

Rayburne W. Goen, MD, FACP, FACC.

Tulsa, OK

Fax (918) 492-4216

E-mail: r.w.goenmd@cox.net

The New Nutrition and Doubting Doctors

September 11, 2004

Dear Doctor,

Thank you for this opportunity to introduce to you the most monumental discovery in Healthcare in the past 100 years, now acknowledged in Medical Journals and Textbooks (1996).

When I first heard about **Glyconutrients** 5 years ago, I called it "Hogwash". I declared that anyone who claimed that oral administration of such supplements was of striking benefit to people suffering from a long list of unrelated diseases or ailments was a QUACK! In the same class as all the others making such claims, whatever the modality, for relief of a multitude of ailments, so blatantly proclaimed and touted in numerous brochures and catalogs in the daily mail. I was already well versed in that kind of hype! I had previously tried, on myself, enthusiastically at first, the highly touted Glucosamine, Chondroitin Sulfate, Cetyl Myristoleate, MSM, SAM-e, Blue Green Algae, Alfalfa Tea, Olive Leaf Extract, Colloidal Silver: -- each with lots of "ink" but not one helped me in any way.

I was closed-minded -- call it skeptical, dubious, or cynical- as you and the rest of our Medical profession would have been, and are. I was, however, receptive enough to read the pertinent Medical Journals offered to me, and I must admit I was a little jarred at the implications of what I read. I began to look into what turned out to be an overwhelming amount of related literature: Carbohydrate ("Glyco") Metabolism is suddenly a hot subject-- over 20,000 papers in Medline 1996-1998, and a greater number since. All of them are in Specialty Research Journals that we as practicing physicians do not take or read— nor readily understand! The Clinical articles published thus far have been mainly Retrospective or Prospective: case reports of a series of patients with a major disease, and with suspiciously high percentages of positive results. I read many of these articles. I could not believe they were documenting something so fundamentally powerful, as that a mere food supplement (sugars at that!) could correct a deficiency in our diet so vitally important as to be the mechanism of all cellular communication in our body The **Glyco** of Glycoproteins, enabling every metabolic and biologic function that occurs in that marvel of creation, the human body!

I proposed to try (surreptitiously --"don't tell anybody"), Glycosupplements for a list of 21 ailments I could identify in myself, rated in severity from 1-10, attributable mostly to "old age" (I was 85 years old at the time). I was not neurotic-- just trying to be scientific. None of these completely disabled me, except Arthritis of knees, which required aspiration of fluid and instillation of a Cortisone, Depo Medrol, more and more frequently: eventually every 3 months for one, then the other knee. Then I would again be functional. I had a Peripheral Neuropathy, which impaired my balance, walking, and sleep because of restless legs; a right shoulder Rotator Cuff tear; Low Back pain; Cervical Disc with left C-5 Radiculopathy; Inflammatory Osteoarthritis of hands (I could not shake hands without hurting the next 3 days); Hypertension (190/105); Hypercholesterolemia (320mg) since in my 30's; Nocturia 4-6x per night; Urinary Urgency Incontinence; Prostate Cancer; Cataract both eyes, etc

**Within 4 months, I became symptom-free of 20 of these 21 complaints!** I was

able to **discontinue all 8 prescribed drugs, and all over-the-counter, except 1 baby aspirin every other day (I had a Coronary in 1990, for which I took aspirin). The drugs had been effective to a degree, but all had side effects that were either disagreeable or intolerable.** That result was not enough to convince me. This had to be some sort of “fluke”!

I resolved I could disprove this “stuff” by persuading a “know-it-all” patient who scoffed at the idea of taking supplements like these for his refractory Raynaud's Syndrome (cold-sensitive fingers that turned purple and agonizingly painful upon exposure); uncontrolled type 2 Diabetes with serious adverse effects from Insulin and oral anti-diabetes drugs; Hypercholesterolemia; and Diabetic Peripheral Neuropathy, worsened by all “statin” drugs for cholesterol reduction. He was scheduled for replacement surgery of both knees, each of which had been operated twice for old injuries and loss of cartilage, poorly responding to NSAID drugs, and with intolerable side effects. He had stated he was going to discontinue all the above drugs--- he would rather die than live this miserably. I reminded him that dying is an easy out, but that he might not die, but be disabled by Heart Attack, Stroke, Amputations, Blindness, or Renal Failure and Dialysis. I managed to induce him to try Glyconutritionals for 4 months, with the assurance they absolutely could not harm him. He reluctantly agreed...Three weeks later he reported he was free of knee pain and paresthesias, was having normalized blood sugars on just the one oral anti-diabetes drug he had tolerated (but had not previously controlled the high blood sugar). His vision and mental clarity were improved. He neglected, however, to reorder the supplements, and the symptoms all recurred within 2 weeks. Upon resumption of the supplements, the symptoms again abated. **Koch's postulates fulfilled!!**

I still was not convinced! I did cautiously offer Glyconutrients to several other former patients, including 2 refractory diabetics with complications, with similar salutary effects. I was nearly convinced, after almost a year of results that I could only describe as incredible!

