



TheElite Training Group track club

Expanding the area of what is possible

In Track & Field Distance Running & Competent Self-Care in medicine and psychology

www.theetgtrackclub.com

Nutrition Medicine

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 anyone seeking to move themselves or others forward in these areas.

As you continue to acquire and apply more information you continue to expand the area of what is possible. Data-less conclusions founded upon faulty assumptions are the mother of all screw-ups. They lead to human belief systems that quickly get set in stone. Put data ahead of dogma. Follow the data -not- the crowd.

TheETG packets attempt to address the following;

".....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]

"Not enough doctors adapt appropriately to new scientific findings.....An insufficient number of medical faculty members are well prepared, effective educators, and too few medical schools prepare their students for a lifetime of learning and change."
[J.Hilliard, et al. -- The Lancet -- Volume 385 #9969 -- February 21, 2015 -- page 672]

"....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]

".....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 -- page 984 - 985.....News In Brief]

"It is estimated that more than 700,000 individuals are seen in hospital emergency departments for adverse drug events each year in the United States."
[Centers For Disease Control -- 2015]

"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]

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

"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.]

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TheETG Nutrition Medicine standardized menu

These food items and supplements used with mind-body medicine activities such as autogenic relaxation or meditation, along with high intensity short duration exercise and strength training are a pathway to prevention and possible reversal of major maladies that impact or kill most Americans.

Objectives.....

Provide a standardized, **multi-decade** foundation of guaranteed nutrient supply 4 days each week from which your body can have a good chance at receiving health related nutrients. Reduce potential for cancer, heart disease, brain cell dysfunction, brain cell degeneration....and increase potential for reversal of same.

Fasting....standardized norms

The intended purpose is to provide some time off for digestion as well as less work for the immune system in the digestive tract, cells of the pancreas and other digestion related organs and glands, and to contribute to cell level activities including mitochondrial repair in the liver and other organs.

-- between meals = 3 hours -- overnight = 12 hours

4 days each week, about 180 - 200 days each year

raw vegetables

I consume of the 4 major vegetables [broccoli, cucumber, carrot, tomato].

When combined with one another they provide relatively high levels of gene activating phyto-chemicals, anti-oxidants, and micro-nutrients....as well as being well established alkalizing foods.

To increase delivery of fat soluble substances contained in them I add a source of fat via fish oil poured on top of the vegetables.

Chopping each of the vegetables [in addition to chewing] carries the purpose of physically activating substances in these vegetables that are in an inactive form. I add grapes to the mixed vegetables for an additional flavor and nutrients.

The mix of these 4 vegetables in particular are where the money is in this area of sport nutrition, as well as general health nutrition for the non-athlete American.

raw berries/fruits/nuts

I consume a combination of the 4 major berries and fruits to supply additional anti-oxidants and micro-nutrients.

[strawberry, raspberry, black berry, blue berry]

juices

I consume the 4 major juices mixed together in a glass bottle [Aloe juice, cranberry juice, concord grape juice, pomegranate juice].

They provide long chain plant sugars [plant polysaccharides] and other phyto-chemicals.

TheETG drink

I consume a nutrition medicine beverage comprised of a combination of liquid or powdered items on TheETG supplements list, mixed together in a glass bottle. Collectively they provide.....nucleotides, neuropeptides, immunoglobulins, essential fats, iodine, magnesium, and other minerals.

supplements

I consume nutrition medicine oriented supplements that also happen to be powerful nutrients in applied Sport Nutrition.

Willard Water, probiotics

-- probiotics.....4 capsules [Dr. Ohhira's Probiotics 12 Plus]

-- pour 16oz water into a glass bottle.....with 1/2 teaspoon [Willard Water Ultimate]

raw vegetables organic, together in a glass bowl = Broccoli florets – cucumber -- carrot -- romano tomato....[add dark grapes]

----- add a teaspoon fish oil to aide absorption of fat soluble nutrients

raw berries organic, together in a glass bowl = strawberry, blueberry, raspberry, blackberry, mixed fruit cup = peach, pear, pineapple....[Dole]

raw nuts organic, together in a glass container = almonds -- cashews – pecans -- walnuts.....[Aurora Natural]

juices [mixed together into 8oz glass bottle]

- aloe juice [Lily Of The Desert] - grape juice [Lakewood Organics]
- cranberry juice [Lakewood Organics] - pomegranate juice [Lakewood Organics]

supplements with this meal

-- kyolic.....1 capsule 1000mg [Kyolic Aged Garlic Extract]
-- phosphatidylserine.....1 capsule 100mg [Doctor's Best, Phosphatidylserine]
-- curcumin.....1 capsule 500mg [ProHealth, Optimized Curcumin Longvida]
-- benfotiamine.....1 capsule [Doctor's Best Benfotiamine 300mg]
-- N-acetyl-cysteine.....1 capsule 600mg [Doctor's Best, NAC Detox Regulator]

pizza [¼ to ½ medium size, thin crust] = Tuesdays, Thursdays

toppings = mushroom -- tomato -- green pepper -- black olive -- onion -- cheese

beef = Mondays.....1 cheese burger, 5280 Burger Bar restaurant

= Wednesdays...1 cheese burger, 5280 Burger Bar restaurant

= Fridays.....2 double cheese burgers, P.Terry's restaurant

Supplements with these meals = Mon/Tues/Wed/Thur

-- vitamin D3-K2.....1 capsule [Bio Tech D3, K2]
-- magnesium glycinate....2 capsules [Trace Minerals, magnesium glycinate, 120mg]
-- multi-vitamin.....4 capsules [3 Formulas, Molecular Multi]

