



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

3

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 wholistic practice
- ∞ Each participant chooses a colleague in his/her world to convey the notes and information – no information squandering
- ∞ Issues/problems/questions are considered a learning process for everyone, although individual's remain anonymous
- ∞ All questions, comments, case studies to be directed through email to SP rep who will compile and include in next teleconference (must be submitted 10 days prior)

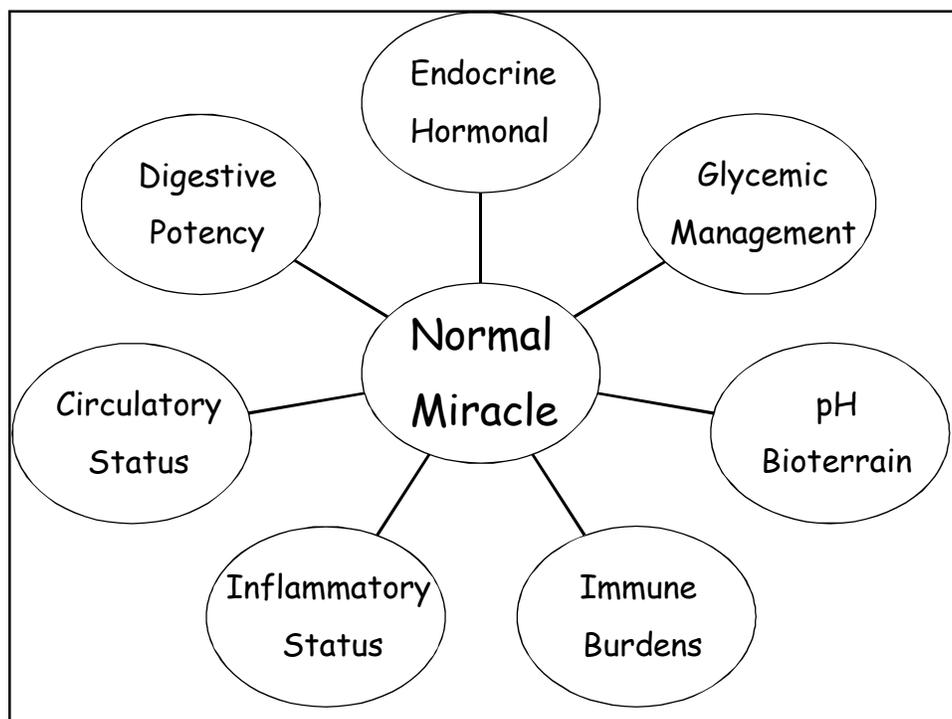
4

Mentoring-

☞ The supreme misfortune that can befall any man is for him to embrace a theory mistaking it for fact.

Leonardo da Vinci

5



7 Pillars Protocols

⌘ Endocrine/Hormonal ~ Symplex F/M, Hypothalmex, Black Currant Seed Oil

⌘ Glycemic Management ~ Phase VIII Diet, AF Betafood

⌘ pH Bioterrain ~ Calcifood, Calcium Lactate, Magnesium Lactate, Green Food, Organic Minerals

⌘ Inflammatory status ~ Eliminate food allergies, Cataplex AC

⌘ Immune burden ~ Thymex, Sesame Seed Oil, Congaplex, Allerplex, Immuplex, Zymex, Zymex II, Multizyme, Wormwood

⌘ Circulatory Status ~ Cardioplus, Vasculin, Cayenne, Garlic, Hawthorne, Horse Chestnut

⌘ Digestive Potency ~ Cataplex AC, Lact Enz, Gastro Fiber, Chlorophyll, Okra Pepsin, Gastrex, Zypan, Betaine Hydrochloride, Fasting, Diet Modulation

Getting started -

Start by doing the necessary,
then the possible,
and suddenly
you are doing the impossible.

