinical Strategies* to provide students and clinicians an evidence-based foundational approach to treating common clinical disorders such as Asthma, Hypertension, Diabetes Mellitus Type-2 and Metabolic Syndrome, and Disorders of Mood and Behavior—a section that emphasizes adult depression and anxiety. Readers of these sections will note that they differ in format from the other chapters with regard to a stronger emphasis on presenting an article-by-article review in the effort to strengthen the evidence-based nature of the clinical protocols; ultimately this is to help students and clinicians appreciate the richness (and occasional limitations) of the research supporting an integrative clinical approach. As with my previous books and all other clinical resources, clinicians should still consult other sources and texts for additional information, current updated guidelines, and changes to standards of care.

The emphasis of *Chiropractic and Naturopathic Mastery of Common Clinical Disorders* is to begin bridging the gap that continues to exist between so-called "CAM" (which includes patient's self-directed non-pharmacosurgical healthcare practices and preferences as well as integrative and mostly non-pharmacosurgical treatments utilized by trained professionals) and so-called "conventional" healthcare as is generally taught in the majority of osteopathic and allopathic medical schools. Health problems for which patients most often seek CAM treatment are listed in the illustration below.



Source: Barnes PM, Bloom B, Nahin R. *CDC National Health Statistics Report #12*. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007. December 2008.

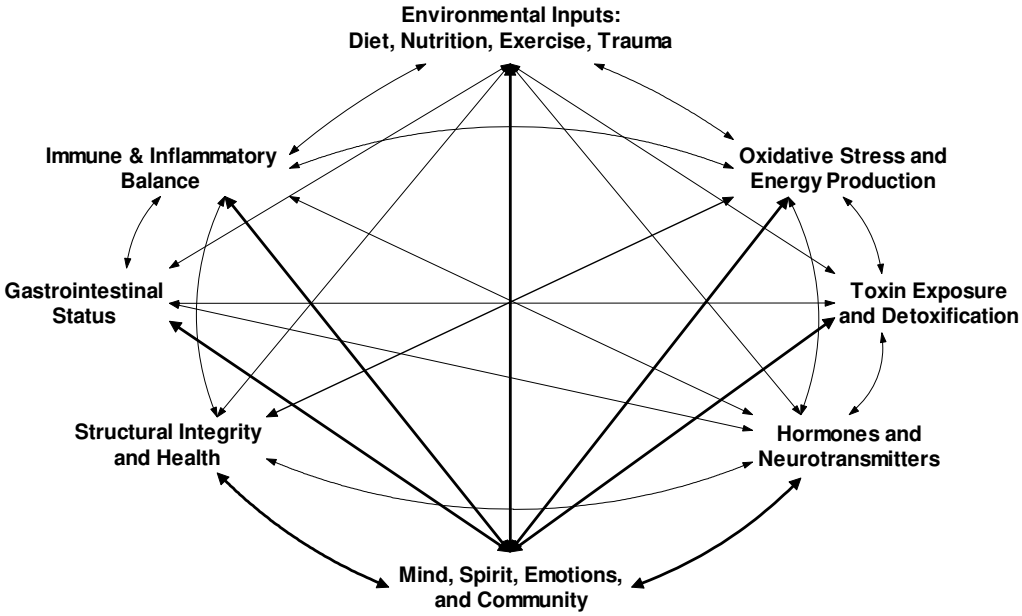
Image Credit: National Center for Complementary and Alternative Medicine, NIH, DHHS. http://nccam.nih.gov/news/camstats/2007/graphics.htm

The following table provides a listing—in order of percentage—of the most common conditions seen in a general family practice of medicine.