So---- I gave Glyco-supplements to Zondra, a patient whom I had “doctored” for 50 years with Muscular Dystrophy, Spinal Atrophy type. (*Her brother had died at age 13 with Duchenne type MD*). She was total care since age 3 years; unable to do anything for herself; had impairment of swallowing; and was on Oxygen 24 hours daily. She was able to do some ceramic painting, with her right arm supported on a table, for 2 hours, twice a week. 4 months after starting glyconutrients, she could, for the first time in 50 years, feed herself, brush her teeth, scratch her nose, and is now off Oxygen for 3-4 hours daily. She can now swallow well, and she can paint 6-8 hours per day, 6 days a week! She states “I have so much energy I could do more, but know I should rest some, whether I feel the need or not!” She has sustained this improvement, and for the first time ever she has not been treated or hospitalized for respiratory failure or infection in over a year, despite a Flu epidemic disabling two of her Nurses and her room mate!

Bill, a former Surgical Technician in the Service, developed Type 2 Diabetes after returning from overseas in the 80's. When originally diagnosed, his blood sugars were in the 900's and remained uncontrollably high (above 500) for many years, despite multiple injections of regular Insulin up to 200 units daily, plus Ultra-Lente (long acting) Insulin 120 Units daily. He developed Retinopathy, requiring Laser cautery every 3 months for years. He developed Peripheral Neuropathy of both legs and arms with complications of Diabetic Ulcers on his legs and feet, for which amputation was advised. This he refused. He experienced muscle deterioration, with Claudication (leg cramps) and Angina on attempting to walk half a block. He gained weight, up to 330 lbs, with the inactivity. Despite being on

multiple medications, his blood pressure for years averaged 200/115. He developed Arthritis, especially in his hands. After 4 years, he acquired an electrified “scooter” which enabled him to get up and around... In the early 90’s, over a 3-4 months time period, he had a series of Strokes with some permanent left-sided weakness, Migraine Headaches, and double vision. Sleep Apnea, and shortness of breath at rest, necessitated 6 inhalers, including nasal and tracheo-bronchial steroids. He experienced Heart Failure with edema of the lower limbs. For years he has been on a multiplicity of antibiotics – a month without any was considered a “Good Month”! His Kidneys began to excrete albumin, and his BUN and Creatinine elevated as he approached Renal Failure that would require Dialysis. Because of the seriousness of his combined health problems, he “realized this would prove TERMINAL in a short period of time”. He became severely depressed because of his condition, and by what it was doing to his family. Despite the efforts of 12 Doctors and Specialists, nothing seemed able to alter the downward trend of his health.

He had “given up all hope, and was making arrangements for his funeral”, when the Minister who would conduct his funeral introduced him to Glyconutritionals. He decided, as a last resort, to try some – “not expecting anything to happen. After all, nothing else had helped”. 3 months later the vision was improving, the ulcers of feet and legs were healed, the pain, swelling, weakness (including the left side stroke weakness), shortness of breath, and angina no longer were a problem. He was off all 6 inhalers, and his arthritis was all but gone. He is able to walk without depending on the scooter or a cane, and now drives his car. The Migraine has resolved, as has a chronic sinusitis, and he has not needed any more antibiotics. Blood pressure now averages 130/85. Albumin is no longer found in his urine, and the creatinine levels have not increased, indicating stable renal function rather than the previously noted progression. He lost weight from 320 to 280 pounds, and continues to lose fat and regain muscle mass. . The Insulin has been reduced to 10-50 units daily, of Regular; with Ultra-Lente, 60 units each Am and PM. The blood sugars are running 105-125, and the Glycohemoglobin (A1c) is now an incredibly low 5.1 (a measure of the biological level of glucose saturation of the Red Blood Cells. Very, very good!) He could no doubt reduce his weight and Insulin further by following a low glycemic diet. He exercises more. His severe depression is no more. *[[After 4+ years of this wellness, he was doing some home repairs and wounded his back. Meningitis was suspected, and Glyconutrients were stopped during hospitalization, workup, operations, and Rehab. He deteriorated rapidly, with diabetes uncontrolled, paralysis of bladder and stools, massive bedsores, ulcerations, and bleeding. He is now dead since without Glyconutrients]]*

