Mentoring the Mentor

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Mentor goals:

- To declare what is possible and establish a commitment to that possibility
- Address personal and professional barriers limiting the ability to serve
- Evolution of vision/mission/ethics that drive success
- Create immediate action steps to apply learning and growth
- Construct the round table of applied trophologists

Mentoring the mentor:

- Who are the mentors? – Practitioners
- Who are we mentoring? – Patients and GAP
- What’s the purpose? – Optimized life
- How does it work? – Whatever you learn you teach someone else (anyone else)
- Who’s is included? – Self selection, you pick yourself
Mentoring the mentor:

- Each participant attends monthly teleconferences (1 hour in duration, 4th Thursday of month) creating a round table discussion/exploration of the dynamics and details of a nutrition-based holistic practice
- Each participant chooses how to convey the notes and information to their world and community — no information squandering

Review - Distinguish yourself

- It is more apparent why people are choosing alternative health care professionals who specialize in a functional approach
- No matter you specialty or technique you must distinguish yourself as an expert -- people are just seeking to understand and they need you to do so
- Typically in the healthcare industry people are receiving shallow answers that leave them puzzled with the mystery of “Why is this happening to me?” and “What can I do about it?”
- Trends research over 10 years ago identified a number of factors essential to being successful in the nutritional field — one of those was establishing yourself as an expert

Review - Explanation as hope

- The practitioner’s ability to explain health issues and therapeutic outcomes creates an inflation of understanding in the patient which feels like hope
- Today in the professional world there is so much avoidance of ‘giving false hope’ that often we end up offering little hope at all
- I propose another model that bolsters hope and expectation and subsequently practices accountability as to whether the therapeutic endeavors are achieved or not
- As long as the hope that has been instilled is revisited and acknowledged as being accomplished or not the betrayal of false hope can be avoided
- So as an example, if a practitioner was describing the potential for nutritional intervention through supplements and diet modification to improve the lipid profile, then s/he would need to revisit to success or failure of the experiment within a reasonable period of time
- Our community is starving for legitimate hope, as a starting place, as empowerment to begin, as an idea to act upon
- There is genius in hope
Mentor Considerations

Contents

Hypertension – Idiopathic or Undiscovered – Part I Review
Hypertension – Part II - Microcirculation

Triage Theory by Bruce Ames

• The Triage Theory describes that DNA damage and late onset disease are consequences of ‘triage’ allocation mechanisms developed in evolution to cope with periods of micro-nutrient shortages.
• In this observation he sees that rate limiting shortages cause certain events to be postponed to later activity in favor of immediate short term survival needs.
• Micronutrients, when scarce, are used for short-term survival at the expense of long-term survival.
• “The theory explains why diseases associated with aging like cancer, heart disease and dementia (and the pace of aging itself) may be unintended consequences developed during evolution to protect against episodic vitamin/mineral shortages.”
• The following white paper describes this in more detail.

Eternal truth -

Fulfillment is not a goal to achieve,

But always a by-product of sacrifice.
Epigenetics - Already doing it!

- All nutrition no matter how basic is epigenetic in its influence.
- We must exceed intimidation and admit that we have been modulating the genetic expression and repairing DNA since we began seeing macroscopic clinical signs of improvement in health expression with nutrient influence.
- All nutrition is information.
- In the largest view nutrition and genetics is where the human becomes one with the environment.
- We need the environment to fully elaborate ourselves – to turn on the machinery.

Rate of Reaction

- This is the unified mechanism that allows us to understand genetic influence and bio-individuality.

Disease as a mosaic pattern

- Most imbalances and diseases are not a single event distortion.
- There are multiple factors combing to create an outcome, which also helps describe the resistance to getting sick and to getting well.
- Idiopathic Hypertension is a good example of this mosaic pattern.
- Proper clinical management can reveal the underlying events contributing to this physiological modulation, and reinforces why the practitioner is essential in the investigative process of finding these.
- The following is a suggested sequential consideration of factors contributing to hypertension.
Hypertension

Hypertension is the term used to describe high blood pressure.

Blood pressure is a measurement of the force against the walls of your arteries as your heart pumps blood through your body.

Blood pressure readings are usually given as two numbers -- for example, 120 over 80 (written as 120/80 mmHg). One or both of these numbers can be too high.