TheETG Drink Bolthouse Farms Protein Plus

pour the beverage and the supplements shown below, into a glass bottle

-- 1 drop.....iodine = 4mg [Lugol's Iodine, 2% solution]
-- 1 teaspoon.....ribose [Jarrow Formulas D-Ribose 200mg]
-- 1 teaspoon.....liquid colostrum [Nature's Gift colostrum liquid]
-- 1 teaspoon.....fish oil = 2g [Nordic Naturals, liquid, Ultimate Omega]
-- 1 teaspoon.....magnesium chloride = 400mg [Trace Minerals, liquid magnesium]
-- 1 teaspoon.....arginine = 5g [Nutricost, L-Arginine]

other supplements with this meal

-- vitamin C.....2 capsules 500mg [Dr Mercola, liposomal C]



TheETG Supplements Budget

[1 year = rounded, about \$2500]

willard water, probiotics ----- rounded, about \$700 per year

1 probiotics = \$70	--- comes in 100 per box --- will use 4 capsules x 16 days = 64 capsules each month For maintaining beneficial bacteria in the digestive tract	1 year = 8 boxes = \$600 Dr. Ohirra's Probiotics 12 Plus I buy it at amazon
2 willard water = \$30	--- comes in 47 teaspoons per bottle --- will use 1/2 teaspoon x 16 days = 8 teaspoons each month For supplying micronutrients, minerals.	1 year = 2 bottles = \$60 Willard Water--Ultimate I buy at willardswater.com

beef ----- rounded, about \$400 per year

3 vitamin D3 & K2 = \$30	--- comes in 120 per bottle --- will use 1 capsule x 16 days = 16 capsules each month D3 For maintaining high level cellular function in the brain, nervous system, and immune system via Vitamin D's role as a major hormone in the body that impacts the function of many cells and organ systems. K2 For reducing and/or removing calcified cholesterol plaques and beta amyloid plaques from blood vessel walls in brain and body	1 year = 2 bottles = \$60 Bio Tech D3 & K2 I buy it at amazon
4 magnesium = \$35	--- comes in 180 per bottle --- will use 2 capsules x 16 days = 32 capsules each month For magnesium for cellular function in brain, nerve, & immune system	1 year = 2 bottles = \$70 Trace Minerals [magnesium glycinate] I buy it at amazon
5 multi-vitamin = \$60	--- comes 120 in per bottle --- will use 4 capsules x 16 days = 48 capsules each month For providing several nutrition medicine oriented nutrients [magnesium, zinc, iodine, B vitamins, beta carotene, vit C, vit E, selenium, resveratrol, beta glucan, etc, etc, etc]	1 year = 5 bottles = \$300 Molecular Multi, 3 Formulas buy online, lifespannutrition.com

veg-berry-nuts-juices ----- rounded, about \$300 per year

6 kyolic = \$15	--- comes in 60 per bottle --- will use 1 capsule x 16 days = 16 capsules each month For reducing and/or removing calcified cholesterol plaques and beta amyloid plaques from blood vessel walls in brain and body	1 year = 3 bottles = \$45 Kyolic Aged Garlic Extract 1000mg I buy it at amazon
7 phosphatidylserine = \$30	--- comes in 120 per bottle --- will use 1 capsule x 16 days = 16 capsules each month For regenerative processes in the brain and nervous system, contributes to nerve growth factor production, dopamine production, melatonin production, reduces effects of cortisol [stress hormone]	1 year = 2 bottles = \$60 Doctor's Best Best Phosphatidylserine I buy it at amazon
8 curcumin = \$35	--- comes in 60 per bottle --- will use 1 capsule x 16 days = 16 capsules each month For contributing to high level endothelial cell function [blood vessel cells], and for reducing and/or removing beta amyloid plaques from blood vessel walls in brain.	1 year = 3 bottles = \$100 ProHealth, Optimized Curcumin Longvida 500mg I buy it at amazon
9 benfotiamine = \$15	--- comes in 60 per bottle --- will use 1 capsule x 16 days = 16 capsules each month For fat soluble form of vitamin B1, improves brain glucose metabolism, cognitive function, and halts or reverses dementia progression in mild to moderate Alzheimer's.	1 year = 3 bottles = \$45 ProHealth, Optimized Curcumin Longvida 500mg by on amazon
10 N-Acetyl-cysteine = \$10	--- comes in 60 per bottle --- will use 1 capsule x 16 days = 16 capsules each month For contributing to production of anti-oxidant glutathione, and for reducing and/or removing cholesterol plaques, beta amyloid plaques from blood vessel walls in brain and body	1 year = 4 bottles = \$40 Doctor's Best NAC Detox Regulators 600mg I buy it at amazon

