

#### CLINICAL NUTRITION: TRANSITION FROM ART TO SCIENCE

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You are a chiropractor. You appreciate more than most people (certainly more than any other type of doctor) the critical role proper nutrition plays in your patients' health. So you read up on it. You take a couple of continuing education courses on nutrition. You contact a few suppliers of nutrition supplements and read all their promotional literature. The more you study the more excited you become. You are thoroughly convinced – clinical nutrition is certain to be the answer to many of your patients' health problems.

Without another moment's hesitation you dive in headfirst. Ouch! You should have tested the waters first.

You prescribe calcium for a menopausal woman concerned about osteoporosis and immediately she becomes severely constipated and her arthritis flares up. Then, you are certain zinc and vitamin C are just what your allergy patient needs to build his immune system. He sneezes, wheezes and itches as much as ever, while his cholesterol mysteriously soars to over 300. What about the woman with PMS? You try to help her with vitamin B6 and she suffers her worst migraine in twenty years. You have read about the wonderful benefits of unsaturated fatty acids, selenium, and germanium on arthritis. The first patient to take your cure bloats up with ten pounds of fluid retention in less than two weeks. Finally, backing a sure winner this time, you prescribe calcium for Tommy's developing teeth and bones, and the ungrateful little brat starts getting muscle cramps.

Wait a minute! Just when you are convinced that clinical nutrition is the one way to help nearly all your patients, everything is going wrong.

Your problem is simply that you are using a disease-specific, empirical approach to clinical nutrition, when you could be using a patient-specific system of objective testing. You are practicing clinical nutrition as an art, with all its uncertainties and frustrations. A far better alternative is to practice scientifically.

The purpose of this article is twofold; to demonstrate that objective testing procedures are essential to the practice of health care in any form, and, to show that with regard to clinical nutrition, objective testing procedures are available which permit its scientific practice.

### ART VS. SCIENCE

No one knows better than you, the chiropractor, the pain of being branded an illegitimate practitioner of the healing arts. You have been undeservedly called a quack, a charlatan. Why? Your art was claimed to have no scientific validity; and there was no denying an element of truth to that claim. Just what is this scientific validity that was lacking?

Inherent in the term "scientific" is the concept of being supported by objective evidence. Though practiced masterfully by the artists of the profession for decades, chiropractic had little to support it beyond the subjective, biased personal feelings of its practitioners and their patients.

Happily, this has changed dramatically in recent years. Study after objective study has substantiated in measurable scientific terms the efficacy of your profession. The transition from art to science is progressing at an accelerating pace, as you take your rightful place among the best primary health care providers.

It is time for clinical nutrition to make this same art-to-science metamorphosis. Of course nutritionists have always based their practice upon the objective scientific research of biochemists. Yet no matter how it is dressed up in scientific jargon, the application of this biochemistry as clinical nutrition has been an entirely subjective, unsystematic, unsubstantiated art form.

As a doctor of chiropractic you are perfectly positioned to deliver to your patients the almost unlimited potential benefits of therapeutic nutrition. The public is justifiably hungry for it; and you, the "natural doctor," are the logical choice to provide this valuable service. However, as a chiropractic professional you must demand of yourself that you provide for your patients only services of real, objective, measurable value. To do so is to exemplify the fine ideals of your rapidly evolving profession. To do otherwise is to regress back to the state of quackery and charlatanism.

How then must you proceed? How can you make nutrition as scientific in practice as it is in theory?

## DISEASE-SPECIFIC VS. PATIENT-SPECIFIC

Therapeutic specificity has long been "the impossible dream" of clinical nutritionists. Vitamins, minerals, trace minerals, glandulars, enzymes and amino acids are among the potent therapeutic agents at your disposal, yet specificity in their application remains a dilemma. Why is it that one patient's response to a particular combination of nutrition supplements is nothing less than miraculous, while another patient, presenting identical signs and symptoms, experiences under identical treatment an exacerbation of his problems? This question obviously must be answered before nutrition therapy can be employed with efficacy.

Specificity is the key word to this thesis and is defined here as, <u>nutrition</u> <u>supplementation of effective quality</u>, <u>quantity</u>, <u>and timing</u>.

