TheElite Training Group track club

Expanding the area of what is possible
In Track & Field Distance Running & Competent Self-Care in medicine and psychology

quadriplegic, paraplegic nerve repair training

A major part of TheETG mission is to expand the area of what is possible in competent self-care in medicine and psychology. TheETG’s primary method of achieving that is to proliferate applied science based information by way of – free– packets containing plain language info for “the average joe” seeking to move themselves or others forward in these areas. The mail problem TheETG packets attempt to address......

“….takes an average of 17 years to translate 14% of original research into benefit…..average of 9 years for interventions recommended as evidence-based practices to be fully adopted.”

M.Tinkle, et al
Dissemination and Implementation
Nursing Research and Practice…Volume 2013

Competent Self-Care: Medicine……The best medicine comes with no risk-versus-benefit equations to contemplate, no daily violations of “first, do no harm”, no whac-a-mole medicine being practiced to medicate each health issue as it pops up. To be a good doctor one must -first- be a good physiologist. And in order to have a fully functioning health care system available to all human beings in America its core must be comprised of competent self-care and good physiologists.

Competent Self-Care: Psychology……So-called “mental health professionals” should practice more mental health and less pharmacology. The goal of applied psychology is to empower people to achieve self-mastery. This should be the goal of competent self-care and all psychologists. Parenting…..dysfunction moves from the parents, into the home, into the kids, into the streets, into the norm. Personal growth toward being a fully functional human being can move from the parents, into the home, into the kids, into the streets, into the norm.

You may copy any and all contents of this packet, with exception and exclusion of using such copies for purposes of producing revenue, profit, or any direct or indirect compensation.
The Brain:
--- Branches out to the body
--- Thus it can control or effect...everything!!!
"Until recently, the local inflammation that occurs in response to spinal cord injury has received a negative reputation; overall, it was assumed to be one of the major causes of a vicious neurotoxic cycle that leads to impaired recovery following injury. This local inflammation involves both the activated tissue-resident microglia and monocyte-derived macrophages infiltrating from the blood. Ten years ago, we proposed that the blood-derived macrophages, reminiscent of “alternatively activated” macrophages (also known as tissue repairing, M2), are not spontaneously recruited in sufficient numbers to sites of injured central nervous system (CNS)."

"We further demonstrated that their exogenous administration to the margins of injured spinal cord improved functional outcome. However, our suggestions evoked criticism, claiming that we were adding macrophages to a site that is already overwhelmed with inflammatory cells."

"Using experimental paradigms that enabled functional distinction between the resident and infiltrating cells, our most recent studies further corroborated our repair perception, showing that

"(a) infiltrating monocyte-derived macrophages are recruited following injury and localize to the margins of the lesion, unlike the activated resident microglia that are not compartmentalized, and

"(b) activated resident microglia and infiltrating monocyte-derived macrophages perform distinct roles; recruited blood-derived macrophages display an (IL-10-dependent) anti-inflammatory phenotype when they become co-localized with the glial scar."

"We further found that post-injury recruitment of blood monocytes is indeed suboptimal. Augmentation of the levels of naïve blood monocytes leads to their increased recruitment to the same zones that are the targets of the infiltrated endogenous monocytes, and they acquire the same anti-inflammatory activity, leading to improved recovery. Thus, boosting the levels of the relevant blood monocytes reinforces the body’s own repair mechanisms that, for reasons that are currently under investigation, are not optimally triggered within the critical post-injury period."

M. Schwartz
“Tissue-repairing” blood-derived macrophages are essential for healing of the injured spinal cord: From skin-activated macrophages to infiltrating blood-derived cells?
Brain, Behavior, and Immunity....Volume 24 #7....October 2010....pages 1054 - 1057
“Research on the pathology of spinal cord injury have been recently focused on oxidative radicals stress and inflammation associated neuronal apoptosis.”

“Resveratrol, a natural phenolic compound, has been extensively studied....”

“.... the study of its potential role in neuroprotection and underlying mechanism in spinal cord injury model has been limited.”

“In this study, we investigated the effect of resveratrol on neurologic functions and histopathologic changes after spinal cord injury and the mechanism underlying its neuro-protective effects.”

“Resveratrol treatment reversed the decrease of SOD activity and increase of MDA level caused by spinal cord injury...”

In addition, resveratrol treatment suppressed immunoreactivity and expression of inflammatory cytokines.....after spinal cord injury....”

“......resveratrol treatment inhibited injury-induced apoptosis.....”

“Our data suggest that resveratrol significantly promotes the recovery of rat dorsal neuronal function after spinal cord injury, and this effect is related to its characteristics of anti-oxidation, anti-inflammation and anti-apoptosis.”

Chanbjian Liu, et al
Resveratrol improves neuron protection and functional recovery in rat model of spinal cord injury
Brain Research......Volume 1374....February 16, 2011....page 100 - 109
“...a variety of approaches from boosting the function of immune cells within the lesion to promoting regeneration of severed connections......”

“....not all approaches are drug-based. Some research suggests that neural circuits can turn off when not used for long periods of time, but might be able to be reactivated by intense rehabilitative training.”

Regenerating Hope
Nature Neuroscience.....Volume 7 #3.....March 2004.....page 197

“rTMS of the cerebral cortex resulted in physical and sensory improvements......”

“The researchers believe that rTMS strengthens the information leaving the brain to the spinal cord and activates surviving nerves to strengthen their connections.”

News In Brief
The Lancet.....Volume 363.....May 15, 2004.....page 1617

‘Neurotrophins play a crucial role in cell survival and anatomical reorganization of damaged spinal cord.”

“Our data indicate that Brain Derived Neuro-trophic Factor and Neurotrophic Factor 4 expression could be modulated by activity of spinal circuitry and further support putative involvement of the endogenous neuro-trophins in mechanisms of spinal cord neuro-plasticity.”

R. Gulinoa, et al
Levels Of Brain-Derived Neurotrophic Factor And Neurotrophin-4 In Lumbar Motoneurons After Low-Thoracic Spinal Cord Hemisection

Brain Research.....Volume 1013, Issue 2.....July 9, 2004.....pages 174 - 181

“Here we show that the adult brain has the capacity for self-repair after insults causing extensive neuronal death.”

