

NUTRITIONAL ASPECTS OF TREATING PAIN

by Ronald L. Myers, CNC

Pain—what a great motivator! It can motivate your patients to *comply* with your instructions regarding their nutritional therapy. Remember; in all probability you are not the first health care practitioner they have seen regarding their pain. If another practitioner had helped them, they would not be in your office now.

What can be done to help people with pain after they have already been around the block more than once seeking help? Let me show you how to do it by first, keeping it simple and addressing their documentable, biochemical needs determined by blood chemistry and diet survey.

WATER—

Here is a need that is very easy to document; ask the patient how much water they drink each day. Don't ask the amount of *fluids* they consume daily say water! Fluids are not defined regarding net water consumption. As you know, some *fluids* have a decidedly diuretic effect; possibly removing as much or more water than they contain. So—"Mrs. Quackenbush, how much water do you drink daily? I don't mean coffee, tea, juice or soft drinks but WATER!"

Water as a pain reliever? Bayer and Co will love me for what I am about to communicate to you.

Pain-Dehydration Link

Histamine is the regulator of water intake and distribution in the body. As dehydration occurs, this system of water management swings into full gear. As histamine and its subordinate water regulators (prostaglandin's, kinins, etc) become excessively active, they cause pain when they come across pain sensing nerves (nociceptors) in the body. **Non-infectious, recurring, chronic pain should always be translated as a "thirst" signal first!!** Batmanghelidj, F.; *Pain; A Need For Paradigm Change*; Anticancer Research, V7, #5B, Sept-Oct. 1987.

In his book, *Your Body's Many Cries for Water*, Dr. Batmanghelidj details accounts of using plain, simple, taken for granted WATER to successfully treat all kinds of pain. Dyspeptic pain, joint pain, anginal pain; the treatment protocol used was water. I do not mean to imply that all pain is dehydration related, nor does Dr. Batmanghelidj. It is one more treatment option in your protocol book that may provide the patient relief because you have found the cause of their pain and shown them how to fix it! All they need to do is comply with your recommendations to drink at least eight glasses of * pure WATER a day. Let's try water as our **first** therapy for pain.

*(By pure water, I mean non-fluoridated, non-chlorinated water. This is extremely important for the patient's overall health. The only expense to the patient for the proposed water-drinking program is the minimal cost to rent, lease or purchase a Reverse Osmosis water purifier. *Editor's note.*)

PRO-INFLAMMATORY DIET—

According to various research articles and textbooks, the causes of inflammation are: microbial infections, physical agents such as trauma, chemicals (i.e., toxins and caustic substances), necrotic tissue and all types of immunologic reactions. Cotran, Kumar & Robbins. *Robbins' Pathologic Basis of Disease (4th ed.)*, Philadelphia: W.B. Saunders; 1994, p.40. The chemicals or toxins and caustic substances provide our dietary link to the inflammatory process. (These same chemicals stimulate nociceptors.) I will briefly review the more common foods that may give rise to "caustic substances" and make us prone to inflammation and its companion **pain**.

Trans Fatty Acids

There seems to be universal agreement among various authors (Enig, Erasmus, Seaman, Schmitt) that commercially prepared trans fatty acids cause metabolic problems in the human system. Inhibited activity of the elongase enzyme Delta-6-Desaturase (D-6-D) by trans fatty acids results in a relative over-production of the pro-inflammatory prostaglandin Series II. After years of consuming foods containing 50% or more of trans fatty acids (these foods, as you know have been promoted for years due to their "lack of cholesterol"), the patient is now prone to an inflammatory response at the slightest trauma.

According to Walter H. Schmitt, Jr., D.C. (*Compiled Notes On Clinical Nutrition Products*, 2nd ed., David Barmore Productions, New York, 1990.), these prone to inflammation patients can be identified by asking a simple question: "If you take an aspirin (or other NSAID) does it help?" If their answer is yes, you have a patient who has an essential fatty acid deficiency **and** a PROCESSED (or junk) fat *excess*! The same is true for those who find relief by using COX-2 (cyclooxygenase) inhibitors. In effect, the patient's biochemistry is screaming to us about their urgent need for essential fatty acids, if we have "ears" to hear.

