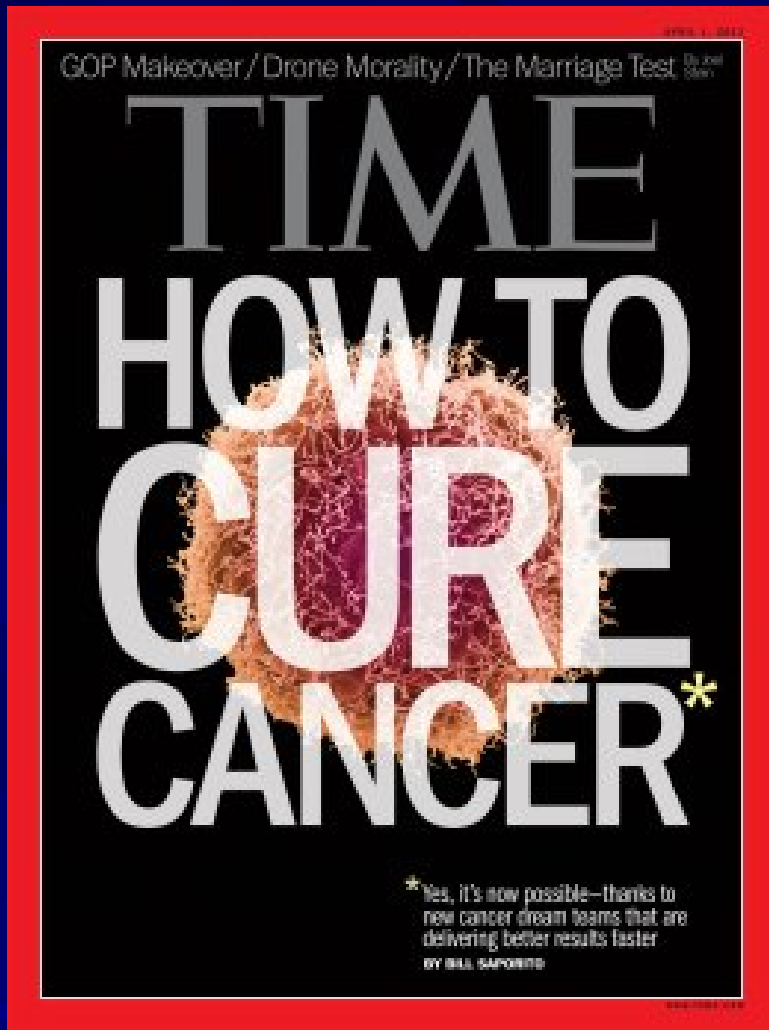


# PEMF Enhanced Detoxification Essential Today for Everyone Seeking Optimal Health & Longevity

*Dr. Garry F. Gordon, MD, DO, MD(H)  
Gordon Research Institute  
Payson, Arizona USA*





## The Conspiracy to End Cancer

by Bill Saporito

April 1, 2013

The hero scientist who defeats cancer will likely never exist. It will take not one hero but many.

Cancer is not just one disease, it is potentially thousands. And not all cancers are caused by just one agent — a virus or bacterium that can be flushed and crushed.

Cancer is an intricate, potentially lethal collaboration of genes gone awry, of growth inhibitors gone missing, of hormones and epigenomes changing and rogue cells breaking free. It works as one great armed force, attacking by the equivalent of air and land and sea and stealth...

Cancer research has traditionally involved a narrowly focused investigator beavering away, one small grant at a time. But advances in genetic profiling of malignancies and mutations that cause them are telling scientists and physicians they must stop treating lung or breast or colon or prostate cancer as distinct diseases.

<http://healthland.time.com/2013/04/01/the-conspiracy-to-end-cancer/>



CELEBRITIES

## Angelina Jolie Says She Had Double Mastectomy

By Associated Press | May 14, 2013 | 19 Comments

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(LOS ANGELES) — Angelina Jolie says that she has had a preventive double mastectomy after learning she carried a gene that made it extremely likely she would get breast cancer.

The Oscar-winning actress and partner to Brad Pitt made the announcement in the form of an op-ed she authored for Tuesday's *New York Times* under the headline, "My Medical Choice." She writes that between early February and late April she completed three months of surgical procedures to remove both breasts.

**(PHOTOS: Angelina Jolie Visits Pakistan Flood Victims)**

Jolie, 37, writes that she made the choice with thoughts of her six children after watching her own mother, actress Marcheline Bertrand, die too young from cancer.

"My mother fought cancer for almost a decade and died at 56," Jolie writes. "She held out long enough to meet the first of her grandchildren and to hold them in her arms. But my other children will never have the chance to know her and experience how loving and gracious she was."



JOEL RYAN / AP

Angelina Jolie

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# Cancer as a Metabolic Disease

On the Origin, Management,  
and Prevention of Cancer



Thomas N. Seyfried

 WILEY

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## Cancer as a Metabolic Disease

*[excerpts from pg(s) 5-6 and 17]*

Radiation therapy is given to many cancer patients. Radiation will kill both cancer cells and normal cells.

Some normal cells that are not killed outright can be metabolically transformed into tumor cells.

Moreover, those tumor cells that survive the radiation treatment will sometimes grow back as more aggressive and less manageable cancers in the future.

Emerging evidence suggests that cancer is a metabolic rather than genetic disease.

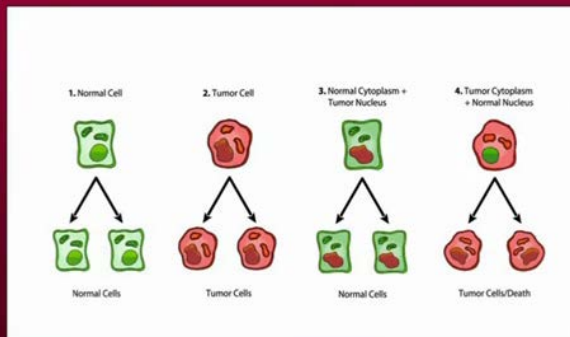
**Cancer is a disease of defective cellular energy metabolism, and most of the genomic defects found in cancer arise as secondary downstream effects of defective energy metabolism.**

# Thomas Seyfried, Ph.D.—Targeting Energy Metabolism in Brain Cancer



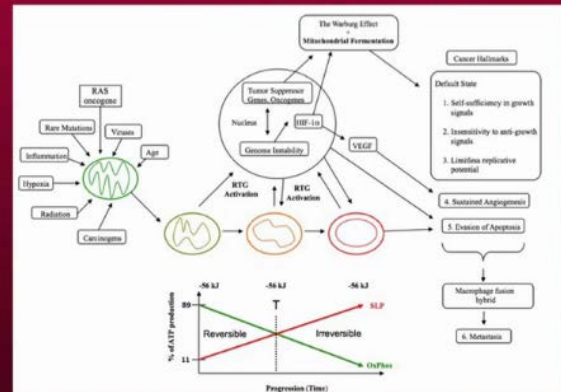
Is cancer a nuclear genetic disease or a mitochondrial metabolic disease? As a metabolic disorder involving the dysregulation of respiration, malignant brain cancer can be managed through changes in metabolic environment. Warburg was correct.

## Role of the nucleus and mitochondria in the origin of tumors



Seyfried, *Cancer as a Metabolic Disease*, John Wiley & Sons, 2012

## Cancer as a Metabolic Disease



Seyfried, *Cancer as a Metabolic Disease*, 2012, John Wiley & Sons



<https://www.youtube.com/watch?v=sBjnWfT8HbQ>



## **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 excess 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.**

Mol Aspects Med. 2010 Feb;31(1):60-74. Epub 2009 Dec 6.

## **The Warburg effect and mitochondrial stability in cancer cells.**

Gogvadze V, Zhivotovsky B, Orrenius S.

Institute of Environmental Medicine, Division of Toxicology, Karolinska Institutet, Box 210, Stockholm SE-17177, Sweden.



### **Abstract**

**The last decade has witnessed a renaissance of Otto Warburg's fundamental hypothesis, which he put forward more than 80 years ago, that mitochondrial malfunction and subsequent stimulation of cellular glucose utilization lead to the development of cancer.**

**Since most tumor cells demonstrate a remarkable resistance to drugs that kill non-malignant cells, the question has arisen whether such resistance might be a consequence of the abnormalities in tumor mitochondria predicted by Warburg.**

**The present review discusses potential mechanisms underlying the upregulation of glycolysis and silencing of mitochondrial activity in cancer cells, and how pharmaceutical intervention in cellular energy metabolism might make tumor cells more susceptible to anti-cancer treatment.**

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Curr Opin Clin Nutr Metab Care. 2006 Jul;9(4):339-45.