Saint Francis of Assisi

Sequenced decline – Senescence

- ⌘ Chronological age – accurate, measured in years
- ⌘ Biological age – variable, determined by biochemistry and energetic state
- ⌘ Psychological age – variable, determined by thinking which arises from emotional reality and neuroendocrine status
- ⌘ Only the first of these is fixed
- ⌘ One of the most important tissue aging factors is collagen synthesis, which is effected by smoking, exposure to sunlight, nutrient deficiency, dehydration – individual collagen molecules get attached to each other through cross linkage brought on by free radicals (Radical Oxygen Species ROS) attacking vital molecules including DNA
- ⌘ Vitanox (2/day) is essential to care for senescence

Mitochondrion – Center stage

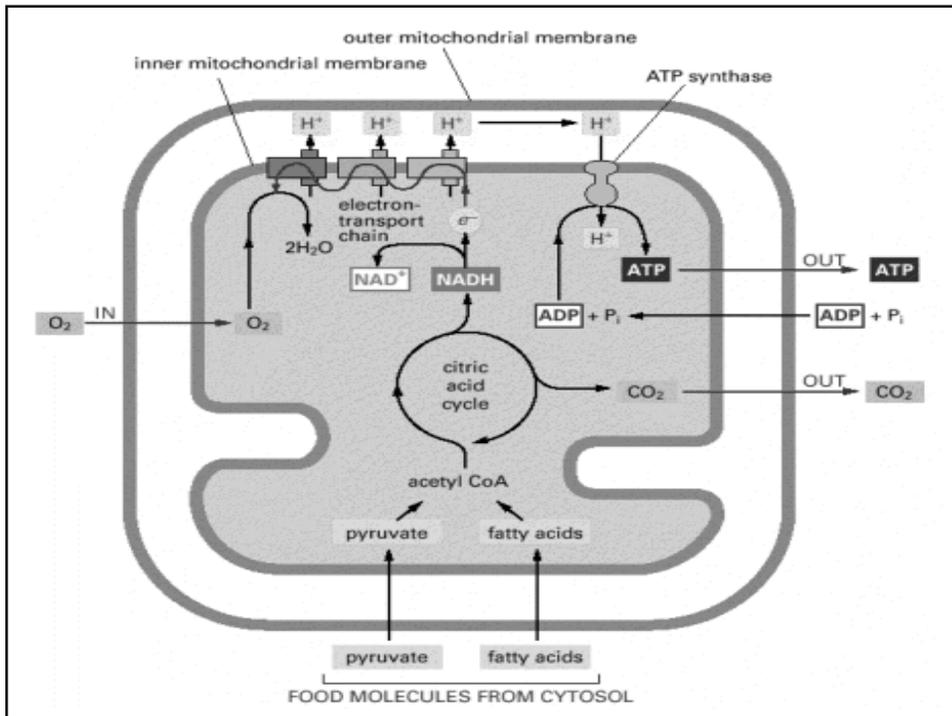
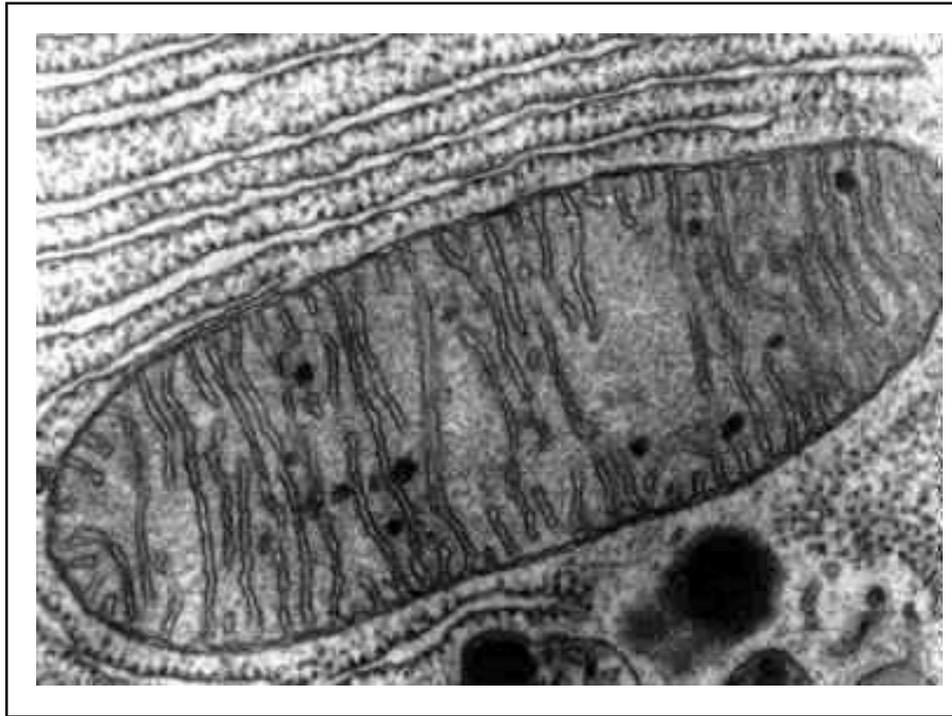
- ⌘ Mitochondria have many structural and functional features in common with bacteria (eukaryotes) which led to the idea that the mitochondria originated from an endosymbiotic relationship (one organism living inside another)
- ⌘ This idea was strengthened with detection of mitochondrial DNA similar to bacterial genomes contributed solely by the mother (approx 100k mitochondria from oocyte, none from sperm)
- ⌘ Each mitochondria consists of 4 main compartments – outer membrane enclosing entire organelle, inner membrane is a series of complex folds and tubules called cristae, intermembranous space, and the matrix which is the space enclosed by the inner membrane wherein the mitochondrial DNA resides
- ⌘ Radical Oxygen Species (ROS) degrades the inner membrane including mitochondrial DNA

