A New World Without Cancer with Energy Medicine

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Payson, Arizona USA

Cancer Control Society
Tokyo, Japan
2012

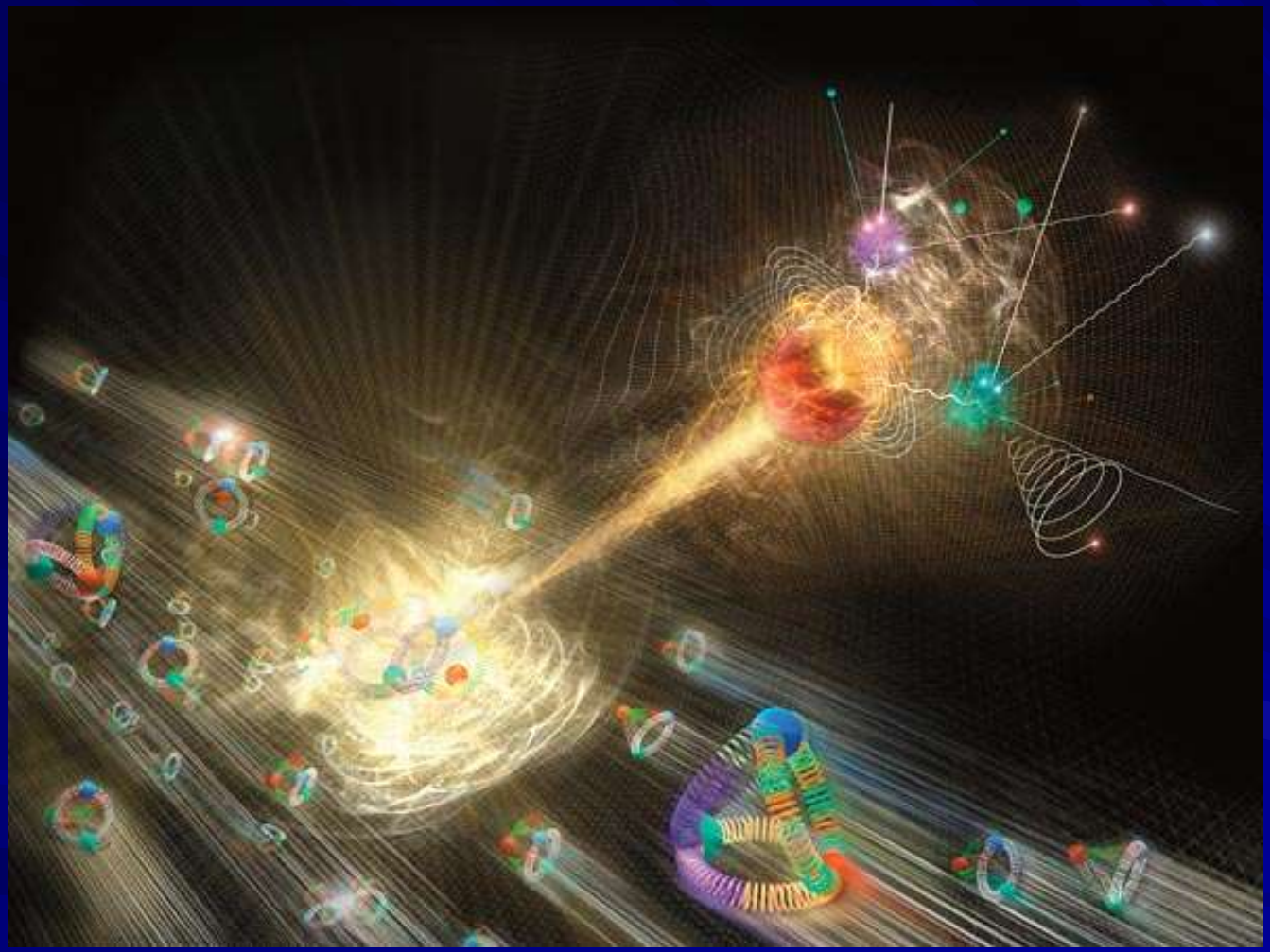
GRI-e

M.I.C.E.

F.A.C.T.
Forum on Anti-Aging & Chelation Therapies

LONGEVITY PLUS
Anti-Aging Products

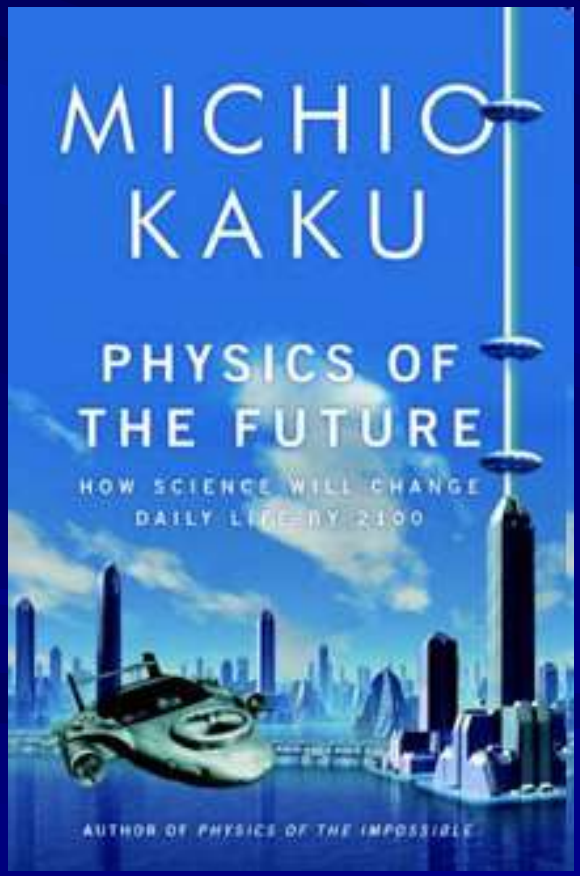
AS ABOVE – SO BELOW: Higgs Boson "God Particle" Discovered?



The long-sought particle, thought to be at the core of ALL existence, may complete the standard model of physics by explaining why objects in our universe have mass—and in so doing, why galaxies, planets, and even humans have any right to exist.

In an artist's conception, a Higgs boson erupts from a collision of protons.
Illustration by Moonrunner Design Ltd., National Geographic

http://news.nationalgeographic.com/news/2012/07/120704-god-particle-higgs-boson-new-cern-science/



Based on interviews with over three hundred of the world's top scientists, who are already inventing the future in their labs, Kaku—in a lucid and engaging fashion—presents the revolutionary developments in medicine, computers, quantum physics, and space travel that will forever change our way of life and alter the course of civilization itself.

Dr. Kaku's astonishing revelations include:

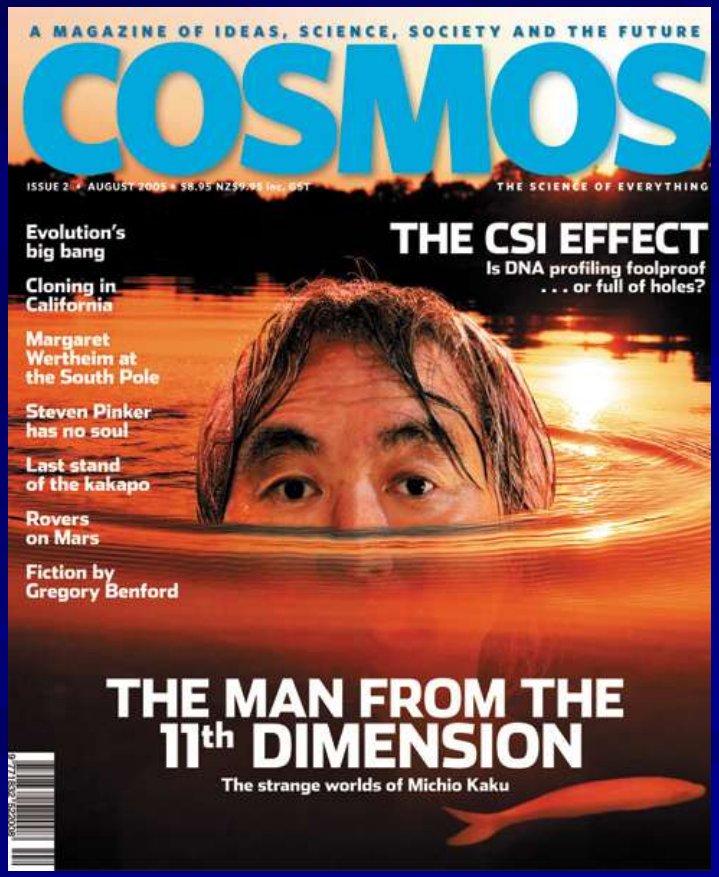
Sensors in your clothing, bathroom, and appliances will monitor your vitals, and nanobots will scan your DNA and cells for signs of danger, allowing life expectancy to increase dramatically.

You will control computers and appliances via tiny sensors that pick up your brain scans.

http://mkaku.org/home/?p=988

THE MAN FROM THE 11TH DIMENSION *By Elizabeth Finkel*

His mind wanders incredibly complex worlds of eleven dimensions and he is trying to complete Einstein's unfinished masterpiece: a 'theory of everything'. Meet one of the world's leading theoretical physicists, Michio Kaku, a founder of string field theory and a man as charming as he is imposing.



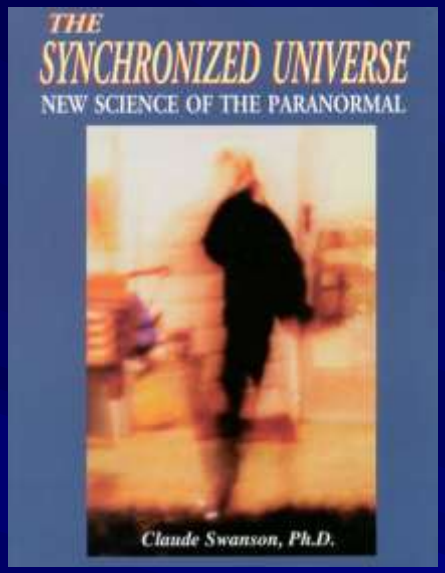
Dr. Michio Kaku is the co-creator of string field theory, a branch of string theory. He received a B.S. (summa cum laude) from Harvard University in 1968 where he came first in his physics class.

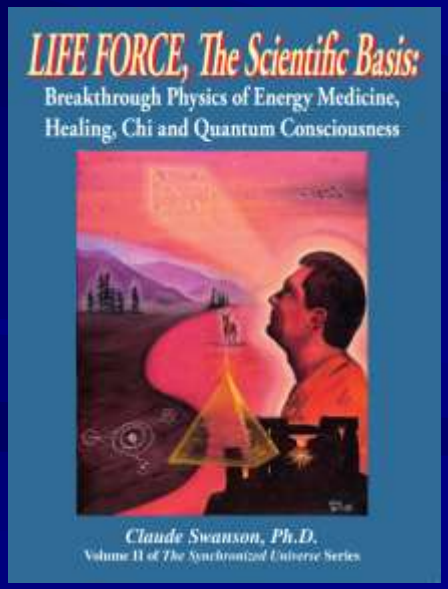
He went on to the Berkeley Radiation Laboratory at the University of California, Berkeley and received a Ph.D. in 1972. In 1973, he held a lectureship at Princeton University.

