

"At First Do No Harm"

Confessions of a Heretic

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Doctor, I have taken the oath,
but I Ask you - am I really a Hypocrite?

Integrative Health - A Paradigm Shift

The Process of Obtaining and Maintaining Optimal Health by Integration of Allopathic Therapies and Nutritional Supplementation to Achieve and Maintain Optimal Health in your Patients.

The journey begins...

Preface

I am presenting this thesis to motivate you to re-assess the fundamental assumptions that were taught to you during your medical education. I would like you to evaluate the beliefs, thoughts, and assumptions that formed your conditioned beliefs from the earliest times of your life. I am asking you to embark upon a journey of discovery.

This process of discovery typically follows a pattern of skepticism, ambivalence, and then acceptance as truth. In the next few pages try to answer with sincerity and honesty in your own mind the ideological contradictions that we operate with in modern medicine today. I implore you not to react as a pavlovian, but to examine what you believe and why you believe it. Question yourself. Can your beliefs withstand critical analysis of these fundamental questions? If you are not prepared to do this at this time, still, please read on and do come back again when you are ready to question yourself.

I want you to examine the very core of your reasons why you became a doctor and why you continue to practice medicine. What is your true intention? I invite you to examine the journey that I began in mid 1997 that culminated in a metamorphosis of my own philosophy of health and disease ... a paradigm shift of Integrative Health.

This paradigm shift and medical awakening occurred some fifteen years after my fellowship training in Pulmonary Disease. I challenge you to re-asses the ideological path of what we are as physicians and what we are supposed to be as physicians. It is not my intention to indict the medical profession as it exists today. It is, however, my intention to expose its shortcomings and present alternative options, guiding it back on track to fulfill the role that it should have in society today.

I do indict our definition of good health as insufficient and misleading. It is absurd to use the absence of symptoms as the definition of good health. It is difficult for us to quantify and measure good health because we are so accustomed to measure the negative aspect of a health problem on the human body and spirit.

I define optimal health as a person who is free of specific complaints, exercises without difficulty, sleeps well and awakens refreshed and maintains this throughout his or her life with no undo anxiety or depression. This process should be accomplished without the aid of a drug or visit to the doctor, chiropractor, or homeopathic physician. If we are to be true physicians, adhering to the oath of Hippocrates, this must be our goal.

The Ethical Considerations: Do you really have a choice?

As much as things change, they stay the same. Fundamental needs and requirements of the human body, mind, spirit and soul have not significantly changed in the past 6000 years. It is with that preface that I looked back upon the Hippocratic Oath; the oath that I swore to uphold when I graduated from medical school. One key phrase that haunted me over the past twenty years was:

"At first, do no harm."

I could honestly say that this was not always true. The other overwhelming and yet unexplainable fact was that I was seeing more and more patients with more complex and bizarre symptoms and problems, many of which I could not explain. In fact, many of these same patients were sick because of the medications that I and other physicians had prescribed. I began to question myself, was I really acting in my patient's best interests? Was something missing?

Mainstream medicine seemed to be close to answers and yet absolute unyielding dogma one year was soon to become last year's fad and silly science. Was the traditional Western Medicine (primarily acute interventive care) approach to disease and illness appropriate?

Consider the following trends:

- Cancer will strike 1 in 3 people
- Heart Disease will strike 1 in 2 people
- Asthma now afflicts some 13½ million people (nearly double past 10 years)
- Chronic Fatigue and Fibromyalgia are nearly epidemic in proportion; as an intern - I barely heard of one case

These trends are nothing to be proud of and certainly nothing to be satisfied with. To continue as we have (philosophical approach to health and disease) would produce the same terrible results; to expect something different would be tantamount to overt psychosis. Review the following chart (Figure1), which shows the lifetime incidence of breast cancer in females; can you be satisfied with this trend?

[Review Figure 1: Chart showing Risk of Breast Cancer during life of females \(Adapted from NCI Data 2000\).](#)

It finally occurred to me that traditional medicine and therefore - I, was missing something. I was not adhering to the oath that I swore to twenty years ago. Traditional Western Medicine had significant limitations and my patients were suffering because of it. Additionally, I would wince when I would hear the American Medical Association advocate preventive health measures - substituting early detection for prevention. These terms are not synonymous and therefore are not interchangeable.