## **Oxidative metabolism in cancer growth.**

Ristow M. Department of Human Nutrition, Institute of Nutrition, University of Jena, Jena, Germany.



### **Abstract**

**Recent evidence suggests that oxidative metabolism may have a key role in controlling cancer growth.**

**More than 80 years ago, Otto Warburg suggested that impaired oxidative metabolism may cause malignant growth. This assumption, later known as Warburg's hypothesis, has been experimentally addressed for many decades. It employs multiple approaches including cell lines, implanted xenografts and other animal models, by biochemical methods to quantify glycolytic and mitochondrial fluxes and signaling pathways including the rates of intermediate metabolism, respiration and oxidative phosphorylation.**

**The hallmarks of cancer growth, increased glycolysis and lactate production in tumors, have raised attention recently due to novel observations suggesting a wide spectrum of oxidative phosphorylation deficits and decreased availability of ATP associated with malignancies and tumor cell expansion. The most recent findings suggest that forcing cancer cells into mitochondrial metabolism efficiently suppresses cancer growth, and that impaired mitochondrial respiration may even have a role in metastatic processes.**



## **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 to describe Acidosis**

Cancer Res Published OnlineFirst January 3, 2013.

## Acidity generated by the tumor microenvironment drives local invasion

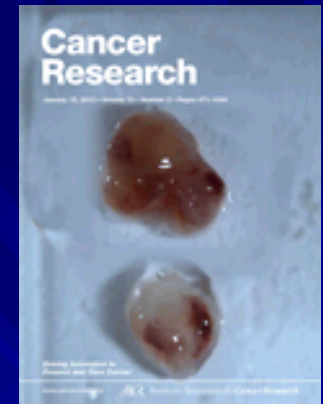
Veronica Estrella, Tingan Chen, Mark Lloyd, et al.

The morbidity and mortality associated with cancer is largely related to tumor invasion and formation of metastases. Extensive application of FDG-PET imaging to clinical cancers has clearly demonstrated the vast majority of malignant tumors metabolize glucose at high rates.

We propose **there is a direct, causative link between increased glucose metabolism and the ability of cancer cells to invade and metastasize.**

Elevated glucose metabolism is the proximate cause of increased acidity in the tumor microenvironment. Furthermore, most tumors develop an aberrant vasculature network that tends to be poorly organized and leaky, disrupting blood flow and hampering the delivery of oxygen. This has a two-fold effect on tumor acidity.

First, it subjects tumor regions to poor perfusion and hence, poor oxygenation (36). Low oxygenation increases glycolytic flux via the Pasteur Effect. Notably, **even in tumor regions with adequate oxygen supply, glycolysis and acid production are up regulated via the Warburg Effect.** Second, **poor perfusion hampers the ability of the microenvironment to remove tumor derived acid through diffusion.** Consequently, the extracellular pH of tumors is typically highly acidic, and this will inevitably result in acid diffusion into the surrounding stroma.



# Dr. Garry Gordon's F<sup>2</sup>IGH<sup>2</sup>T For Your Health Program

F<sup>2</sup> = Food and Focus - related aspect and leaky gut, and Focus (positive mental outlook): Acidophilus, Avoid food sensitivities (wheat, dairy) food supps to include Vitamin C and D

I = Infections - causing cancer, cardiovascular disease, autoimmune diseases: Ozone/UVB, HBO, Silver, Vit 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<sup>2</sup> = 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<sup>2</sup> = Energy and Exercise - PEMF or pulsed electromagnetic frequency therapy that promotes healing through



Magnetically Induced Cellular Exercise, or MICE

# FIGHT with M.I.C.E. Magnetically Induced Cellular Exercise.

Pulsed electro-magnetic frequency (PEMF) therapy recharges the body's 70+ trillion cells. Like physical exercise, PEMF increases cellular bioporation, oxygenation, alkalinity, energy production, and nutrient uptake – while promoting vital autophagic processes and detoxification of harmful toxins and metals.



Multi-vitamin complex  
Herbs & Minerals  
Omega 3's  
Zeolite

EDTA (calcium edta)  
Vitamin C  
Zeolite  
Fiber

## Energy Boost: The Warburg Effect Returns in a New Theory of Cancer

Ken Garber

In 1930, German biochemist Otto Warburg, M.D., proposed that cancer was caused by altered metabolism—deranged energy processing—in the cell. Warburg, winner of a Nobel Prize in 1931, is now considered by many to be the greatest biochemist of the first half of the 20th century. His cancer theory, though, mostly fell on deaf ears.

Now Warburg's theory is enjoying a resurrection. Two prominent cancer biologists contend that a shift in energy production from oxidative phosphorylation to glycolysis—the so-called “Warburg effect”—is a fundamental property of cancer cells, not just a byproduct of the cell's transformation into cancer.

“We think it's a requirement of transformation,” said University of Pennsylvania cancer biologist Craig Thompson, M.D. “You can't become fully transformed until you've had this shift.” If Thompson is right, the implication is enormous: a whole new area of vulnerability for cancer cells, one that promises novel targeted treatments. “Can we exploit any of this for therapeutic reasons?” asked Chi Dang, M.D., Ph.D., a cell biologist at Johns Hopkins University Medical School in Baltimore who is doing similar work. “The answer is going to be yes.”



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## ILLUMINATING THE ENERGY SPECTRUM

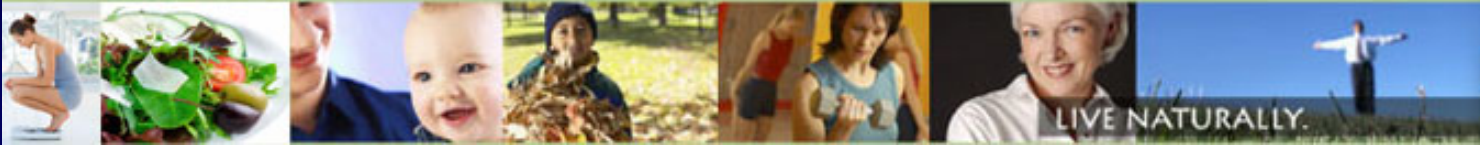
Exploring the Evidence and Emerging  
Clinical Solutions for Managing Pain,  
Fatigue, and Cognitive Dysfunction

May 30–June 1, 2013 ■ Omni Hotel, Dallas, TX

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Through the use of clinical nutrition, dietary modifications, and nutraceuticals, as well as therapeutic modalities such as homeopathy, acupuncture, microcurrent, laser, pulsed electromagnetic field, craniosacral therapy, and guided imagery.



## *Pulsed Electromagnetic Field Therapy*

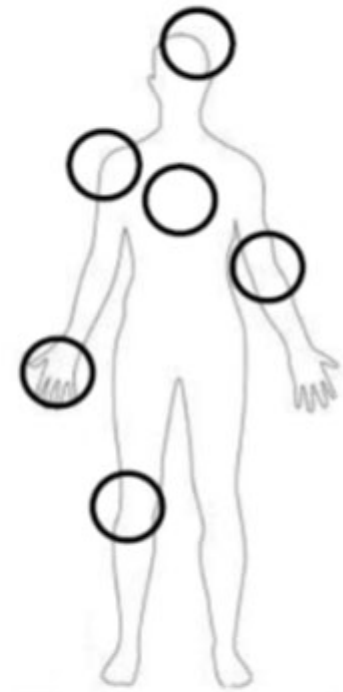
An article published in Public Health Alert in January 2012 details the many benefits of Pulsed Electromagnetic Field Therapy (PEMF Therapy). The article surmises that with the loss of 90% of the earth's electromagnetic field, there is now a very real epidemic of disease associated with magnetic deficiency. Supplementing your body with magnetic fields has shown to have a broad array of cellular effects of PEMF therapy:

- Improves cellular fluid and blood circulation
- Stimulates ATP (energy) production
- Increases cellular energy & oxygen levels
- Promotes cell healing

These cellular effects translate into real biological effects, which include:

- Decreased pain
- Reduced inflammation
- Increased range of motion
- Faster functional recovery
- Reduced muscle loss after surgery
- Increased tensile strength in ligaments
- Faster healing of skin wounds
- Enhanced capillary formation
- Acceleration of nerve regeneration
- And decreased tissue necrosis (cell death)

PEMF therapy is suitable for children through seniors. It is not painful and does not require disrobing. A typical treatment lasts from 9-15 minutes. Patients often report feeling relief immediately after the first session and significant improvement in 2-4 sessions. More chronic conditions may take longer to resolve but improvement is felt at every step.









# 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<sup>+</sup> K<sup>+</sup> pump function  
which leads to ↑ charge of the cell  
wall and ↑ metal excretion.