Michio continues Einstein's search for a "Theory of Everything," seeking to unify the four fundamental forces of the universe— the strong force, the weak force, gravity and electromagnetism.

http://www.cosmosmagazine.com/issues/2005/2/ http://www.cosmosmagazine.com/node/99

The Synchronized Universe - A new scientific revolution!





Physicist Dr. Claude Swanson, educated at MIT and Princeton University, describes the latest discoveries in Energy Medicine.

"We are learning the 'Secret of Life', how the body's trillons of cells grow, repair and heal… Electromagnetism and Earth energies hold part of the answer… we are witnessing the integration of CONSCIOUSNESS with physics"

It is called CHI, PRANA, MANA, ORENDO, WAKEN, BARAKA, and LIFE FORCE.

It is the energy which enables adepts, Yogis and Shamen to achieve the miraculous feats they do. It enables QiGong masters from China to project their energy over thousands of miles to heal injured cells and to cure cancer in laboratory experiments.

Today we have documented proof of how this energy changes the laws of physics, bringing together the Theory of Relativity and Quantum Mechanics, and is the explanation for many strange phenomena which we in the West call "paranormal."

http://synchronizeduniverse.com/

The Synchronized Universe Model (S.U.M.)

Assumes that all the particles in the universe interact with one another.

Dr. Claude Swanson Ph.D. thesis at Princeton was done in the "Gravity Group," which focuses on experimental cosmology and astronomy. His postgraduate work at Princeton and Cornell Universities on the design of superconducting plasma containment vessels for fusion energy systems.

Local electrons are tied to distant matter via photons.
The “virtual photons” in space are assumed to be created by the motions of other electrons. Most of them are created by the “distant matter” which contains almost all the matter of the universe.

The seemingly random “zig zag” dance they do is not random – it is really the communication between it and the distant matter – a purposeful, intimate and conscious dance with one another.

SO ALL THE EXISTING ELECTRONS AND PROTONS AND OTHER PARTICLES ARE ACTUALLY CONNECTED TO ONE ANOTHER!

Momentum and energy that is created here (locally) is absorbed there (universally) and vice versa, virtually instantaneously, able to travel backward in time as well as forward.

Photons which travel backwards in time are called “advanced waves”, and are a perfectly valid solution of Maxwell’s Equations which govern electromagnetism.

(from pgs 241 – 242 of The Synchronized Universe – Claude Swanson, PhD)

The cells of living tissue are electrical direct current (DC) systems

All life generates an electrical DC charge

This natural DC charge is created by the movement of ions in and out of cell membranes which are responsible for a healthy cell membrane's electrical charge of approximately – 70 mV.

***Any challenge to the cell*, such as oxygen/nutrient deficiency, toxicity, tissue changes or inflammation, alters ion movement and the charge on the cell membrane changes.**

This altered charge profoundly affects the homeostasis of the cell and normal metabolic processes, including the movement of nutrients into, and waste products of metabolism out of the cell.
~ Martin Milner, ND

Fueled by Electro-Magnetic Energy

We are only as healthy as our cells

"By regenerating the cells in our bodies we can help our cells become and stay healthy with pulsed electromagnetic fields.

The earth creates magnetic fields, without which life would not be possible. Science teaches that everything is energy. All energy is electromagnetic in nature. All atoms, chemicals, and cells produce electromagnetic fields. Science has proven that our bodies actually project their own magnetic fields and our seventy trillion cells in the body communicate via electromagnetic frequencies.

Disruption of electromagnetic energy in cells causes impaired cell metabolism. This is the final common pathway of disease. If cells are not healthy, the body is not healthy."

William Pawluk, MD, MSc, and Donna Ganza, ND

Excerpt from 101 Great Ways to Improve Health

Why Do We Need Magnetism?

Most people know we need food (earth), water (water) and oxygen (air) to survive.

And many people also know they need full spectrum sunlight (fire) or you get what is referred to as SAD (seasonal affective disorder).

That makes FOUR critical elements:

EARTH/FOOD

WATER

FIRE/SUNLIGHT

AIR/OXYGEN

However, every organism on earth (that includes people) has evolved to the natural magnetic signals of the earth and that part of the solar radiation that is able to penetrate our atmosphere.

We have learned that these PEMF signals are of great importance to internal regulation of every organism.

http://www.pemft.net/the-5th-element.html

The Earth's Magnetic Field is Weakening

Over the last 165 years, scientists have measured the Earth's magnetic field and have recorded a decline of its' strength.
Today the magnetic field of the Earth is measured at 0.5 gauss. It is estimated that the field of the Earth 4,000 years ago was 5.0 gauss.

That is a decrease of 90%!

In addition, the Earth's natural magnetic signal is often distorted by our modern way of living. The power grid, electrical appliances, mobile phone's, mobile phone towers, Satellite signals, TV broadcast stations, tall buildings, asphalt, draining pipes and more are responsible for us not getting the signals we have evolved to. The immune system suffers because of this.

Solar Storms – increasing activity and intensity thru 2012

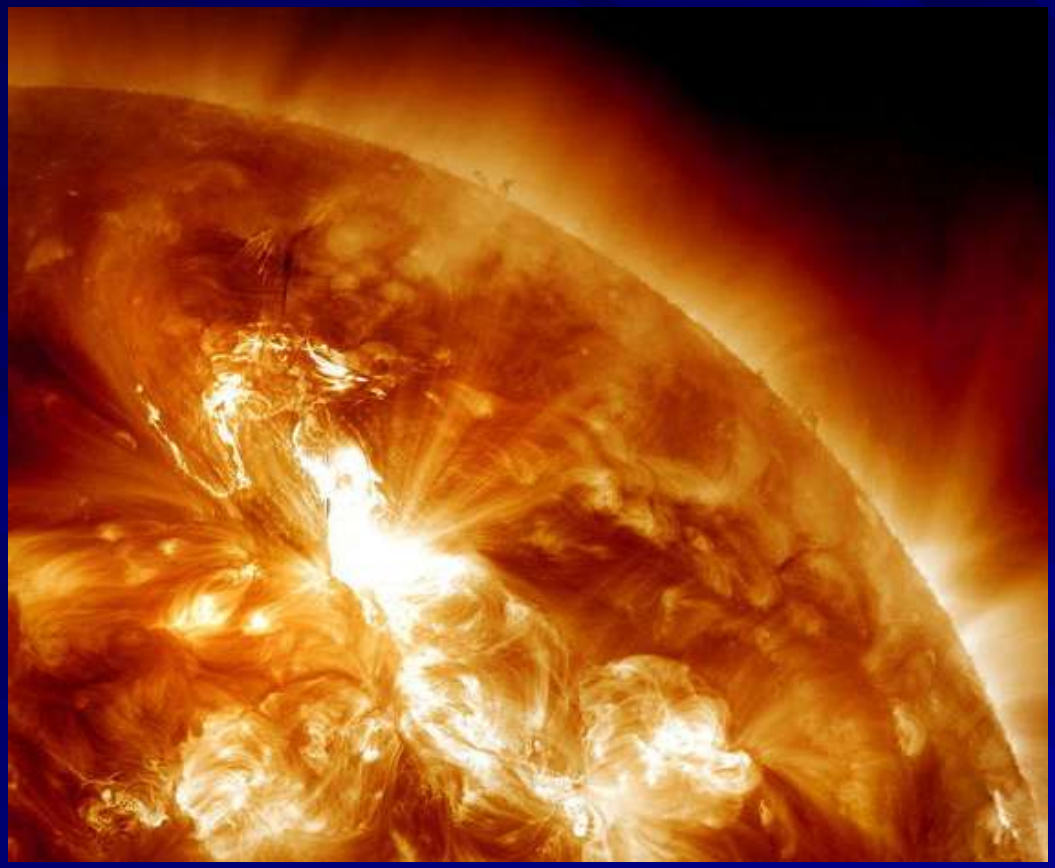


Image provided by NASA, taken Sunday night, Jan. 22, 2012, shows a solar flare erupting on the Sun's northeastern hemisphere. Space weather officials say the strongest solar storm in more than six years is already bombarding Earth with radiation with more to come.

An aurora appears when a magnetic solar wind slams into the Earth's magnetic field, exciting electrons of oxygen and nitrogen.

According to the National Oceanic and Atmospheric Administration, problems can include current surges in power lines, and interference in the broadcast of radio, TV and telephone signals.

Scientists have been expecting solar eruptions to become more intense as the sun enters a more active phase of its 11-year cycle, with an expected peak in 2013.

Electromagn Biol Med. 2010 Aug;29(3):105-12.

A role for the geomagnetic field in cell regulation.

Liboff AR.
Center for Molecular Biology and Biotechnology, Florida Atlantic University

Abstract

We advance the hypothesis that biological systems utilize the geomagnetic field (GMF) for functional purposes by means of ion cyclotron resonance-like (ICR) mechanisms.

Numerous ICR-designed experiments have demonstrated that living things are sensitive, in varying degrees, to magnetic fields that are equivalent to both changes in the general magnetostatic intensity of the GMF, as well as its temporal perturbations. We propose the existence of ICR-like cell regulation processes, homologous to the way that biochemical messengers alter the net biological state through competing processes of enhancement and inhibition. In like manner, combinations of different resonance frequencies all coupled to the same local magnetic field provide a unique means for cell regulation.

PMID:20707644 [PubMed - indexed for MEDLINE]

Bioelectromagnetics. 2009 Jan;30(1):21-8.

Prolonged weakening of the geomagnetic field (GMF) affects the immune system of rats.

Roman A, Tombarkiewicz B.
Department of Brain Biochemistry, Institute of Pharmacology, Polish Academy of Sciences, Kraków, Poland. roman@if-pan.krakow.pl

PubMed.gov
U.S. National Library of Medicine
National Institutes of Health

We found that the long-term shielding of the GMF could influence the functioning of the immune system in a sex-dependent manner.

The deprivation of the GMF delayed physiological thymus involution, that effect being more strongly expressed in females. The weakening of the GMF resulted in an increased number of peritoneal macrophages, especially in males.

The shielding of the GMF diminished the ability of macrophages to release NO and to synthesize O2(-), those effects being more powerfully expressed in males and females, respectively.

It is proposed that the observed changes in the immune system occur as a consequence of the protective effect of GMF shielding on the circadian rhythm-dependent level of melatonin.

Medical Maverick
Dr. Tsuneo Kobayashi

Originally published at www.japaninc.com December 2005

Melding East and West: a forerunner of cancer treatment and prevention.

by John Dodd

Over the last 30 plus years, he has become a thorn in the side of conventional cancer physicians, not least for his idiosyncratic behavior and treatment methods, which are based on a lifetime of experimentation and observation, and a belief in the holistic nature of the human body. He uses Chinese herbal medicines in addition to drugs for biochemical-modulation and apoptosis-inducing and cancer-vessel treatment, as well as sophisticated methods of applying TMCA (tumor marker combination assay), heat therapy and immunology.