Two problems so far identified:

- Western Medicine could not answer many questions of health problems and was wrong much of the time
- Harm was occurring to patients because of medication

An additional problem surfaced some twenty years ago with traditional, acute interventive style medicine -- it became very expensive. This "cost problem" brought in the federal government. With the government now interested in cost containment the squeeze was on. This resulted in a shift of work from direct patient care and interaction (primarily physician and nursing) to documentation of work done. Real work and real patient care in the hospital setting has deteriorated profoundly. The last bastion of Western Medicine, the hospital, is fast becoming a straw dog, a shadow of its former self - often unable to save people from the clutches of premature death and relegating patients to expensive and sometimes painful therapy.

Another unfortunate side effect of the government's interest in our health is its increasing interest in how we behave (e.g. do we smoke?). This has caused extreme limitations of our freedom. To some this may seem like a good idea, but the premise that the federal government has the moral, ethical and constitutional authority to do this is beyond frightening. If we are to stay a free country, then we must take responsibility for ourselves, stand by our convictions and not rely on an oppressive government to take care of us.

Therefore, I contend, the only way to help people survive, is to keep them out of the hospital and most importantly, keep them away from drugs as much as humanly possible. If we look into the "bible" of Allopathic Medicine, the PDR (Physician Desk Reference), nothing safe can be found for prevention. Again, I was personally at a loss to explain why patients were so sick and there was nothing that was effective for true disease prevention and maintenance of health. I was becoming more and more helpless as a physician -- I knew in principal what was needed; I just had no tools, or so I thought.

Current Scientific Philosophy: One Disease - One Drug - One Cure

Society has always demanded answers from Western Medicine concerning causes and treatment of diseases. Today, there are a profound number of people becoming disenchanted with traditional^{1,2} Western Medicine . Now, the new demand and focus is on how to stay well (preventive medicine). The problem with the approach of Western Medicine, is that it is incapable of giving one simple answer to even just one of the major health problems in our society today - what causes cancer, heart disease, arthritis, asthma, etc. etc. etc. ...?

Each time Western Medicine discovers a new answer to a health issue, it is soon followed by five new unanswered questions. This year's medical dogma is soon to be next year's foolish medical ritual. I also think, that at times Western Medicine focuses on areas where it does not belong. For example, the Center for Disease Control now looks at violent shootings as a medical problem. Its treatment for this "medical problem" is gun control. What is the direct connection to Medicine? Shooting someone is a crime - not a medical condition. This picture of

medicine is certainly not right. Again, I stand by my conviction of personal responsibility for our well being as individuals, our family and ultimately our society.

If Western Medicine has a codifying theory, it is that of all the diseases that afflict man, none are really connected or related in any significant way. It assumes that each disease has a unique and specific cause, and to be "cured" a specific "drug" must be found that will remedy the particular problem. Unfortunately, the drugs identified as "cures" often have many side effects.

Some, sadly enough, are detrimental or even lethal. In late 1999, The Institute of Medicine, a division of the National Academy of Science released a stunning report, "To Err is Human". This report finds upwards of 98,000 people are killed by medical errors in prescription medications. Making matters yet worse, several other recent studies have indicated that appropriate use of prescription medication is the fourth to sixth largest killer of Americans today, accounting for upwards of one million injuries a year and 180,000 deaths.

This ideological process also assumes that the human body is programmed to fail. Rather than fail, could it be, that the human body is programmed to succeed - actually achieve and maintain optimal health if given the right "stuff" -- i.e., food? Ask yourself, are there logical problems to Western Medicine's theory? Does it ever answer the true cause of a disease?

I strongly contend that there are logical problems with this approach. For instance, peptic ulcer disease, once thought to be caused by excess acid of the stomach, is now thought to be caused by a bacterium - *heliobacter pylori*. This however begs the question: why should someone have *heliobacter pylori* in the stomach in the first place and why should it cause an ulcer?