The top number is called the systolic blood pressure, and the bottom number is called the diastolic blood pressure.

Normal blood pressure is when your blood pressure is lower than 120/80 mmHg most of the time.

High blood pressure (hypertension) is when your blood pressure is 140/90 mmHg or above most of the time.

If your blood pressure numbers are 120/80 or higher, but below 140/90, it is called pre-hypertension.

If you have pre-hypertension, you are more likely to develop high blood pressure.

The following factors should be considered as the mosaic is revealed:

- Cortisol elevation and ‘cortisol resistance’
- Food allergy mechanisms of influence
- Metabolic Acidosis
- Mineral deficiency
- Inflammatory and Immune up-regulation
- Pain – silent of conscious
- Circulatory limitation – macroscopic and microscopic
- Primary organ influence

Cortisol dysregulation
The Stress Model

- The HPTA is at the heart of the body's ability to respond to the environment.
- Cortisol elevation is the result of Corticotrophin Releasing Hormone (CRH) arising from the parvocellular neurons of the paraventricular nucleus (PVN) - this is the 'master' stress hormone released in response to the perception of stress.
- Stressful stimuli are generalized as:
  - Physical - pain, trauma, infection, hypotension, exercise, hypoglycemia
  - Psychological - bereavement, fear, personal loss, anger (the perception that God is not in control - something is wrong)
- CRH is released into the portal circulation of the Median Eminence and is carried by venous blood to the corticotroph cells of the anterior pituitary where it binds to the cell surface receptors stimulating the release of Adrenocorticotropic Hormone (ACTH).
- ACTH reaches the adrenal cortex stimulating the synthesis of Cortisol (glucocorticoid) and also androgenic hormones like androstenidione and DHEA (both may convert to testosterone and DHT in peripheral tissues).

The Stress Model

- Cortisol maintains blood glucose during stressful 'fight or flight' challenges so that as more metabolic fuel is consumed a critical amount is maintained for brain function and to support the activated survival organs such as the heart, lungs, and skeletal muscle with renewable supply of fuel.
- Cortisol also participates with Aldosterone (mineralocorticoid) in driving sodium reabsorption from the renal tubules conserving electrolytes and water within the vasculature to provide blood and perfusion pressures to vital organs.
- Cortisol concentrations rise until it effects negative feedback on the CRH neurons and the pituitary corticotrophs to return blood levels to normal preventing prolonged elevations of CRH, ACTH and cortisol.
- Chronic stress and maladapted responses to stress alters this mechanism and causes long term cortisol dysregulation and even 'cortisol resistance'.

Cortisol Activation
### Modulating Cortisol

- Symplex, Hypothalmex/us – HPA general support
- Androgen up-regulation
- Adrenal Complex – 2-4/day licorice & rehmannia
- Allergen removal
- Drenamin – 6/day
- Dessicated Adrenal – 2-4/day for acute activation
- Eleuthero – 2-4/day
- Withania Complex – 2/day
- Vitanox 2-4/day
- Detoxification
- Change of thinking
- Neuro-emotional release

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### Modulating Cortisol

- Adrenal Complex (1-2) has exploded on the scene and represents another MediHerb homerun
- Introduced in 02/09 it has backordered multiple times as Americans have grasped its value as an idea whose time has come
- Licorice (250 mg of 7:1 extract) contains 25 mg of glycyrrhizin the active component that assists cortisone (a less active storage form of cortisol) to convert to cortisol (more active form)
- Rehmanna (150 mg of 5:1 extract) provides immune modulation
- Expect modulation in WHR, concentration, sleep quality, reduced muscle tension, relaxability, reduced anxiety
- Contraindicated when hypertension results

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### Food Allergen Influences
**Determining Food Allergies**

- Blood type sensitivities
- Most food allergies are delayed sensitivity reactions – difficult to objectively determine
- Elisa Act lymphocyte response assay
- Elimination is the most accurate and labor intensive - 2 week elimination then reintroduce and watch for 4 days for reactions
- Histaminic Reactions (rash, red eyes, serous secretions) vs. Immune Activity (fever, catarrhal, lymphatic congestion, aching)
- Basic 4 allergies that most complicate healing process – wheat (gluten), corn, soy, milk (casein)
  - Additionally suspect: chocolate, peanuts, tomatoes, beef