TheETG Drink ----- rounded, about \$1000 per year

11 vitamin C = \$40	--- comes 180 per bottle --- will use 2 capsules x 16 days = 32 capsules each month For aiding training adaptations by supplying vitamin C	1 year = 2 bottles = \$120 Dr Mercola liposomal C I buy it at amazon
12 iodine 2% solution = \$30	--- comes in 30ml per bottle --- will use 1 drop [0.05ml, 2mg iodine] x 16 days = 0.6ml each month For maintaining iodine supply required in high level training adaptations.	1 year = 1 bottle = \$30 Lugol's Solution I buy it at amazon
13 ribose = \$35	--- comes in 60 teaspoons per bottle --- will use 1 teaspoon x 16 days = 16 teaspoons each month For aiding training adaptations by supplying nucleotides	1 year = 4 bottles = \$150 Jarrow Formulas D-Ribose I buy it at amazon
14 colostrum [liquid] = \$35	--- comes in 24 teaspoons per bottle --- will use 1 teaspoons [5ml] x 16 days = 12 teaspoons each month For supplying nucleotides, neuro-peptides, and immuno-globulins.	1 year = 6 bottles = \$250 Nature's Gift Colostrum Liquid I buy it at nutrivene.com
15 fish oil = \$60	--- comes in 47 teaspoons per bottle --- will use 1 teaspoon [5ml] x 16 days = 16 teaspoons each month For adding fat to vegetables to aid absorption of fat soluble nutrients in the vegetables. Also for supplying the brain with essential fatty acids critical for regenerative processes in the brain and nervous system	1 year = 4 bottles = \$250 Nordic Naturals Ultimate Omega liquid fish oil I buy it at an Austin grocery store
16 magnesium [liquid]= \$20	--- comes in 118ml per bottle --- will use 1 teaspoon [5ml] x 16 days = 80ml each month For maintaining magnesium supply required in high level training adaptations.	1 year = 8 bottles = \$160 Trace Minerals Liquid Magnesium I buy it at amazon
17 arginine [powder] = \$15	--- comes in 50 teaspoons per bottle --- will use 1 teaspoon [5g arginine] x 16 days = 16 teaspoons each month For aiding immune system function	1 year = 4 bottles = \$60 Nutricost, L-Arginine I buy it at amazon

essential fatty acids for concussion & brain injury...

"Traumatic brain injury.....remains a clinical challenge. Clinical studies thus far have failed to identify an effective treatment strategy."

".....controlling aspects of neuroprotection, neuroinflammation, and neuroregeneration is needed."

"Omega-3 fatty acids offer the advantage of this approach."

".....there is a growing body of strong preclinical evidence and clinical experience that suggests that benefits may be possible from aggressively adding substantial amounts of Omega-3 fatty acids to optimize the nutritional foundation of traumatic brain injury, concussion, and postconcussion syndrome patients."

"Early and optimal doses of Omega-3 fatty acids, even in a prophylactic setting, have the potential to improve outcomes from this potentially devastating problem."

"....Omega-3 fatty acids should be considered mainstream, conventional medicine, if conventional medicine can overcome its inherent bias against nutritional, nonpharmacologic therapies."

n-acetyl-cysteine and L-carnitine..... shown to address the front end, back end, and middle of beta amyloid plaques in Alzheimer's and cholesterol plaques in heart disease.

- On the front end they interfere with production of beta amyloid and cholesterol plaques.
- On the back end they lower the toxicity and other issues caused by beta amyloid and cholesterol plaques.
- And in the middle they contribute to the destruction of already existing beta amyloid and cholesterol plaques.

studies and clinical trials are underway to expand on the information shown below.....

"The main component of the characteristic amyloid plaques in brains of Alzheimer's patients are Abeta peptides, derivatives of the amyloid precursor protein APP."

"APP.....increased secretion of neurotoxic Abeta peptides..."

"We report here.....N-Acetyl-L-Cystein downregulates APP gene transcription...."

"These results open up new possibilities for the development of therapeutic agents that intervene at the transcriptional level."

R.Studer, et al

N-Acetyl-L-Cystein downregulates beta-amyloid precursor protein gene transcription in human neuroblastoma cells
Biogerontology.....Volume 2 #1...2001.....page 55 – 60

"Acetyl-L-carnitine [500 mg, twice daily] exhibits to help prevent the formation of brain tangles that are the hallmark of Alzheimer's disease."

"Although tau proteins are a normal part of nerve cell construction, they can accumulate in a hyperactive fashion that results in cognitive decline and memory loss. Acetyl-L carnitine helps tau proteins behave normally by intervening at the gene and molecular level so preventing dementia/memory decline."

"Supplementation of acetyl-L-carnitine also suppressed the phosphorylation of beta-amyloid precursor proteins, which may underlie the reduction of beta amyloid."

P Zhou

Acetyl-L-carnitine attenuates homocysteine-induced Alzheimer-like histopathological and behavioral abnormalities
Rejuvenation Research.....Volume 14 #6.....December 2011.....page 669 - 679

Alzheimer's.....

Mayo Clinic study [M.Murray, N.G.Radford, et al, 2015] at its campuses in Rochester Minnesota and Jacksonville, Florida on about 3500 brains suggest that tau protein rather than beta-amyloid is the primary root cause of Alzheimer's.

Nutrition Medicine studies done several years ago demonstrated that Acetyl-L-Carnitine supplements normalize the function of tau protein. When buying a supplement, it may to some degree be important to note the difference between L-Carnitine and Acetyl-L-Carnitine.