Proof Kobayashi Method Works: In the last 25 years,* he has treated more than 20,000 early stage patients, and more than 2,000 mid-to-latter stage patients, who subsequently went into long term remission, *with an average life span after treatment of seven years.

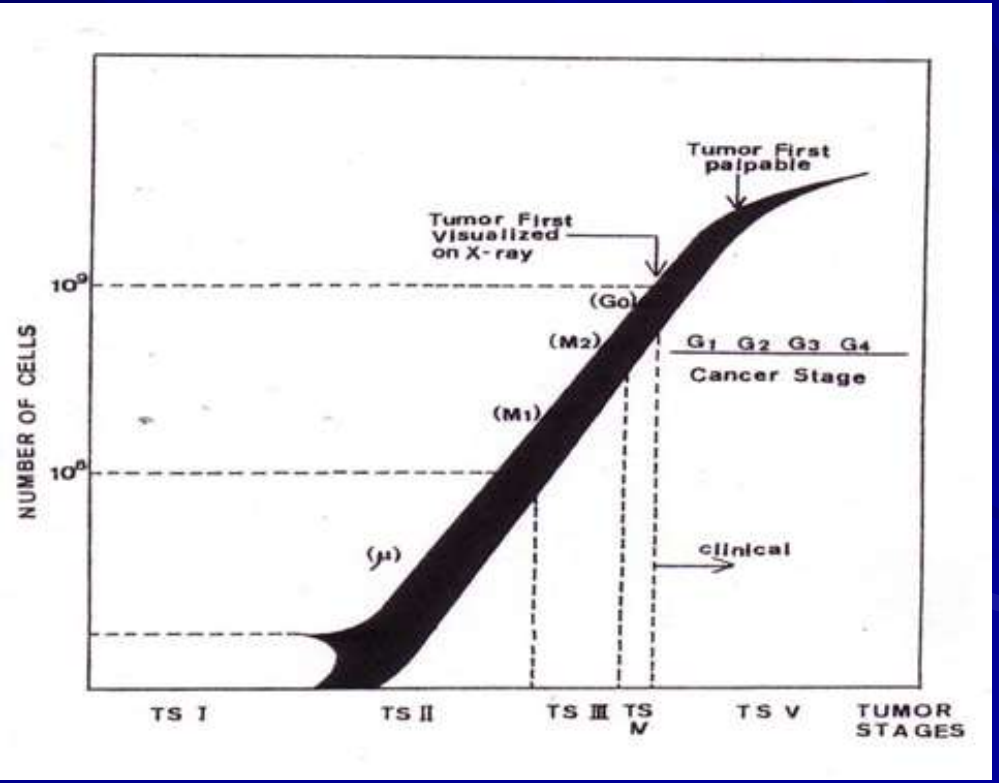
In comparison, the average life span of breast cancer patients in remission is 4.5 years (Source: US National Cancer Institute) and for prostate cancer patients it is around 2 years.

http://www.euro-med.us/dr-kobayashi-story.pdf

Tumor First Palpable typically after seven years of growth…

Regardless of the process by which normal cells become cancerous, as these toxic cells fatten and grow, they require more nutrients to survive. Over time, a network of blood cells and friendly neighbors start to emerge and the tumor grows into a palpable lump that until recently was one of the few clues for a cancer diagnosis. A tumor that is detectible by feel has been growing for approximately seven years.

By that time, more often than not, treatment is too late. Early detection significantly increases the likelihood of survival, and much research is geared toward detecting cancer-prone and individual cancer cells long before a tumor forms. Tumor markers, such as those developed by Dr. Kobayashi, are one method of early detection.

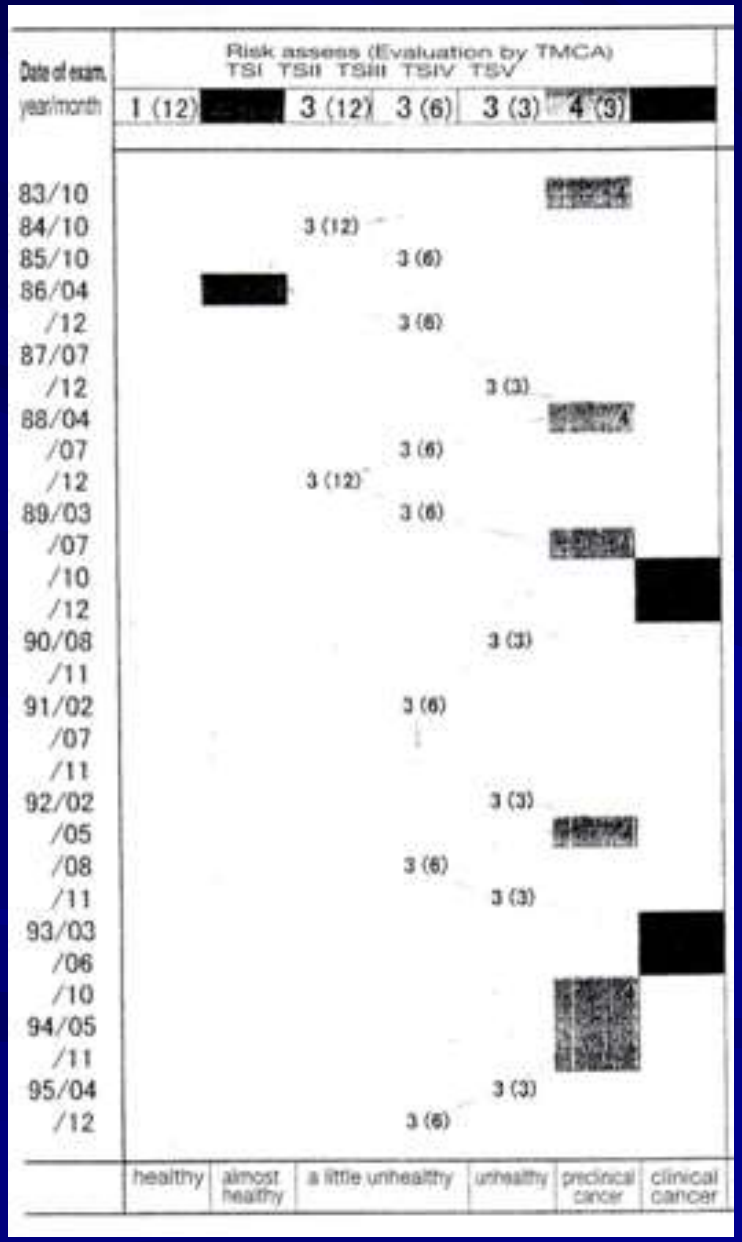


Cutoff Value of Tumor Markers in various Tumor Stages

Table 3. Cutoff Value of Each Tumor Marker According to Tumor Stage

	Tumor stage				
Tumor marker	I (N)	II (μ-)	III (M_2-)	IV (G_0-)	V (G_1-)
CEA (ng/ml)	<2.9	3.0-3.5	3.5-3.9	4.0-4.3	>4.4
IAP (μg/ml)	<299	300-449	450-499	450-499	>500
RNase (units)	60-69	70-89	90-109 or <59	110-144 or -59	>145 or <59
Sialic acid (mg/dl)	45-59	45-59	60-65	>66	>66
FT (ng/ml)					
Male	55-99	100-199	200-249	250-299	>300
Female	30-79	80-149	150-179	180-199	>200
FT/Fe	1-1.99	1-1.99	2-4.99	5-9.99 or <0.9	>10 or <0.9
HSAP (U/l)	<9.9	<9.9	10-19.9	20-36.9	>37
CA19-9 (U/ml)	<29	30-32	33-34	35-36	>37
TPA (U/l)	<74	75-79	80-84	85-109	>110
ALP isoenzymes					
ALP_1 (%)	0	0	0	1-4	<5
$ALP_{2/3}$ ratio	1.0-1.9	1.0-1.9	<0.9 or 2.0-2.4	<0.9 or 2.0-2.4	<0.9 or >2.5 >0.1
APA	<0.09	<0.09	<0.09	>0.1	>0.1

Risk Assessment Evaluation by Tumor Marker Combination Assay (TMCA)



Postoperative patient 68 years old male after colorectomy. His medical doctor said that there are high susceptible to recurrence of cancer.

He received TMCA so as to avoid recurrence of cancer. His risk assessment is tumor stage IV (TSIV), which is just before cancer appearance.

He carried out 4 times of detoxification refreshment therapy. He continued lower risk group classification for 4 years. When he had experienced 2 times of high risk assessment (Dec. 1989, March 1993), he carried out combination treatment of herbal medicine (SA) and detoxification therapy.

By these procedures, the risk assessment became to lower risk assessment and he had succeeded to avoid recurrence opportunity.

He successfully suppress cancer recurrence for 12 years.

Kobayashi's Simple Detox Plan:

Dr. Kobayashi's advocates an integrative treatment, combining conventional Western medical treatments with ancient eastern practices that include:

▪ Thermal treatment	▪ Herbs
▪ Negative ion treatment	▪ Massage
▪ Tumor marker testing	▪ Acupuncture
▪ Diet modification	▪ Moxibustion

Kobayashi has shown that his holistic medical treatment approach can put some 70% of all his cancer patients in remission, even if they are in the last stage of the disease.

Changes in life-style (change in sleeping habits), change in diet (eating yellow and green vegetables every day), detoxification, supplementation of vitamins, smoking cessation, maintaining the life-style change, special refreshment therapy, and herbal medicines are all part of My F.I.G.H.T. for Your Health Program.

F²IGH²T-E²M

with

M.I.C.E.

FIGHT-EM with MICE is an acronym that stands for:

F = Food and Focus - related aspect and leaky gut, and Focus (positive mental outlook): Acidophilus, Avoid food sensitivities (wheat, dairy) food supplements to include Vitamin C and D_2

I = Infections - causing cancer, cardiovascular disease, autoimmune diseases: Ozone/UVB, HBO, Silver, Vitamins A, C and D including IV Vit C

G = Genetics - and epigenetics and methylation issues needed for detoxing B-12, MSM, TMG, 5'MTHF

H = Heavy Metals and Hormones - Daily detoxification of mercury, lead; Hormonal balance and support for both men and women: Oral Chelation, Zeolite, DHEA, HRT, Melatonin, GH Support, Thyroid

T = Toxins - BPA, phtalates, and other toxins including household chemicals and everyday products: Exercise, IR/FIR Sauna, PEMF, Magnetics, Electrotherapy, cold (soft) lasers.

E = Energy and Exercise - PEMF or pulsed electromagnetic frequency therapy that promotes healing through

Magnetically Induced Cellular Exercise, or MICE

M.I.C.E. = Magnetically Induced Cellular *EXERCISE*

The Prime Cause and Prevention of Cancer

Dr.Otto Warburg – 1931 Nobel Laureate

Dr. Warburg stated "Cancerous tissues are acidic, whereas healthy tissues are alkaline. Water splits into H+ and OH- ions, if there is an access of H+, it is acidic; if there is an excess of OH- ions, then it is alkaline."

…tumors live in the body anaerobically.

…cell respiration is impaired if the active groups of the respiratory enzymes are removed from the food; and that cell respiration is repaired at once, if these groups are added again to the food. No way can be imagined that is scientifically better founded to prevent and cure a disease, the prime cause of which is an impaired respiration.