Concept of Aging

- ⌘ Adult possesses 10 million billion mitochondria which is 10 % of body weight, the primary function of which is to produce ATP
- ⌘ The primary role is to produce ATP for energy via the citric acid cycle (tricarboxylic acid cycle or Kreb's cycle) along with the electron transport chain
- ⌘ When ATP levels fall AMP levels increase which activates the enzyme AMPK (5' Activated Protein Kinase - cyclic AMP)
- ⌘ AMPK switches metabolism from energy consuming to energy conservation and mitochondrial biogenesis (making more mitochondria)
- ⌘ Mitochondria are a prime source of ROS which immediately effects the DNA, proteins, and lipids
- ⌘ ROS increases as we age, gain weight, and in virtually all disease states

Can anything be done?

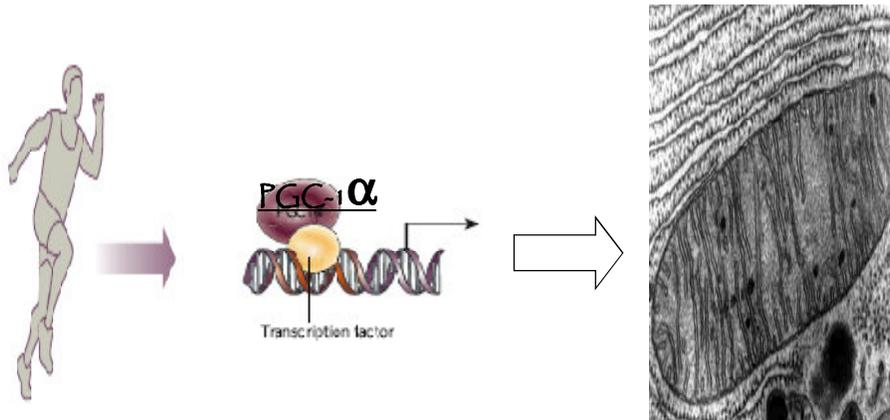
- ⌘ 1956 proposed the free radical theory of aging by Professor Denham Harman stating the accumulated cellular damage resulting from ROS was responsible for symptoms associated with aging
- ⌘ 1972 he published a theory that mitochondria by determining ROS functioned as a "biological clock" determining the ultimate lifespan of an organism
- ⌘ A reasonable question is "Can anything be done about mitochondrial ROS?"
- ⌘ Superoxide dismutase, peroxidase, catalase, Vitamins C & E, CoQ10, Alpha Lipoic Acid, Resveretrol, detoxification to unburden the toxic load and ROS burden