## PEMF's are like a spark plug or catalyst for energy production in the cell.

Just like a car needs oxygen, fuel and an ignition or spark plug, so does the human cell need fuel (glucose), oxygen and a "spark plug" or ignition. This ignition is PEMF or pulsed magnetic energy from both the earth and movement/exercise on the earth.



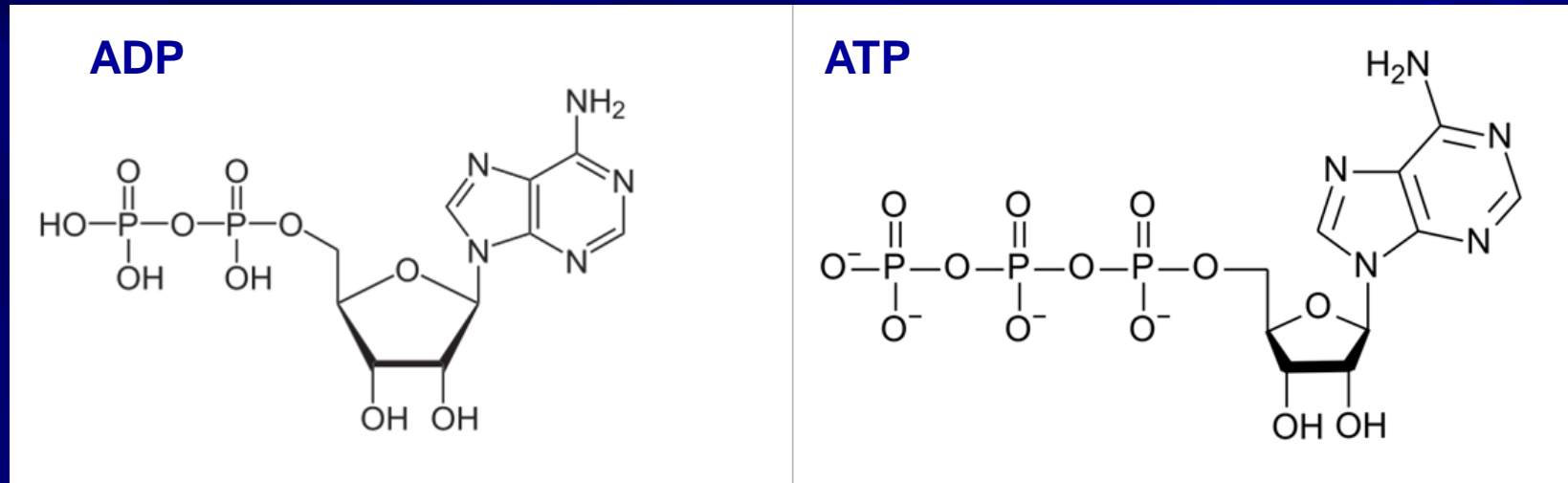
We can also think of PEMF as a battery recharger for the human cell. We now know that the voltage of a healthy cell is about 70-110 millivolts and when we get sick that voltage drops below 50 millivolts or less and cancer cells are 30 millivolts or less. Pulsed electromagnetic fields (PEMF) act like a catalyst and battery recharger for the human cells and these PEMF's are critical for human metabolism.

PEMF's also improve microcirculation, oxygenation (up to a 200% increase), help in nerve regeneration, pain management and many other health promoting benefits. There are over 1000 clinical studies and over 7000 research papers validating the therapeutic benefits of PEMFs.

# PEMF Therapy Increases Energy Storage and Cellular Activity

At the sub-atomic level, as the pulsed fields expand and collapse through a tissue, the protein molecules, such as the cytochromes in the cells' mitochondria, gain electrons and, in doing so, store energy.

The average total energy transmitted to the tissues does not create heat within the cells, nor cause the cells' atoms to vibrate much causing a thermal increase, nor cause an electron to jump to a higher orbit and emit heat as it returns to its orbit of origin.



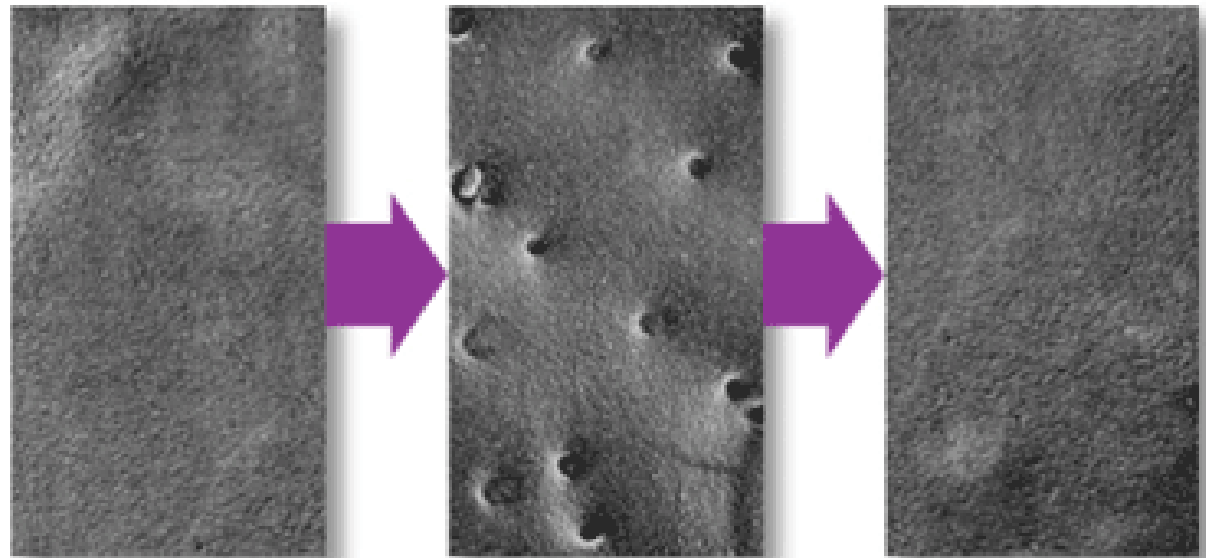
There is only sufficient average energy for the electron-spin to be increased, thus, energy gets stored in the cells' mitochondria by converting ADP (Adenosine Di-Phosphate) to ATP molecules more rapidly by the addition of the phosphate radical to the ADP.

# 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-aging and treating chronic diseases including cancer.

The phenomenon of electroporation



Cell membrane before pulsing

Cell membrane during pulsing

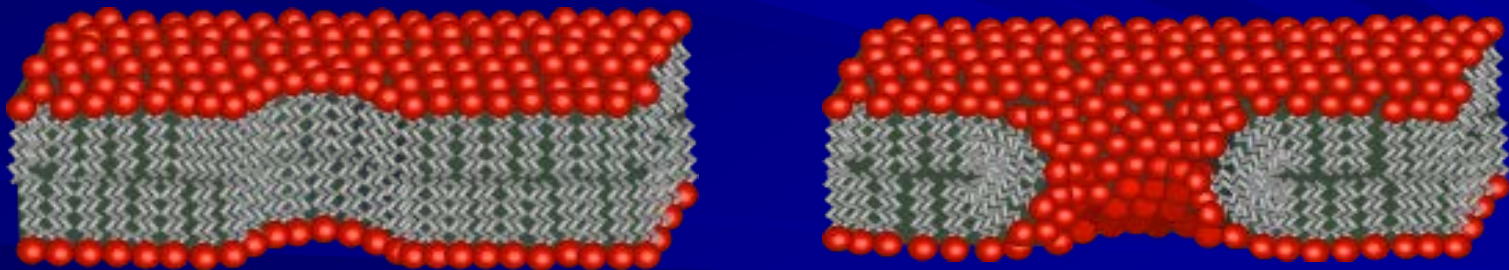
Cell membrane after pulsing (cell returns to)

- *Controlled, millisecond electrical pulses induce temporary pores in the cell membrane*
- *Cell membrane reseals and is left unharmed*

## Physical Mechanism of Electroporation

Electroporation allows cellular introduction of large highly charged molecules such as DNA which would never passively diffuse across the hydrophobic bilayer core. This phenomenon indicates that the mechanism is the creation of nm-scale water-filled holes in the membrane.

Although electroporation and dielectric breakdown both result from application of an electric field, the mechanisms involved are fundamentally different. In dielectric breakdown the barrier material is ionized, creating a conductive pathway. The material alteration is thus chemical in nature. In contrast, during electroporation the lipid molecules are not chemically altered but simply shift position, opening up a pore which acts as the conductive pathway through the bilayer as it is filled with water.



Schematic showing the theoretical arrangement of lipids in a hydrophobic pore (left) and a hydrophilic pore (right).