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Rejuvenation Research.....Volume 14 #6.....December 2011.....page 669 - 679

Alzheimer's.....

Curcumin = stuff in turmeric plant, tumeric is used in curry in India

human clinical trials at medical schools in the U.S. have shown.....

- Curcumin inhibits accumulation of beta-amyloid plaques in Alzheimer's
- promotes destruction of existing beta-amyloid plaques in Alzheimer's
- reverses nerve tangles around beta-amyloid plaques in Alzheimer's

".....effects of curcumin on patients with Alzheimer's disease. Curcumin (Turmeric), an ancient Indian herb used in curry powder, has been extensively studied in modern medicine.....".

"It has been used in various types of treatments for dementia and traumatic brain injury."

"Curcumin as an antioxidant, anti-inflammatory and lipophilic action improves the cognitive functions in patients with Alzheimer's disease."

"Due to various effects of curcumin, such as decreased Beta-amyloid plaques, delayed degradation of neurons, metal-chelation, anti-inflammatory, antioxidant and decreased microglia formation, the overall memory in patients with Alzheimer's disease has improved."

S.Mishra, K.Palanivelu

The effect of curcumin (turmeric) on Alzheimer's disease: An overview Annals of Indian Academy of Neurology.....Volume 11 #1.....January - March 2008...page 13 - 19

U.S. National Library Of Medicine, National Institutes Of Health

"Accumulated amyloid- β peptide ($A\beta$) and hyperphosphorylated tau proteins are two hallmarks of Alzheimer's disease. Increasing evidence suggests that amyloid- β peptide induces tau hyperphosphorylation in AD pathology, but the signaling pathway is not completely understood."

"Inhibiting $A\beta$ -induced cellular signaling is beneficent to AD treatment."

"....curcumin inhibits amyloid- β peptide-induced tau hyperphosphorylation...."

H.C. Huang, et al. Curcumin attenuates amyloid- β -induced tau hyperphosphorylation in human neuroblastoma SH-SY5Y cells involving PTEN/Akt/GSK-3 β signaling pathway.

Journal Of Receptor and Signal Transduction Research....Volume 34 #1.....February 2014...page 26 - 37

U.S. National Library Of Medicine, National Institutes Of Health

Nutrition Medicine

Food and/or supplements as medicine

Vitamin D3 & Ig antibodies.....

"Heavy training is associated with increased respiratory infection risk and antimicrobial proteins are important in defense against oral and respiratory tract infections. We examined the effect of 14 weeks of vitamin D3 supplementation (5000 IU/day) on the resting plasma cathelicidin concentration and the salivary secretion rates of secretory immunoglobulin A (SIgA), cathelicidin, lactoferrin and lysozyme in athletes during a winter training period."

"Blood and saliva were obtained at the start of the study from 39 healthy men who were randomly allocated to vitamin D3 supplement or placebo. Blood samples were also collected at the end of the study; saliva samples were collected after 7 and 14 weeks."

"Only in the vitamin D3 group, the saliva immunoglobulin A and cathelicidin secretion rates increased over time. A daily 5000 IU vitamin D3 supplement has a beneficial effect in up-regulating the expression of immunoglobulin A and cathelicidin in athletes during a winter training period...."

C.-S. Hea, et al

The effect of 14 weeks of vitamin D3 supplementation on antimicrobial peptides and proteins in athletes
Journal of Sports Sciences.....Volume 34 #1.....January 2016

fish oil in mothers -vs- asthma in babies.....

"Reduced intake of n-3 long-chain polyunsaturated fatty acids may be a contributing factor to the increasing prevalence of wheezing disorders. We assessed the effect of supplementation with n-3 long-chain polyunsaturated fatty acids in pregnant women on the risk of persistent wheeze and asthma in their offspring."

"We randomly assigned **736 pregnant women** at 24 weeks of gestation to receive 2.4g of n-3 long-chain polyunsaturated fatty acids (fish oil) or placebo (olive oil) per day."

"A total of 695 children were included in the trial, and 95.5% completed the 3-year, double-blind follow-up period."

"The risk of persistent wheeze or asthma in the treatment group was 16.9%, versus 23.7% in the control group, corresponding to a relative reduction of 30.7%."

".....supplementation with n-3 long-chain polyunsaturated fatty acids was associated with a reduced risk of infections of the lower respiratory tract...."

"Supplementation with n-3 long-chain polyunsaturated fatty acids in the third trimester of pregnancy reduced the absolute risk of persistent wheeze or asthma and infections of the lower respiratory tract in offspring by approximately 7 percentage points, or one third."

Lotta studies show that fish oil improves ADHD in kids. What happens to kids after birth as a result of giving an essential fat to pregnant mothers.....

"Docosahexanoic acid (DHA) is an important constituent of the brain."

"We evaluated global cognition, behavior, and attention at age 5 years.....in a randomized controlled trial of prenatal DHA supplementation."

"A total of 1094 women were randomly assigned to receive 400mg of either DHA or placebo/day from 18 to 22 weeks of pregnancy until delivery. We assessed cognitive development and behavioral and executive functioning, including attention, in 797 offspring at age 5 years...."

"Prenatal exposure to DHA may contribute to improved sustained attention in preschool children."