…the prevention of cancer requires no government help, and no extra money.

Healthy tissues are alkaline whereas cancerous tissues are acidic. Cancer does not survive in an alkaline state.

CAUSE OF CANCER & pH

by Herman Aihara, author of "Acid & Alkaline"

If the condition of our extra cellular fluids, especially the blood, becomes acidic, our physical condition will first manifest tiredness, proneness to catching colds, etc. When these fluids become more acidic, our condition then manifests pains and suffering such as headaches, chest pains, stomach aches, etc.

According to Keiichi Morishita in his Hidden Truth of Cancer, If the Blood develops a more acidic condition, then our body inevitably deposits these excess acidic substances in some area of the body such so that the blood will not be able to maintain an alkaline condition which causes these areas such as the cells to become acidic and lowers in oxygen.

Some cells, instead of dying - as normal cells do in an acid environment - survive by becoming abnormal cells. Abnormal, or malignant cells THRIVE in an acidic and anaerobic (low oxygen) environment.

They do not correspond with brain function, nor with our own DNS memory code. This is cancer.

pH (Hydrogen potential) and Electrons
An Overlooked Key Nutrient

All physical things are comprised of atoms. An atom consists of a central nucleus which is positively charged, and electrons which are negatively charged in shells or orbits around that central nucleus.

Atoms combine with one another because of their desire to lose, gain, or share electrons.

The phenomenon of electrons from one atom being shared with another atom is essential for construction of the complex biochemical compounds, organelles, cells, tissues, and organs comprising life.

The release of energy as electrons move from one energy level to another is responsible for the energy required in all body processes.

Modern living has created an electron-deficient environment that is creating electron-deficient bodies. Electron Deficiency is another way of saying something is Acidic.

Fructose Induces Transketolase Flux to Promote Pancreatic Cancer Growth

Haibo Liu, Danshan Huang, David L. McArthur, Laszlo G. Boros, Nicholas Nissen, and Anthony P. Heaney

Cancer Res; 70(15); 6368–76. ©2010 AACR.

Carbohydrate metabolism via glycolysis and the tricarboxylic acid cycle is pivotal for cancer growth, and increased refined carbohydrate consumption adversely affects cancer survival.

Traditionally, glucose and fructose have been considered as interchangeable monosaccharide substrates that are similarly metabolized, and little attention has been given to sugars other than glucose. However, fructose intake has increased dramatically in recent decades and cellular uptake of glucose and fructose uses distinct transporters. Here, we report that fructose provides an alternative substrate to induce pancreatic cancer cell proliferation. Importantly, fructose and glucose metabolism are quite different; in comparison with glucose, fructose induces thiamine-dependent transketolase flux and is preferentially metabolized via the nonoxidative pentose phosphate pathway to synthesize nucleic acids and increase uric acid production. These findings show that cancer cells can readily metabolize fructose to increase proliferation. They have major significance for cancer patients given dietary refined fructose consumption, and indicate that efforts to reduce refined fructose intake or inhibit fructose-mediated actions may disrupt cancer growth.

Molecular Systems Biology 8; Article number 589; doi:10.1038/msb.2012.20
Citation: Molecular Systems Biology 8:589

Glucose deprivation activates a metabolic and signaling amplification loop leading to cell death

The altered metabolism of cancer can render cells dependent on the availability of metabolic substrates for viability. Investigating the signaling mechanisms underlying cell death in cells dependent upon glucose for survival, we demonstrate that glucose withdrawal rapidly induces supra-physiological levels of phospho-tyrosine signaling, even in cells expressing constitutively active tyrosine kinases.

Using unbiased mass spectrometry-based phospho-proteomics, we show that glucose withdrawal initiates a unique signature of phospho-tyrosine activation that is associated with focal adhesions. Building upon this observation, we demonstrate that **glucose withdrawal activates a positive feedback loop involving generation of reactive oxygen species (ROS) by NADPH oxidase and mitochondria, inhibition of protein tyrosine phosphatases by oxidation, and increased tyrosine kinase signaling.**

In cells dependent on glucose for survival, glucose withdrawal induced ROS generation and tyrosine kinase signaling synergize to amplify ROS levels, ultimately resulting in ROS-mediated cell death. Taken together, these findings illustrate the systems-level cross-talk between metabolism and signaling in the maintenance of cancer cell homeostasis.

Volume 25 | Issue 5 | Page 30
Date: 2011-05-01

Power Failure

Does mitochondrial dysfunction lie at the heart of common, complex diseases like cancer and autism?

By Megan Scudellari

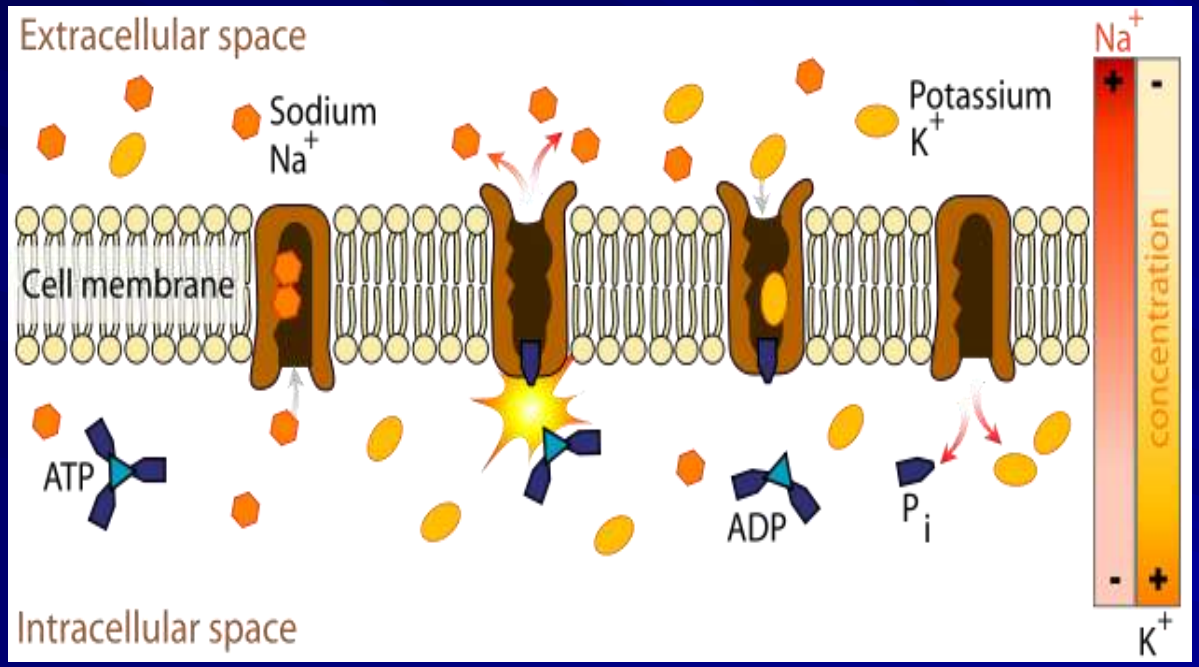
Over the last five years, a growing number of papers by researchers around the world have implicated dysfunctional mitochondria in many elusive diseases, including Parkinson's, autism, and aging.

Leading the charge is a respected and renowned member of the National Academy of Sciences, Dr. Douglas Wallace, founder of the field of human mitochondrial genetics.

> ***"Every one of the diseases we can't solve is absolutely logical if we put energy at the center,"*** Dr. Wallace says.

Medicine fails to solve many of today's common, complex diseases, Wallace asserts, because the fundamental paradigm is wrong: the medical establishment has spent far too long focusing on anatomy and ignoring energy—specifically, mitochondria.

In a study on Chronic Fatigue Syndrome and Electro-medicine, Thomas Valone, Ph.D, showed that **damaged or diseased cells present an abnormally low TMP, about 80% lower than healthy cells.** This signifies a greatly reduced metabolism and, in particular, impairment of the electrogenic Na+/ K+ pump activity associated with reduced ATP (Adenosine Tri-Phosphate) production.



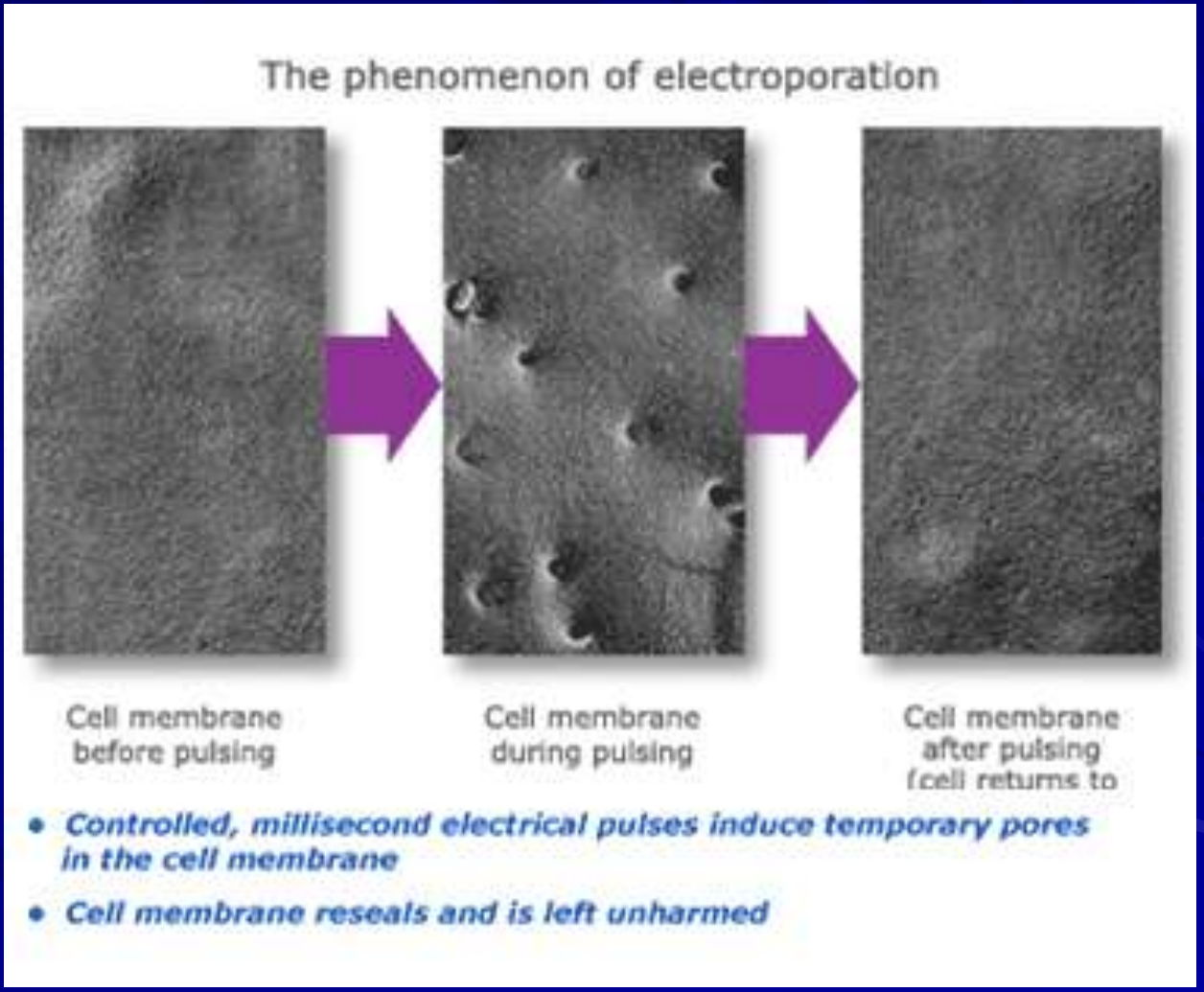
The Na+/ K+ pump within the membrane forces a ratio of 3Na+ ions out of the cell for every 2K+ ions pumped in for proper metabolism. The sodium-potassium pump uses energy derived from ATP to exchange sodium for potassium ions across the membrane.