## **Electroporation and alternating current cause membrane permeation of photodynamic cytotoxins yielding necrosis and apoptosis of cancer cells**

Nelly Traitcheva, Hermann Berg.



To increase the permeability of cell membranes for low doses of cytostatic drugs, two bioelectrochemical methods have been compared:

- (a) electric pore formation in the plasma membranes by single electric impulses (electroporation), and
- (b) reordering of membrane structure by alternating currents (capacitively coupled).

These treatments were applied to human leukemic K-562 cells and human lymphoma U-937 cells, yielding apoptotic and necrotic effects, determined by flow cytometry.

Additional cell death occurs after exposure to light irradiation at wavelengths  $\lambda > 600$  nm, of cells which were electroporated and had incorporated actinomycin-C or daunomycin (daunorubicine).

## **Network for Development of Electroporation-Based Technologies and Treatments: COST TD1104**

Damijan Miklavčič

**Exposure of biological cells to a sufficiently strong external electric field results in increased permeability of cell membranes, referred to as “electroporation.” Since all types of cells (animal, plant and microorganism) can be effectively electroporated, electroporation is considered to be a universal method and a platform technology.**

**Electroporation has become a widely used technology applicable to, e.g., cancer treatment, gene transfection, food and biomass processing and microbial inactivation. However, despite significant progress in electroporation-based applications, there is a lack of coordination and interdisciplinary exchange of knowledge between researchers from different scientific domains. Thus, critical mass for new major breakthroughs is missing. This is why we decided to establish cooperation between research groups working in different fields of electroporation.**

**Cooperation in Science and Technology (COST), which funds networking and capacity-building activities, presents a perfect framework for such scientific cooperation. This COST action aims at (1) providing necessary steps toward EU cooperation of science and technology to foster basic understanding of electroporation; (2) improving communication between research groups, resulting in streamlining European research and development activities; and (3) enabling development of new and further development of existing electroporation-based applications by integrating multidisciplinary research teams, as well as providing comprehensive training for early-stage researchers.**



# Clinical Cancer Research

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## Resistance of Tumor Interstitial Pressure to the Penetration of Intraperitoneally Delivered Antibodies into Metastatic Ovarian Tumors

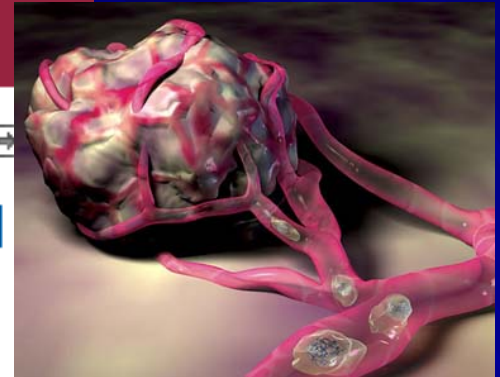
Michael F. Flessner, Jaewah Choi, Kimberly Credit, Ravi Deverkadra and Karla Henderson

Author A

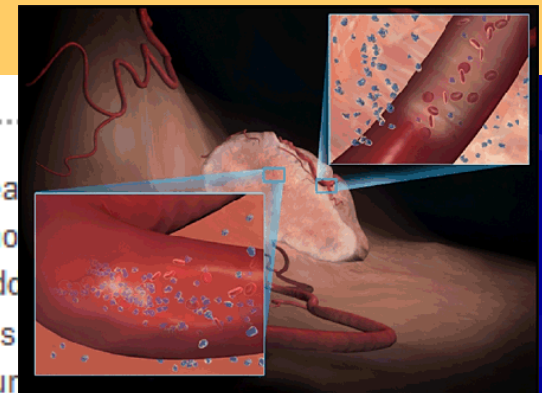
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Mississippi  
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### Abstract

**Purpose:** Despite evidence that regional chemotherapy improves the treatment of metastatic peritoneal ovarian carcinoma, monoclonal antibodies have not had significant success in i.p. delivery. The present study was designed to address the hypothesis that convective penetration of macromolecular antineoplastic agents occurs on a positive pressure difference between the i.p. therapeutic solution and the tumor.



The results only partially support our hypothesis and imply that the microenvironment of the tumor is in itself a major barrier to delivery of charged macromolecules.



**It is observed that drug uptake** after an exponentially decaying electro poration pulse of the initial field strength  $E_0 = 1.4$  kV/cm and pulse time constants in the time range 0.5–3 ms, is faster than during PEMF-treatment, i.e., application of an alternating current of 16 kHz, voltage  $U < 100$  V,  $I = 55$  mA, and exposure time 20 min.

However, at the low a.c. voltage of this treatment, more apoptotic and necrotic cells are produced as compared to the electroporation treatment with one exponentially decaying voltage pulse.

Thus, **additional photodynamic action appears to be more effective than solely drugs and electroporation**, as typically applied in clinical electro chemotherapy, and somewhat more effective than the noninvasive pulsed electromagnetic fields (PEMFs), for cancer cells in general and animals bearing tumors in particular.

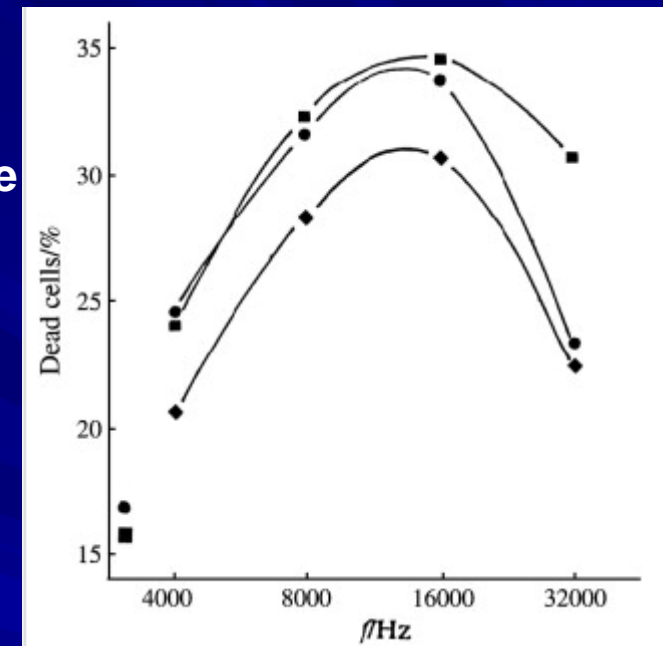
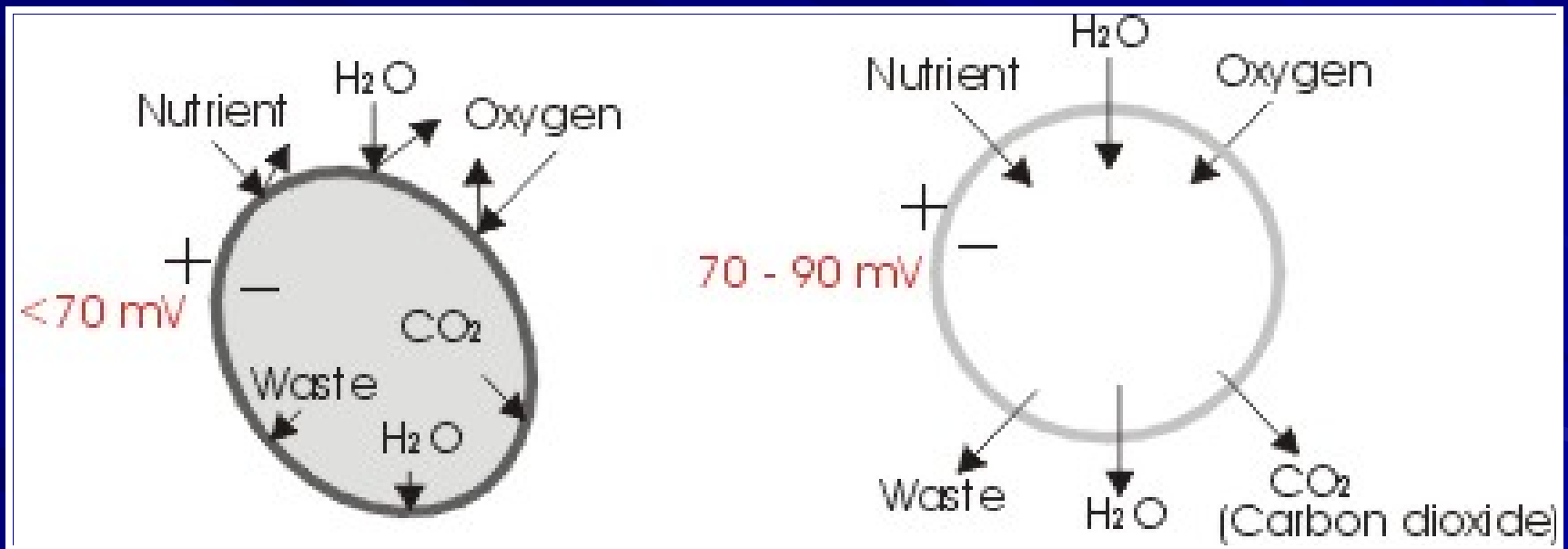


Fig. 1. Frequency dependence. % (death) as a function a.c. current frequency  $f$  for the number  $N(\text{dead})$  of dead U-937 cells, determined by TP colouring: the percentage dead is defined by  $\% \text{ dead} = 10^2 N(\text{dead})/N(\text{total})$ . See Eq. (1) of the main text. Lethal effect by penetration of the drugs alone into the cells after 20 min, below left: (■), for actinomycin-C ( $1 \times 10^{-5}$  M); (●), for daunomycin ( $1 \times 10^{-5}$  M), both without a.c. field pulses. (◆) lethal synergism after 20 min exposure to a.c. field pulses in the presence of drugs: (◆) plus actinomycin-C ( $1 \times 10^{-5}$  M) (◆) plus daunomycin ( $1 \times 10^{-5}$  M).