A. Arvidsson, et. al
Neuronal Replacement From Endogenous Precursors In The Adult Brain After Stroke

Nature Medicine.....Volume 8 #9.....September 2002.....page 963
Early mobilization may ease recovery process

“It is known that physical activity triggers changes in the central nervous system.”

“Adult rats, trained on treadmills for 4 weeks, and a group of sedentary rats was submitted to contuse moderate spinal cord injury.”

“Lesion volume and lesion areal fraction per section were smaller in the trained group. Lesion index was more pronounced in the sedentary group.”

“In conclusion, treadmill running may favor a better functional recovery in the acute period after spinal cord lesion and wound repair processes leading to neuroprotection.”

M. Schultz et al
Treadmill running protects spinal cord contusion from secondary degeneration
Brain Research....Volume 1346.....July 30, 2010....page 266 - 278
ETG Spinal Cord Rehab.

Goal = reverse paralysis

<table>
<thead>
<tr>
<th>Belief systems......</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have been......</td>
</tr>
<tr>
<td>Should be....</td>
</tr>
</tbody>
</table>

To reverse paralysis.....

| you must stimulate nerve fibers that are descending [ie. from brain to leg/arm] and ascending [ie. from leg/arm to brain] that are above and below the spinal cord injury site. |

Time Course Goals

| Recover “some” movement within 12 months following the first training session |
| Recover fully functional movement within 24 months following recovery of “some” movement |

Paralysis Reversal Training --- Group 1

<table>
<thead>
<tr>
<th>Attempts to move leg/arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>purpose --- stimulation of nerve fibers descending into the spinal cord injury site, stimulating repair of severed/damaged nerve fibers.</td>
</tr>
</tbody>
</table>

Massage of limbs and torso below the spinal cord injury site

| purpose --- stimulation of nerve fibers ascending into the spinal cord injury site, stimulating repair of severed/damaged sensory nerve fibers. |

Paralysis Reversal Training --- Group 2

<table>
<thead>
<tr>
<th>Visualization of leg/arm movements</th>
</tr>
</thead>
<tbody>
<tr>
<td>purpose --- stimulation of nerve fibers descending into the spinal cord injury site, stimulating repair of severed/damaged nerve fibers.</td>
</tr>
</tbody>
</table>

Autogenic Relaxation

| purpose --- aid in the production of Nerve Growth Factor and other neuro-trophin substances, as well as aide immune system function at the spinal cord injury site. |

Paralysis Reversal Training --- Group 3......Begin once you’ve begun recovering “some” movement.

<table>
<thead>
<tr>
<th>High weight/resistance movement of leg/arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>purpose --- stimulation of nerve fibers leading to the production of greater connections to muscle fibers, and a greater ability to activate muscle fibers.</td>
</tr>
</tbody>
</table>

High velocity movement of leg/arm

| purpose --- stimulation of nerve fibers leading to the production of greater ability to quickly activate muscle fibers. |

Progressions

<table>
<thead>
<tr>
<th>Progressions</th>
</tr>
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<tbody>
<tr>
<td>[once you’ve recovered “some” movement] You must have progressions to higher effort or resistance to movement at least every 4 weeks built into your training program to avoid a plateau in your improvement.</td>
</tr>
</tbody>
</table>

Avoid stagnant workout protocols.

Caveats

<table>
<thead>
<tr>
<th>Avoidance of Over-training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over-training will stall or reverse your progress</td>
</tr>
<tr>
<td>Keep efforts down to very few reps/minutes per training session [high effort = high results, thus there is no need for high quantity, high volume work]</td>
</tr>
<tr>
<td>Train no more than 3 days per week</td>
</tr>
<tr>
<td>No ingestion of drugs [beer, coffee, liquor, stimulants] that impair and or destroy brain cell function, impair production of Nerve Growth Factor and/or other neuro-trophin substances</td>
</tr>
<tr>
<td>No ingestion of the types of pain killers that impair production of Nerve Growth Factor and/or other neuro-trophin substances</td>
</tr>
<tr>
<td>No ingestion of the types of pain killers that suppress the function of immune system cells.</td>
</tr>
</tbody>
</table>
Autogenic Relaxation

Mind-body Connections
Things you can use to your advantage in life, business, sport, etc, etc.
From slowing cellular aging and reducing likelihood of heart attack...to improving workout recovery and adaptations to training in athletes and weekend warriors.

Can improve everything from worker productivity on the job, to student learning in the classroom, to child and toddler behavior and brain development, to stay-at-home mom stress reduction in the household.
If you have a brain and nervous system, mind-body connections are your friends.

I first began using Autogenic relaxation sometime in the early 1980's. As a coach of distance runners I began teaching it to my athletes in the mid-1980’s to help both in sport and in their academics, test preparation, etc. Many of them still use it today in daily lives as do I.

Autogenic Relaxation
Auto-genics works directly through the brain, the principal regulator of all body systems. The brain can put into practice, verbal instructions and imagined feelings oriented toward operation of internal organ systems such as blood flow, heart rate, nervous system relaxation, etc.

Purpose
-- reduce brain and peripheral nervous system activity, reduce stress hormone [cortisol] levels and/or effects, increase blood flow and oxygenation, increase or normalize levels of substances and growth factors [nerve growth factors, neuro-trophic factors, anabolic hormones, etc] that promote regeneration and recovery functions in brain, nerve, immune system, and muscle.

Duration
-- 20 seconds to 20 minutes

Autogenic Relaxation: Stage 1
-- Oxygenation [diaphragmatic breathing].....lay on floor or sit, place one hand on stomach. During inhale, make your stomach rise prior to your chest rising.

Autogenic Relaxation: Stage 2
-- Brain and nervous system activity reduction.....close your eyes, let go of thoughts related to daily activities. Repeat affirmations several times...."This is my down-time, I am calming and quieting all cells of my body. I am resting."