Among the definitions of specific in Dorland's Medical Dictionary(1) you find, "a remedy specially indicated for any particular disease."

The above account of two patients with the identical disease responding oppositely to the same remedy invalidates this definition for your purposes. Dorland's also defines specific as "restricted in application or effect to a particular function." Relative to the previous definition the second creates a shift in perspective from "disease-specific" to "patient-specific." Referring again to the two patients with the same disease, you see that despite identical symptoms there is an obvious difference in the particular dysfunction responsible for their symptoms. Treating the disease is clearly inappropriate. You must treat the underlying dysfunction.

Empiricism is the antithesis of nutritional specificity. Yet it is the trap virtually all clinical nutritionists have fallen into. Empiricism is disease-specific. For example, if experience has shown Vitamin C to be an effective cold remedy, then Vitamin C is the remedy of choice for any and all cold symptoms; if Vitamin A and zinc have cured acne, then all patients with acne are given Vitamin A and zinc. The folly of the empirical approach is reflected in its inconsistent clinical results.

Only in applying the definition of specificity from the perspective of "patient-specific" will you resolve the dilemma of therapeutic specificity through nutritional supplementation. Only then can you prescribe the exact quality, quantity and timing of supplements to effect the desired changes in your patients.

# **BEWARE OF NON SEQUITURS**

It is just a little too easy to take a sound piece of biochemical research and extrapolate from its legitimate scientific conclusions some illegitimate clinical application for those conclusions. Perhaps it is wishful thinking by clinicians hungry for a way to help their patients that allows blatantly unscientific "jumping to conclusions."

For instance, the science of biochemistry tells us that copper is an essential part of the enzyme cytochrome oxidase, which is required for oxidative energy metabolism. Therefore, you can help a patient with "low energy" by prescribing a copper supplement.

Or, it is a scientific fact that B-vitamin deficiency causes nerve pathology. So, of course, you want to give your patients with "bad nerves" a B complex "stress formula."

You know that the prostate has, relative to other tissues, a very high zinc concentration. It follows that all men with prostate trouble need at least 50 mg. of zinc daily.

The stress of being in our modern environment creates oxygen free radicals, which have been implicated as a causative factor in virtually all degenerative diseases. If you do nothing else for your patients, you are going to see that each and every one takes a daily therapeutic dose of anti-oxidant vitamin E.

All the above are, of course, non-sequiturs. No matter how appealing the "logic" may sound, the nutrition therapy of choice simply does not follow from the scientific facts presented. This kind of flawed reasoning constitutes the sales pitch for the majority of products sold under the guise of therapeutic specificity.

This empirical, disease-specific, trial-and-error approach to clinical nutrition yields inconsistent and disappointing results. There can even be disastrous consequences, as illustrated by the iatrogenic symptoms suffered by the hypothetical patients described at the top of this article.

There is a better approach.

#### **OBJECTIVE TESTING.**

If patient specificity is your goal, how do you achieve it? The answer must be found in an objective testing system; a means of evaluating each patient's nutritional/biochemical imbalances regardless of the subjective symptoms they present. Only with such an objective system will you be finally able to treat the patient, not the disease.

The goal of objectivity in nutritional testing is being achieved.(2,3,4,5) The testing procedures are available to you.

Urine and saliva chemistries have proved to be extremely accurate in defining what metabolic imbalances exist in a patient.(6) Urine is, after all, the end result of all biochemical processes occurring in a person's body.

If, for example, there is an aberration in oxidative metabolism, the byproduct of that aberrant metabolism will invariably be found in the urine. Any inefficiencies of sugar metabolism, or of lipid metabolism, will leave their telltale sign in the urine chemistries as well. If a patient has poor retention of minerals, or excessive retention, that problem will also be revealed by urinalysis.

Other objective clinical signs can be used to define specifically how a patient is reacting in adaption to the metabolic imbalances revealed by the urine and saliva chemistries. Pulse, blood pressure, respiratory rate, and the pupil reflex, to name a few, will tell you whether the adaptative stress reaction has involved the autonomic nervous system, the cardiovascular system, or the hormonal system. (7) A comprehensive patient-specific nutrition profile can be completed in minutes, right in your own office.