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**Food Allergies – Now & Later**

<table>
<thead>
<tr>
<th>Immediate response within hours or next day</th>
<th>Delayed response onset 2-7 days later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Histaminic</td>
<td>Immunological – viral, bacterial, parasitic</td>
</tr>
<tr>
<td>Red, burning eyes, serous secretions (clear)</td>
<td>Colds &amp; Flu – WBC mediated response</td>
</tr>
<tr>
<td>Tiredness, sleepiness</td>
<td>Achiness</td>
</tr>
<tr>
<td>Headaches</td>
<td>Catarrhal, phlegm (colored)</td>
</tr>
<tr>
<td>Mood changes, irritability</td>
<td>Fever</td>
</tr>
<tr>
<td>Rashes, hives</td>
<td>Eczema</td>
</tr>
<tr>
<td>Nausea, cramps, diarrhea</td>
<td>Emesis</td>
</tr>
<tr>
<td>Loss mental acuity</td>
<td>Elevated C-reactive protein, SED rate, AA:EA ratio</td>
</tr>
</tbody>
</table>

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**Allergic Events schematic**

- Blood/lymph fluids
- Infection leading to infestation
- Infectious process
- Viron
- Gut lumen
- Allergens
- Foreignness
- Immune response
- Tissue/cell structures
- Gut lining

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Generalization of allergen

- Milk allergy is primarily casein protein intolerance commonly seen in respiratory and atopic symptoms
- Wheat allergy is primarily a gluten protein intolerance commonly effecting GI symptoms and hyper tension & siderosis
- Corn allergy is primarily a zein protein intolerance commonly effecting neurological symptoms
- Soy allergy is more acquired and therefore can be unlearned commonly effecting acne rosacea and paranasal rashes
- Zypan or Betaine HCL (2-3/meal) will reduce food allergen effects

Metabolic Acidosis

- Many experts agree that pH should be kept to 6.8-7.2, but in acidic world even 7.5 is not too high
- Emergency alkalosis appears alkaline when it is only body stores straining to offset the acidity
- The urine represents the effects of your food, the saliva conveys the blood
- To reduce acidity reduce meat, soft drinks, coffee, alcohol, sugar, fast foods, avoid interrupted sleep, avoid pesticide exposure, decrease mental/emotional stress
- Increasing pH - ionic calcium use Calcium Lactate (6) or powder (1 tsp), Organic Minerals (6), Glutamine (1K mg), Chlorophyll (2), SP Greenfood (2)
Buffering pH by three mechanisms:

- **Bicarbonate Buffer System** – weakest intra & extracellular buffering, but because the CO₂ can be regulated by the lungs and HCO₃ by the kidneys the blood pH can be shifted up and down
- **Phosphate Buffer System** – stronger buffering system essentially but only 1/12th as concentrated in extracellular fluids therefore less potent
- **Protein Buffer System** – same mechanism of binding H⁺ as Bicarbonate buffering, however is intracellular only (studies suggest that 75% of all chemical buffering is intracellular.)

Each system is amplified by ingestion of more protein and reduced carbs, through reduced acid burden from CHO, and increased phosphorus from protein

### Acid/Alkaline Foods

### Mineral Deficiency
The big idea!
- Minerals help the body neutralize acidosis and promote alkalinity
- Alkaline/Acid balance promotes calmness, sleep, health
- All minerals and protein promote this balance
- Inflammation, tension, muscle soreness, stiffness, loss of flexibility, loss of sleep quality, inability to relax, musculoskeletal symptoms, soreness after exercise (lactic acid effects) all indicate mineral insufficiency
- Primary minerals for repletion are Calcium (especially ionic), Magnesium, Potassium
- Multi-minerals are best choice as in Organic Minerals (6) and Catalyn (6)

H2O is mainly what we are!
- H2O makes up 73% of lean mass in adult – ranges from 75% of neonate to 50% in elderly – intracellular water is 65% in men & 60% in women
- H2O serves as primary medium for transport of nutrients and oxygen to the cells and removal of wastes – also plays a role in creating organ form and temperature regulation
- Dehydration occurs because there is insufficient electrolytes to hold the water in osmotic balance – thus hydration when dehydrated further dilutes and leeches the minerals
- Minerals concentrate water
- Recommendation is for 64 oz H2O per day