Another relatively new "disease" in our society is attention deficit disorder (ADD), attacking primarily children. Current management and therapy is with methylphenidate. This therapeutic philosophy argues that the body is deficient in methylphenidate. To argue that the body in its natural state, requires methylphenidate in any amount argues the absurd. I ask you again - what is the answer to the cause of ADD? Lastly, as noted above, a dangerous characteristic of all pharmaceuticals, ignored by most physicians and patients alike, is that by their very definition they are toxins. Their therapeutic effects are always weighed against their side effects.

Paracelsus, Father of Pharmacology stated it the best:
"All drugs are poison.
Their beneficial effects depend on the amount."

A Renaissance: The evidence speaks, but does anyone listen?

The realization that traditional Western Medicine typically does not cure disease, that therapy is often harmful, and is incapable of giving an answer to most of our current health care ailments - was very depressing and frustrating to me as a practicing physician. What I was taught and practiced and believed in all these years was woefully inadequate for my patients (as well as for my family). Millions and millions of dollars, millions and millions of hours of research have been spent with no answers. More depressing were the millions of people with unrequited hopes that their disease would be cured by Western Medicine.

I had to ask myself, and I encourage you to ask yourself, was/is there any evidence in any form that can give credence to a new paradigm of health, or perhaps a re-discovery - a Renaissance?

Once I began my research into this question, it became clear to me that for most of recorded history the answer is yes. In fact, a commonly known plant - aloe vera -- is a good example. The beneficial effects of the aloe vera plant toward human health have been well documented for some 5,000 years. Individuals today use aloe for a host of ailments, although its beneficial effects are typically scoffed at by traditional Western Medicine physicians because of the lack of a traditional scientific approach to its effectiveness.

Surprisingly, there has, in fact, been scientific analysis of the effects of aloe vera. This initially began in 1952. Lushbaugh, et al, found that radiation burns to the abdomen of rabbits healed with fresh aloe vera extract. Aloe vera that was one week old did not heal the wounds. It took some thirty years for the active ingredient of the aloe vera plant to be identified as the source of the healing. This was discovered to be a polymannan (a polysaccharide - made up of many mannose monosaccharide molecules). This polymanose did not act like a drug. There were literally no toxic amounts found when injected or given to animals or people.

During the past 20 years another "new" discovery occurred - the importance of cell surface glycoproteins. These substances covering every single cell in the body, were once regarded as an insignificant cellular oddity. Glycoproteins have been shown to be indispensable in cellular function - i.e. cell to cell communication. These glycoproteins are made up of amino acids and monosaccharides. It is the notion of the eight

essential monosaccharides, which are critical to proper structure and function of the cell that is so new to modern medicine .

These eight essential monosaccharides are: glucose, galactose, mannose, fucose, xylose, n-acetylneuraminic acid, n-acetylgalactosamine, and n-acetylglucosamine. Kornfeld and Kornfeld in 1985 reported in a review article on how this joining of amino acids and simple monosaccharides occur inside the cell.

This heralded a new paradigm in the understanding of the biological importance of these monosaccharides (carbohydrates are not just for energy anymore). This ultimately led to the new field of Glycobiology. An excellent introduction to this science has been published by Dr. John Axford. Relevance to human health of these essential monosaccharides has been abundantly documented. Hanson reported the apparent uniqueness of these monosaccharides in human mother's milk. His study revealed five of the eight essential monosaccharides are found in human mother's milk but not in any other mammalian species or commercial baby formula.

Importantly, there was a direct correlation between longer breast feeding in infants and the decreased incidence of (1) first episode of otitis media (2) eczema and (3) asthma. This strongly suggests a lasting effect on the immune system by mother's breast milk and appears directly related to these essential monosaccharides.

Further, investigations in animals show marked improvement in vaccine effectiveness , immunity ,improved wound healing ,improved glucose control in diabetic mice , improved healing in radiation induced skin changes , and increased tumor cell death, with this polymannan. Experience in the laboratory and in humans has been remarkable as well. Early studies with a single monosaccharide, aloe vera or acemannan, have shown improvement in symptoms in such disorders as wounds, psoriasis , atheromatous heart disease and angina , and AIDS .