An impaired Na+/ K+ pump results in edema (cellular water accumulation) and a tendency toward fermentation, a condition known to be favorable toward cancerous activity.

PEMF induces Electro-poration – Increasing Cellular (TMP) Transmembrane Potential

Applied PEMF stimulates electroporation of the cell membrane, where tiny pores or "ion channels" are opened during pulses.

This effect increases trans-membrane potential, electron transport, and free radical scavenging, which is significantly important for anti-agine and treating chronic diseases including cancer.



PEMF Therapy Increases Cellular Membrane Permeability and Cellular Metabolism

As early as 1940, it was suggested that magnetic fields affect the TMP and the flow of ions in and out of the cells and might therefore influence cellular membrane permeability.

It has since been established that magnetic fields can influence ATP (Adenosine Tri-phosphate) production; increase the supply of oxygen and nutrients via the vascular and lymphatic systems; improve the removal of waste via the lymphatic system; and help re-balance the distribution of ions across the cell membrane.

Healthy cells in tissue have a voltage difference between the inner and outer membrane referred to as the membrane resting potential that ranges from -70 to -80 mV. This causes a steady flow of ions through its voltage-dependant ion channels.

As the magnetic field created fluctuates, it induces an electron flow or a current in one direction through the living tissue. As electrons always flow from a negative (cathode) to a positive (anode) potential, when the magnetic field vanishes, the direction of the electron flow is reversed. Therefore such induced polarized currents stimulate the exchange of ions across the cell membrane.

Exercise Protects the Heart Via Nitric Oxide

Research , School of Medicine
May 4, 2011

Exercise both reduces the risk of a heart attack and protects the heart from injury if a heart attack does occur. For years, doctors have been trying to dissect how this second benefit of exercise works, with the aim of finding ways to protect the heart after a heart attack.

Researchers at Emory University School of Medicine have identified the ability of the heart to produce and store nitric oxide as an important way in which exercise protects the heart from injury.

Nitric oxide, a short-lived gas generated within the body, turns on chemical pathways that relax blood vessels to increase blood flow and activate survival pathways. Both the chemical nitrite and nitrosothiols, where nitric oxide is attached to proteins via sulfur, appear to act as convertible reservoirs for nitric oxide in situations where the body needs it, such as a lack of blood flow or oxygen.

In experiments with mice, the researchers showed that four weeks of being able to run on a wheel protected the mice from having a blocked coronary artery; the amount of heart muscle damaged by the blockage was less after the exercise period. Importantly, the mice were still protected a week after the wheel was taken away.

http://shared.web.emory.edu/whsc/news/releases/2011/05/exercise-protects-the-heart-via-nitric-oxide.html

PEMF Therapy and Nitric Oxide Production

Many cells in the body produce nitric oxide; however, its production by the vascular endothelium is particularly important in the regulation of blood flow. Abnormal production of nitric oxide, as occurs in different disease states, can adversely affect blood flow and other vascular functions. Nitric oxide is one of the few gaseous signaling molecules known and is additionally exceptional due to the fact that it is a radical gas. It is a key vertebrate biological messenger, playing a role in biological processes.

The March/April 2009 Aesthetic Surgery Journal published a study:

"Evidence-Based Use of Pulsed Electromagnetic Field Therapy in Clinical Plastic Surgery" that summarizes the evolution in the understanding of the physiological effects of PEMF therapy on cells and tissues.

Studies emerged suggesting that PEMF could modulate the production of growth factors and began to focus on enzyme systems with well-characterized calcium (Ca^{2+}) dependence.

Exercise Alters Epigenetics

TheScientist
MAGAZINE OF THE LIFE SCIENCES

Exercise causes short-term changes in DNA methylation and gene expression in muscle tissue that may have implications for type 2 diabetes.

By Hannah Waters | March 6, 2012

Exercise can delay the onset of diabetes by boosting the expression of genes involved in muscle oxidation and glucose regulation. A new study, published on March 6th in *Cell Metabolism*, suggests that DNA methylation drives some of these changes, and that they can occur within just a few hours of exercise, providing a potential mechanism for how exercise protects the body from metabolic disease.

People with type 2 diabetes are less responsive to insulin than healthy individuals, and thus have difficulties maintaining normal blood sugar levels. Certain metabolic genes, such as those involved in glucose transport and mitochondrial regulation, have been shown to be expressed at lower levels in diabetics, possibly explaining their decreased insulin responsiveness.

"Exercise is one therapeutic to maintain sensitivity of the organs to insulin and prevent diabetes," said molecular physiologist Juleen Zierath of the Karolinska Institute, who in 2009 showed that diabetics have different DNA methylation patterns in muscle. This suggested "there might be some dynamic changes in methylation" after exercise, said Zierath, who teamed up with Romain Barres of Copenhagen University and others to further investigate a possible epigenetic mechanism of exercise-induced diabetes prevention.

http://the-scientist.com/2012/03/06/exercise-alters-epigenetics/

Exercise as Housecleaning for the Body

By GRETCHEN REYNOLDS, Columnist
New York Times
February 1, 2012

When ticking off the benefits of physical activity, few of us would include intracellular housecleaning. But a new study suggests that the ability of exercise to speed the removal of garbage from inside our body's cells may be one of its most valuable, if least visible, effects.

It's long been known that cells accumulate flotsam from the wear and tear of everyday living. Broken or misshapen proteins, shreds of cellular membranes, invasive viruses or bacteria, and worn-out, broken-down cellular components, like aged mitochondria, the tiny organelles within cells that produce energy, form a kind of trash heap inside the cell.

Through a process with the expressive name of autophagy, or "self-eating," cells create specialized membranes that engulf junk in the cell's cytoplasm and carry it to a part of the cell known as the lysosome, where the trash is broken apart and then burned by the cell for energy.

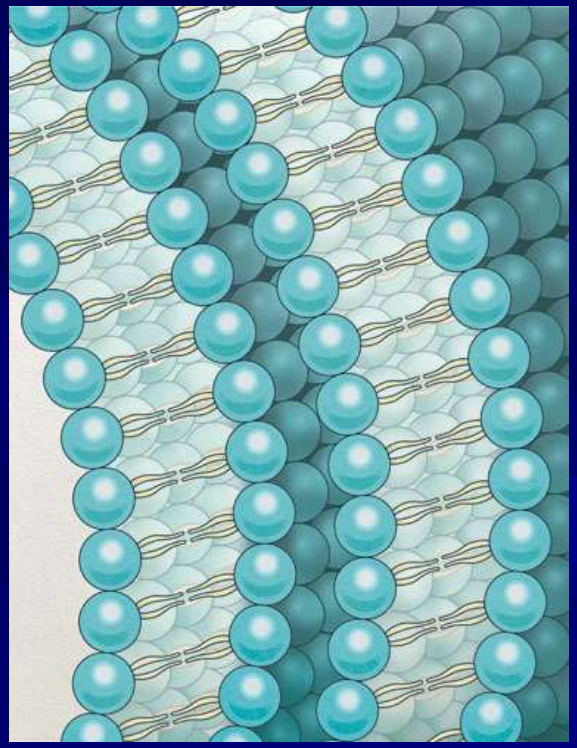
Without this efficient system, cells could become choked with trash and malfunction or die. In recent years, some scientists have begun to suspect that faulty autophagy mechanisms contribute to the development of a range of diseases, including diabetes, muscular dystrophy, Alzheimer's and cancer. The slowing of autophagy as we reach middle age is also believed to play a role in aging.

The Enigmatic Membrane

By Muriel Mari, Sharon A. Tooze, and Fulvio Reggiori

February 1, 2012

TheScientist
MAGAZINE OF THE LIFE SCIENCES

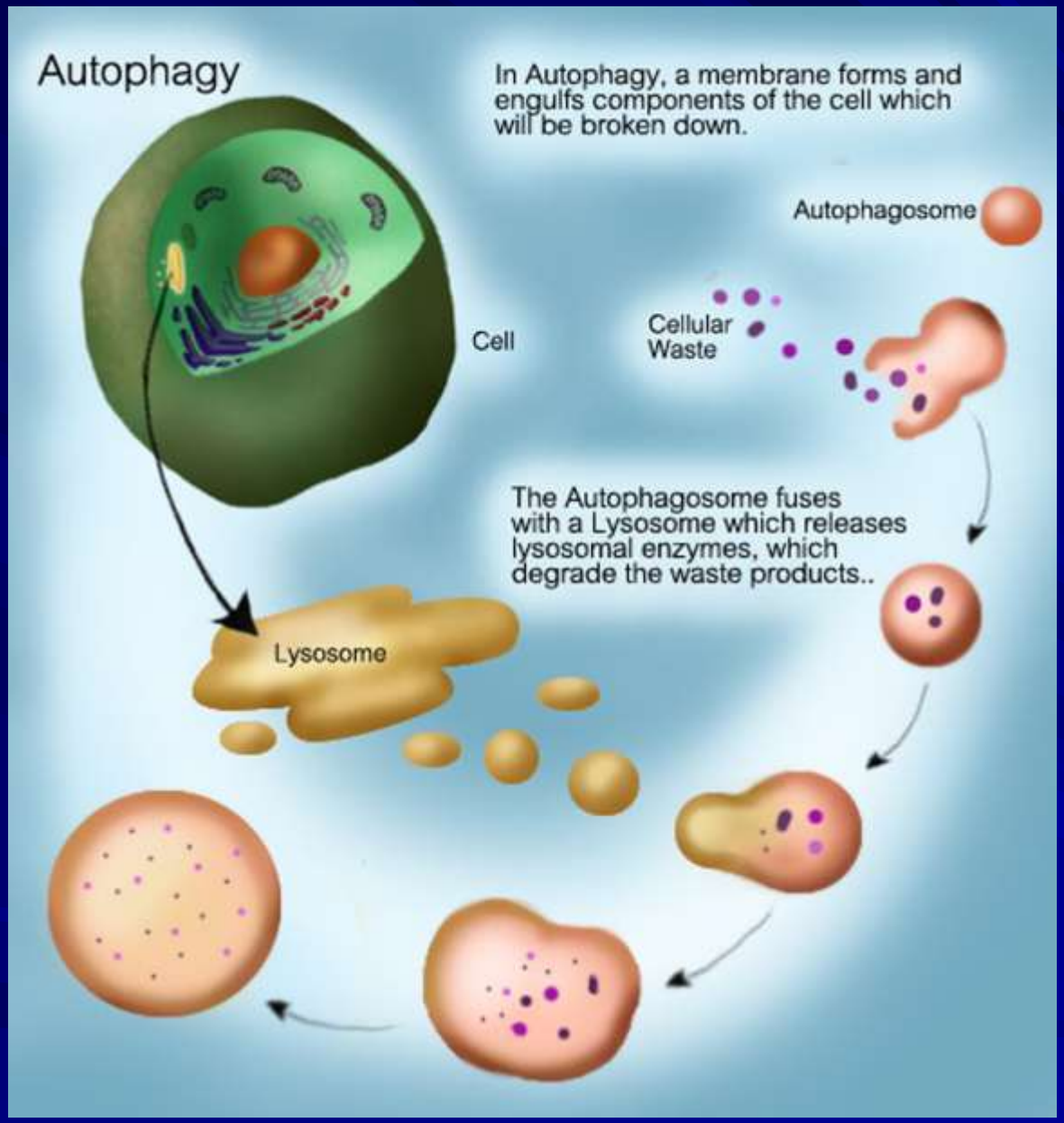


Cells live longer than their internal components. To keep their cytoplasm clear of excess or damaged organelles, as well as invading pathogens, or to feed themselves in time of nutrient deprivation, cells degrade these unwanted or potentially harmful structures, and produce needed food and fuel, using a process they have honed over millions of years known as **autophagy.**