Top diagnoses	Notes and comments
1. Hypertension	5.9% of family medicine diagnoses; nearly 11 million patient visits per year.
2. Diabetes mellitus	4.1% of family medicine diagnoses; more than 7.6 million patient visits per year.
3. Acute upper respiratory infection	3.2% of family medicine diagnoses; more than 10 million patient visits per year. Most of these are caused by viral infections for which there is no direct medical treatment; most patients are treated symptomatically with decongestants and antipyretics. Complications are rare but can be serious.
4. Sinusitis	2.5% of family medicine diagnoses; more than 10 million patient visits per year.
5. Acute pharyngitis	2.3% of family medicine diagnoses; more than 4 million patient visits per year.
6. Otitis media	2.3% of family medicine diagnoses; > 4 million patient visits per year.
7. Bronchitis	1.9% of family medicine diagnoses; > 3 million patient visits per year.
8. Back problems	1.8% of family medicine diagnoses; > 3 million patient visits per year. This is a diverse group of conditions ranging from post-traumatic to benign to developmental problems such as scoliosis. Note that back pain is listed separately below.
9. Hyperlipidemia	1.7% of family medicine diagnoses; > 3 million patient visits per year. This mostly includes the lifestyle-generated dyslipidemia epidemic, with comparably fewer cases of genotropic disorders requiring pharmacotherapy.
10. Urinary tract disorders	1.6% of family medicine diagnoses; almost 3 million patient visits per year. This can include a diverse group of problems ranging from simple and self-limited urinary tract infections to sexually transmitted diseases; these are not directly covered in this text.
11. Allergic rhinitis	1.2% of family medicine diagnoses; > 2 million patient visits per year. A general approach to allergy treatment is included in this text.
12. Back pain	1.2% of family medicine diagnoses; > 2 million patient visits per year.
13. Abdominal or pelvic symptoms	1.1% of family medicine diagnoses; > 2 million patient visits per year. This can include a wide range of diagnoses such as appendicitis, dysmenorrhea, and medically urgent diseases. Due to the breadth and complexity, these are not directly covered in this text.
14. Joint pain	1.1% of family medicine diagnoses; > 2 million patient visits per year.
15. Depression or anxiety	1.1% of family medicine diagnoses; > 2 million patient visits per year. These are mostly mild cases but can also include acute situations that warrant emergency treatment including pharmacotherapy and sedation.
16. Asthma	1.1% of family medicine diagnoses; almost 2 million patient visits per year. A general approach to allergy treatment is included in this text, with a specific section on asthma.
17. Chest pain or shortness of breath	1.1% of family medicine diagnoses; almost 2 million patient visits per year. Some of these are benign musculoskeletal pain or gastroesophageal reflux while others turn out to be life-threatening conditions such as myocardial infarction, pneumothorax, pneumonia, or—rarely—aortic dissection. These are not directly covered in this text.
18. Soft tissue problems	1% of family medicine diagnoses; 1.8 million patient visits per year.
19. Acute bronchitis and bronchiolitis	1% of family medicine diagnoses; 1.8 million patient visits per year. These include bacterial and viral infections, ranging from mild to life-threatening, especially in patients with cardiopulmonary disease.
20. Skin problems	1% of family medicine diagnoses; 1.8 million patient visits per year. Dermatology is not specifically covered in this text except for the chapter on psoriasis. Many patients will benefit from the diet and nutrition protocols described herein.
21. Tendonitis	1% of family medicine diagnoses; 1.7 million patient visits per year.

Data are from *Essentials of Family Medicine, 5th edition* edited by Sloane PD, Slatt LM, Ebell MH, Jacques LB, Smith MA published by Lippincott Williams & Wilkins (April 1, 2007)

In *Chiropractic and Naturopathic Mastery*, I (re)introduce the Functional Medicine Matrix that I originally diagramed for the Institute for Functional Medicine (IFM) in 2003; the diagram used in this book is updated from the original, and readers should appreciate that IFM has since changed their Matrix since its original conceptualization—see discussion in Chapter 1.



Functional Medicine Matrix: Updated from the original diagram by Vasquez in 2003 for the Institute for Functional Medicine (IFM). See www.FunctionalMedicine.org for updated information and additional training.

Bon Voyage: All artists, and scientists—regardless of genre—grapple with the divergent goals of 1) perfecting their work and 2) completing their work; the former is impossible, while the latter is the only means by which the effort can become useful. At some point, we must all agree that it is "good enough" and that it contains the essence of what needs to be communicated. While neither this nor any future edition of this book is likely to be "perfect", I am content with the literature reviewed, presented, and the new conclusions and implications which are described—many for the first time ever—in this text. Particularly for *Integrative Rheumatology* and *Chiropractic and Naturopathic Mastery*, each chapter aims to achieve a paradigm shift which distances us further from the simplistic pharmacocentric model and toward one which authentically empowers both practitioners and patients. With time, I will make future editions more complete and less polemical (but not less passionate). I hope you are able to implement these conclusions and research findings into your own life and into the treatment plans for your patients.

Thank you, and I wish you and your patients the best in health and success,

Alex Vasquez, D.C., N.D.
August 13, 2009

Clinical Mastery requires mastery of numerous basics in knowledge and performance

"He who would learn one day to *fly* must first learn *standing* and *walking*, and *running*, and *climbing*, and *dancing*. One cannot *fly* into *flying*."

Nietzsche FW. [Translated by Kaufmann W]. *Thus Spoke Zarathustra: A Book for None and All. 1892*. New York; Viking Penguin: 1954, page 195