Newer generation products act by supplementing the typical diet with a mixture of the eight essential monosaccharides. This approach has shown improvement in a host of symptoms caused by viruses (herpes), stomatitis, phemphigus vulgaris, attention deficit disorder, lupus, chronic fatigue syndrome, asthma , diabetes, to name but a few.

Phytochemicals , are another "new" nutrient discovery. In fact, they should be classified along with the glyconutrients as new, essential nutrient categories. Phytochemicals are the naturally occurring antioxidants, free radical scavengers, and other anti-cancer ingredients found in vine ripened fruits and vegetables. In fact, the National Cancer Institute continually reports the significant benefits of phytochemicals in the prevention of cancer. These nutrients are also critical for prevention of heart disease as mentioned in a position paper by the American Heart Association . These include classes of compounds such as: isothiocyanates, saponins, indoles, allyl sulfides, isoflavones, terpenes, polyphenols and phenolic acids.

Perhaps the most exciting discovery from the field of glycobiology is the critical role the immune system plays in our health and development of disease. The "window" into our immune system is most easily seen through natural killer cells - otherwise known as NK cells . These cells perform critical immune surveillance - both an infection battling and cancer eradicating function.

Comparing studies over the past 15 years have shown that our baseline NK cell immunity has diminished anywhere from 18% to 25%. Most fascinating is the fact that NK cell activity has been dramatically improved (up to 400%) by the addition of the eight essential monosaccharides to the actual NK cells as seen in patients with chronic fatigue syndrome . Nothing in my experience with pharmaceuticals can compare with these findings.

This is the beginning of the renaissance...

The evidence became overwhelming and crystal clear. I had no choice. I finally decided to offer these nutrients to my patients and I noticed a remarkable benefit. Patients were needing less intervention with traditional pharmaceuticals and less medical testing. They were also feeling significantly better. They were even avoiding hospitalization or needing less intense hospital care.

Also, when traditional allopathic therapies were given they were remarkably more effective. For the first time in my medical career I was seeing benefits that had eluded the traditional allopathic approach.

After seeing the benefits and noting the scientific validation of these nutrients, I no longer consider the addition of proper nutrients to the diet as a luxury. It is a fundamental and integral part of helping my patients achieve and maintain the health that they want and deserve.

It is my obligation as a physician and as a fellow human being to bring this to as many people as I possibly can. To do otherwise would go against everything that exists in the Hippocratic oath. Can you as a physician and fellow human being afford not to bring this to your patient's attention?

Can you honestly continue to offer a unilateral and often ineffective, or even harmful approach to health when the evidence shouts that other

options work?

A New Paradigm of health

Embracing what works and what is safe

We as physicians must embrace what works and what is safe. The "new" tenets of health are amazingly simple. If these tenets are followed the body will repair and maintain optimal health. These tenets are as follows:

- The genes provide the operational programs to establish and maintain normal structure and function of every living organism
- The resources for gene directed biochemical syntheses (everything that the cell needs to exist) are limited to the air breathed, water drunk, and food eaten
- What is present and what is absent from foods eaten, is profoundly more important than what medical education and training has emphasized
- If optimal nutrition is essential for good health, then nutrition could be even more important to persons with compromised health conditions
- One might observe benefits with improved nutrition that is not observed with many toxic drugs that have a label claim to treat disease
- Conditions poorly managed or non-responsive to drugs and responsive to phyto-nutrients and glyco-nutrients, strongly suggests, that the health compromise is due to a previously unrecognized nutritional deficiency Today, mankind's nutritional deficiencies are caused by (1) our food being supplied from a green harvest (2) over processing of food (3) over-utilization of land (4) use of non-organic fertilizer (5) poor variety of foods and (6) over-cooking of our food
- Lastly, toxins in our environment have a significant yet often non-quantifiable deleterious effect on our health, worsened by our present nutritionally deficient state