Minerals serve diverse functions
- Bone formation through hydroxyapatite from calcium and phosphate
- Messenger molecule from calcium binding to various proteins acts as signal
- Ionic, osmotic balance creating electrical gradients maintained by all macronutrients
- Trace elements associate with enzymes or proteins serving structural, catalytic, or binding roles
- Ultratrace minerals are required solely for the synthesis of specialized organic compounds unique to mammalian life (Thyroxin, seleno-proteins, etc)
Minerals and their deficiency

- From the 90 elements occurring naturally in environment, 22 are essential to life, constitute 4% total body weight.
- The organic nutrients (proteins, carbohydrates, lipids, vitamins) are made up of 6 elements – hydrogen, carbon, nitrogen, oxygen, phosphorus, sulfur.
- Minerals or inorganic nutrients are grouped by the amount of each element required by the body.
- Macroelements require greater than 100 mg/day – calcium, phosphorus, magnesium, sodium, potassium, chloride, and sulfur (supplied by amino acids).
- Microelements are 2 groups:
  - Trace elements 1-100 mg/day – iron, zinc, manganese, copper, fluorine.
  - Ultratrace elements less than 1 mg/day – selenium, molybdenum, iodine, chromium, boron, cobalt.
- To understand minerals is to understand the crossover from inorganic to organic – this is where the world becomes alive.
- Mineral deficiency leads to a lack of life.

Immuno-inflammatory Influence

- Innate & Acquired Immunity
  - Primary roles of the healthy immune system are:
    - Identify potentially injurious and infectious substances.
    - Distinguish self antigens (non-threatening) from non-self (threatening).
    - Assess the potential level of threat posed by infectious, toxic, or non-self antigens.
    - Mount a response that is appropriate to the level of threat.
    - Repair any damage that ensues from adversarial encounters.
  - Too much response = inflammatory cascades.
  - Too little response = tolerance of danger.
  - WBC is optimal 6-8, outside optimal range may suggest acute or chronic immune burden, under 4 indicates bone marrow fatigue.
Immune System – 2 Parts

- Generally recognized that there are 2 parts of the immune system
  - **Innate Immune System** – Inborn initial response to eliminate microbes and infections, immediately or within hours – it is not in any locale or organ, it is in the WBCs
    - Each cell is equipped with different mechanisms that allow it to attack and eliminate pathogens from the body demonstrating immune versatility
    - Non-specific defense against pathogens, activates the complement system of inflammatory response
    - Identifies self vs. non-self, complement system triggers inflammation and identifies foreign substances, and activates the adaptive immune system
  - **Innate Immune Cells** include:
    - Mast Cells
    - Natural Killer Cells
    - Phagocytes – Monocytes, Macrophages, Dendritic cells
    - Eosinophils – Neutrophils, Eosinophils, Basophils
  - **Adaptive Acquired Immune System** – Learned response precisely addressing threat requiring 5-7 days for adaptive immune modulation to reach full activity and specific lymphocyte presence
    - Results in TH1 cellular phagocytosis or TH2 humoral antibodies
    - TH1 responds to living things (bacteria, fungus, virus)
    - TH2 responds to non-living things (and parasites) including food, pollens, bad fats, heavy metals

Common TH1 & Th2 Cytokines

- **TH1**
  - IL-12
  - IFN – gamma
  - TNF – alpha
  - IL-2
  - GM – CSF
- **TH2**
  - IL-4
  - IL-5
  - IL-10
  - IL-13

- IL-1 and IL-6 (and others) can show both TH1 and Th2 influences

Efflux pumps and bacteria

- Milk thistle and Berberine have been found to inhibit the active efflux pump in certain bacteria (Staph) and thus inhibit the germ's resistance to remediation by drugs and theoretically host immune response as well
Cytokines – Immune Messages

- Immune response results in the release of cytokines meant to direct local and distant immune function
- These cytokine messenger molecules also drive HPA status and thus determine global brain status
- Cytokines subsequently cause the release of WBC inflammatory mediators to direct the inflammatory process of repair
- Therefore immune status and activity determine HPA/brain settings
- Hypervigilant or depressed immune states reflect in brain states