## PEMF Exercise Therapy can Increase the Effectiveness of Anti-oxidants 100 Fold!

PEMF creates a Negative-Potential energy field to induces subtle current flows and generate a very large amount of negative ions inside human body. Negative Ions stimulate the activity of the **Na<sup>+</sup>/K<sup>+</sup>-ATPase** to enhance **Na<sup>+</sup>/K<sup>+</sup> pump** and to maintain the cell potential at 70 – 90 mV.

Increasing cellular energy and membrane potential assists in uptake of oxygen, H<sub>2</sub>O, anti-oxidants and other critical nutrients into the cell...while toxins, cellular waste and carbon dioxide are purged.



Low energy "sick" cell < 70mV

Normal healthy cell = 70-90 mV

# **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 Triphosphate) 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 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.

# Autophagy in Human Health and Disease

Augustine M.K. Choi, M.D., Stefan W. Ryter, Ph.D., and Beth Levine, M.D. N Engl J Med 2013; 368:651-662  
February 14, 2013



The NEW ENGLAND  
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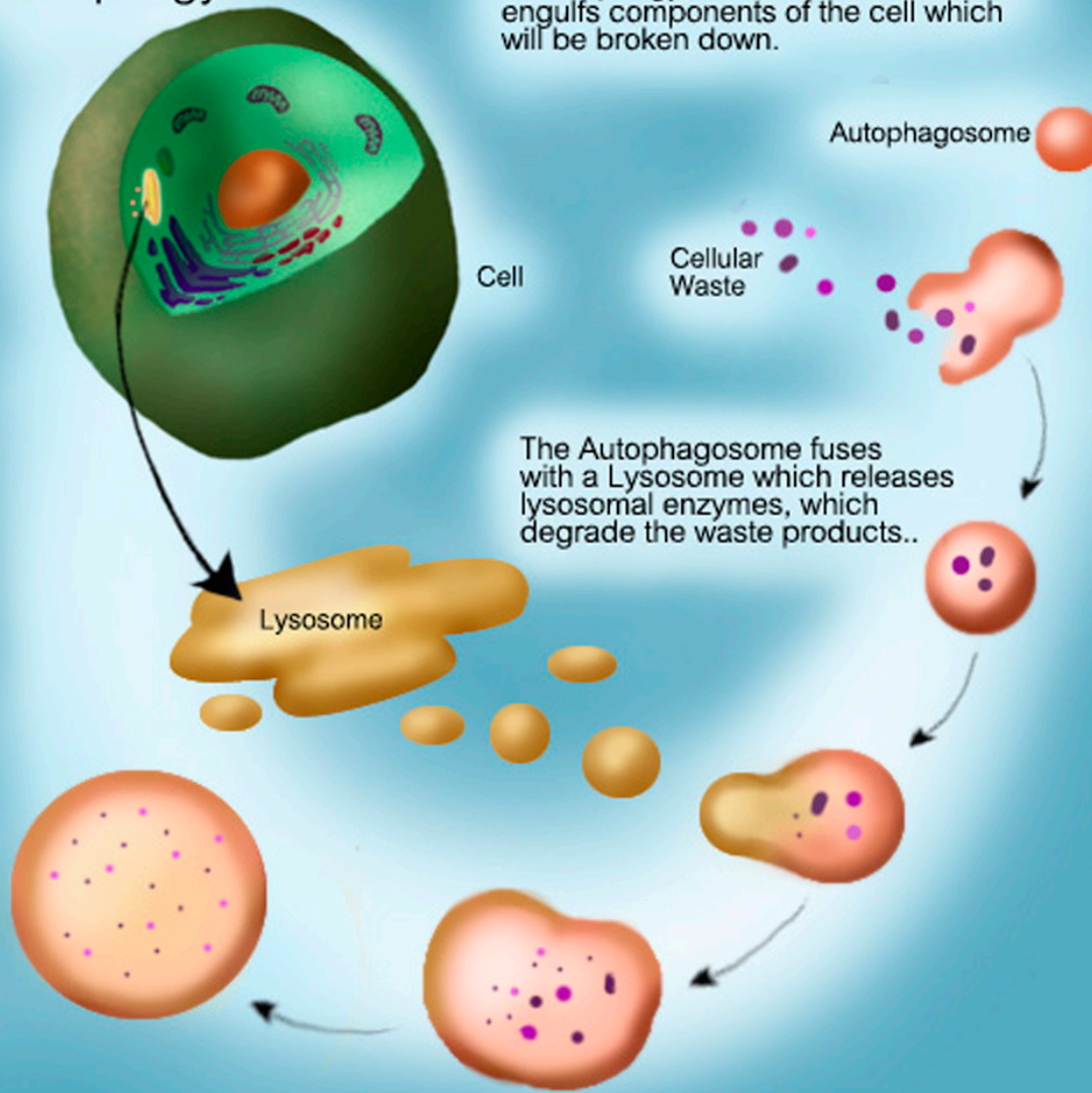
**This review discusses the cellular process of autophagy (“self-eating”), which plays key roles in normal development of the immune system and adaptation to stress, as well as in a wide range of disease states.**

**During exercise, autophagy is increased in cardiac and skeletal muscle, adipose tissue, and pancreatic beta cells. In mice, exercise-induced autophagy provides protection against glucose intolerance associated with a high-fat diet**

**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.**

## Autophagy

In Autophagy, a membrane forms and engulfs components of the cell which will be broken down.



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.

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## Perspective

*Acta Pharmacologica Sinica* (2013) 34: 600–604; doi: 10.1038/aps.2012.189; published online 4 Feb 2013

### Therapeutic induction of autophagy to modulate neurodegenerative disease progression

*Open*

Warren E Hochfeld<sup>1</sup>, Shirley Lee<sup>1</sup> and David C Rubinsztein<sup>1</sup>

"It has been well established that autophagy regulates important biological functions, such as cell survival, cell death, cell metabolism, development, aging, infection and immunity"

**There is accumulating evidence that aggregating, misfolded proteins may have an impact on autophagic function, suggesting that this could be a secondary pathological mechanism in many diseases. In this review, we focus on the role of autophagy in four major neurodegenerative diseases: Alzheimer disease (AD), Huntington's disease (HD), Parkinson's disease (PD) and amyotrophic lateral sclerosis.**

**Keywords:** autophagy; neurodegenerative disease; Alzheimer disease; Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis; mTOR; rapamycin; IP3; lithium

## FULL TEXT

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Autophagy. 2007 Jan-Feb;3(1):28-31. Epub 2007 Jan 3.

## **Role of autophagy in cancer: management of metabolic stress.**

Jin S, White E.

Department of Pharmacology, University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, 675 Hoes Lane, Newark, NJ 08854, USA.



### **Abstract**

**Human breast, ovarian, and prostate tumors display allelic loss of the essential autophagy gene beclin1 with high frequency, and an increase in the incidence of tumor formation is observed in beclin1(+/-) mutant mice. These findings suggest a role for beclin1 and autophagy in tumor suppression; however, the mechanism by which this occurs has been unclear.**

**We found that metabolic stress is a potent trigger of apoptotic cell death, defects in which enable long-term survival that is dependent on autophagy both in vitro and in tumors in vivo. These findings raise the conundrum whereby **inactivation of a survival pathway (autophagy) promotes tumorigenesis**. Interestingly, when cells with defects in apoptosis are denied autophagy, this creates the inability to tolerate metabolic stress, reduces cellular fitness, and activates a necrotic pathway to cell death. This necrosis in tumors is associated with inflammation and enhancement of tumor growth, due to the survival of a small population of injured cells in a microenvironment that favors oncogenesis. Thus, **by sustaining metabolism through autophagy during periods of metabolic stress, cells can limit energy depletion, cellular damage, and cell death by necrosis, which may explain how autophagy can prevent cancer, and how loss of a survival function can be tumorigenic.****

# The Case Against Detoxing

*Why detoxing can actually make your body more toxic...*



Most toxins are stored in your fat cells. When you begin a detox program, you pull these toxins out of your fat cells and into your bloodstream, where they can travel through your body to your vital organs, your brain, invade your joints and tissues, triggering pain and inflammation, cause headaches, memory loss and premature brain aging.