Educate your patients regarding the benefits of natural fats (unsaturated and saturated) and the health risks of hydrogenated (trans or *junk*) fats. This is becoming easier. Recently I have seen several televised and print reports (in the popular press) raising at least the possibility that trans fats may have a negative effect on human health in more than one way. For almost a decade now this information has been appearing in books and peer-reviewed journal articles. In spite of the best efforts of the food processors, cholesterol myth promoters and other "experts" to suppress this information, in the end the truth comes out. Let's use the truth to the better health of our families and patients.

EFA SUPPLEMENTATION

Along with dietary changes, it is reasonable to recommend EFA supplementation. In a review of the literature for this issue of e-Bytes, I find an increasing number of researchers recommending a ratio of 1:1 between the Omega 3 and 6 families of fatty acids. Current estimates of this ratio in the standard American diet put it as high as 20 – 25:1 Omega 6 to Omega 3. This could be pro-inflammatory because the Omega 6 families are precursors to PGE2's.

Biomega 3 provides Marine source Omega 3 (EPA 180mg, DHA 120mg) unsaturated fatty acids. Independent laboratory analysis of this product (performed without the knowledge of BRC) shows it to be free of ANY heavy metal (or other) contaminants.

Flax Seed Oil provides Omega 3, 6 and 9 unsaturated fatty acids with greater than 60% being Omega 3.

BRC provides other EFA products, but for our purposes here, the above listed EFA sources will provide the results the patient is looking for regarding relief from pain and inflammation.

Intenzyme Forte this is a multi enzyme product providing live, active enzymes. Consider this for the patient suffering from pain and inflammation NOW. This product will provide significant relief in 48 to 72 hours. For the acute patient begin with a dose of 10 tablets t.i.d. or even q.i.d. on an empty stomach.

Several books (Lopez, D., Williams, R., Miehke, K., *Enzymes The Fountain of Life*, The Neville Press, Inc., 1994) and a number of journal articles describe the effectiveness of systemic enzyme therapy in the treatment of pain and inflammation. This therapy will provide your patients relief without any side effects that I know of.

Lactic Acidosis or the refined carbohydrate connection to pain. Blood chemistry interpretation can help you determine the patient with relative lactic acidosis. Most texts concerned with analysis of laboratory results relating to blood chemistry tell us that an increased Anion Gap is a marker of metabolic or lactic acidosis, especially in alcoholic or diabetic patients. Tietz, N., *Clinical Guide to Laboratory Tests*, 2nd ed., W. B. Saunders Co., 1990. Bakerman (*A B C's of Interpretive Laboratory Data*, 2nd ed., Interpretive Laboratory Data, Inc., 1984) writes the following regarding increased Anion Gap "Only four clinical conditions are associated with high anion gap metabolic acidosis; they are renal failure, ketoacidosis, drugs or toxins, and LACTIC ACIDOSIS. In the absence of renal failure or intoxication with drugs and toxins, an increased anion gap is assumed to be due to ketoacids or lactate accumulation."

Carbon dioxide (CO₂) is a bi-product of the Citric Acid Cycle (CAC). If the patient presents an increased Anion Gap with a decreased CO₂ on their blood chemistry, the clinical indication would be impaired CAC function with lactic acid accumulation. Athletes know that lactic acid accumulation in the soft tissues (muscles) results in **pain!** Whether your patient is an athlete or not, if they present an Anion Gap > 12 mmol/L with a CO₂ < 26 mmol/L and are in pain the cause is lactic acid accumulation in their soft tissues. Chemical sciatica, "fibromyalgia" are common conditions seen with lactic acid accumulation.