Maxine is a 65 year old housewife who had Breast Cancer in 1984, treated with bilateral mastectomy. The Cancer recurred in the abdomen and stomach 16 years later, for which she received 6 chemotherapy treatments in 2000. These were very poorly tolerated, and did not improve her condition. She developed obstruction of colon, necessitating a Colostomy; and blockage in the Stomach outlet, resulting in abdominal swelling, loss of appetite, and rapid weight loss. She was told there was nothing more to do, and Hospice was utilized for pain control with injections of narcotics, and expectation of death within 6 months. 3 months passed, with a downhill course, despite herbals.

Glyconutrients were offered to her, and in desperation she began to take them. Within 2 weeks she was out of bed, going to Church, and a week later she insisted on going to a garage sale! She was then up and around, doing housework and the cooking, enjoying eating, in little pain, and the abdominal swelling had disappeared. Praise God! *[[Unfortunately, after 8 months of comfort and activity, Glyconutrients were not available for*

*2 weeks, during which time she rapidly declined. When the Glyconutrients became again available, she could no longer swallow or retain, and within another week she died. The lesson: if effective, **NEVER, EVER discontinue the Glyconutrients!** ]]*

Kelly is a 7 year-old with severe Cerebral Palsy, with hands clenched, arms and legs spastic and crossed, head turned upward and out, and unable to speak. Glyconutrients were started, and within 1 week her hands were unclenched. Arms and legs uncrossed in another week. At 3 weeks she was trying to talk. This was frustrating to her, and she became almost violent in her actions for the next six weeks. I did not hear from her for another 2 months. Then I was told that she had learned to ride a bicycle, and I watched this on a video! **Glyconutrients enabled her body to heal!**

The sugars are teamed with other supplements enabling body **protection, regulation, repair, nourishment, and disposal functions**. Glyconutrients are fully documented to be safe, non-toxic, and do not interfere with Rx drugs. We are noting 1/3 of those taking Glyco-supplements show striking improvement; 1/3 require longer, or larger amounts, and 1/3 may not respond. Such RESULTS as these, and now many others, I have not seen before in my 65 years as a Doctor!! Nothing is ever 100% –there must be some other **unknown essentials**, as well as the known: oxygen, water, and food: i.e. amino acids, fatty acids, carbohydrates, vitamins, minerals, trace elements. None of those are now likely deficient within our current diet and traditional supplements- except 6 of the newly-recognized 8 essential sugars, and possibly the **Omega 3 Fatty Acids**.

The only things that convince us Doctors are CONSISTENT, SAFE, RESULTS. We have all been led down the primrose path with promising new drugs, approved by the FDA, and seen them withdrawn from the market 6 months later because of dire effects on the liver, kidneys, bone marrow, GI tract, and/or pregnancy. How many more do we daily prescribe which result in only occasional "idiosyncratic" lethal effects, with approved doses, within the acceptable risk-benefit ratio? (But over 106,000 in the year 1997 died in, and 180,000 outside, hospitals, from reactions to properly prescribed and taken drugs, as reported in JAMA July 26, 2000. This is the third leading cause of death in the US, outnumbered only by: Heart Attacks and Cancer). It has happened in my practice, as it has that of every Doctor who prescribes for patients. It has been devastating enough to me and to you, but how much more so to the patients and their families! For them it is 100%!

**Carbohydrates** were always acknowledged to be **just for energy. Not any more!!** Of the 200 known complex carbohydrates there are **8 that are now recognized to be essential** to all cellular function. They are **glucose, galactose, mannose, xylose, fucose (not fructose), N-acetylneuraminic acid (also called sialic acid), N-acetylglucosamine, N-acetylgalactosamine**. Six of these eight essentials are universally lacking in our diet, because of soil depletion, green harvesting, processing, preservatives, and overcooking. Fortunately our bodies can make these 6 from glucose and galactose, if everything is all right! Obviously, everything is not all right if the body has a **Health Problem**, whether from **infections; toxins** in our environment: the air we breathe, the food we eat, the water we drink; **stresses** in our lifestyle; **deficiency** of a necessary enzyme, vitamin, co-factor, trace minerals; **Free Radicals**, or a **genetic defect**, in the 15 or more stages, plus much energy, to convert one (available) sugar to another! **Currently, the most important one of all these "essentials" is the one that is missing! And "essential" means the body must have it; cannot make it; and without it, the body is dysfunctional, sick or dying!**