Invaluable to the busy clinician is the finding that abnormal test results tend to occur in very definite combinations or patterns. Each pattern corresponds to aberrant function in what may be thought of as a fundamental metabolic control system.

Five patterns of abnormality are of diagnostic significance. These are referred to as the five fundamental balances:

- 1) water/electrolyte balance,
- 2) anaerobic/dysaerobic balance,
- 3) glucogenic/ketogenic balance,
- 4) sympathetic/parasympathetic balance,
- 5) acid/alkaline balance.(8)

A detailed description of each fundamental balance is beyond the scope of this article. The accompanying list of references should be consulted for indepth study.

The five balances conform to a dualistic model. The concept of an oscillatory dynamic balance, resulting from the alternate operation of opposed forces, is essential to the study of physiological function.(9) Normality, or health, is typified by maintenance of homeostatic balance of all physiologic entities via this dualistic mechanism. Abnormality, as expected from the dualistic concept, reflects an imbalance associated with the exaggerated predominance of one force over its antagonist. For each normal physiological condition, then, two opposite abnormalities are possible. In your urine and saliva tests this dualism is seen in the two opposite imbalance patterns possible for each of the five fundamental balances.

The forces inherent in maintaining the five balances are omnipresent in physiological function and dysfunction.(10) No bodily activity occurs that does not come under the sphere of influence of these balances. This fact greatly facilitates your efficacy as a clinical nutritionist. As all symptom complexes are merely the manifestation of one or more patterns of imbalance, they need not be considered as individual symptoms. Instead of being able to treat the thousands of possible symptoms presented by your patients, you need be competent at treating only ten patterns of fundamental imbalance.

#### **EFFICACY IN TREATMENT**

Even more exciting than the ability to identify fundamental imbalances is your ability to correct them. Each of the imbalances has demonstrated its reversibility when the patient is given appropriate dietary recommendations along with a very specific combination of supplements.(11)

To illustrate: one of your most valuable clinical tests is urinary surface tension. This is a measure of the amount of surface-active substances excreted. If your patient's surface tension is decreased it indicates excessive surface-active substances in the urine. These substances result from oxidative processes that are out of control and which involve damaging free-radical formation.(12) The patient is analyzed as having a Dysaerobic Imbalance.

The dysaerobic patient will respond beautifully to proper diet and supplementation.(13) All foods containing free fatty acids (fried foods, margarine, vegetable oils, salad dressings, canned meats) must be strictly avoided. Supplementation must include histidine, bioflavenoids, vitamin E, zinc, and chromium. Therapeutic doses of vitamin B6, calcium, selenium, methionine and essential fatty acids will quickly exacerbate the patient's condition.

It should be noted that there are certain symptoms that are commonly associated with this Dysaerobic Imbalance. These include migraines, colitis, insomnia, high cholesterol and allergies. These symptoms are inextricably linked with the patient's urinary surface tension. As your prescribed nutrition regimen brings the objective indicator up to normal, the subjective symptoms abate.

You may never have imagined such a radical departure from disease-specific attempts at therapeutic nutrition. You can effectively treat patients with symptoms as diverse as migraines and high cholesterol with identical patient-specific therapy.

# **SUMMARY**

A patient-specific approach to clinical nutrition gives you and your patients these important benefits:

- 1) You will no longer be dependent on empirical trial-and-error methods. Based on objective test procedures, your practice will meet the scientific criteria demanded by your professional stature.
- 2) Your patients will be taking just the supplements they need, in the form and combination most compatible with their body chemistry.
- 3) Your patients will not be wasting time and money taking supplements they do not need.
- 4) Your patients will no longer suffer adverse reactions to your recommended supplements.
- 5) You will not be dependent upon patients' subjective responses to your recommendations. No more chasing symptoms. You will have objective tests to monitor their progress.

This article has shown that empirical methods of treatment yield only inconsistent results and frustration for the clinical nutritionist. Furthermore, the means are readily available to determine objectively the nutrition needs of each patient. The transition from art to science is well under way. And should you choose to offer truly professional nutrition to your patients, you will participate in this metamorphosis.

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