Immune Tolerance
"Don’t be so Reactive"

- If it weren’t for tolerance we would constantly fighting a war with the foreignness everywhere
- Complex feedback system developed through reactor and moderator substances activating and suppressing immune/inflammatory responses creating an immune capacity of tolerance
- Net reactor chemistry x net moderator chemistry = immune tolerance
- Especially strategic to the autoimmune circumstance – goal is to reduce immune burdens and promote immune tolerance and thus reduce immune reactivity
- Infections, infestations, toxicities, allergens, injuries, inoculations, etc. create a burden teasing out intolerance and excessive reactions

Immune mechanisms – schematic
Sequential Immune Up-Regulation

- Especially under the teeth, diverticulosis, severe infections near or in bone, body cavities like sinus, ears, pelvic, intestinal
- Sequential immune bolstering protocols for one month each at therapeutic dosage – "deep cleaning"
- Up regulate immune system gradually beginning with Sesame Oil Perles (6/day), followed by Thymex (10/day), then Immuplex (6/day), Congaplex (15/day), Allerplex (15/day), Echinacea (4/day), Astragulus (4/day)
- Clear infestations with Zymex II (6/day), Multizyme (4/day), Wormwood Complex (4/day) – also treats mycoplasmic infections
- Finally use Chaparral with high concentration of NDGO (strongest known antioxidant) – will clear systemic infection including bowel

Pain – Silent or Audible

Many nutrients & botanicals inhibit the activation of NF-kappab inflammatory gene activation.

- Omega 3 EFA's & GLA
- Grape Seed Extract
- Vitamin D
- Propolis
- Curcumin/Turmeric
- Resveratrol
- Lipoic Acid
- Chlophogues
- Green Tea
- Vitamin C Complex
- Rosemary

Insert diagram: Figure 2. Translation of environmental trauma into biochemical inflammation. Note the self-perpetuating "vicious cycle" where inflammatory mediators promote additional inflammation via activation of NF-kappab.
Circulation - starvation

The Circulatory Mission -
- Heart, arteries, veins, capillaries, portal and general circulatory systems provide to each cell in the body the available ‘oceanic milieu’ required for life – it is an internal portable environment to live around allowing eukaryotes the ability to control the environment
- Heart is brain of the circulatory system pumping 70 beats/minute, 100,000 times/day, making the heart the busiest organ of the body under the most mechanical and chemical stress
- Cells comprising the heart require nutrition for proper function – deficiency causes disease to develop
- Every cell in the body depends on the circulatory system to deliver oxygen and nutrition and remove CO2 and wastes

Cardiovascular Deficiency -
- Nutritional deficiency in the coronary vasculature leads to blockage and hypoxia/ischemia and cell failure (heart attack)
- Deficiency in the electrical nervous system of the heart leads to irregular heart beats (arrhythmias)
- Deficiency in the cardiac musculature leads to impaired pumping/strength and shortness of breath and edema
**Protocol – Circulatory Pillar**

- **General support:**
  - Circuplex (6)
  - Horse Chestnut (4)
  - Vasculin (6)

- **Heart Support and Renewal:**
  - Circulatory - Cardioplus (6)
  - Vasculin (6)
  - Garlic 5000 (2)
  - Cayenne (4)
  - Hawthorne (4)
  - Horse Chestnut (2)

- **Electrical**
  - Cataplex B (6)
  - Cataplex G (6)

- **Organically Bound Minerals** (6)

- **Cardiomyopathy (viral)**
  - Cataplex AC (12)

- **Sesame Oil** (6)

- **Claudication:**
  - Collinsonia Root (6)

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**Circulation – starvation**

**Microcirculation**

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**Microcirculatory Dynamics -**

- Veins and arteries are considered to comprise the circulatory system and are influenced macroscopically by many factors and controlled through the actions of smooth muscle tone to effect the openness of the large vessel.

- However, the largest part of the circulatory system lies beyond these structures and can be called small vessel microcirculation and is not influenced by smooth muscle actions.