There are some studies, Double-Blind, Placebo-Controlled, with enough numbers to

be Statistically Significant, as we are so used to seeing, but these are years away from being reported. Food Supplements, being non-toxic do not undergo this type of research. Many are not subject to double blinding or placebo control, such as near-terminal Cancer cases, Genetic Disorders with progressive downhill course, and Immune Dysfunction diseases, which are epidemic, overwhelming us over the past 2-3 decades. For these we have no cure -- nor even satisfactory or safe relief of the symptoms, with our conventional therapy: Asthma, Lupus, Hepatitis C, Rheumatoid Arthritis, Cancer, Leukemia, Cerebral Palsy, Osteoarthritis; Cystic Fibrosis, ADD-ADHD, Fibromyalgia, Diabetes types I and II, Chronic Fatigue Syndrome, Multiple Sclerosis, AIDS, Ulcerative Colitis, Crohn's Disease, Down Syndrome, Muscular Dystrophy, ALS (Lou Gehrig's Disease). These are just a few examples, in which administration of Glyconutrients has resulted in improvement or remission, in each of these conditions, (without any harmful side effects!), as documented in reports or publication in peer-reviewed Medical Journals.

### **What could possibly be the common denominator of all these?**

#### **Immune System Dysfunction! Why? Something Essential is missing!**

**Glyconutrients** are not a treatment, mitigation, or cure for any disease, but if these food supplements are **supplied in the diet, the body can heal itself of virtually anything wrong!** (*But not grow a new tooth in an adult if one is pulled, or a new limb if it is amputated. That is not in our DNA! It is, however, in the DNA of Sharks which lose a tooth, and Lobsters which lose a limb*)

These 8 monosaccharides are in and on every cell in the body. They are necessary as the glyco of glycoproteins on the surface of every cell, as transmitter or receptor, of all the vital reactions between cells: defense, repair, regulation, nutrition, and apoptosis, (*the programmed death and recycling of all cells*). *Every cell in the body (100+ Trillion or so!) is replaced at different rates: (e.g. WBC, 6-7 days; RBC's, 3-4 months; DNA and most Internal Organs, 6 months; Bone, 9 months; Brain and Spinal Cord, 14 months)*. These monosaccharides are present as a substrate in the Endoplasmic Reticulum, and as building blocks for the glycosylation occurring in the Golgi Apparatus of cells, forming glycoproteins, proteoglycans, glycolipids, and glycophospholipids. This is all under control of the DNA as the blueprint, and mRNA, as the message. The glycoproteins translate the messages and send chemical signals (*cytokines*) to the appropriate receptors, (*also glycoproteins*) to facilitate the proper action at the cellular level. This is the Universal Code of Life, equivalent to the Microsoft Operating System, which runs all computers! This is extremely complicated and has to be, not 99.9999% perfect, but 100%, or there is dysfunction, disease, or death!

I have studied intensively, still know so little, but yet enough to be awed and excited by what I have witnessed! Supplying Glyconutritional in the diet has enabled the body to **modulate the immune system**: elevate those elements that are too low, as in Cancer and AIDS; and reduce those that are too high, as in autoimmune diseases; or do both, as in most of the immune dysfunctions!! This Modulation had been considered impossible—something never before seen in Medicine.

**The new Glyconutrient AO (Antioxidant) is proven to be by far the most powerful antioxidant of 90 tested. This is Anti-aging, anti-mutation and anti-cancer, by combating Free Radicals.**

The Natural Killer Cells, necessary as the first line of defense against Infection and Cancer, are reduced by 30 % in even the "normal" population in the past 2 decades, and

are further falling by 3% per year. No wonder 150,000,000 of the US population are suffering from some form of acute or chronic disease! These Natural Killer Cells are restored to normal counts in those receiving Glycos.

How? I do not know! But the body knows! Thank God!

Cell-to-cell communication via a “Zip code” was the subject for the Nobel Prize in Medicine awarded to Dr. Gunter Blobel in 1999. He did not recognize that **glycoprotein interactions** generated the actual specific chemical messages sent. This mechanism of communication has been demonstrated within the past decade, when use of Mass Spectrometry, and High Resolution NMR Spectroscopy, became available, initially only at Oxford University. In the past few years, 8 essential monosaccharides were identified— then the globe scoured for plant sources of the missing 6 monosaccharides. They were identified, isolated, purified, and combined into a powder as a Nutraceutical: —a pharmaceutical-grade high Antioxidant natural food concentrate.