Other Validation Issues

- In 1994, Congress passed the Dietary Supplement Health and Education Act. This was an extraordinary shift of authority by the government in how it viewed and treated nutritional supplements. It transferred an incredible amount of power and control out of Washington and into the hands of the people. It gave the individual, not the government, the power to make educated decisions on dietary supplements based upon unbiased scientific information. This law is helping drive the importance of nutraceuticals into the consciousness of every American. This paradigm shift of health has already occurred in many places throughout Europe. For instance, in Germany, nutraceuticals are out selling traditional pharmaceuticals two to one.
- Another dynamic change is occurring in the Health Insurance Industry. Several new insurance companies have recently announced partial reimbursement of nutritional supplements. Health maintenance organizations are also studying these types of supplements for the first time in their history. What does this tell you? It is just a matter of time before all major health insurance companies follow suit.
- U.S. Track and Field endorsed nutrient-based supplements in August of 1997 because of its tremendous effect in improving athletic performance. This organization has never endorsed a specific athletic product in its entire history. This organization is committed to use these nutrients through the 2000 Olympics.
- Institutes of Health established the Office of Alternative Medicine (OAM) initiated through Congressional mandate under the 1992 National Institutes of Health (NIH) Appropriations Bill. The NIH is one of eight health agencies of the U.S. Public Health Service and is part of the U.S. Department of Health and Human Services (DHHS). Budgeted funds for 1998 were \$20 million; increased from \$12 million in 1997.
- Medical Schools in the U.S offering curricula in alternative health have markedly increase over the past 2 years. Of the 125 schools in the U.S., 33 offered classes in 1995 ; this increased to 75 schools in 1997 .

Closing the Loop: Integrated Health - The Union

Question yourself again. Can you honestly say that allopathic approach to disease and health is adequate? Would you only offer traditional drugs to your patients, to your spouse, or to your child - knowing that safer and perhaps better ways toward health exist? We must take action now - the process of achieving and maintaining optimal health requires merging nutrition and allopathic therapies.

Statistics speak for themselves. Surveys have been done indicating that upwards of 40% of patients are using alternative therapies with 40 million more visits to alternative health practitioners than traditional primary care (allopathic) physicians .

Additionally, some people may ignore the beneficial effects of traditional medicine, particularly in acute crisis situations. It is our obligation to become knowledgeable about the use of nutrients in health and disease, just as we have with pharmaceuticals.

This is not a contest between the two - it is a union. If we ignore the evidence we will be significantly hampered in our ability to care for our patients; we will lose even more credibility by ignoring proven natural therapies and patients will seek other avenues of health care. Society is dictating this shift and it will occur with or without us.

Additionally, recent studies have shown "compelling evidence" that the United States is on the verge of a physician oversupply crisis. Ultimately, we cannot help but suffer economically if we don't merge the two sciences-- the writing is on the wall.

Where do we go from here?

Is your mind still held hostage and enslaved (as mine was) to the idea that Traditional Medicine is the only process available? Some of the things we prescribe and do in medicine we do with very little evidence. Ask yourself, what would be adequate evidence? What would be a viable and rational process for health? Write them down and test this thesis - test me...

The following sequence of events will occur as you shift your thinking, followed by a change in your medical practice, as you discover the truth concerning the benefits of proper nutrition. This change of mind-set will generally follow the course below (as it did with me):

The Transition

- Acknowledge that Traditional Western Medicine is necessary for acute crisis type medical care; it is however, very ineffective for prevention or the treatment of many chronic diseases
- Understand that nutrition plays a much greater role in health than ever appreciated, acknowledged or emphasized in medical training
- Recognize that It is impossible to obtain the proper nutrients in today's diet due to the green harvest, processing of food and lack of ingestion of certain foods
- Admit that the addition of specific glyconutritionals and phytochemicals to the diet will fundamentally change the health of people
- Realize and become consciously aware, that validation of proper nutrition is everywhere - both scientific and lay sources of information
- Proclaim the vital importance of integrating Allopathic Medicine and nutraceutical support of health and disease as the only rational and safe way to care for patients. Today's culture is demanding that this process occur
- Finally, make specific recommendations to patients, family and friends as to the type of products that are proven to work, integrate them into your daily practice and educate others in this process

If this journey is of interest to you, I can show you how to establish this integration of nutrition in your practice. In this process, I am sure without a doubt, you will find the truth of what I have stated. If you are not yet ready, I implore you to investigate this, until you can prove me the fool...