Autogenic Relaxation: Stage 3
-- Blood flow.....create relaxation, warmth and heaviness in limbs and torso. Repeat the affirmations....."my hands and arms are becoming warmer and heavier. My feet and legs are becoming warmer and heavier. My chest and torso is becoming warmer and heavier. I am feeling more and more quiet, calm, and relaxed."
Eyes closed bed-rest [and/or Napping]
Laying down on a bed, floor, ground and close your eyes.

Purpose
Split-up the amount of "up-time" and/or awake-time on a given day by inserting some down-time. Reduce the cumulative total amount of daily activity and stress loads on brain, nervous system, and immune system.

Duration
-- 10 minutes to 2 hours

Hot Jacuzzi or hot bath
Sit in a hot Jacuzzi or bath tub.

Purpose
-- Provide temperature and relaxation related stimuli for production of growth and regeneration oriented substances in the brain and body [nerve growth factor, growth hormone, etc]. Increase blood flow and oxygenation in order to promote regeneration and recovery functions in brain, nerve, immune system, and muscle.

Temperature
F = 98 - 105 degrees
C = 37 - 40

Duration
-- 5 to 10 minutes

Access to information and the ability to apply it is the major mechanism of success in human performance in track & field, in medicine, in health and wellness. As you continue to acquire and apply more information you continue to expand the area of what is possible.

To be a good track coach one must -first- be a good physiologist.
To be a good medical doctor one must -first- be a good physiologist.
To be a good physiologist one must -first- be willing to.....
-- put data ahead of dogma
-- put science ahead of indoctrinated tradition
-- put logic and reason ahead of faulty assumptions
-- put mechanisms ahead of correlations and "risk factors"
-- put critical thinking and clinical reasoning ahead of memorized "if-then" statements
-- aggressively keep up with, read, and apply large amounts of published research
-- accept outcomes as the judge and jury of your work
Over-training

The term "over-training" means different things to different people. In running, most people in the sport define it in such a way as to relate to a running injury.

That's the common way people think of it. However, the more common manner in which it manifests itself is in suppressing one's body from gaining fitness, thus suppressing improvements in performance level.

There are --2-- separate consequences of "Over-training"

1. The one where you incur a running injury

2. The one where your body enters into the physiological state where your anabolic system [a.k.a tissue building] is suppressed to some significant degree and thus your ability to acquire training adaptations and move forward in fitness level is suppressed. This can be referred to generally as "Physiological Over-training", or being in an "over-trained state".

Physiological over-training, or being in an "over-trained state" is something one can measure. It often comes in the form of cortisol [stress hormone] production, which suppresses anabolic [tissue building] hormones and other hormone production [ie. testosterone, estrogen, growth hormone, thyroid hormone, and overall adrenal gland function], and competes with anabolic hormones for binding sites on tissues such as muscle. It reduces protein production, such as muscle protein, blood proteins [ie. Red Blood Cells, Immune system cells, etc]. This is a state where even though you are -not- injured, and even though you are training fully, your fitness level does -not- move forward, and may even reverse.

Again, this is a measurable state. You can measure cortisol levels. You can measure red blood cell and EPO production ability. You can measure muscle protein synthesis. You can measure immune system activity. You can measure adrenal gland function. You can measure certain aspects of brain activity.

Regardless of what type of training program you believe in and follow [mileage oriented, or velocity oriented], its helpful if one's body can stay in an anabolic state such that it can adapt to one's training, thus moving forward in fitness, leading to increases in performance level.

That's major challenge and the major objective when designing any training program.

If your body can't adapt, you can't move forward in fitness level. If your body can't move forward in fitness level, it can't move forward in performance level.

Much of sport is about moving forward in performance.
**Nutrition Medicine**

**food or supplements as medicine**

These food items and supplements used with things such as autogenic relaxation or meditation, high intensity short duration exercise and strength training are a pathway to prevention and/or reversal of major maladies that impact and/or kill most Americans. At the very least they provide a foundation from which your body can have the best chance to respond to formal treatments or therapies.

Never take nutrition supplements everyday.

**Objectives**

Reduce potential for cancer, heart disease, stroke, Alzheimer’s, Dementia...and/or facilitate recovery from disease or injury

-- contribute to stopping and reversing cholesterol plaques on blood vessel walls and beta amyloid plaques in the brain

-- contribute to high level immune system and intestinal system functioning

-- contribute to brain cell regeneration

-- contribute to maintaining productive pH environment inside the body and providing minerals and other micronutrients

---

**3 days each week**

<table>
<thead>
<tr>
<th>as a meal by itself</th>
<th>together in a bowl....[unheated, raw]</th>
</tr>
</thead>
<tbody>
<tr>
<td>organic Broccoli florets [6 to 10]</td>
<td>organic Broccoli florets [6 to 10]</td>
</tr>
<tr>
<td>organic Cucumber [2 to 3 inch slice, chopped-up]</td>
<td>organic Cucumber [2 to 3 inch slice, chopped-up]</td>
</tr>
<tr>
<td>organic Carrot [3 to 4 inches, chopped-up]</td>
<td>organic Carrot [3 to 4 inches, chopped-up]</td>
</tr>
<tr>
<td>organic Romano tomato [chopped-up]</td>
<td>organic Romano tomato [chopped-up]</td>
</tr>
<tr>
<td>pour on top.....Australian MacNut Oil. [1 tablespoon, 15ml]</td>
<td>pour on top.....Australian MacNut Oil. [1 tablespoon, 15ml]</td>
</tr>
</tbody>
</table>

---

**3 days each week**

<table>
<thead>
<tr>
<th>as another meal by itself</th>
</tr>
</thead>
<tbody>
<tr>
<td>together in a bowl......</td>
</tr>
<tr>
<td>Dole mixed fruit cup [cherry, peach, pear, pineapple]</td>
</tr>
<tr>
<td>1/2 organic chopped Banana, organic grapes</td>
</tr>
<tr>
<td>organic berries [strawberry, blueberry, raspberry, blackberry]</td>
</tr>
<tr>
<td>vitamin D3..............1 capsule 5000 IU [Jarrow Formulas Vitamin D3]</td>
</tr>
<tr>
<td>magnesium threonate….1 capsule 500mg [Absorb Health]</td>
</tr>
<tr>
<td>zinc......................1 capsule [Jarrow Formulas Zinc Balance 15mg]</td>
</tr>
</tbody>
</table>