- The reason for this oversight in practice is because there has been very little that can be done to influence the microcirculatory status.
Microcirculation -

- "The difficulty of assessing microcirculation in view of the extremely small dimensions of these vessels has been by far the principle reason why this enormous anatomical entity has been essentially neglected for decades ... With very few exceptions, pentoxifylline and the antidiabetic metformin, no specific treatments have been developed for treating disorders at the microcirculatory level."
- Conventional medical approaches to influence this part of physiology are few

Microcirculatory Events-

- Microangiopathy is the term linked to this microcirculatory limitation
- While there are no smooth muscles in the small arterioles, venules and capillaries there is a mechanism to effect the degree of dilation and openness – namely the effect of a noble gas called nitric oxide
- This gas inside the circulatory pathways promotes openness and supply of blood rich constituents to the distal tissues
- So this discussion means to line of the mechanisms known to influence nitric oxide production and this microcirculatory health

Microcirculatory Events-

- The following list the known influences upon this distal function:
  - Bilberry –
  - Cocoa –
  - Garlic –
  - Ginkgo
  - Gotu Kola
  - Pine Bark Extract or Grape Seed Extract
  - Nitric Oxide promotion
Microcirculatory Events-
- Bilberry – reduced symptoms caused by decreased capillary resistance such as bruising, bleeding and occult fecal bleeding – reduced microcirculatory changes in cortisone therapy and improved diabetic retinopathy and improved post surgical recovery
- Cocoa – in one clinical trial the impairment of endothelial function lining blood vessels was reduced
- Garlic – increased capillary skin perfusion by 55% and increased calf blood flow by 15% in only 7 days of administration
- Ginkgo – improves vision in patients with glaucoma
- Gotu Kola – improved microcirculatory status and reduced edema in multiple studies
- Pine Bark Extract or Grape Seed Extract – increases microcirculatory perfusion
- Nitric Oxide promotion – increased with L-Arginine or L-Citrulline and betaine

Organ demand
- Heart
- Brain
- Kidney

Seven Pillars
Unified Mechanisms of Health
Promoting Physiology
7 Pillars of Healing
7 Unified Mechanisms of Health

Endocrine/Hormonal
Glycemic Management
pH Bioterrain
Immuno-Inflammatory
Circulatory Status
Digestive Potency
Cellular Vitality

Hypertension Sequence

Cortisol and Food Allergens
Metabolic Acidosis
Mineral Deficiency
Inflammation, Pain
Immune burdens
Circulation – Macro and Micro
Organ Demands

Assess for large vessel blockages and microcirculatory limitations
Support the heart, brain, kidneys

Gluten elimination (Gluten)
Calcium, Magnesium, Organic Minerals
Boswellia Complex
Glutamine
Looking to the source -

Upstream circuitry takes us to sources that are far less impressive that the downstream events compelling action.

The source of the Nile River is far less impressive that the river as it winds through Egypt.
Yet introducing change in a more subtle source can meet much less resistance and be more far reaching on multiple levels than struggling with the impressive downstream imbalances.
As well upstream changes will reveal more global changes and thus show the intricacy of relationships to the practitioner.

Principles at work

- Sufficient clinical observation allows mechanisms to be revealed that will remove the idiopathic mystery of hypertension and return it to a simple physiological modulation and resultant augmentation in function, balance, tissue fortification and promotes healthy genetic expression
- This allows the symptom resolution to occur as a result of system ‘mosaic’ change, and then of course the downstream events occur
- The longing in the public is for this sort of detective work to find the cause and make the correction – increasingly food is seen as medicine and people are asking more and more for what foods will change their health patterns

Sequential Intervention

- By giving hope through discussion of therapeutic rationale and then accountably determine if the therapy had efficacy it is possible to initiate activity that may assist a person to make the changes that result in healing
- Sequential intervention and accountable follow-up can show what has worked and what may still need to be employed
- Promote an understanding of intervention that creates evolutions in individual physiology and show the effect of that intervention
- Allow every condition to become a strategic consideration of possible etiology and therapeutic rationale – people are in search of experts – reveal yourself
- The comprehensive nature of nutritional therapy means there is always more physiology to optimize and support leaving an individual constantly refining as long as they wish to further improve their status
- If the practitioner is accountable s/he will be allowed to experiment with reasonable ideas
Change the world
It wants to