"DO NO HARM" REFERENCES

1. Astin JA. Why patients use alternative medicine: results of a national study. JAMA. 1998;279:1548-1553.
2. Fox E. Predominance of the curative model of medical care: a residual problem. JAMA. 1997;278:761-763.
3. To Err Is Human: Building Safer Health System; Linda Kohn, Janet Corrigan, and Molla Donaldson, Editors; Committee on Quality of Health Care in America, Institute of Medicine. Pre-publication release, Nov, 1999.
4. Lazarou J; Pomeranz BH; Corey PN Incidence of adverse drug reactions in hospitalized patients: a meta-analysis of prospective studies JAMA, 279(15):1200-5 1998 Apr 15.
5. Holland E, Degruy F. Drug-Induced Disorders. AFP 1997;56(7),1781-1788.
6. Lushbaugh, et. Al Cancer, 1952.
7. Fogleman RW, Chapdelaine JM, Carpenter RH, McAnalley BH Toxicologic evaluation of injectable acemannan in the mouse, rat and dog. Vet Hum Toxicol 1992 Jun;34(3):201-205
8. Cook GM Glycobiology of the cell surface: the emergence of sugars as an important feature of the cell periphery. Glycobiology,

5(5):449-58 1995 Jul

9. Murray R. Harpers Biochemistry 24ed.Chapter 56: 648-666. Appleton & Lange 1996.
10. Kornfeld R, Kornfeld S.Assembly of asparagine-linked oligosaccharides. *Annu Rev Biochem* 1985;54:631-664.
11. Axford J Glycobiology and medicine: an introduction. *J R Soc Med*, 1997May 90(5):260-4
12. Hanson L. Breastfeeding Stimulates the Infant Immune System. *Science & Medicine* 1997;4(6),2-11.
13. Chinnah AD, Baig MA, Tizard IR, Kemp MC Antigen dependent adjuvant activity of a polydispersed beta-(1,4)-linked acetylated mannan (Acemannan). *Vaccine* 10 (8): 551-557 (1992)
14. Zhang L, Tizard IR Activation of a mouse macrophage cell line by acemannan: the major carbohydrate fraction from Aloe vera gel.*Immunopharmacology* 1996 Nov;35(2):119-28
15. Stuart RW, Lefkowitz DL, Lincoln JA, Howard K, Gelderman MP, Lefkowitz SS Upregulation of phagocytosis and candidicidal activity of macrophages exposed to the immunostimulant acemannan *Int J Immunopharmacol* 1997 Feb;19(2):75-82.
16. Karaca K, Sharma JM, Nordgren R Nitric oxide production by chicken macrophages activated by Acemannan, a complex carbohydrate extracted from Aloe Vera. *Int J Immunopharmacol* 17 (3): 183-188 (Mar 1995)
17. Egger SF, Brown GS, Kelsey LS, Yates KM, Rosenberg LJ, Talmadge JE Studies on optimal dose and administration schedule of a hematopoietic stimulatory beta-(1,4)-linked mannan. *Int J Immunopharmacol* 1996 Feb;18(2):113-126
18. Chithra P, Sajithlal GB, Chandrakasan G Influence of Aloe vera on collagen characteristics in healing dermal wounds in rats *Mol Cell Biochem* 1998 Apr;181(1-2):71-76
19. Chithra P, Sajithlal GB, Chandrakasan G Influence of Aloe vera on the glycosaminoglycans in the matrix of healing dermal wounds in rats *J Ethnopharmacol* 1998 Jan;59(3):179-186
20. Chithra P, Sajithlal GB, Chandrakasan G Influence of aloe vera on the healing of dermal wounds in diabetic rats *J Ethnopharmacol* 1998 Jan;59(3):195-201
21. Davis RH, Donato JJ, Hartman GM, Haas RC Anti-inflammatory and wound healing activity of a growth substance in Aloe vera. *J Am Podiatr Med Assoc* 1994 Feb;84(2):77-81