To calculate the Anion Gap:

$$(Na^{+} + K^{+}) - (Cl + CO_2) = \text{Anion Gap}$$

Sample Calculation:

$$\begin{array}{r} (Na^{+} 141 + K^{+} 4.2) - (Cl 104 + CO_2 22) = \text{Anion Gap } 19.2, \text{ increased.} \\ = 145.2 \quad \quad \quad - \quad \quad \quad = 126 \quad \quad \quad = \text{Anion Gap } 19.2, \text{ increased.} \end{array}$$

If the laboratory you use provides this calculation for you, check it using the above formula to insure accuracy. Not all laboratories use this formula in calculating the Anion Gap, why is uncertain. The other formula leaves potassium out of the calculation.

CAC SUPPLEMENTATION

Dietary changes should be geared to reduce consumption of refined sugars and other refined carbohydrates. Fruit juices and fruits such as raisins, bananas and grapes may need to be avoided at first due to their content of fast-acting sugars. Encourage this patient to increase their consumption of good quality, animal source protein, natural fats and complex carbohydrates. (Consider Low Carbohydrate Diet.)

Consider supplementing the patient with the following CAC and Electron Transport Chain (ETC) nutrients:

Bio 3B-G provides the food grade, co-enzymatic form of thiamine and other B complex factors. **Bioglycozyme Forte** provides the food grade form of thiamine with other B complex factors as well as other accessory nutrients (except Lipoic acid, iron and phosphorus) required for CAC function. The above two products may be used separately or in concert depending on the severity of the case.

Ultra PPI provides orthophosphoric acid with riboflavin (and inositol) for CAC function. In reviewing patient data for doctors, I find phosphorus is often missed as part of the protocol in treating fatigue and pain. It is a required nutrient in the Citric Acid Cycle (CAC) for the metabolism of lactic acid, and is required for the production of ATP, a tri-phosphorylated molecule, by the Electron Transport Chain (ETC). Serum phosphorus decreased to < 3 gm/dl will identify the patient needing phosphorus supplementation.

Lipoic Acid Plus provides 100 mgs of alpha lipoic acid and 50 mgs of mixed ascorbate per capsule.

Co Q Zyme 30 provides 30 mgs of emulsified coenzyme Q₁₀ per tablet. The human body CANNOT produce energy without coenzyme Q₁₀! It is the nutrient that opens the door to the Electron Transport Chain for the production of ATP. I know what you are thinking; this issue is about PAIN not fatigue you myopic dwarf! Well, it's not nice to fool Mother Nature. It may not be a good idea to normalize CAC function without considering a possible ETC impairment. Remember, if your patient has been or is now taking statin drugs, their need for Co Q₁₀ is assured. Without adequate Co Q₁₀ the molecules produced by the CAC cannot enter the ETC and may result in tissue damage due to oxidation of cell membranes; more pain.

Mg Zyme provides 100 mgs of magnesium per tablet. **Bioglycozyme Forte** contains some magnesium, but more may be needed when dealing with soft tissue pain.

Gout—the Uric Acid connection to pain. The biochemistry books tell us that uric acid accumulation in humans (usually men) is due to an inborn error of metabolism, i.e., the uricase enzyme is void in man. Uric acid is the result of purine metabolism. Serum Uric Acid will usually be increased to > 6 mg/dl in gout.

U. A. SUPPLEMENTATION

Along with a Low Purine Diet, consider supplementing the patient with the following nutrients: **Folic Acid 800**, folate is known to inhibit the final step in purine metabolism leading to the formation of uric acid. Dose, 6 to 8 tablets daily.

Li Zyme Forte provides 150 mcg of lithium from vegetable culture per tablet. Lithium seems to help break down uric acid crystals.

As always, before having the patient begin any food supplement program, evaluate their G. I. function and if impaired supplement with **Hydrozyme** (hypochlorhydria) and **Beta TCP** (biliary stasis) at no fewer than 2 tablets each with each meal for two weeks before allowing them to begin the main protocol. If the patient is over 35 and presented with hypochlorhydria, long-term supplementation with **Hydrozyme** may be required to maintain adequate HCl levels.

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