Usha Ramakrishnan, et al

**Prenatal supplementation with DHA improves attention at 5 y of age: a randomized controlled trial
American Journal Of Clinical Nutrition --- Volume 104 #4 --- October 2016 --- page 1075**

terms.....

DHA = one of the fats in fish oil

cortisol = stress hormone

"To test the effectiveness of prenatal docosahexaenoic acid (DHA) supplementation on birth outcomes and infant development in a sample of African American women with Medicaid insurance....."

"The Nutrition and Pregnancy Study is a double-blind, randomized controlled trial of prenatal DHA supplementation conducted between 2012 and 2014."

"Participants were recruited from obstetric clinics at the University of Pittsburgh Medical Center."

"64 pregnant, African American women were enrolled at 16–21 weeks of gestation and randomized to either 450 mg/day of DHA or a soybean placebo."

"....complete data were obtained for 49 infants at the 3-month assessment."

"Infants of mothers who received DHA supplementation had higher birth weight than infants of mothers receiving placebo...."

"Infants of mothers who received DHA compared with infants of mothers receiving placebo had lower levels of cortisol in response....."

"Infants of women living in urban, low-income environments who received DHA supplementation had more optimal birth outcomes and more modulated cortisol response to a stressor. DHA supplementation may be effective in attenuating the negative effects of prenatal stress on offspring development."

K.Keenan, et al

**The effect of prenatal docosahexaenoic acid supplementation on infant outcomes in African American women living in low-income environments: A randomized, controlled trial
Psychoneuroendocrinology --- Volume 71 --- September 2016 --- page 170**

fish oil & blood vessel repair

definitions.....

- endothelial cells = cells that repair or produce blood vessels
- endothelial progenitor cells = cells that produce//become endothelial cells

"Emerging cellular markers of endothelial damage and repair include endothelial microparticles (EMPs) and endothelial progenitor cells (EPCs), respectively.

"A total of 84 subjects with moderate risk of Cardiovascular Disease completed a randomized, double-blind, placebo-controlled, 8-week crossover trial of **fish-oil supplementation that provided 1.5 grams per day.**"

"....there was a significant effect of fish-oil supplementation on cellular markers of endothelial function. **Fish-oil supplementation increased numbers of endothelial progenitor cells** and reduced numbers of endothelial microparticles relative to those with placebo treatment, which potentially favored the maintenance of endothelial integrity. There was no influence of genotype for any cellular markers of endothelial function, which indicated that effects of fish-oil supplementation were independent of eNOS genotype."

•

Szu-Yun Wu, et al

Fish-oil supplementation alters numbers of circulating endothelial progenitor cells and microparticles independently of eNOS genotype
American Journal Of Clinical Nutrition.....volume 100 #5....November 2014....page 1232 - 1243

Cancer

"....dietary sterols. This study was undertaken to compare the effect of two dietary sterols on prostate cancer cells in vitro. beta-Sitosterol the most common plant sterol, and cholesterol, an animal sterol, were compared for effect on LNCaP cell growth, differentiation, apoptosis....."

"Cells were treated for up to seven days with sterols....."

"Compared with cholesterol, beta-Sitosterol decreased growth by 24% and induced apoptosis fourfold....."

"No effect was observed on differentiation as measured by prostate-specific antigen....."

"The results suggest that the decrease in cell number and increase in apoptosis associated with beta-Sitosterol treatment are mediated by activating the sphingomyelin cycle.

R.L.von Holtz, et al

**beta-Sitosterol activates the sphingomyelin cycle and induces apoptosis in LNCaP human prostate cancer cells
Nutrition and Cancer....Volume 32 #1.....1998....page 8 - 12**

"....we purified Saw Palmetto....and found that Saw Palmetto induced growth arrest of prostate cancer LNCaP, DU145, and PC3 cells....."

"Saw Palmetto induced apoptosis of LNCaP cells in a time- and dose-dependent manner..."

"Saw Palmetto increased the expression of p21waf1 and p53 protein in LNCaP cells."

"In addition, we found that Saw Palmetto down-regulated DHT- or IL-6-induced expression of prostate specific antigen in conjunction with down-regulation of the level of androgen receptor in the nucleus...."

"These results indicate that Saw Palmetto might be useful for the treatment of individuals with prostate cancer."

Y.Yang, et al

**Saw Palmetto induces growth arrest and apoptosis of androgen-dependent prostate cancer LNCaP cells via inactivation of STAT 3 and androgen receptor signaling.
International Journal Of Oncology....Volume 31 #3....September 2007....page 593 - 600**

Fish oil in cancer

Cells put essential fatty acids [ie. fish oil, etc] into their outer shell covering a.k.a cell membranes. The type of fat in the cell membrane can alter cell health and cell function. In women that includes cells in the breast.

The fat in cell membranes periodically get attacked by things called oxidants. Anti-oxidants lessen those attacks.

When essential fatty acids in cells are attacked by oxidants, that initiates an immune cell response that is unlike that of an attack on other types of fat in that it can inhibit tumor growth, such as in breast cancer.