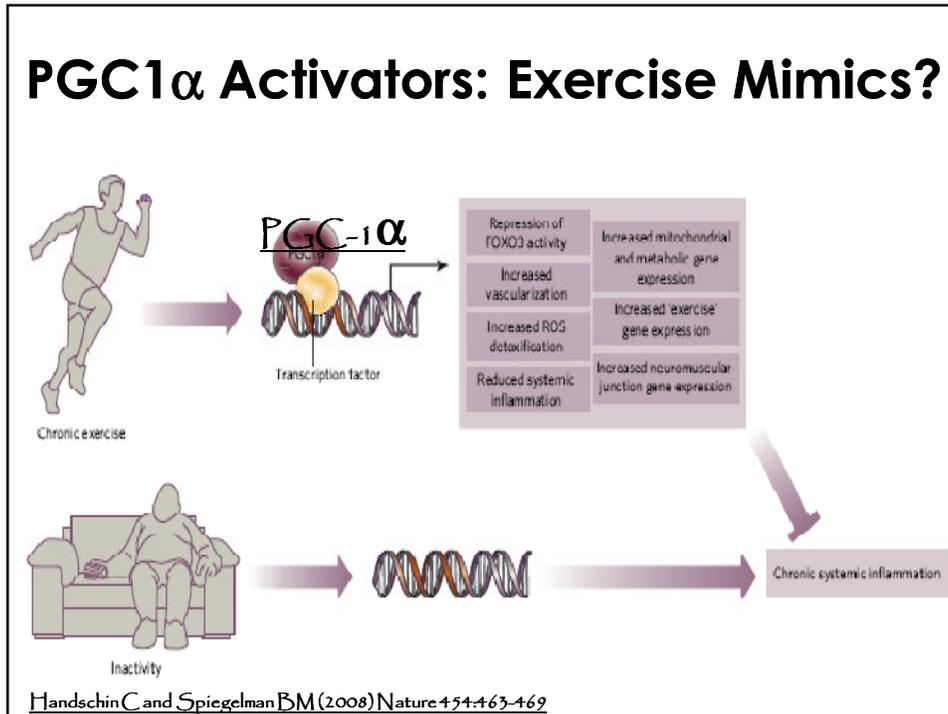


Benefits of Increased Mitochondrial Biogenesis and ATP

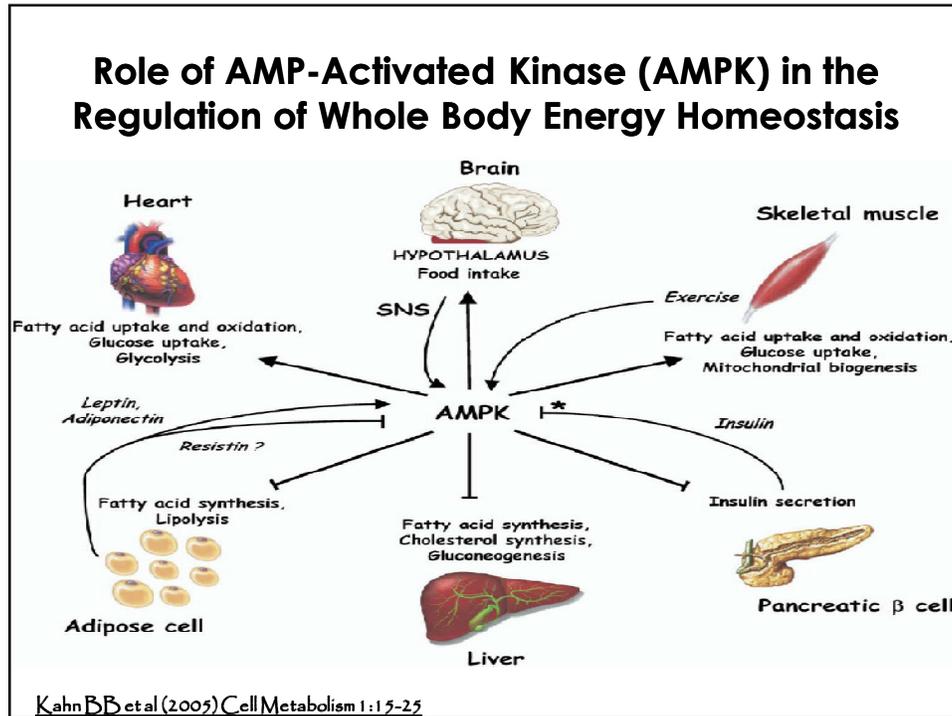
- ↓ ROS / Oxidative Stress
- ↑ Metabolic Function
- ↑ Energy Level
- ↑ Exercise Performance
- ↓ Body Fat / ↑ Lean Muscle Mass
- ↓ Age-Related Deterioration
- ↑ Increase Lifespan (?)

PGC-1 α *The Molecular Switch for Mitochondrial Biogenesis*





- ## AMPK (AMP-Activated Protein Kinase)
- Regarded as the body's cellular fuel sensor
 - Enzyme is activated when AMP:ATP ratio increases
 - i.e. when ATP stores decrease
 - Plays a crucial role in lipid metabolism and fatty acid oxidation in liver and skeletal muscle
 - Activated AMPK switches metabolism from ATP-using to ATP-generating
 - Molecular switch for FAT-Burning
 - Exercise is a potent activator of AMPK
 - Activation of AMPK results in increased mitochondrial biogenesis



Revisiting protomorphology

- ⌘ Royal Lee postulates that the growth factors (PMG) are part of the mechanism that determines the aging process
- ⌘ The factors can be locked in the tissues and he considers that there are 'elutagens' which have the effect of releasing these pmg's into tissue action
- ⌘ Progesterone can be considered a elutagen as well as other nutritional elements that reduce the radical oxygen species
- ⌘ This begins to suggest why certain people do not respond as keenly to pmg therapy as others
- ⌘ Perhaps there is an emerging understanding of the stage that must be set for tropho-restorative activation