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**Supplements Schedule**

**Mondays - &- Tuesdays**

<table>
<thead>
<tr>
<th>with a meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin K2..............1 capsule 90mcg [Jarrow Formulas MK-7]</td>
</tr>
<tr>
<td>L-Carnitine...........1 capsule 500mg [Jarrow Formulas L-Carnitine Liquid Caps]</td>
</tr>
<tr>
<td>Kyolic....................1 capsule 300mg [Kyolic Garlic Formula 100]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>with another meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHA..................2 capsules [Doctor’s Best DHA 500]</td>
</tr>
<tr>
<td>Phosphatidylserine...1 capsule 100mg [Doctor’s Best, Best Phosphatidylserine]</td>
</tr>
<tr>
<td>N-Acetyl-cysteine....1 capsule 600mg [Doctor's Best, NAC Detox Regulators]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>drink Willard Water [Ultimate] with meals and for taking supplements</th>
</tr>
</thead>
<tbody>
<tr>
<td>at bed time --- Probiotic.......1 capsule [Dr. Ohhira's Probiotics 12 Plus]</td>
</tr>
</tbody>
</table>

**Wednesdays - &- Thursdays**

<table>
<thead>
<tr>
<th>with a meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selenium............1 capsule 200mcg [Solaray, as L-selenomethionine]</td>
</tr>
<tr>
<td>B-vitamins..........1 capsule [Doctor's Best Fully Active B-Complex]</td>
</tr>
<tr>
<td>Resveratrol..........1 capsule 100mg [Micronized Longevinex]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>with another meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iodine.............1 drop placed in 1/3 cup water or juice = 7mg iodine....[Lugol’s Iodine]</td>
</tr>
<tr>
<td>vitamin D3........1 capsule 5000 IU [Jarrow Formulas Vitamin D3]</td>
</tr>
<tr>
<td>magnesium threonate..1 capsule 500mg [Absorb Health]</td>
</tr>
<tr>
<td>zinc................1 capsule [Jarrow Formulas Zinc Balance 15mg]</td>
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The ETG nutrient list

**stopping and reversing cholesterol plaques and beta amyloid plaques on blood vessel walls**

--- Resveratrol  
product = trans resveratrol  
brand name = Longevinex, Micronized Longevenix [100mg trans resveratrol]  
research based purpose = increase production and regeneration of brain cells, reduce cholesterol plaques and beta amyloid plaques in blood vessels and in brain  
purchase = can buy online at the Longevenix site

--- N-Acetyl-cysteine  
product = n-acetyl-cysteine  
brand name = Doctor's Best, NAC Detox Regulators 600mg  
research based purpose = reduce cholesterol plaques and beta amyloid plaques in blood vessels and in brain  
purchase = can buy online at Health Works Mart located at realfoodgrocery.com

--- L-Carnitine  
product = L-Carnitine  
brand name = Jarrow Formulas L-Carnitine Liquid Caps 500mg  
research based purpose = reduce cholesterol plaques and beta amyloid plaques in blood vessels and in brain  
purchase = can buy online at amazon.com

--- Vitamin K2  
product = vitamin K2  
brand name = Jarrow Formulas MK-7 [90mcg]  
research based purpose = reduce cholesterol plaques and beta amyloid plaques in blood vessels and in brain  
purchase = can buy online at amazon.com

--- Kyolic  
product = aged garlic extract  
brand name = Kyolic Garlic Formula 100 [300mg, 300 capsules]  
research based purpose = reduce cholesterol plaques and beta amyloid plaques in blood vessels and in brain  
broad outcome purpose = provide allicin, an extract of garlic reduce potential for heart disease and stroke  
purchase = can buy online at amazon.com

--- DHA  
product = Doctors Best DHA 500  
brand name = Doctors Best  
research based purpose = reduce blood vessel inflammation, improve blood vessel functioning  
purchase = amazon.com

--- Vitamin C  
product = vitamin C in liposomal form  
brand name = Dr Mercola's Liposomal Vitamin C licaps [500mg per capsule, listed on bottle as 1000mg per serving]  
research based purpose = reduce blood vessel inflammation, improve blood vessel functioning  
purchase = can buy online at amazon.com
# TheETG nutrient list

## immune system and intestinal system functioning

--- probiotics
--- Vitamin D3
--- liquid Colostrum
--- Aloe Juice

--- Probiotics
  | product       | Dr Ohirra's Probiotics-12 Plus
  | brand name    | research based purpose = provide "good" bacteria to the intestines to increase nutrient supply to the body, decrease digestive tract stress on immune system, maintain high level brain and nervous system functioning
  | purchase      | can buy online, amazon.com

--- Vitamin D3
  | product       | small capsule vitamin D3
  | brand name    | Jarrow Formulas Vitamin D3 5000 IU
  | research based purpose | stimulate immune system, reduce blood vessel inflammation, increase regeneration of cells
  | purchase      | online amazon.com

--- Colostrum
  | product       | Colostral Whey Liquid colostrum
  | brand name    | PerCoBa
  | research based purpose | provide immunoglobulins and nucleotides to boost immune system functioning
  | purchase      | can buy online at the PerCoBa website, PerCoBa.com

--- Aloe Juice
  | product       | organic aloe juice with un-damaged long chain polysaccharides
  | brand name    | Lily Of The Desert Aloe Juice [inner filet]
  | research based purpose | provide aloe polysaccharides
  | purchase      | Whole Foods Market, can buy online at amazon.com
The ETG nutrient list

brain cell functioning and regeneration
--- Phosphatidylserine
--- Ribose
--- B-Vitamins

--- Phosphatidyl-serine
product = Phosphatidylserine
brand name = Doctor's Best, Best Phosphatidylserine 100mg
research based purpose = provide fatty acids serine and choline for brain cells
broad outcome purpose = increase production of new brain cells, increase regeneration of brain cells
purchase = amazon.com

--- Ribose
product = ribose
brand name = Jarrow Formulas D-Ribose Muscle Edge [200g powder]
research based purpose = provide nucleotides to increase cell regeneration
purchase = can buy online at amazon.com