- levels of essential fatty acids measured in breast tissue is a predictor of metastatic breast cancer potential
- the greater the level of essential fatty acids the lower the potential for metastatic breast cancer
- levels of essential fatty acids is a predictor of tumor size
- the greater the levels the smaller the size
- diets high in fats from corn oil, safflower oil, etc tend to aid tumor growth

“There is mounting evidence that low levels of n-3 polyunsaturated fatty acids (PUFAs) play a role in the pathophysiology of a number of psychiatric disorders. Preclinical studies have shown that n-3 PUFAs decrease anxiety like behaviors, but there is a paucity of information about their effects on anxiety in humans. “

“In light of our observation that substance abusers have poor dietary habits and the strong association between anxiety disorders and substance use disorders, the possibility that the administration of supplements of n-3 PUFAs would decrease the anxiety level of a group of substance abusers was explored.”

“The trial was double-blind, randomized, and lasted 3 months.”

“Patients who received n-3 PUFAs for 3 months showed a progressive decline in anxiety scores.”

“Anxiety scores remained significantly decreased in the PUFA group for 3 months after treatment discontinuation.”

“In conclusion, these preliminary data indicate that n-3 PUFA supplementation could be beneficial in the treatment of some patients with anxiety disorders.”

Journal of Clinical Psychopharmacology....Volume 26 #6....December 2006....pages 661-665

L.Buydens-Branchey, M.Branchey

n-3 Polyunsaturated Fatty Acids Decrease Anxiety Feelings in a Population of Substance Abusers

“The researchers found that the drugs did have a positive impact on people with mild depression - but the effect was no bigger than that achieved by giving patients a sugar-coated "dummy" pill.”

“The number of prescriptions for anti-depressants hit a record high of more than 31 million in England in 2006 - even though official guidance stresses they should not be a first line treatment for mild depression.”

“There were 16.2 million prescriptions for SSRIs alone.”

“Alan Johnson, the Health Secretary, has announced that 3,600 therapists are to be trained during the next three years in England to increase patient access to talking therapies, which ministers see as a better alternative to drugs.”

BBC News [February 26, 2008] Anti-depressants' Little Effect

Fish oil ---vs--- Statin drugs.....

"Based on the above discussion, we propose that statins and ingredients of fish oil have anti-excitotoxic, antioxidant, and anti-inflammatory effects in brain tissue."

"Unlike higher doses of statins, fish oil does not cause myopathy and neuropathy. Fish oil lowers plasma concentrations of fibrinogen and has no adverse or side effects even after long-term use in patients with cardiovascular and cerebrovascular disease."

A.A.Farooquia, et al

Comparison of biochemical effects of statins and fish oil in brain: The battle of the titans

Brain Research Reviews.....Volume 56 #2.....December 2007.....pages 443-471

Acid blockers, etc.....Rolaids, Tums, Malox, Prilosec

Sales in the United States = **\$14 Billion per year**
Deaths they cause = **16,500 Americans per year**

Natural, non-death inducing alternatives....

- probiotics [ie. product suggestion = Dr. Ohirra's Probiotics 12 plus]
 - colostrum
 - Aloe Vera [ie. product suggestion = Lily Of The Desert]
-

"Exercise-induced asthma (EIA) is traditionally treated with the use of pharmacotherapy.

"However, there is now convincing evidence that a variety of dietary factors such as elevated omega-3 polyunsaturated fatty acids and antioxidant intake, and a sodium-restricted diet can reduce this condition."

"New therapies that are safe, effective, and likely to be used by individuals with EIA are needed."

Exercise & Sport Sciences Reviews....Volume 36 #3.....,July 2008.....page 135 - 144

T.D.Mickleborough

A Nutritional Approach to Managing Exercise-Induced Asthma

Honey --vs.-- drugs.....

Objectives

To compare the effects of a single nocturnal dose of buckwheat honey or honey-flavored dextromethorphan (DM) with no treatment on nocturnal cough and sleep difficulty associated with childhood upper respiratory tract infections.

Participants

One hundred five children aged 2 to 18 years with upper respiratory tract infections, nocturnal symptoms, and illness duration of 7 days or less.

Results

Significant differences in symptom improvement were detected between treatment groups, with honey consistently scoring the best and no treatment scoring the worst. In paired comparisons, honey was significantly superior to no treatment for cough frequency and the combined score, but DM was not better than no treatment for any outcome. Comparison of honey with DM revealed no significant differences.

Conclusions In a comparison of honey, DM, and no treatment, parents rated honey most favorably for symptomatic relief of their child's nocturnal cough and sleep difficulty due to upper respiratory tract infection.

Honey may be a preferable treatment for the cough and sleep difficulty associated with childhood upper respiratory tract infection.

Archives Of Pediatrics & Adolescent Medicine.....Volume 161 #12.....December 2007.....1140-1146

I.M. Paul,et al

Effect of Honey, Dextromethorphan, and No Treatment on Nocturnal Cough and Sleep Quality for Coughing Children and Their Parents

excerpt from Nature Medicine.....

"Skin seems to come with its own system to attract T cells, induced by a metabolite of vitamin D3, the vitamin produced by sunlight, according to a report in Nature Immunology [Volume 8, #3....March 2007].

The active form of vitamin D, can be synthesized in the liver and kidney, and has many reported effects on immunity-from promoting the development of certain types of T cells to inhibiting dendritic cells.

Immune cells can also manufacture active D from vitamin inactive D
which can signal T cells to express a receptor that recognize chemicals that cause an immune response."