This catabolic process involves the selection and the sequestration of the targeted structures into unique transport vesicles called autophagosomes, which then deliver the contents to lysosomes where they are degraded by lytic enzymes. This conserved eukaryotic pathway plays a central role in a multitude of physiological processes, including programmed cell death, development, and differentiation.

Autophagy plays a protective role against aging, tumorigenesis, neurodegeneration, and infection. Given all this, it is not surprising that an impairment of autophagy is correlated with various severe pathologies, including cardiovascular and autoimmune diseases, neuro- and myodegenerative disorders, and malignancies.

http://the-scientist.com/2012/02/01/the-enigmatic-membrane/



Recent developments reveal a crucial role for the autophagy pathway and proteins in immunity and inflammation. They balance the beneficial and detrimental effects of immunity and inflammation, and thereby may protect against infectious, autoimmune and inflammatory diseases.

Autophagy helps the cell fight infection by some kinds of invading bacteria and viruses, by cleaning them out of the cell's interior without having to discard the entire cell.

Sustained autophagy may also increase longevity by protecting cells against free radical damage and mutations in DNA.

http://www.mesaschumacher.com/science-art-and-illustration/medical-illustration/?album=6&gallery=24

Plant Physiol. 2007 January; 143(1): 291–299.

Degradation of Oxidized Proteins by Autophagy during Oxidative Stress in Arabidopsis

Yan Xiong, Anthony L. Contento, Phan Quang Nguyen, and Diane C. Bassham*

PubMed.gov
U.S. National Library of Medicine
National Institutes of Health

Upon encountering oxidative stress, proteins are oxidized extensively by highly reactive and toxic reactive oxidative species, and these damaged, oxidized proteins need to be degraded rapidly and effectively. There are two major proteolytic systems for bulk degradation in eukaryotes, the proteasome and vacuolar autophagy. In mammalian cells, the 20S proteasome and a specific type of vacuolar autophagy, chaperone-mediated autophagy, are involved in the degradation of oxidized proteins in mild oxidative stress.

Using two macroautophagy markers, monodansylcadaverine and green fluorescent protein-AtATG8e, we here show that application of hydrogen peroxide or the reactive oxidative species inducer methyl viologen can induce macroautophagy in Arabidopsis (*Arabidopsis thaliana*) plants. Macroautophagy-defective RNAi-*AtATG18a* transgenic plants are more sensitive to methyl viologen treatment than wild-type plants and accumulate a higher level of oxidized proteins due to a lower degradation rate. In the presence of a vacuolar H+-ATPase inhibitor, concanamycin A, oxidized proteins were detected in the vacuole of wild-type root cells but not RNAi-*AtATG18a* root cells.

Together, our results indicate that autophagy is involved in degrading oxidized proteins under oxidative stress conditions in Arabidopsis.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1761971/

Cellular Workout: Autophagy

The cell's recycling system, may be responsible for the health benefits of exercise.

By Megan Scudellari | January 18, 2012

TheScientist
MAGAZINE OF THE LIFE SCIENCES

It's indisputable—exercise is good for you. But on a molecular level, scientists aren't really sure why.

Published online today in *Nature,* researchers show that a cellular housekeeping mechanism, called autophagy, could be the source of the beneficial effects of exercise, including protection against diabetes.

Targeting the pathway could mimic the health effects of exercise—all the perks with none of the sweat—and help treat type II diabetes, the authors suggest.

Autophagy is an internal recycling system that degrades damaged or unwanted organelles and proteins in a cell and produces energy. In animal models, this process has been shown to protect against cancer, neurodegenerative disorders, infections, diabetes, and more. "Exercise is known to protect against all these same diseases," said Beth Levine, a biologist at the University of Texas Southwestern Medical Center, "so it made sense to us that exercise might induce autophagy."

'If Physical Exercise Were a Drug, It Would Be Hitting the Headlines' ; Exercise Can Help Cancer Survivors, Says New Report

Macmillan Cancer Support - http://www.macmillan.org.uk

08-09-11

EXERCISE is a "wonder drug" for cancer survivors and may even prevent the disease coming back, according to a report published today. Macmillan Cancer Support said physical activity should be "prescribed" by doctors after "hard evidence" showed it can significantly help recovery and prevent other long-term illnesses.

The research also showed exercise had an impact on *preventing recurrence* of a few specific cancers.

- **Women with breast cancer who exercise for 150 minutes a week at moderate intensity have a more than 40% lower risk of dying and recurrence of disease compared to women who are active for less than one hour a week.**

- **Results of two studies on bowel cancer also show the risk of dying or the disease coming back is cut by about 50% in patients taking six hours a week of moderate intensity exercise.**

- **Prostate cancer patients have around a 30% lower risk of dying from the disease and a 57% lower rate of disease progression if they do three hours of moderate intensity exercise a week.**

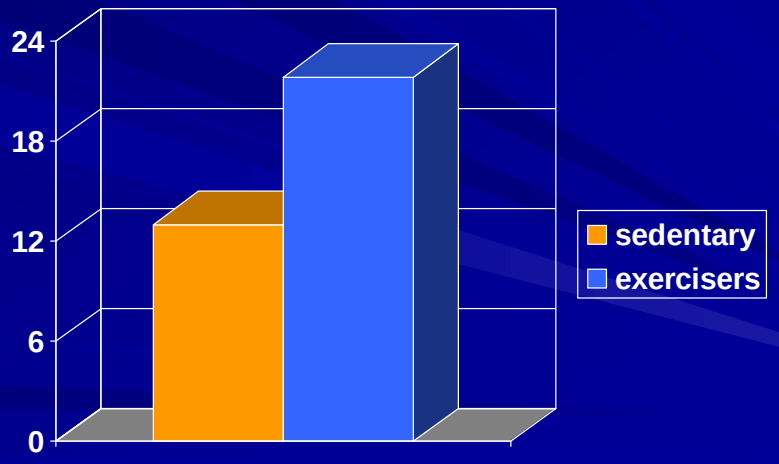
Exercise Associated With Longer Survival After Brain Cancer Diagnosis

ScienceDaily (June 21, 2011)

Brain cancer patients who are able to exercise live significantly longer than sedentary patients, scientists at the Duke Cancer Institute report.

The finding, published online June 20 in the *Journal of Clinical Oncology*, adds to recent research that exercise improves how cancer patients feel during and after treatments, and may also extend their lives. The study enrolled 243 patients at the Preston Robert Tisch Brain Tumor Center at Duke with advanced recurrent gliomas, lethal brain malignancies that typically result in a median life expectancy of less than six months.

The patients who reported participating in regular, brisk exercise - the equivalent of an energetic walk five days a week for 30 minutes, had significantly prolonged survival, living a median 21.84 months vs. 13.03 months for the most sedentary patients.



http://www.sciencedaily.com/releases/2011/06/110621114153.htm

Bill Doyle: Treating cancer with electric fields

TED Ideas worth spreading

The [Tumor Treating Fields] patients can undergo all the activities of their daily life. There's none of the tiredness. There's none of what is called the ‘chemo head.’

Surgery, chemotherapy and radiation are the best-known methods for treating cancer. At TEDMED, Bill Doyle presents a new approach, called Tumor Treating Fields, which uses electric fields to interrupt cancer cell division. Still in its infancy -- and approved for only certain types of cancer -- the treatment comes with one big benefit: quality of life. With his company Novocure, Bill Doyle works to bring breakthrough medical technologies to doctors and patients.

http://www.ted.com/talks/lang/en/bill_doyle_treating_cancer_with_electric_fields.html

British Journal of Cancer - 17 January 2012

Treating cancer with amplitude-modulated electromagnetic fields: a potential paradigm shift, again?

C F Blackman - Integrated Systems Toxicology Division (B-105-03), US Environmental Protection Agency, Research Triangle Park, NC 27711, USA

The Zimmerman *et al* (2012) study published here, coupled with the group's two preceding papers (Barbault *et al*, 2009; Costa *et al*, 2011), identify a potential modality for treating tumours at a dramatic reduction in trauma and cost. This set of clinical and explanatory laboratory results should be understood in the context of the history of research into the biological effects of electromagnetic fields (EMFs).

Costa *et al* (2011) reported surprising clinical benefits from using the specific AM-EMF signals to treat advanced hepatocellular carcinoma, stabilising the disease and even producing partial responses up to 58 months in a subset of the patients.

Now Zimmerman *et al* have examined the growth rate of human tumour cell lines from liver and breast cancers along with normal cells from those tissues exposed to AM-EMF.

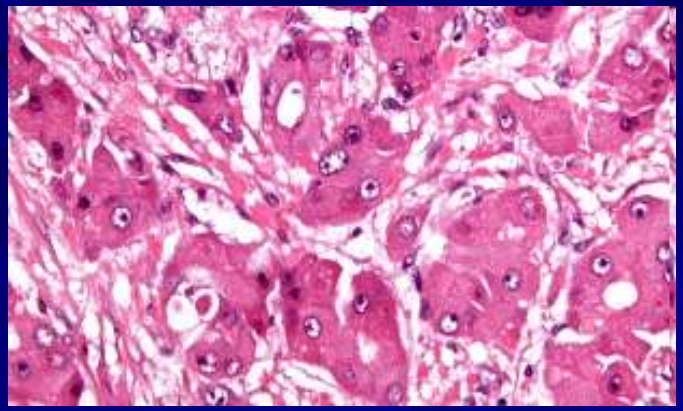
Reduced growth rate was observed for tumour cells exposed to tissue-specific AM-EMF, but no change in growth rate in normal cells derived from the same tissue type, or in tumour or normal cells from the other tissue type.