22. Heggors JP, Elzaim H, Garfield R, Goodheart R, Listengarten D, Zhao J, Phillips LG Effect of the combination of Aloe vera, nitroglycerin, and L-NAME on wound healing in the rat excisional model. *J Altern Complement Med* 1997;3(2):149-153
23. Rodriguez-Bigas M, Cruz NI, Suarez A Comparative evaluation of aloe vera in the management of burn wounds in guinea pigs. *Plast Reconstr Surg* 1988 Mar;81(3):386-389
24. Ajabnoor MA Effect of aloes on blood glucose levels in normal and alloxan diabetic mice. *J Ethnopharmacol* 1990 Feb;28(2):215-20
25. Roberts DB, Travis EL Acemannan-containing wound dressing gel reduces radiation-induced skin reactions in C3H mice. *Int J Radiat Oncol Biol Phys* 32 (4): 1047-1052 (Jul 1995)
26. King GK, Yates KM, Greenlee PG, Pierce KR, Ford CR, McAnalley BH, Tizard IR The effect of Acemannan Immunostimulant in combination with surgery and radiation therapy on spontaneous canine and feline fibrosarcomas. *J Am Anim Hosp Assoc* 31 (5): 439-447 (Sep 1995)
27. Peng, S.Y., et al. Decreased mortality of Norman murine sarcoma in mice treated with the immunomodulator, Acemannan. *Mol Biother* 1991;3(2):79-87
28. Harris C, Pierce K, King G, Yates KM, Hall J, Tizard I Efficacy of acemannan in treatment of canine and feline spontaneous neoplasms. *Mol Biother* 1991 Dec;3(4):207-213
29. Davis RH, Leitner MG, Russo JM, Byrne ME Wound healing. Oral and topical activity of Aloe vera. *J Am Podiatr Med Assoc* 1989 Nov;79(11):559-62
30. Fulton JE Jr The stimulation of postdermabrasion wound healing with stabilized aloe vera gel-polyethylene oxide dressing. *J Dermatol Surg Oncol* 1990 May;16(5):460-7
31. Liptak JM An overview of the topical management of wounds. *Aust Vet J* 1997 Jun;75(6):408-413
32. McCauley RL, Heggors JP, Robson MC Frostbite. Methods to minimize tissue loss.. *Postgrad Med* 1990 Dec;88(8):67-68
33. Miller MB; Koltai PJ Treatment of experimental frostbite with pentoxifylline and aloe vera *Arch Otolaryngol Head Neck Surg* 1995;121:678-80.
34. Visuthikosol V; Chowchuen B; Sukwanarat Y; Sri urairatana S; Boonpucknavig V Effect of aloe vera gel to healing of burn wound a clinical and histologic stud. *J Med Assoc Thai* 1995, 78:403-9.
35. Syed TA, Ahmad SA, Holt AH, Ahmad SA, Ahmad SH, Afzal M Journal: Management of psoriasis with Aloe Vera extract in a hydrophilic cream: a placebo-controlled, double-blind study. *Trop Med Int Health* 1996;1 (4): 505-509 .
36. Agarwal OP Prevention of atheromatous heart disease *Angiology*, 36:485-92, 1985 Aug
37. Kahlon JB, Kemp MC, Carpenter RH, McAnalley BH, McDaniel HR, Shannon WM Inhibition of AIDS virus replication by Acemannan in vitro *Mol Biother* 3 (3): 127-135 (Sep 1991)
38. McKinley R. The Effect of Dietary Supplements on Herpes Labialis. *JANA* 1997; Suppl 1:16-18.
39. McKinley R. The Effect of Dietary Supplements on Recurrent Aphthous Stomatitis. *JANA* 1997; Suppl 1:11-12.
40. McKinley R. Case Report: effects of Nutritional Supplementation on Benign Mucous Membrane Pemphigus (Cicatricial

Pheophytin). JANA 1997; Suppl 1:19-20.