--- B-Vitamins
product = Doctor's Best Fully Active B-Complex
brand name = Doctor's Best
research based purpose = improve functioning of cells in the brain, immune system, blood vessels
purchase = amazon.com

maintaining pH environment inside the body and providing minerals and other micronutrients
--- combined 4 specific unheated raw vegetables into a meal by themselves
--- MacNut Oil
--- Willard Water

--- Super Vegetables
product = organic cucumber, carrot, romano tomato, broccoli florets….buy at grocery store

--- Macademia nut oil
product = MacNut Oil
brand name = Australian MacNut Oil
research based purpose = provide micro-nutrients, essential fatty acids
purchase = can buy at Whole Foods Market or online at Health Works Mart

--- catalyzed water
product = catalyzed water
brand name = Willard Water Ultimate Concentrate
research based purpose = provide minerals via catalyzed water
purchase = can buy online at willardswater.com

--- Iodine
product = liquid iodine [7mg per drop] 1 ounce, 30ml
brand name = J.Crow's Lugol's Solution 5%
research based purpose = provide iodine in potent form
purchase = can buy online at amazon.com
The ETG menu's 4 vegetables; Broccoli, cucumber, carrot, Romano tomato

Placing mechanical or physical stress [i.e. cutting them, then chewing them] activates plant chemicals contained in them, increasing their impact on brain cells, immune system, and other cells in the body.

Green leaf vegetables contain substances called iso-thio-cya-nates. Green leaf vegetables contain one of the most important isothiocyanates, called Sul-for a-phane. These substances can activate specific genes in our cells. Those specific genes are for anti-oxidant enzymes and detoxifying enzymes, most of them referred to collectively as Phase 2 enzymes. The substance has the ability to bind to the promoter area of anti-oxidant genes, causing production of anti-oxidant and detoxifying enzymes. This is believed to be among the main mechanisms by which certain vegetables have the ability to prevent cancer and heart disease. Aside from supplying anti-oxidants in the vegetables themselves they have this ability to cause cells in our body to produce other anti-oxidants as well.

"Sulforaphane, one of the most important isothiocyanates in the human diet, present in cruciferous vegetables, is known to have chemopreventive activities in different tissues."

"The observed Sulforaphane-induced upregulation of phase II enzymes was accompanied by a significant increase in nuclear erythroid 2 p45-related factor 2 expression and correlated with a significant increase in total antioxidant capacity....."

M. Malaguti, et al
Sulforaphane treatment protects skeletal muscle against damage induced by exhaustive exercise in rats
Journal Of Applied Physiology........Volume 107.........August 2009.........page1028

"When tomatoes and broccoli are eaten together, we see an additive effect. We think it's because different bioactive compounds in each food work on different anti-cancer pathways..."
[John Erdman, Professor of Food Science, University of Illinois]

The ETG menu's 4 mixed berries strawberry, blueberry, raspberry, blackberry

Mixed berries to supply additional anti-oxidants and micro-nutrients.

"Regular strawberry consumption augmented plasma antioxidant activity and decreased lipid peroxidation suggests preventive potential of these fruits against oxidative stress-dependent disorders. Blood phagocytes are important source of oxidants that may contribute to systemic oxidative stress. We examined the effect of strawberry consumption on the luminol enhanced whole blood chemiluminescence reflecting oxidants generation by circulating phagocytes in healthy subjects."

"Strawberry consumption decreased median resting luminol enhanced whole blood chemiluminescence and this effect was more evident after the 1st course (by 38.2%) than after the the 2nd one (18.7%), while fMLP-induced luminol enhanced whole blood chemiluminescence was constant."

"The decrease in resting luminol enhanced whole blood chemiluminescence suggests that regular strawberry consumption may suppress baseline formation of oxidants by circulating phagocytes. This may decrease the risk of systemic imbalance between oxidants and anti-oxidants and be one of mechanisms of health-promoting effect of these fruits consumption."

P. Bialasiewicz, et al
Addition of Strawberries to the Usual Diet Decreases Resting Chemiluminescence of Fasting Blood in Healthy Subjects—Possible Health-Promoting Effect of These Fruits Consumption
Journal of the American College of Nutrition.....Volume 33 #4........July 2014.......pages 274 - 287

"Let food be your medicine and medicine be your food."
[Hippocrates]
The Role Of pH

The body's pH level is a critical aspect of the ability of cells to adapt to stress, prevent and/or recover from illness or injury, adapt to exercise and sport training, etc.

The environment in which your cells operate in can change day to day, and for many if not most Americans, get into a level that is well below optimal. Keeping your body's pH level in an optimal range is to put the environment inside your body in a state where it can quickly repair itself, build tissue, adapt to and recover from high level stressors, slow aging, boost the immune system, prevent illness, etc.

To put your body in a high state of health you must not only ingest protein in your diet, provide yourself with rest, relaxation, and sleep, but you must also provide the food/nutrients that put and keep your body's pH level in the necessary range, and consume the essential gene level nutrients that assist the body to repair itself.

Life Long Status: Choose Foods That You Like Or Can Tolerate

Creating the best environment inside your body is helpful over the long term. The use of the pH paper can help you use trial and error to get your diet to a point where things are approaching the ballpark of being optimal and staying that way for most of the day. Generally, most vegetables are alkalizing foods.

Choose alkalizing foods that you like. What you're out to do is to establish the efficacy of your diet and supplement intake as it impacts the status of the environment inside your body that your cells operate in.

For a list of foods that can help you get some idea of what foods can make your pH more alkaline see a general list; www.energiseforlife.com/list_of_alkaline_foods.php

Testing Your pH If you'd like to test your urine pH, you can buy pH paper for about $10.00

Keep in mind that you are looking at the pH of urine. How you choose to do that is up to you. You can do the "stream of flow" method of placing a strip of pH paper in a given position. Or you can choose a less potentially messy method by using a dixie cup to collect a small amount, then dipping the pH strip in to cup.