(2012) 106, 241–242. doi:10.1038/bjc.2011.576 www.bjcancer.com

Electromagnetic Fields Shrink Tumors

New research shows that low-intensity fields can inhibit cancer cell proliferation.

By Bob Grant | The Scientist | January 11, 2012



Very high magnification micrograph of fibrolamellar hepatocellular carcinoma
Wikimedia Commons, Nephron

Researchers have demonstrated that small doses of **electromagnetism can shrink liver and breast cancer cells without harming surrounding tissues**, according to a report published recently in the *British Journal of Cancer*.

An international team, led by University of Alabama at Birmingham oncologist Boris Pasche, has shown that low-intensity electromagnetic fields can slow the proliferation of and hepatocellular carcinoma (HCC) cells, which are involved with a deadly form of liver cancer, and breast cancer cells. ***"This is a truly novel technique,"*** Pasche told *The Guardian*. ***"It is innocuous, can be tolerated for long periods of time, and could be used in combination with other therapies."***

In August, Pasche and his colleagues published a *British Journal of Cancer* paper showing that they could slow tumor growth in some HCC patients by treating them with low-level electromagnetic fields on a regular basis. In total, 41 patients received the treatments… after 6 months of treatment, tumor growth in 14 of those patients had stabilized, and **none experienced negative side effects.**

http://the-scientist.com/2012/01/11/electromagnetic-fields-shrink-tumors/

Electromagnetic Therapy
for energy production and cellular detoxification

In an article published in *Plos One*, November 2010, volume 5, issue 11 (Wang), page 4, Johns Hopkins' researchers found a 38% increase in ATP production in P12 cells that were placed in a static magnetic field device that we supplied.

This increase could be much higher *in vivo* with the brain's pulsed DC electromagnetic field interacting with an enhanced earth-type field resulting in increased resonance of the mitochondria. All of this leading to enhance electron transfer in the creb cycle resulting in more ATP production.

↑ ATP equals ↑ Na+ K+ pump function which leads to ↑ charge of the cell wall and ↑ metal excretion.

ZeoGold™ Has Superior DETOX Capacity and Performance

Generally, ZeoGold™ powder has superior DETOX capacity and performance for inorganic metallics vs. other zeolite DETOX products, because of the higher CEC capacity, ultrahigh surface area available for sorption and optimized particle size. The natural zeolites remove Pb or other metal cations present in water solutions and biological, aqueous milieu via:

a) exchange for ions (e.g., Na, K, Ca, H+) in the zeolite, crystallites for the Pb or other metal cation.

b) by direct, surface sorption.

c) by physically, removing particulate forms of Pb or trace metals that get "trapped" in the zeolite, micro-crystals or pore structures.

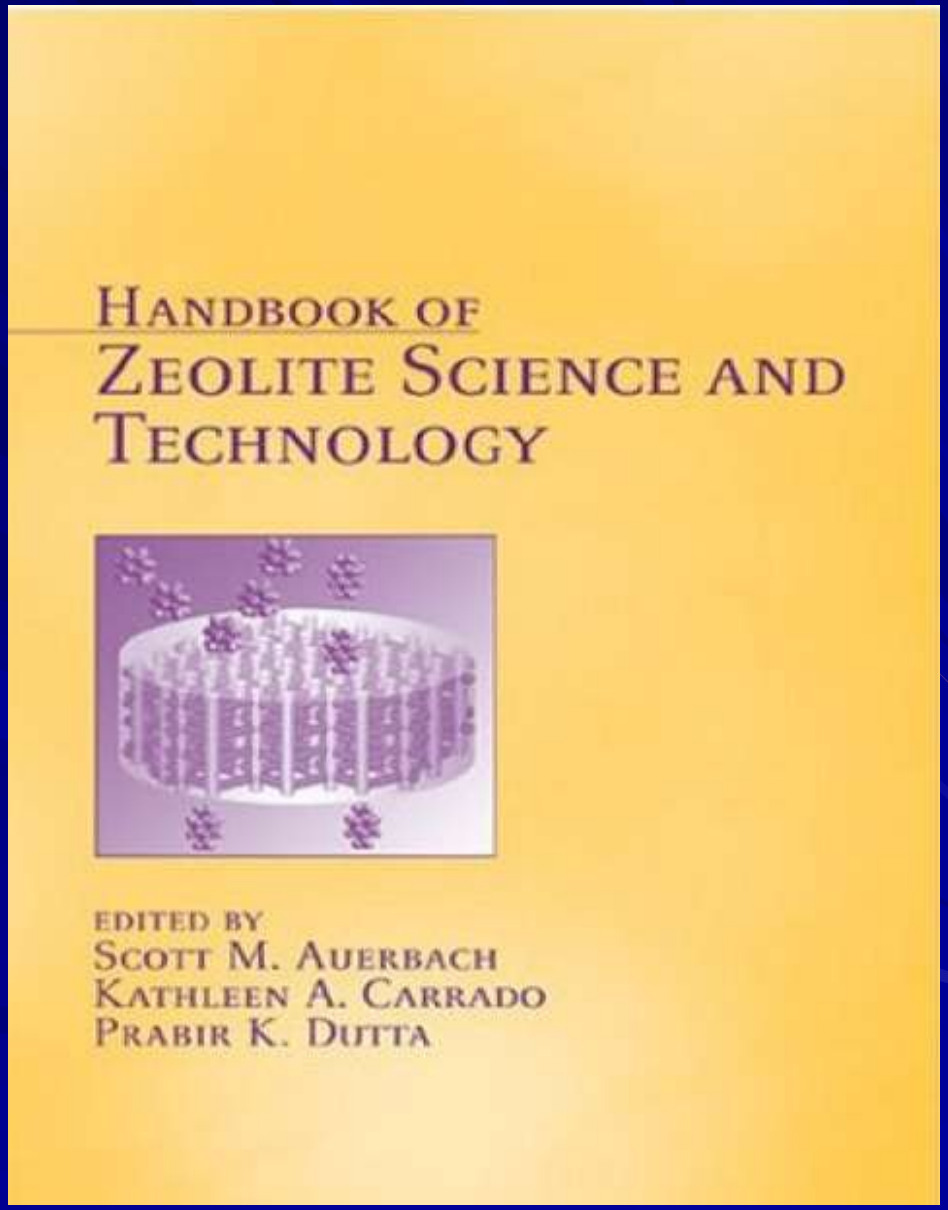
d) indirectly, by altering the intestinal tract microflora and/or bio-film layer that can alter the utilization or processing of trace metals.

The mechanism for removal of Pb and other toxic, trace metal cations for ZeoGold™ is the same as for Clinoptilolite products, but superior DETOX performance can be expected from the ZeoGold™ doses (100 to 250 mg/day) than the Clinoptilolite products.

24 – Medical Applications of Zeolite

Kresimir Pavelic and Mirko Hadzija
Ruder Boskovic Institute, Zagreb, Croatia

Zeolites are among the most important inorganic cation exchangers. The aluminosilicate structure is negatively charged and attracts cations that come to reside inside the pores and channels. Zeolites have large empty spaces, or cages, within their structures that can accommodate large cations, such as Na+, K+, Br+, and Ca+, and even relatively large molecules and cationic groups, such as water, ammonia, carbonate ions, and nitrate ions. The basic structure of zeolites is biologically neutral (pg 1141).



Doyle *et al.*: ISOFLURANE SCAVENGING

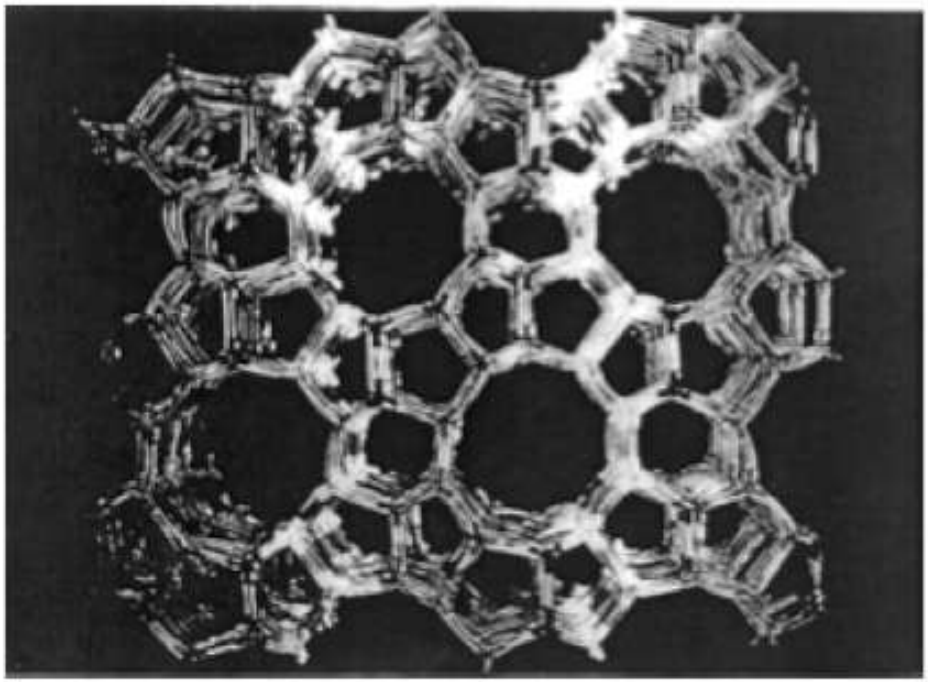


FIGURE 1 A repeated unit cell of the crystal structure of hydrophobic silica zeolite (MHZ™) molecular sieve; anesthetic agent is selectively captured in the honeycomb-shaped silica zeolite crystals. In just 500 g of silica zeolite, the total internal surface area available for capturing anesthetic would cover 70 football fields.

Therefore…

100 g of zeolite internal surface is equal to 14 football fields.

The internal surface area of the Micronized Hydro-Colloidal Zeolite crystal structure of only 7.15 g would cover the surface area of an entire 100 yard football field.

1 g of zeolite internal surface is equal to 14 yards of a football field.

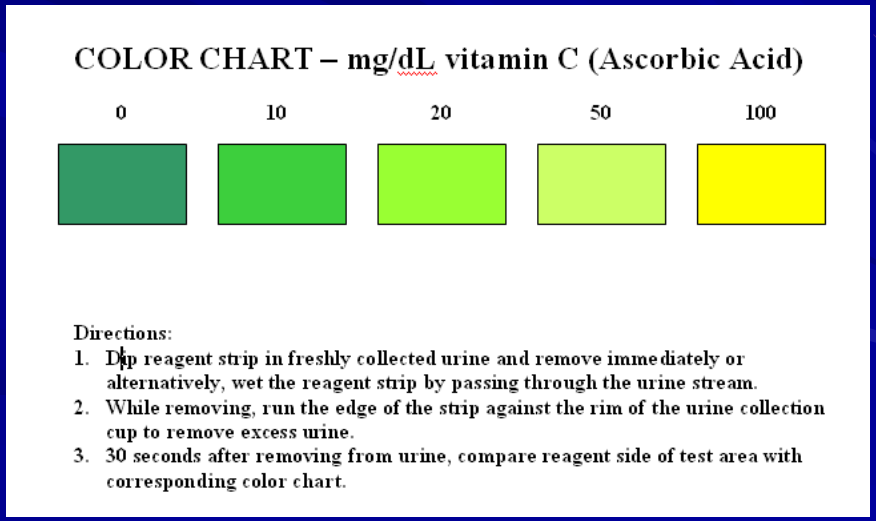
100 mg (one ZeoGold capsule) = 1.4 yards of one football field.