And they can invade your heart, where they can cause blood pressure problems.

Because these toxins do not dissolve in water, your body cannot eliminate them easily. Before it eliminates them, it has to make them water-soluble. Your liver makes the toxins water-soluble so they can be excreted in the urine or via the bile. That's why your bile is full of toxins. Every day, your liver dumps bile into your intestines so the toxins can be eliminated through your stool.

**The problem is that the toxins must first bind with fiber in your intestines. And if you don't eat enough fiber, the toxins are simply re-absorbed through your intestines, and sent right back into your body!**

# 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)



# Beyond Fiber

Stabilized rice bran is one of the most nutrient-dense natural food on Earth. It is an extremely powerful source of vitamins and minerals, essential amino acids, Omega-3,6,9 fatty acids, with complete soluble and insoluble fiber, plus rice bran contains a powerful array of antioxidants



Inulflora, a food derived from the Jerusalem artichoke that is in “Beyond Fiber” provides the ultimate PREBIOTIC.

This is NOT FOS. This is a huge molecule that alone lowers Candida counts over just a few months time, ensuring healthy flora to flourish while harmful pathogens are choked out.

## Supplement Facts

Serving Size: 1 Scoop (11.2 grams)

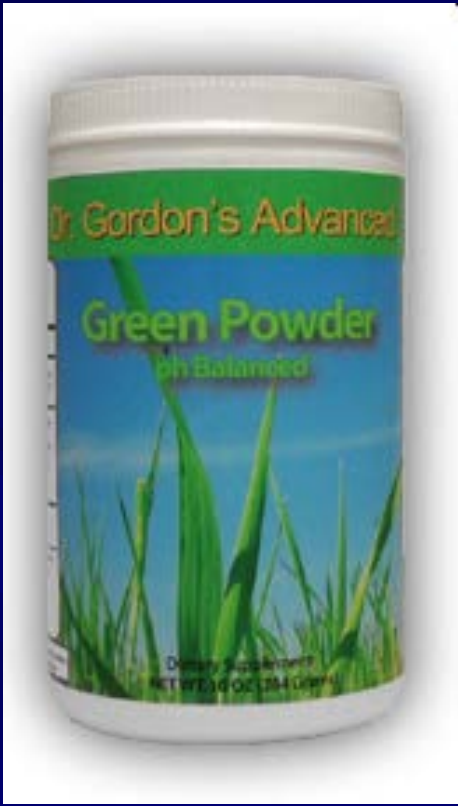
Ingredient	Amount Per Serving	% Daily Value
Calories:	34	*
Calories from fat	18	*
Total fat	2 g	3%
Total Carbohydrates	3.4 g	2%
Dietary Fiber	3.4 g	14%
Sugars	0.8 g	*
Protein	1.5 g	3%
Vitamin B1	270 mc	18%
Vitamin B2	28 mcg	2%
Vitamin B3	5 mg	16%
Vitamin B6	317 mcg	25%
Pantothenic Acid	398 mcg	4%
Calcium (from EDTA)	124 mg	12%
Iron	159 mcg	16%
Phosphorus	73 mg	18%
Magnesium	550 mcg	4%
Zinc	27 mcg	>2%
Manganese	3 mg	150%
Potassium	157 mg	5%
Inulin (Jerusalem Artichoke)	600 mg	*

Percent Daily Values are based on a 2,000 calorie diet.

\*Daily Value not established.

Other Ingredients: Calcium EDTA, Stabilized rice bran, Inulin

## Dr. Gordon's Best of Organic Greens



### Organic Cereal Grasses Blend:

Barley grass, Oat grass, Wheatgrass, and Alfalfa leaf

### Organic Vegetable Blend:

Spinach, Kale, Parsley, Dandelion Leaf, Broccoli and Cilantro.

### Organic Sea Green Blend:

Spirulina, Chlorella, and Dulse





## **Alfalfa Leaf**

**Alfalfa leaf has an extraordinary ability to alkalize and detoxify the body. It balances blood sugar and hormones, and acts as a diuretic**

## **Barley Grass**

**Containing lots of chlorophyll and other essential nutrients that act in a way to help detoxify the body of toxins such as heavy metals and pollutants.**



## **Cilantro**

**A perennial herb also known as coriander or Chinese parsley. It binds to heavy metals and helps remove them from your body.**

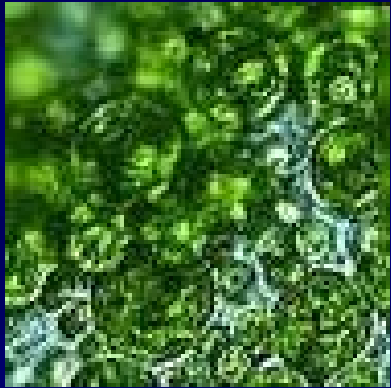
## Dandelion Leaf

Helps stimulate a sluggish gallbladder and promotes bile excretion from the liver so the body can more efficiently process foods and liquids while also purging harmful toxins.



## Chlorella

Chlorella is one of the top nutrients for absorption of toxic metals. Well known in the field of environmental toxicology, Chlorella readily absorbs toxins such as uranium, cadmium, and mercury.



## Spirulina

Providing more than 12 times more digestible protein than beef, Spirulina is also known to be good natural bone medicine due to its high calcium content. It helps to regulate blood sugar, helps to detox the body from heavy metals, is good for the liver and assists with weight loss.





## **Longevity Maca** (*Lepidium meyenii* Walp) Powder

**Maca's reputation as a powerful enhancer of strength and stamina and as a libido-fertility herb goes back more than 500 years, and today it is gaining worldwide attention for its effectiveness.**

**Maca is a radish-like root that grows in the mountains of Peru. Peruvian Maca Root naturally contains significant amounts of amino acids, carbohydrates, vitamins, and minerals.**



**Maca is both a hormone balancer and an adaptogen. It helps stimulate the pituitary gland, acting as a kind of tonic for the hormone system. When the pituitary gland functions optimally, the entire endocrine system becomes balanced, because the pituitary gland controls the hormone output of the other three glands.**



## **Lepidium meyenii (Maca) reversed the lead acetate induced damage on reproductive function in male rats.**

Rubio J, Riqueros MI, Gasco M, Yucra S, Miranda S, Gonzales GF.

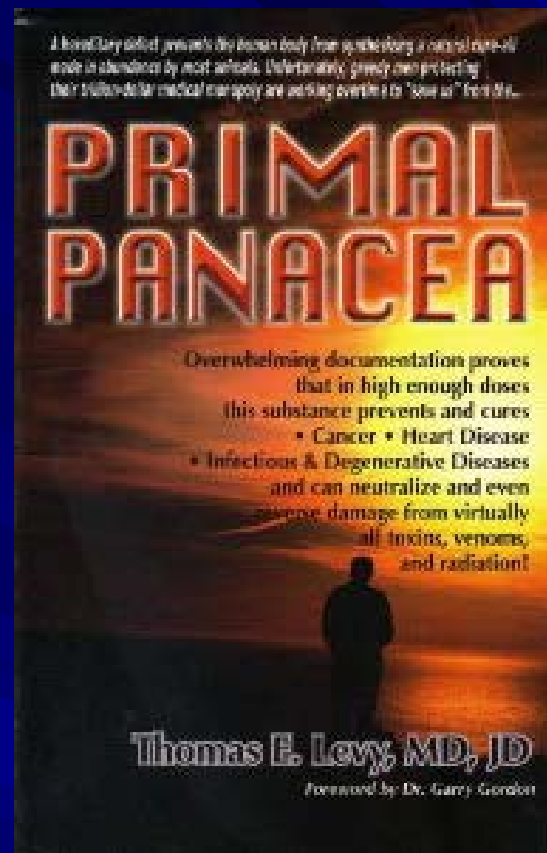
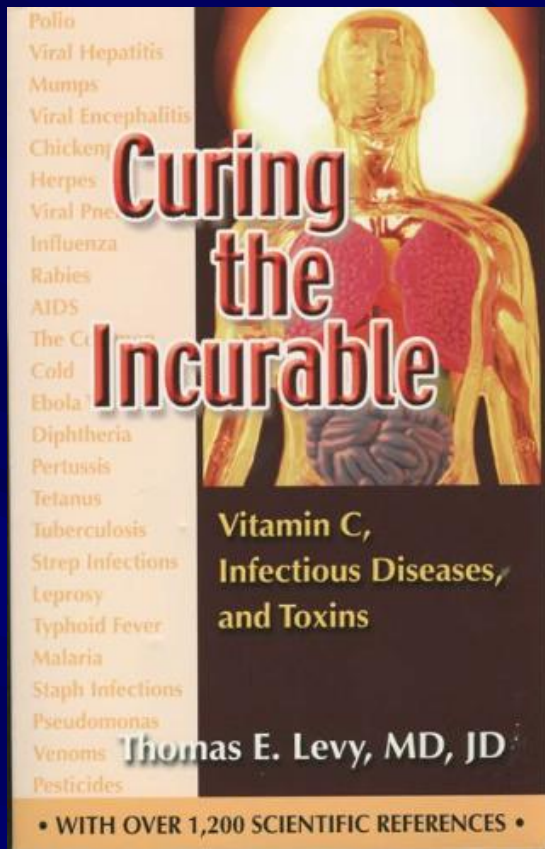