Many Americans are reported to be between 5.5 - 5.8. For them the paper won't change color. You'd like it to turn green to be 6.8 - 7.0 range both in the morning and in the evening. Keep in mind that even though you're looking at urine pH, what you're really out to measure is the efficacy of your diet and supplement intake, and thusly, the status of the environment inside your body that your cells operate in.
Colostrum

Colostrum is a substance similar to milk that is produced in the breast by humans [women] and animals for use by newborns to aid their physiological development and growth. It contains a number of digestive tract, brain/nervous system, and immune system substances that are basic nutrients and proteins for these areas of function. It also contains a number of basic cell function substances as well as growth factors that are used in normal cellular adaptations and recovery from major stressors and traumas.

When taken by adults as an extremely popular aspect of Preventive Medicine, Nutritional Medicine, and Naturopathic Medicine particularly for those who have nutrient deficits [ie. hospital patients, elderly nursing home residents, high level athletes], or by those who suffer from immune system related maladies or challenges [allergies, common cold, infection, high level athletes in heavy training] colostrum can be a major restorer of normal functioning. From heart disease and cancer, to fibromyalgia and infections, colostrum addresses many of the nutritional components of these maladies.

The major health triad....digestive tract, brain/nervous system, and immune system, have become the 3 main targets in the modern day practice of Preventive Medicine, Nutritional Medicine, and Naturopathic Medicine. Colostrum is one substance that has the ability to address all 3.

Product suggestion.......PerCoBa http://www.percoba.com/quality.html

Colostrum & Nutrition Medicine

In the interest of the broad effects of Preventive Medicine and Nutritional Medicine at a time in history when there is a rapid transition underway, headed away from Traditional Medicine and it’s pharmaceuticals and toward Preventive Medicine and Nutritional Medicine and their foundational nutrients approach to human cellular function, the ETG would like to express its opposition to the World Anti-doping Agency [WADA] position [taken earlier this year] on Colostrum. Whether for athletes or the general public, a recommendation to avoid use of a product that benefits long term health is a WADA position that cannot be defended. The original purpose of a "banned list" was to protect the health of athletes, not to "catch the drug cheats", or level a playing field. Coming out against a non-drug product that protects health is nonsensical.

The ETG currently has no plans to avoid use of Colostrum, and to the contrary, recently added it to it’s "Supplements List", shown on the ETG Training Packet page of this website, in "The Food & Supplements" section of the packet.

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Of concern to some [ie. World Anti-Doping Agency (WADA)] is that similar to human Colostrum, colostrum from cows contains Growth Hormone along with its best friend and side-kick, IGF-1. These substances are comprised of proteins. When consumed by mouth, these proteins enter the digestive tract, where they get broken down in the stomach [ie. Digested]. Thus they are no longer Growth Hormone or IGF-1.

When you correct nutritional and other deficits in humans, you see cell function return to normal, and thus if you measure things such as growth hormone levels and/or IGF-1 levels, you'll likely see an increase. The increase was due to restoring normal cell function, not Growth Hormone ingestion or IGF-1 ingestion. Obviously, this point added to the situation where we know that growth hormone is not a performance enhancing drug [see the ETG Training Packet section titled The Problem With Drug Use & The Problem With Drug Testing], should remove any cause for concern in using Colostrum to aid one's health and/or cellular functioning. The original purpose of a banned drug list in sport was to protect the health of athletes. Colostrum is a super-star in ever expanding field of Nutrition Medicine.

Product suggestion.... PerCoBa Colostrum
Vitamin D is a major player in the function of the immune system. Generally speaking, having low levels tends to lead to out of control immune cells attacking some part of the body that you'd prefer to be left alone. Called a "vitamin", it is a hormone that regulates lots of stuff in the body, the immune system being one of them.

As Americans, our excessive use of sun screens is creating problems, since sun light causes the skin to produce vitamin D.

The study shown below focuses on its role in Multiple Sclerosis, which is a situation where out of control immune system cells attack the nervous system, gradually killing off your cells along your nerve fibers, reducing and/or destroying nerve function.

The study was published in 2006, so a lot has been learned since then. The question is no longer "can low vitamin D levels lead to something bad". The answer is yes. The question now is, how come some people get MS, while others get rheumatoid arthritis, while yet others get some other immune system related malady.

Like all issues related to problems involving immune system function, there is a chronic stress component to these issues that go along with and/or lead to the nutrient deficiency issues that may exacerbate a problem.

Vitamin D supplements should be in the form of D3 [ie. vitamin D3].

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Journal Of The American Medical Association…..Volume 296 #23…..December 20, 2006
K.L.Munger, et al
Serum 25-Hydroxyvitamin D Levels and Risk Of Multiple Sclerosis

“Epidemiological and experimental evidence suggests that high levels of vitamin D, a potent immunomodulator, may decrease the risk of multiple sclerosis.”

“…..the risk of multiple sclerosis significantly decreased with increasing levels of 25-hydroxyvitamin D…..”

“The results of our study suggest that high circulating levels of vitamin D are associated with a lower risk of multiple sclerosis.”

“Prevailing thought is that MS is an autoimmune disorder whereby an unknown agent or agents triggers a T cell–mediated inflammatory attack, causing demyelination of central nervous system tissue. A striking feature of the global distribution of MS is a multifold increase in increasing latitude, both north and south of the equator.”

“…..the change in MS risk with migration among people of common ancestry strongly supports a role for environmental factors. One potential factor may be vitamin D, a potent immunomodulator that in its hormonal form can prevent experimental autoimmune encephalomyelitis (EAE), an animal model of MS.”

“Because food provides little vitamin D, the major source for most people is through skin exposure to sunlight. At latitudes of 42° or more (eg, Boston, Mass), in winter most UV-B radiation is absorbed by the atmosphere, and even prolonged sun exposure is insufficient to generate vitamin D. As a result, seasonal vitamin D deficiency is common.”

“A protective effect of vitamin D on MS is supported by the reduced MS risk associated with sun exposure and use of vitamin D supplements.”

“In this large prospective study, we found that the risk of MS decreased with increasing serum levels of 25-hydroxyvitamin D.”

“Although this association was not seen among blacks, their smaller sample size and substantially lower 25-hydroxyvitamin D levels may have reduced the power to detect an association in this group.”