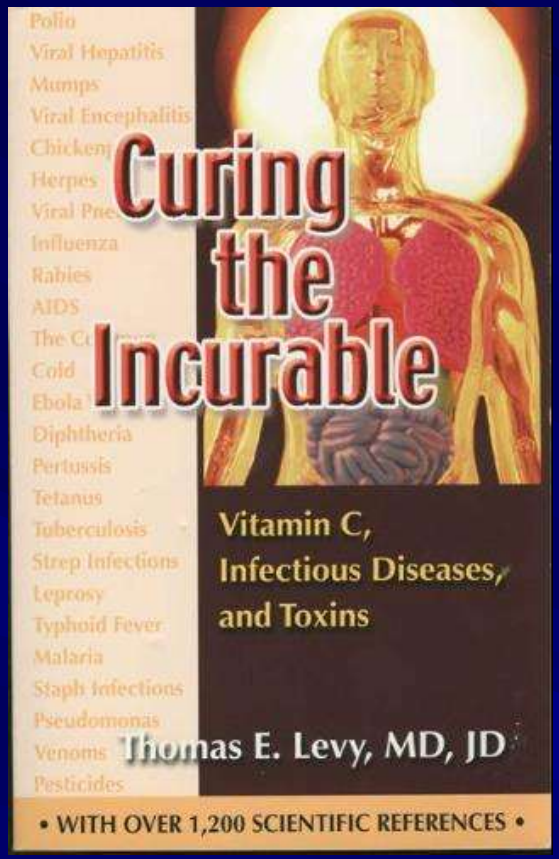
Bio En'R-G'y C is an exciting new form of Ribose Nucleotide Activated (RNA) Vitamin C containing Riboperine metabolites that safely allows patients to take daily high doses without stomach upset, cramping, or diarrhea.

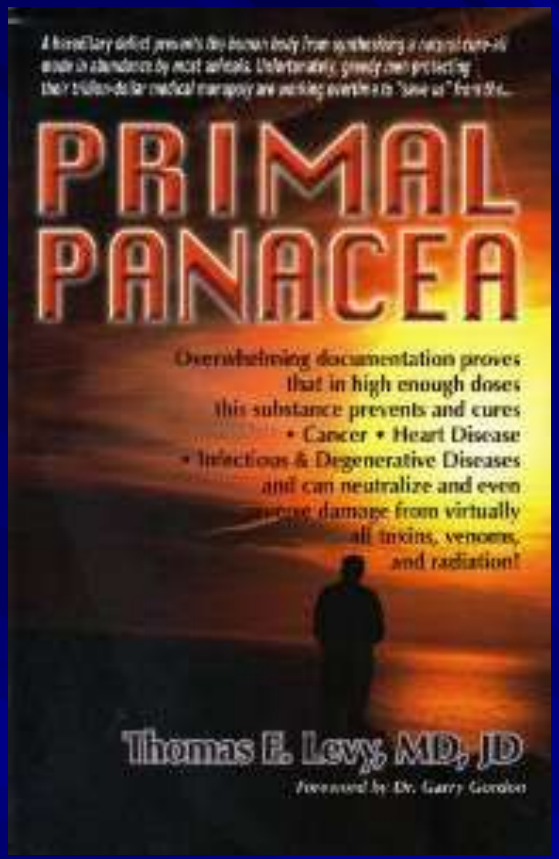
Each serving of Bio En'R-G'y C 's unique form of L-Ascorbate C crystals, has been further enhanced with 2000 mg of GMS-Ribose for increased bio-availablility.

Preliminary double blind, human trials on one or more of the ingredients of GMS-Ribose taken with Vitamin C have been shown to enhance the uptake of Vitamin C plasma levels above 30% of subjects on placebo.

A BRIGHT SPOT on this urine stick test means you will have a brighter future!







VITAMIN C

Vitamin C, given at sufficiently high doses, by itself, can cure life-threatening infections and neutralize many otherwise fatal toxin exposures, according to author Thomas E. Levy, MD, JD in his extensively referenced book, Vitamin C, Infectious Diseases, and Toxins: Curing the Incurable, and his newest book "Primal Panacea".

Thomas Levy's books are unmatched in the medical literature. According to Dr. E. Cheraskin, more than 80,000 scientific papers and reports have been written about vitamin C since its chemical nature was first discovered early in the 20th century. The Vitamin C Foundation credits Levy with "doing an almost impossible feat of reading, analyzing and clearly explaining the meaning of the massive science behind vitamin C."

http://findarticles.com/p/articles/mi_m0ISW/is_2003_May/ai_100767885/

Alkalinizing Foods and Supplements to Fight Cancer

by Ronald Klatz, MD, DO and Robert Goldman, MD, PhD, DO, FAASP **Townsend Letter August/September 2010**

Vitamin K May Slash Cancer Risk – EPIC-Heidelberg study documented participants with highest average intakes of K2 were 14% less likely to *develop* cancer, and increased vitamin K2 intakes corresponded to a 28% *reduction* in cancer mortality.

Garlic May Counteract Key Cancer Process – 'Nitrosation' is a cellular process in which substances in foods and water are converted into cancer-causing compounds. Researchers have observed that *"allyl sulfur compounds abundantly present in garlic may inhibit nitrosation in humans".*

Vitamin and Calcium Supplements May Lower Breast Cancer Risk – Study findings presented at the American Association for Cancer Research 101st Annual Meeting 2010, from the Ponce School of Medicine (Puerto Rico), researchers have concluded that *"Vitamins and calcium intake are protective for breast cancer and are associated with higher DNA repair capacity levels.* Vitamins' intake is an independent protective factor for breast cancer while the protective effect of calcium may be explained by an increased DNA repair capacity".

Pomegranates May Help Prevent Breast Cancer – The fruit contains antiaromatase phytochemicals are is rich in ellagitannins, both compounds associated with anticancer properties. Studies suggest that pomegranate [ellagitannin]-derived compounds have the potential to prevent estrogen-responsive breast cancers.

Omega-3 Fatty Acids May Reduce Risk of Colon Cancer – Recent 5 year study from the US National Institute of Environmental Health Sciences (North Carolina) has found that participants consuming the most long-chain omega-3 fatty acids had a reduced risk of distal large bowel cancer, with those in the highest quartile achieving a 39% reduced risk.

Green Tea May Modify Lung Cancer – Green tea is especially high in polyphenols, a potent type of antioxidant, and previous studies have shown that drinking green tea may confer anticancer benefits. One study found that non-smokers who did not drink green tea had a 5.16-fold increased risk of lung cancer, compared with non-smokers who drank at least one cup per day. Among smokers, those who did not drink green tea at all had a 12.71-fold increased risk compared to those who drank at least one cup per day.

Pistachios May Reduce Lung Cancer Risk – Pistachios are known to exert heart-healthy benefits by producing a cholesterol-lowering effect and providing antioxidants, such as gamma tocopherol. Two ounces of pistachios per day could be incorporated into dietary strategies designed to reduce the risk of lung cancer without significant changes in body mass index.

Broccoli Extract May Reduce Skin Cancer Risk – Johns Hopkins University (Maryland) fed broccoli sprout extracts high in glucoraphanin (which has been indentified as a potent anticarcinogen) to laboratory mice previously exposed to UV radiation. The researchers found that a daily dose of 10 moles of glucoraphanin inhibited the subsequent development of skin tumors – with skin tumor incidence reduced by 25% and tumor volume by 70%

FIGHT for Your Health with Dr. Gordon's Power Drink

Beyond Fiber - 1 rounded tsp

Bio En'R-G'y C - 1 rounded tsp

MACA Powder - 1/2 tsp

Dr. Gordon's Organic Best of Greens - 1 rounded tsp

ZeoGold* - 1 capsule (twist open and dissolve in drink)

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I could not imagine treating patients without this device in my office as I would be cheating my patients otherwise.

Every chiropractor NEEDS to have this technology in their office!

Dr. Kim Shunkwiler, DC
Westland, MI

VIDEO

"As a licensed Practitioner, you need to search for alternative ways to treat conditions. I've been practicing for 40 years and one of the most exciting things I've seen is this PEMF Technology.

Utilizing this technology adds a whole NEW dimension to a practice.

Dr. Allen Unruh, DC

VIDEO

"This is the most simplest device that can change your life and that of your patients. Every practitioner needs this type of Cellular Exercise in their Practice."

Dr. Garry Gordon
MD, DO, NP
Founder of Gordon Research Institute

I was personally involved in a bad motorcycle accident 4 years ago that left me crippled up and disabled. The Ortho team was able to save my right leg. In just 2 treatment sessions with the PMT 100 device I was able to alleviate almost 100% of the pain. This device has helped me get back a productive life.

Can you imagine a device that can provide your practice with a GREAT source of secondary stream Income and offer noticeable pain reduction for your patients? I believe that any practice without this technology will be left behind.

Dr. Curtis Ficenec, DC
Fargo, ND

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Lipid	Lipid Metabolism Type	Lipid Metabolism Type Metal Binding	APOE	2	Apolipoprotein E			Refer to specific Panel
Lipid	HDL regulation		APOA1	1	Apolipoprotein A-I			smart DNA Report
Lipid			APOC3	1	Apolipoprotein C-III			
Lipid			APOB100	1	Apolipoprotein B			
Lipid	Plasma Triglycerides		APOA5	2	Apolipoprotein A-V			
Lipid			CETP	2	Cholesteryl ester transfer protein			
Lipid	Fat absorption		FAPB2	1	Fatty acid binding protein type 2			
Lipid			ABCA1	1	ATP binding cassette transporter 1	1. Liposcan 2.Micronutrients Cu, Zn, selenium 3. Lipid Peroxidation 4. Fatty Acid Profile 5. Oxidated LDL		
Lipid			LPL	3	Lipoprotein lipase			
Lipid			LDLR	2	Low density lipoprotein receptor			
Lipid	Body fat metabolism	Body fat metabolism	ADRB2	2	Beta-adrenergic receptor 2			
Lipid	Body fat metabolism	Body fat metabolism	ADRB3	1	Beta-adrenergic receptor 3			
Lipid	Insulin resistance	Insulin resistance	PPAR-γ	1	Peroxisome proliferator-activated receptor gamma			
Lipid N/A	Adiponectin/obesity		ADIPOQ	1	Aiponectin			
Lipid N/A	Childhood obesity		FTO	1	Fat mass and obesity associated gene			
Lipid N/A	Inhibition of lipolysis		PLIN	1	Perilipin 1			
Lipid			E-selectin	1	CD62 antigen-like family member E or endothelial-			
Lipid	HDL level		LIPC	1	Lipase			

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Garry F. Gordon MD, DO, MD(H)