"Parkinson disease (PD), first reported by James Parkinson in 1817, is a neurodegenerative disease....."

".....an important role of low Magnesium intake over several generations in the pathogenesis of substantia nigra degeneration in humans. Furthermore, it indicates that Magnesium may be a key factor for prevention and treatment of human diseases involving degeneration of the substantia nigra."

"This is the first report to document a significant and striking effect of Magnesium for prevention of neurite and neuron pathology, and also amelioration of neurite pathology in a Parkinson's Disease model."

Brain Research.....Volume 1197.....March 4 2008.....pages 143 - 151

T.Hashimoto, et al

Magnesium exerts both preventive and ameliorating effects in an in vitro rat Parkinson disease model involving 1-methyl-4-phenylpyridinium (MPP+) toxicity in dopaminergic neurons

**[March 7, 2008]University of Maryland Medical Center
[Complementary Medicine Website]**

[Depression and B vitamins]

Studies suggest that vitamin B9 (folate) may be associated with depression more than any other nutrient.

Between 15% and 38% of people with depression have low folate levels in their bodies and those with very low levels tend to be the most depressed.

Many healthcare providers start by recommending a multivitamin (MVI) that contains folate, and then monitoring the homocysteine levels in the blood to ensure the adequacy of therapy.

Elevated homocysteine levels indicate a deficiency of folate even if the levels of folate in the blood are normal. If the MVI alone is not enough to lower homocysteine and improve folate function, the provider may suggest additional folate along with vitamins B6 and B12 to try to bring the homocysteine levels down, thereby eliminating the functional folate deficiency and, hopefully, helping to improve feelings of depression.

B-vitamins [niacin] and lowering cholesterol.....

[MayoClinic.com]

What impact does niacin have on cholesterol?

Niacin can raise HDL — the "good" cholesterol — by 15 percent to 35 percent. This makes niacin the most effective drug available for raising HDL cholesterol. While niacin's effect on HDL is of most interest, it's worth noting that niacin also decreases your LDL and triglyceride levels. High levels of LDL and triglycerides are significant risk factors for heart disease.

“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 incidence with 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.”

The Common Cold & Flu

In order to “catch a cold”, a virus must enter the body, usually through the eyes, nose, or mouth. This occurs most often when someone who has a cold, sneezes or wipes/blows their nose. The cold virus gets out of their body in this way, often onto their hands. Assuming they don’t wash their hands or wipe them off onto their clothing, towel, etc., they then touch door knobs, hand rails on stairs, and other objects that may be common for other people to touch within a few minutes to a few hours later. If --you-- then come along and touch one of those objects, the cold virus then gets onto you, often onto your hands. All that is necessary at this point is for you to use your hands to rub your eyes—nose--mouth without....first....having wiped them off on your clothes, towel, etc, and/or without having washed your hands.

Once the virus makes its way into your body, it often finds its way into the mucus area of your nose, and/or upper portion of your throat. In these places, though it will come under attack by your immune system, it will make a major effort to replicate and proliferate. If it does so successfully, you will.....“catch a cold”.

At your work place, at school, at the mall, at the airport, somebody with the cold or flu sneezes into their hand, wipes their nose, coughs into their hand, etc, etc. At your home, your work place, school, shopping mall, airport, those people place their hands on door handles, stair railings, water fountain buttons, escalator hand rails, etc, etc.

The cold and flu viruses await you on.....door handles, stair railings, water fountain buttons, escalator hand rails, etc, etc. Keep in mind that cold and flu viruses usually don't get into your body unless --you-- put them there.....3 steps to prevent yourself from putting the cold and flu into your body.....

step 1 = program into your brain a deeply ingrained habit to wipe your hands off on your clothes before you use them to rub or touch your eyes—nose--mouth.

step 2 = program into your brain a deeply ingrained habit to wipe your hands off on your clothes before you use them to rub or touch your eyes—nose--mouth.

step 3 = program into your brain a deeply ingrained habit to wipe your hands off on your clothes before you use them to rub or touch your eyes—nose--mouth.

There are some things you can do to assist your immune system during the early stages, at the point in time that you “feel a cold coming on”.

----- Make an effort to kill the cold virus in your nose and/or upper portion of your throat, as to reduce the “viral load” that your immune system will have to combat. You can accomplish this task simply by exposing the virus to the deadly combination of.....baking soda—salt—and water. This can be done by placing a teaspoon of baking soda and a pinch of salt into a small Dixie cup or small glass of water. You then pour the mixture into your nose either straight out the cup, or use an eye dropper or other device, allowing the mixture to go through your nose, down into your throat, then expell it [do --not-- swallow it]. You should repeat with another cup, this time pouring the mixture in your mouth, and gargle for a few seconds.

Grocery stores now sell [probably on the cold remedy shelves] a ready-made product of fluid, a saline spray or baking soda and water product, etc, that may facilitate all this if you're not into the do-it-yourself method. Product suggestion.....Xclear [xylitol nasal spray product...xlear.com]

----- It may be beneficial to use gravity to assist in the drainage of mucus when you go to bed by using pillows, etc, to elevate your upper-body above the rest of the body.

----- It may take at least 4 - 7 days for your body to fully work through resolving the situation. During the early stages, at the point in time that you “feel a cold coming on” you should begin an automatic 4 day period of consumption of nutrition medicine oriented nutrients that assist immune system, brain cells, and nervous system cells in their task of resolving the situation.