“Our results converge with a growing body of evidence supporting a protective role for vitamin D in MS development.”

“Of interest, regulatory T cells have been shown to be suppressed in individuals with MS.”

“If sufficient 1,25-dihydroxyvitamin D is produced, it may exert paracrine effects on surrounding T lymphocytes, thereby regulating the tissue-specific immune responses. Some support for this hypothesis comes from recent experiments showing that mice fed diets high in vitamin D had significantly fewer clinical and pathological signs of EAE than mice fed a vitamin D–deficient diet. Central nervous system levels of 1,25-dihydroxyvitamin D, but not blood levels, were higher in supplemented mice than in vitamin D–deficient mice and correlated inversely with disease severity.”

“…..our previous finding of a lower MS risk among women taking vitamin D supplements supports a specific role for vitamin D.”

“These results suggest that vitamin D levels earlier in life may be critical in conferring protection for MS and our finding of a strong protective effect of 25-hydroxyvitamin D levels of 100 nmol/L or higher before age 20 years supports this view. Vitamin D supplementation in infancy seems to exert a strong protective effect against the autoimmune disease type 1 diabetes, and vitamin D levels in early childhood could also have an impact on the risk of MS. Although there are no data on vitamin D levels earlier in life and risk of MS, the strong inverse association between MS risk and 25-hydroxyvitamin D levels at ages 16 to 19 years suggests that levels in late adolescence are likely to be important.”

“Almost half of white and two thirds of black adults in the United States have 25-hydroxyvitamin D levels below 70 nmol/L.28 Although levels above 25 nmol/L have traditionally been considered normal and almost everyone in this study had measurements above this level, much higher levels may be required for bone mineralization and prevention of fractures. According to a recent review, the best serum 25-hydroxyvitamin D concentrations are between 90 and 100 nmol/L. Adolescents have somewhat higher levels than adults, but few have levels higher than that associated with a reduced risk of MS in our study. If the association reported here reflects a true protective effect of vitamin D, increasing the vitamin D levels of adolescents and young adults could result in an important reduction in MS incidence.”

“Such an increase could be achieved by using vitamin D supplements. Although the current Institute of Medicine adequate intake of vitamin D is 200 U/d for adults younger than 50 years, and the highest dose that is considered safe is 2000 U/d, adverse effects have been reported only at intakes several-fold higher.”
We investigated whether supplementation with 60 grams per day of bovine colostrum affects blood levels of insulin-like growth factor-1 (IGF-I) and IGF binding protein-3 in relation to doping testing.

Nine endurance-trained men ingested 60 g/d of bovine colostrum for 4 wk.

After 4 wk urine and blood samples were taken....

Drug testing in a laboratory accredited by the International Olympic Committee did not show any forbidden substance before or after 4 wk of supplementation.

Daily supplementation with 60 g of bovine colostrum for 4 wk does not change blood IGF-I or IGF binding protein-3 levels and does not elicit positive results on drug tests.

Nutrition...Volume 18 # 7-8...July-August, 2002...page 566 - 567

H. Kuipers, et al...[Department of Movement Sciences, Maastricht University, The Netherlands] --- Effects of oral bovine colostrum supplementation on serum insulin-like growth factor-I levels

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This study examined the effect of supplementation with concentrated bovine colostrum protein powder (intact) on plasma insulin-like growth factor I (IGF-I) concentrations....

We conclude that supplementation with intact powder did not increase plasma IGF-I concentrations...after 8 weeks of supplementation

J.D. Buckley, et al [University of South Australia, Adelaide] -----Bovine colostrum supplementation during endurance running training improves recovery, but not performance

....IGF-1 is present in breast milk....

Gut....Volume 51.....2002.....page 748-754

A .G. Cummins, F. M. Thompson [Bazil Hetzel Research Institute and the Department of Gastroenterology and Hepatology, The Queen Elizabeth Hospital, Adelaide, South Australia] ----Effect of breast milk and weaning on epithelial growth of the small intestine in humans

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Natural colostrum contains several substances, including IGF-1 which is listed as a prohibited substance (section S2 of the Prohibited List).”

Taking into account the above elements and the fact that there is still scientific uncertainty on the ability for IGF-1 contained in colostrum to influence plasma levels of IGF-1, the WADA List Committee adopted a safe approach and recommends athletes not to take colostrum”.

[World Anti-Doping Agency 2008]

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"WADA would like to take this opportunity to emphasize that colostrum contains Insulin Growth Factor-1 (IGF-1) a substance prohibited under section S.2 of the 2008 WADA Prohibited List. Even if influence of oral intake of colostrum on plasma concentration of IGF-1 is still a matter of debate within the scientific community, WADA would like to alert that abnormal increase or level of blood circulating IGF-1 would be considered as potentially revealing doping practices (e.g hGH or IGF-1 intake) by athletes.”

"WADA wishes to draw your utmost care in the use of colostrum by athletes.”

[March 19, 2008.....Dr Olivier Rabin, Director, Science of the World Anti Doping Agency(WADA)]
The problem in American health care

"...the benefits that US health care currently deliver may not outweigh the aggregate health harm it imparts."
Journal Of The American Medical Association.....Volume 302 #1.July 1, 2009....page 89 - 91

"Despite unparalleled financial and human capital investments, the quality, safety, and value of US health care remain suboptimal."
B.W. Powers, et al.....Ending the Cycle of Blame in US Health Care
Journal Of The American Medical Association....Volume 312 #20.November 26, 2014 ....page 2091 - 2092

"...most doctors don't read or understand medical research..."

"How many established standards of medical care are wrong........If almost half of these practices are wrong, as empirical studies suggest....."

"The doctors do not always know best and often fail to provide the appropriate care."
[Consumer Reports On Health...April 2002 -- When Doctors Don't Know Best]

"The US health care culture still does not support the questioning of physician behavior."
[Journal Of The American Medical Association...Volume 304 #2.July 14, 2010...page 204-205]

".....A recent study for example, found that only half of all cardiac guidelines are based on scientific evidence."
President Barack Obama...Speech to the American Medical Association [June 15, 2009]

"As long as people will accept crap, it will be financially profitable to dispense it."
[Dick Cavett]
Traditional Medicine = drugs, drugs, and more drugs

"All the good things...they don't teach us in medical school, because the drug companies pay for our education."
Dr. John Sessions M.D.