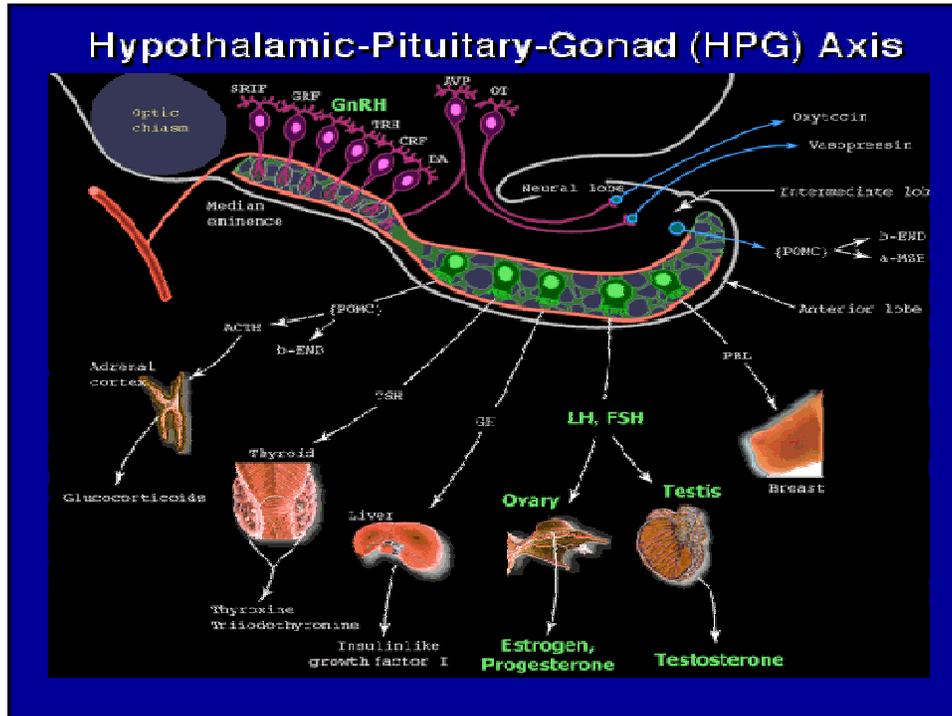
Protomorphagen / Elutagen

PMG	EMG
Intrinsic factors that promote repair	Intrinsic factors that activate PMG
Extrinsic factors that promote repair	Extrinsic factors that activate the PMG
Animal glandular extracts	Minerals, phospholipids
Hormones & Prohormones	HRT & endocrine modulation
Inflammatory cytokines	Detoxification & antioxidant sparing Progesterone for detox