I would suggest a combination of these items shown below.....

liquid Colostrum.....www.shop.percoba.com/Whey-Bundle-3-Bottles-of-Whey-P500.htm

Aloe Juice....www.lilyofthedesert.com/our_products/item/inner-fillet-aloe-vera-juice/18

Probiotics ...www.amazon.com/Essential-Formulas-Ohhiras-Probiotics-Original/dp/B00141B75S/ref=wl_it_dp_o_npd?ie=UTF8&coliid=IKYC8Y83IMRGU&colid=27RXREF91WUOP

Vitamin D3....www.amazon.com/Jarrow-Formulas-Vitamin-5000IU-Softgels/dp/B003L8VQLK/ref=sr_1_1?ie=UTF8&qid=1355429485&sr=8-1&keywords=jarrow+formulas+vitamin+d3+5000+iu

ZinC...www.amazon.com/Jarrow-Formulas-Zinc-Balance-capsules/dp/B0001VKDDM/ref=sr_1_2?ie=UTF8&qid=1354740137&sr=8-2&keywords=zinc+balance

magnesium...www.amazon.com/Integrative-Therapeutics-Magnesium-Malate-Capsules/dp/B003FJ5FU/ref=sr_1_2?s=hpc&ie=UTF8&qid=1354740245&sr=1-2&keywords=magnesium+malate+integrative+therapeutics

protein-carbo beverage called IMPACT Advanced Recovery

www.amazon.com/Impact-Advanced-Recovery-Vanilla-Brikpak/dp/B0045740Y4/ref=sr_1_2?ie=UTF8&qid=1345940383&sr=8-2&keywords=impact+advanced+recovery

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 Naturo-pathic 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 Naturo-pathic 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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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 Naturo-pathic Medicine. Colostrum is one substance that has the ability to address all 3.

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](#)

[below are a few quotes].....

"We investigated whether supplementation with 60 grams per day of bovine colostrum affects blood levels of insulin-like growth factor-I (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

"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

"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]

"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)]



Health & Longevity

----- brain programming, belief systems

----- mind-body, autogenic relaxation

----- short duration high intensity exercise

----- strength training

----- food & supplements

“Nature, to be commanded, must be obeyed.”

[Francis Bacon]

In all areas of applied science and particularly in anything having to do with human performance, age & aging, and “its genetic”.....avoid group think, pursue critical thinking, engage in intellectual honesty.

The functioning of brain cells, muscle cells, blood cells, -all- cells are governed by the laws of nature, -not- your chosen belief system.

So called "performance enhancing drugs" are prescription drugs.

Some examples of the effectiveness of prescription drugs in sport.....

"The drug erythropoietin, often called EPO.....a new systemic review of existing research reveals that **there is no scientific evidence that it does enhance performance**, but there is evidence that using it in sport could place a user's health and life at risk."
EPO [erythropoietin] doping in elite cycling: No evidence of benefit, but risk of harm
Science Daily.....December 5, 2012.

"....**there is no scientific basis from which to conclude that rHuEPO has performance-enhancing properties** in elite cyclists." "The use of rHuEPO in cycling is rife but scientifically unsupported by evidence, and its use in sports is medical malpractice."
J.A.Heuberger, et al
Erythropoietin doping in cycling: lack of evidence for efficacy and a negative risk-benefit.
British Journal Of Clinical Pharmacology.....Volume 75 #6.....June 2013...page 1406

"The **over-exaggeration of the effects of growth hormone** in muscle building is effectively promoting its abuse...."
"....there is the question of disinformation on rhGH....Part of this problem may, paradoxically, derive from the anti-doping authorities themselves. By ignoring the evidence the **rhGH does not work** in normal healthy subjects, the athletic establishment could be accused of effectively promoting its use."
"We must tell athletes the truth: growth hormone does not 'work' or at least not as they think it does and that its is associated with all kinds of immediate and long term hazards-----everything from decreased performance to cancer."
"....none of us scientists, doctors, coaches, or sports bodies should continue to suggest that this dangerous doping practice works."
M.J. Rennie
British Journal Of Sports Medicine.....Volume 37 #2....April 2003....pages 100-103

"**Testosterone prohormones** such as androstenedione, androstenediol, and dehydroepiandrosterone (DHEA) have been heavily marketed as testosterone-enhancing and muscle-building nutritional supplements for the past decade."
"Contrary to marketing claims, research to date indicates that the use of prohormone nutritional supplements (DHEA, androstenedione, androstenediol, and other steroid hormone supplements) **does not produce either anabolic or ergogenic** effects in men. Moreover, the use of prohormone nutritional supplements may raise the risk for negative health consequences."
G.A.Brown, et al
Testosterone Prohormone Supplements.
Medicine & Science in Sports & Exercise.....Volume 38 #8....August 2006.....pg 1367-1537

So called "performance enhancing drugs" are prescription drugs.

Some examples of the effectiveness of prescription drugs in American medicine & health care.....

"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]

".....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

"It is estimated that more than 700,000 individuals are seen in hospital emergency departments for adverse drug events each year in the United States."
[Centers For Disease Control.....2015]

"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

".....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

Pursue becoming a

**Master Of
Sport**