"Most drugs are only effective for a small percentage of people who take them."
Michael Leavitt [U.S. Secretary of Health & Human Services 2005 - 2009]

"For every dollar we spend on prescription drugs, we spend a dollar to fix the complication."
Dr. Mehmet Oz [Professor of Surgery, Columbia University]

"Conventional medicine.....Its unwavering commitment to the use of pharmaceutical drugs I see as a real problem...."
Dr. Andrew Weil

"The reason why doctors are using all these statins is because they're told that's the right way to practice medicine......its not getting through to the doctors that their information is coming from the drug companies."
[Dr. John Abramson , Lecturer, Harvard University, Consultant U.S. Dept. Of Justice & FBI.....stated on the Dr. Oz Show May 13, 2011]

"1000 people have to be treated for one year to prevent one death......it seems wrong-minded to me to treat everyone with a statin"
Dr. Shah Ebrahim [South Asia Network for Chronic Disease, New Delhi, India]

U.S. Department of Justice [November 4, 2013]-----"Johnson & Johnson will pay more than $2.2 billion to resolve criminal and civil liability......payment of kickbacks to physicians and to the nations largest long-term care pharmacy provider."

U.S. Department of Justice [May 7, 2012]-----"Abbott Laboratories Inc. has pleaded guilty and agreed to pay $1.5 billion to resolve its criminal and civil liability arising from the company's unlawful promotion of the prescription drug......even after its clinical trials failed......"

U.S. Department of Justice [April 20, 2012]-----".....pharmaceutical company Merck was sentenced by U.S. District Court Judge Patti B. Saris to pay a criminal fine in the amount of $321,636,000 in connection with its guilty plea related to its promotion and marketing of the painkiller......Merck entered into a civil settlement agreement under which it will pay $628,364,000 to resolve additional allegations regarding off-label marketing of Vioxx and false statements about the drug's cardiovascular safety."

"In September 2011...a National Prescription Drug Take-Back Day...in Orange County, Florida alone....more than 1.5 tons of prescription medications were returned."
WH Shrank....Our bulging medicine cabinets....New England Journal of Medicine....Volume 364 #17.....April 28, 2011......page 1591

"And one of the worst forms of bias is that the drug companies will not permit researchers to publish negative results. If the drug doesn't look good, it's not published. It's buried.....the FDA will look through all of these trials, and if two are positive--then they'll usually approve that drug....for these two studies, there may be an additional 10 studies or 15 studies that are negative....But they will not release the negative trials. The FDA will not release the negative trials--because they say it's proprietary. They only release the trials that the company agrees to release. In lots of cases the negative results are hidden; the positive results are published; and the negative results are hidden within the agency that is supposed to be insuring the safety and effectiveness of drugs."
Marcia Angell [Harvard Medical School...former Editor In Chief of the New England Journal Of Medicine]
Traditional Medicine, first do-no-harm......

"In April, the WHO declared that the problem threatens the achievements of modern medicine. A post-antibiotic era in which common infections and minor injuries can kill is a very real possibility for the 21st century."------".....a report on antibiotic resistance linked to an executive order from President Barack Obama, who directed the National Security Council to work with a governmental task force and a nongovernmental advisory council to develop a national action plan by February 2015."------".....antibiotics in a market that is currently worth more than $40 billion annually for drugs that are starting to fail."


"Infections resistant to medicines will kill more people per year than cancer by 2050, and cost the world $100 trillion annually, according to a U.K. government-backed report led by Jim O'Neill, the well-known former Goldman Sachs economist."------"The wide-ranging study, called the Review on Antimicrobial Resistance, was commissioned by the U.K. government earlier this year amid growing concerns about drug-resistant "superbugs", including new strains of E. coli, malaria and tuberculosis."------"Its forecasts, based on research by RAND Europe and KPMG, suggest that drug resistance, which is estimated to have caused around 700,000 deaths globally this year, will cause 10 million by 2050 if further action is not taken."

CNBC [December 11, 2014]....Drug resistance deadlier than cancer by 2050: Study....by Catherine Boyle

"106,000 deaths/year from non-error, adverse effects of medications"
B. Starfield...Is US Health Really the Best in the World
Journal of The American Medical Association.....Volume 284 #4....July 26, 2000....page 483 - 485

"Hospital Acquired Infections are a significant cause of morbidity and mortality......about 1 in every 20 inpatients has an infection related to hospital care."

[United States Department Of Health & Human Services]

"......1.5 million U.S. residents are harmed or killed each year because of medication errors, according to an Institute of Medicine report."

Nature Medicine.....Volume 12 #9....September 2006.....pg 984 - 985.....News In Brief

"Every week, about 53,000 excess hospitalizations and about 2400 excess deaths occur in the United States among people taking properly prescribed drugs to be healthier. One in every five drugs approved ends up causing serious harm......Prescription drugs are the 4th leading cause of death......American patients also suffer from about 80 million mild side effects a year......The further corruption of medical knowledge through company-funded teams that craft the published literature to overstate benefits and understate harms, unmonitored by the FDA, leaves good physicians with corrupted knowledge. Patients are the innocent victims."

Dr. Donald Light...[Risky Drugs: Why The FDA Cannot Be Trusted
University of Medicine and Dentistry of New Jersey...Harvard University Center For Ethics

Mental health = drugs, drugs, and more drugs

"The difference between the effect of a placebo and the effect of an anti-depressant is minimal for most people.....People get better when they take the drug, but its not the chemical ingredients in the drug that are making them better, its largely the placebo effect."

Irving Kirsch [Associate Director Placebo Studies, Harvard Medical School]

"The U.S. mental health system is in crisis....according to a federal report."

"The fundamental problem: emphasizing medicating people over fostering ways to help them lead productive lives."

Associated Press, The Daily Texan [September 17, 2002]

"Practice is not reflecting the research. Ninety to 95% of programs have no research base. The gap between what is known and what is being provided in routine care is huge."