### **Abstract**

Rats were treated with 0, 8, 16 and 24 mg/kg of lead acetate (LA) (i.p.) for 35 days with or without Maca. Maca was co-administrated orally from day 18 to day 35. The lengths of stages of the seminiferous epithelium were assessed by transillumination. Also, sex organ weights, testicular and epididymal sperm count, sperm motility, daily sperm production, sperm transit rate and serum testosterone levels were measured.

Lead acetate treatment resulted in a dose-response reduction of lengths of stages VIII and IX-XI, and serum testosterone levels. However, rats treated with 8 and 16 mg/kg but not 24 mg/kg of lead acetate showed a low number of testicular spermatids, low daily sperm production (DSP) and low epididymal sperm count. Administration of Maca to rats treated with lead acetate resulted in higher lengths of stages VIII and IX-XI with respect to lead acetate-treated rats. Moreover, treatment with Maca to lead acetate-treated rats resulted in lengths of stages VIII and IX-XI similar to the control group.

**Maca administration also reduced the deleterious effect on DSP caused by lead acetate treatment. Maca prevented LA-induced spermatogenic disruption in rats and it may become in a potential treatment of male infertility associated with lead exposure.**



## 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/](http://findarticles.com/p/articles/mi_m0ISW/is_2003_May/ai_100767885/)



**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.

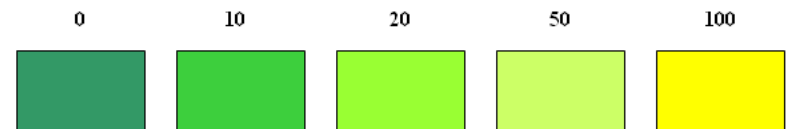
Each serving of Bio En'R-G'y C 's unique form of L-Ascorbate C crystals, has been further enhanced with 2000 mg of GMS-Ribose for increased bio-availability.

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!

#### COLOR CHART – mg/dL vitamin C (Ascorbic Acid)



#### Directions:

1. Dip reagent strip in freshly collected urine and remove immediately or alternatively, wet the reagent strip by passing through the urine stream.
2. While removing, run the edge of the strip against the rim of the urine collection cup to remove excess urine.
3. 30 seconds after removing from urine, compare reagent side of test area with corresponding color chart.

# **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<sup>+</sup>) 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.**



# ZeoGold™ Supplement Facts Panel

Suggested Use: Open 1 Individualized pre-measured serving (capsule) and HYDRATE contents in 4 ounces of water or liquid of choice, 1 or more times daily or as directed by your Health Professional

## Supplement Facts

Serving Size: 1 Individualized pre-measured serving unit (capsule)  
Servings Per Container: 30 capsules

Ingredient	Amount Per Serving	% Daily Value
Vitamin C (FASM L-ascorbate Crystals**)	60 mg	100%
GMS-Ribose ***	40 mg	*
MicroHydro Zeolite**** (Natural Na aluminosilicate)	100 mg	*
Glutathione Lipoate *****	60 mg	*

\* Daily Value not established.

\*\*FASM L-Ascorbate C crystals, with a Firmly Attached Sodium Molecule at a neutral pH, 7mg of attached sodium.

\*\*\* GMS-Ribose™ Glycine Methyl Sulfone Ribose, a patented proprietary blend of methylated glycine, as complexed with methyl sulfone (MSM), D-Ribose/Malate, Aloe, EDTA.

\*\*\*\*MicroHydro Zeolite-Micronized HydroColloidal Zeolite-Natural Na aluminosilicate

\*\*\*\*\* Glutathione Lipoate- a water-soluble complex of L Glutathione, R Lipoate, and Human Grade purified Humic acid. Zeo Gold is a Micronized Hydro-colloid form of Zeolite. It forms in petrified bubbles of the clinoptilolite volcanic rock providing ultra high surface area and higher CEC (cation exchange capacity) for more effective utilization than any clinoptilolite without nano sizing.

Research has shown that Zeolite has an ideal structure for mopping up and removing toxins such as aluminium, arsenic, cadmium, lead, mercury and tin and what's more it appears that Zeolite does not remove "positive" beneficial minerals such as zinc and potassium etc., which can be the case with other detox treatments.

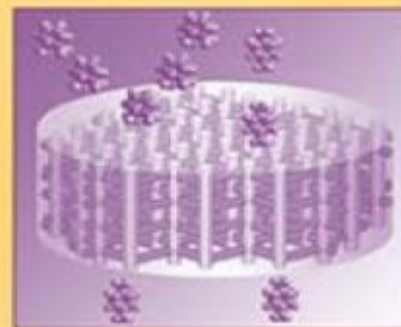
- It removes heavy metals and free radicals
- It helps to balance Ph levels
- It has the highest Cation exchange of any Zeolite product
- It passes out naturally through the body
- It contains sub micronized clinoptilolite Zeolite in nano distilled water
- It is 100% natural

## 24 – Medical Applications of Zeolite

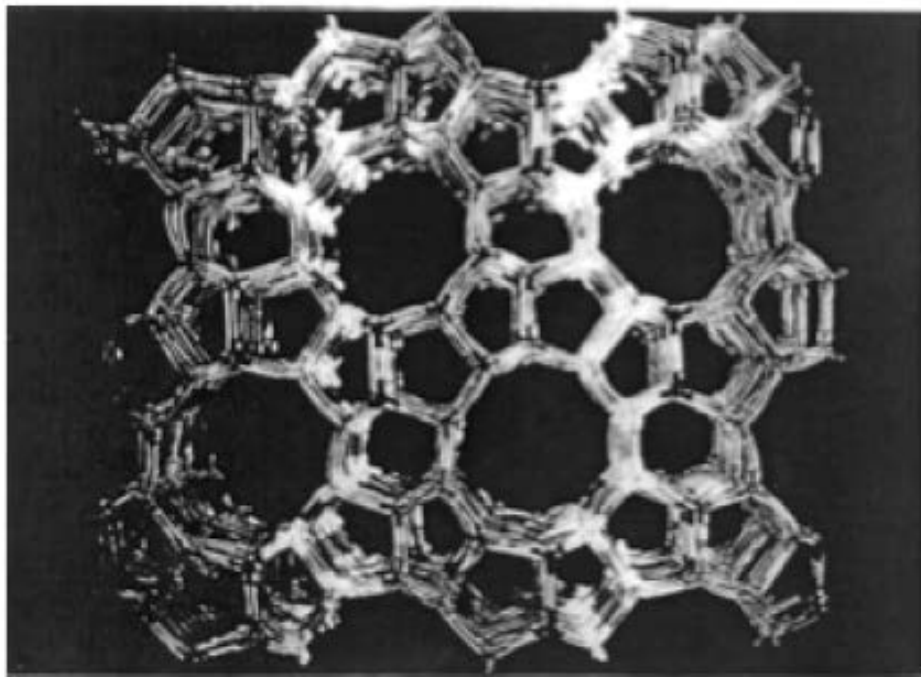
Kresimir Pavelic and Mirko Hadzija  
*Ruder Boskovic Institute, Zagreb, Croatia*

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  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Br}^+$ , and  $\text{Ca}^+$ , 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).