41. Dykman K, McKinley R. Effect of Glyconutritionals on the Severity of Attention-Deficit Hyperactivity Disorder. Proceedings of the Fisher Institute for Medical Research 1997; 1:24-26.
42. Dykman K, Tone C, Ford C. The effects of dietary supplements on lupus: a retrospective survey. Proceedings of the Fisher Institute for Medical Research 1997; 1:26-30.
43. Dykman K, Tone C, Dykman R. Analysis of retrospective survey on the effects of nutritional supplements on chronic fatigue syndrome and/or fibromyalgia. JANA 1997; Suppl 1:28-31.
44. Dykman K, Tone C, Ford C, Dykman RA The effects of nutritional supplements on the symptoms of fibromyalgia and chronic fatigue syndrome. Integr Physiol Behav Sci 1998 Jan;33(1):61-71
45. Ganapini K. Dietary Supplements Improve Many Symptoms of Asthma and Decrease the Need for Other Medications: A Retrospective Study. JANA 1997; Suppl 1:32-35.
46. Purcell B. Case Report: Observed Improvements in Respiratory Air Flow in Asthmatics Following Dietary Supplementation. JANA; Suppl 1:24-25.
47. McDaniel C, Dykman K, McDaniel R, Ford C, Tone C. Effects of Nutraceutical Dietary Intervention in Diabetes Mellitus: A Retrospective study. Proceedings of the Fisher Institute for Medical Research 1997; 1:19-23.
48. McDaniel C, Stevens E. Nutraceuticals Decrease Blood Glucose and Pain in an individual with Non-Insulin Dependent Diabetes and Myofascial Pain Syndrome: A case report. Proceedings of the Fisher Institute for Medical Research 1997; 1:30-31.
49. Messina M. Nutritional implications of dietary phytochemicals. Adv Exp Med Biol 1996.401() 207-12.
50. Craig WJ. Phytochemicals: guardians of our health. J Am Diet Assoc 1997; 97(10Suppl2):S199-204.
51. Howard B, Kritchevsky D. Phytochemicals and Cardiovascular Disease. Circulation 1997; 95:2591-2593.
52. McCoy JP Jr; Chambers WH Carbohydrates in the functions of natural killer cells. Glycobiology 1991;1(4):321-8
53. Whiteside TL - Role of human natural killer cells in health and disease Clin Diagn Lab Immunol - 1994 Mar; 1(2): 125-33
54. Whiteside TL - The role of natural killer cells in immune surveillance of cancer. Curr Opin Immunol - 1995 Oct; 7(5): 704-10
55. See DM; Khemka P; Sahl L; Bui T; Tilles JG The role of natural killer cells in viral infections. Scand J Immunol, 46(3):217-24 1997 Sep
56. See D, Cimoch, Chou S, Tilles T. The in vitro immunomodulatory effects of glyconutrients on peripheral blood mononuclear cells of patients with Chronic Fatigue Syndrome. J Integr Physiol Behav Med (in press).
57. Adapted from McDaniel, HR personal communication.
58. Carlston M, Stuart M, Jonas W. Alternative medicine instruction in medical schools and family practice residency programs. Fam Med. 1997;29:559-562.
59. Miriam S. Wetzel, PhD; David M. Eisenberg, MD; Ted J. Kaptchuk, OMD Courses Involving Complementary and Alternative Medicine at US Medical Schools. JAMA 1998; 280:784-787.
60. Gordon J. Alternative Medicine and The Family Physician. AFP 1997;54(7),2205-2212.
61. Rivo ML, Kindig DA. A report card on the physician workforce in the United States. N Engl J Med. 1996;334:892-896.
62. Weiner JP. Forecasting the effects of health reform on US physician workforce requirements. JAMA. 1994;272:222-230
63. Cooper RA. Seeking a balanced physician workforce for the twenty-first century. JAMA. 1994;272:680-687.
64. Konner JA. Alternative Careers for Physicians JAMA.1998;279:1398.