Dr. Robert K Murray, Senior Editor of Harper's Biochemistry (*Appleton and Lange, 1996*) wrote the chapters 56 through 65 on: Glycoproteins; The 8 Essential Monosaccharides; The Extracellular Matrix; Muscle Metabolism; The Immune System; etc. I have the 25<sup>th</sup> Edition (2000), and have pored over the awesome biochemical reactions, newly-discovered, in this explosively growing segment of Biochemistry: Glycoscience, Glycobiology, and Glycomics!

I will ask you, Doctor, if I may, "How did you advertise when you started your Medical Practice? Newspaper? Radio? TV?" Or “Word of Mouth” from satisfied Patients?? I can guess!!! So did I!

Don't knock **Word of Mouth!** We who are aware of this discovery do not sell products, but educate and introduce the good news to those we love and want to help, who then can order these Glyconutrients wholesale from the only company who can supply all of them, shipped directly to their home; to be taken as a **complement to conventional Medical Care**. We, and they, see benefits more safely, more completely, more consistently, and less expensively, than we have ever seen in our lives before! And **they, in turn, will share** the good news with others who are suffering from the effects of these deficiencies! Better yet, these Nutrients enable Prevention, Wellness, and Anti-aging!

I am now retired, but I can't deny my love for Medicine, nor yet ignore the recent monumental advancements in the Science of Nutrition, and especially the role of monosaccharides in the formation of glycoproteins, so vital in the function of the cells of our body. At age 90 I am enjoying a new career (*yes, Mission!*) to share with everyone I meet, this epochal Nutritional Breakthrough, and its effect on the Immune function. Medicine has advanced beyond the Blood-letting, Leeches, and Maggots treatment of disease, to Immunizations, Wonder Drugs, incredible Surgery, Organ Transplants, and DNA/Genomes. We have great expectations from the latter, but the promised wondrous cures are yet years away from application, and even the initial Genetic modifications are fraught with the same old side-effects that other synthetics have exhibited. The body is programmed by God to utilize whatever it needs from our foods, and is not about to change. **Stem Cell Cloning** is superfluous, as our own bone marrow contains Stem Cells that can develop into whichever organ cells the intact DNA directs, **when missing Glyconutrients are supplied!** Glyconutrients are already available here and now, safe and effective, awaiting but the eventual universal recognition by all Health Professionals! This New Nutrition: Diet, Supplement, and Exercise, is the Keystone of **Prevention and Wellness**, as our New

Focus in the Practice of Medicine, versus the traditional paradigm of **Treating Sickness symptoms**, with **Rx. Drugs**.

This new paradigm in Medicine did not originate in the traditional “A Drug Cure for Every Disease” concept of Pharmacology, nor yet by the Nutritionists. This is a “Disruptive Technology”, comparable to the displacement of Phonograph records with Magnetic Tape, and this in turn by Digital CD and DVD, each of which was birthed by a totally unrelated industry. Likewise, was the obsolescence of the watch and clock by the Quartz Crystal; and the Mechanical Typewriter by the Electric, and this, in turn, by the Word Processor of the Computer, again an upstart industry.

**The new Biochemistry: Glycobiology, Glycoscience, Glycomics: Glyconutrients!**

For those who might be interested in my background, I have BA and MD degrees (1939) University of Colorado: (*Phi Beta Kappa, and Alpha Omega Alpha, Honor Medical Society*). Lt. Col. Medical Corps. Army of US, WW II; Diplomat American Board of Internal Medicine; Fellow, American College of Physicians (FACP); Fellow, American College of Cardiology (FACC); Clinical Associate Professor of Medicine, University of Oklahoma School of Medicine, Tulsa; Past Chairman Medical Section, St John Medical Center and of St. Francis Hospital, Tulsa; past Vice-President Medical Staff St. John Hospital; past President Medical Staff St. Francis Hospital. “Leader in Medicine”, OSMA, 1996.

I couldn't blame you if you thought me a Kook, but do please be open-minded, for your own sake, and for that of all your patients. And in so doing you will honor the aphorism of that wise old Doctor, Hippocrates, the Father of Medicine, whose first concern with his patients was “*Primum non nocere.*” *Above all, do no harm!* And his next was “*Let your Food be your Medicine, and let your Medicine be your Food*”. What goes around comes around!

Rayburne W. Goen Sr. MD