21

Protomorphagen / Elutagen

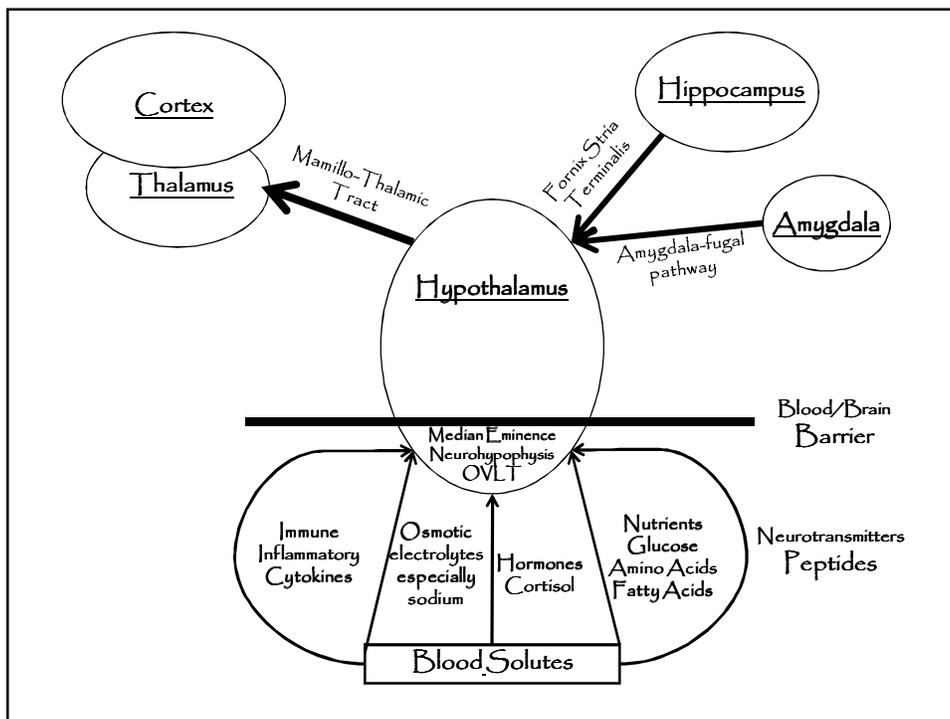
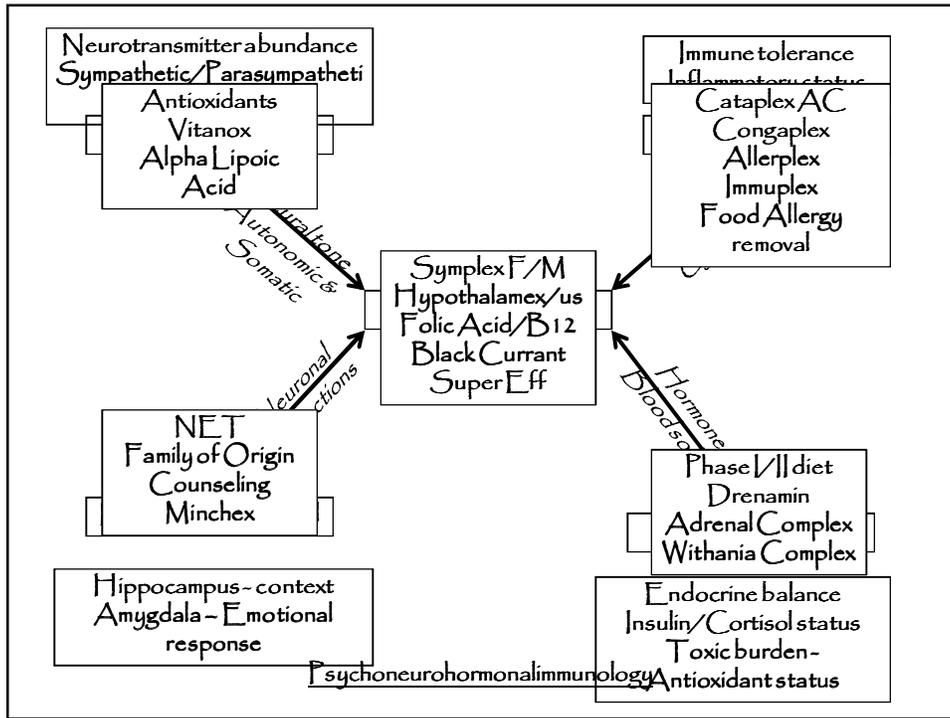
PMG	EMG
Animal source PMG's	Super Eff, Circuplex, e Poise
Animal source cytosol extracts - Hypothalmex, Thymex, (Drenex)	Immuplex, Congaplex, Thymex, Allerplex, Cataplex AC, Zymex, Gut Flora Cx, Zymex II, Multizyme, Wormwood, Livaplex
Hgh, Precursors	SPPurification Program 21 days, Detoxification
Protein, Amino Acids, EFAs	Omega 3 fatty acids - Tuna, Linum/B6
	Antioxidants - Vitanox Circulation increase - Gingko, Bilberry, Cyruta Plus, Collinsonia Root



Psychoneuroimmunology -

Immune, nerve and endocrine cells all talking with each other through cytokines, hormones, neurotransmitters creating the biochemical background for spiritual, emotional, mental and physical states of being.

This is the body/mind connection!



Hypothalamus- Basis of Mind/Body Connection

- ⌘ The hard wiring of the Hypothalamus to other brain structures via neuronal projection pathways provides avenues for communicating conscious thought, emotions and memories to the hypothalamic integrator and governor
- ⌘ Median Eminence (ME, Organum Vasculosum of the Lamina Terminalis (OVLT), Posterior Pituitary (Neurohypophysis) - Three components of the hypothalamus lie outside of the blood brain barrier and thus can sample blood-borne solutes such as glucose, electrolytes (especially sodium), fatty acids, amino acids, hormones, neurotransmitters, peptides, cytokines, etc.
- ⌘ Factual information from hippocampus which records new information as longterm memory couples with emotional responses from the amygdala and is then projected into the hypothalamus via the fornix, stria terminalis and amygdalo-fugal pathways

27

Hypothalamus- Basis of Mind/Body Connection

- ⌘ Upon summation of integrated information in hypothalamus and its various intercommunicating nuclei uses releasing factor neurons to release hormonal responses to elicit hormonal, autonomic, metabolic and behavioral changes that are appropriate to the physical/emotional events at hand
- ⌘ Mostly we are unaware of the visceral autonomic alterations, but the Mamillo-Thalamic Tract exits from the hypothalamus and relays information to the thalamus and cortex thus we become aware of physiological responses to stress
- ⌘ Arousal may manifest changes in respiration rate, muscular tone due to release of sympathetic catecholamines, mentation and alertness, body temperature, perspiration, cold hands, dry mouth, the hard wiring of the
- ⌘ These neuronal and humoral pathways are the connectivity between perception and response, between inside and outside
- ⌘ This is the stage for the mind-body/self-nonsel approaches
- ⌘ A person may choose to act upon or modulate these responses²⁸

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 Adrenocorticotrophic Hormone (ACTH)
- ⌘ ACTH reaches the adrenal cortex stimulating the synthesis of Cortisol (glucocorticoid) and also androgenic hormones like androstenedione 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'

30

Modulating Cortisol

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

31

The Response Ability -

It's not what happens to you,
but how you react to it that
matters.

Epictetus

How do we do it? - Summary

- ⌘ Mitochondrial biogenesis - Pillar 2 glycemic limiting diet increases ketogenesis and leptin/adiponectin influences on the HPA axis and delivery of pyruvate to the mitochondria promoting proliferation
- ⌘ Protection of mitochondrial ROS membrane damage -
 - SPPurification unburdens toxic load
 - Super Eff (2) phospholipid support
 - Greenfood (4), Cruciferous (4) methylation support
 - Vitanox (2) provides antioxidant protection
- ⌘ Promotion of HPA response to cortisol and thus reduced sympathetic neural tone -
 - Drenamin (6)
 - Adrenal Complex (2)
- ⌘ Cellular Support - Elutagenic support
 - Catalyn (6)
 - e-Poise (4)

33

Connect the dots -

- ⌘ It is time to make a connection between cellular metabolism and whole-body energy metabolism through the hypothalamus
- ⌘ AMPk makes this connection as research has shown that modulation of AMPk in the Hypothalamus modulates feeding and energy behavior
- ⌘ The mitochondria is so simple in its structure that it simplifies the focus of the functional practitioner and focuses our activity on the macroscopic level as well
- ⌘ It has always been the ambition of the functional practitioner to find the upstream primary mechanisms that produce the most widespread general response

34

Revisiting the physiologic possibility

- ⌘ 7 pillars of foundational strength and physiological potency (unified mechanisms of disease)
- ⌘ Physiologic possibilities have not been fully explored or metered as this microscopic mitochondrial function reveals and as the macroscopic HPA function reveals – these are foundational events in the modulation of disease/health
- ⌘ The practice of reducing ROS free radical burden and promoting mitochondrial biogenesis will yield more cyclic AMP and ultimately more energy production and subsequent potentiation of cellular activity and agenda
- ⌘ Stand back and view the genetic agenda of the cell nuclear DNA as it is energized to its completion

35

Visit after visit ~ Start Monday

- ⌘ See each patient for the digestive issues they reveal
- ⌘ Teach every patient the principles that give them potency and process in their living
- ⌘ Employ the principles of the seven pillars as a way of seeing the human in the process of manifestation - Application of pillars is sequential and at the discretion of the doctor – always start with caring for the chief complaint, the pillars that relate to that issue, and the deemed physiological priority (eg – immune)
- ⌘ The purpose of the pillars is to create a conceptual framework to organize the diverse complexity of nutritional care, so that method can emerge
- ⌘ Examine your patient for the ROS free radical toxicity, status of skin quality reflecting this, repair status, attitude of optimism
- ⌘ Change outcomes, stop disease progression, reveal the inherent healing potential by using principles and products that express The Law (the way it was made to work)
- ⌘ Tune in, Turn on .. Evolve and blow them away – Empower the hypothalamus and mitochondria!

The Response Ability -

It's not what happens to you,
but how you react to it that
matters.

Epictetus



Give generously
As you have received