### HANDBOOK OF ZEOLITE SCIENCE AND TECHNOLOGY



EDITED BY  
SCOTT M. AUERBACH  
KATHLEEN A. CARRADO  
PRABIR K. DUTTA



**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.**

#### IV. Removal Of Heavy Metals and Organopoisoning

Heavy metals released in wastewater are among the most worrisome pollution problems due to their cumulative effects along the food chain. The natural zeolites clinoptilolite, phillipsite, and chabazite are particularly useful in selectively eliminating ammonia and heavy metals such as  $\text{Cd}^{2+}$ ,  $\text{Pb}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Cu}^{2+}$ , and particularly  $\text{Cr}^{3+}$ . Generally, clinoptilolite is stable in an acidic environment and shows high selectivity for many heavy metals.

#### V. Antimicrobial Effects

Tissue conditioners containing silver-exchanged zeolite showed a strong in-vitro antimicrobial effect on *Candida albicans*, and also on nasocomial respiratory infections of *S. aureus* and *P. aeruginosa*. All microbes were killed whether they have been immersed in saliva or not.

A new type of antibacterial temporary filling material in dentistry was incorporated into urethane acrylate monomer paste. These materials exhibited prominent in-vitro antibacterial activity against *Streptococcus mutans* and *Streptococcus mitis*.



*J Clin Biochem Nutr.* 2012 May;50(3):195-8. Epub 2011 Nov 29.

## **Natural zeolites chabazite/phillipsite/analcime increase blood levels of antioxidant enzymes.**

Dogliotti G, Malavazos AE, Giacometti S, Solimene U, Fanelli M, Corsi MM, Dozio E.

Dipartimento di Morfologia Umana a Scienze Biomediche "Città Studi", University of Milan, Via Mangiagalli 31, 20133 Milan, Italy.



### **Abstract**

**Imbalance between reactive oxygen species generation and antioxidant capacity induces a condition known as oxidative stress which is implicated in numerous pathological processes.** In this study we evaluated whether natural zeolites (chabazite/phillipsite/analcime) may affect the levels of different antioxidant enzymes (glutathione peroxidase, superoxide dismutase, glutathione reductase), total antioxidant status and oxidative stress in 25 clinically healthy men, both non-smokers and smokers. Measurements were performed on whole blood or on plasma samples before (T0) and after 4-weeks zeolites intake (T1).

At T1, glutathione peroxidase, superoxide dismutase and glutathione reductase increased compared to T0 levels, both considering all subjects as joint and after subdivision in non-smokers and smokers. Differently, a reduction in total antioxidant status was observed at T1. Anyway, total antioxidant status resulted higher than the reference values in both groups at each time point. **A decrease in lipid peroxidation, a major indicator of oxidative stress assessed by monitoring thiobarbituric acid reactive substances, was observed in all subjects at T1.** Our results suggested that natural zeolites may help to counteract oxidative stress in apparently healthy subjects exposed to different oxidative stress risk factors, such as smoking, thus representing a particular kind of food with potential antioxidant properties.

*Anticancer Res.* 2003 Mar-Apr;23(2B):1589-95.

## **Anticancer and antioxidative effects of micronized zeolite clinoptilolite.**

Zarkovic N, Zarkovic K, Kralj M, Borovic S, Sabolovic S, Blazi MP, Cipak A, Pavelic K.  
Ruder Boskovic Institute, Division of Molecular Medicine, Bijenicka 54, HR-10000 Zagreb, Croatia.



### **ABSTRACT**

**Treatment of cancer-bearing mice and dogs with micronized zeolite clinoptilolite (MZ) led to improvement of the overall health status, prolongation of life span and decrease of tumor size in some cases. It also reduced lipid peroxidation in the liver of mice.**

### **MATERIALS AND METHODS:**

The experiments were performed on various tumor cell cultures and tumor-bearing animals. Immunohistochemistry was used to analyze if MZ could interfere with Doxorubicin-induced lipid peroxidation and consequential production of 4-hydroxynonenal (HNE).

### **RESULTS:**

MZ reduced the metabolic rate of cancer cells and increased binding of HNE to albumin in vitro. It selectively reduced generation of HNE in vivo in tumor stroma after Doxorubicin treatment leaving onset of lipid peroxidation intact in malignant cells. Combined treatment with Doxorubicin and MZ resulted in strong reduction of the pulmonary metastasis count increasing anticancer effects of Doxorubicin.

### **CONCLUSION:**

**Interference of MZ with lipid peroxidation might explain some of the beneficial effects of this particular zeolite in combined cancer therapy.**

*J Mol Med (Berl). 2001;78(12):708-20.*

## **Natural zeolite clinoptilolite: new adjuvant in anticancer therapy.**

Pavelić K, Hadzija M, Bedrica L, Pavelić J, Dikić I, Katić M, Kralj M, Bosnar MH, Kapitanović S, Poljak-Blazi M, Krizanac S, Stojković R, Jurin M, Subotić B, Colić M. Ruder Bosković Institute, Division of Molecular Medicine, Zagreb, Croatia.

PubMed.gov

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

### **Abstract**

Natural silicate materials, including zeolite clinoptilolite, have been shown to exhibit diverse biological activities. We report a novel use of **finely ground clinoptilolite as a potential adjuvant in anticancer therapy.**

Clinoptilolite treatment of mice and dogs suffering from a variety of tumor types led to improvement in the overall health status, prolongation of life-span, and decrease in tumors size. Local **application of clinoptilolite to skin cancers of dogs effectively reduced tumor formation and growth.**

In addition, toxicology studies on mice and rats demonstrated that the treatment does not have negative effects. In vitro tissue culture studies showed that finely ground clinoptilolite inhibits protein kinase B (c-Akt), induces expression of p21WAF1/CIP1 and p27KIP1 tumor suppressor proteins, and blocks cell growth in several cancer cell lines.

These data indicate that clinoptilolite treatment might affect cancer growth by attenuating survival signals and inducing tumor suppressor genes in treated cells.

PMID: 11434724 [PubMed - indexed for MEDLINE]

# R-Lipoic Acid

Suna and Willow  
are yellow Labrador  
Retrievers.

They have the  
same body mass,  
the same blood  
markers & activity  
levels.

**Suna (13 yrs) and Willow (3 yrs)**



Suna is continuing to learn new tricks & has been begging for  
22.5 mg/kg/day RLA for the last 7 years.

Suna is Willow's aunt, although they frequently pass as siblings.

## **R-(+)-Lipoic Acid reverses age-related decline**

- RLA & ALCAR improved memory by reversed oxidative damage to nucleic acids & improving mitochondrial function. (Liu et al 2002)
- RLA increases Nrf2 translocation from the cytosol and accumulation in the nucleus. **SLA is not effective.** (Petersen-Shay et al 2008)

# **R-(+)-Lipoic Acid reverses age-related decline**

- RLA reversed age-associated increase in susceptibility of hepatocytes to tert-butylhydroperoxide both in vitro and in vivo. SLA was ineffective. (Hagen et al 2000)
- RLA reversed the age-associated effects on ascorbic acid concentration, recycling and biosynthesis after oxidative stress. (Lykkesfeldt et al 2000)
- RLA improved mitochondrial metabolism in aging rat heart. (Hagen et al 2002)

## Humate - Humic Acid



Humates contain both humic and fulvic acids. The fulvic acid is the chelator that carries the minerals. The humic acid acts as dilator increasing the cell wall permeability. This increased permeability allows easier transfer of minerals from the blood to the bone and cells.

Red blood cells have the capability of carrying higher percentages of oxygen when in the presence of humate. Healing of injuries, as a result of additional oxygen, is much quicker.

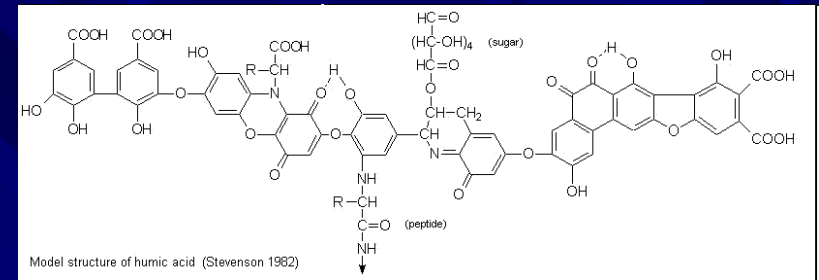
Literature reports additional transport of iodine from foods into the thyroid glands. Just as fulvic acid carries life-sustaining minerals to the body, it also captures and removes toxic metals from the body. Detoxification takes place within first three to four days of usage.

Humic substances, including peat and sodium humates, are known to exhibit anti-inflammatory properties. Inflammatory states of the cervix, especially cervical erosion (generally known as cervicitis) can be treated with humic preparations.

Humate takes an active part in the liver metabolism. The use of humate plays a role in the liver function and protects it somewhat from disease and/or disturbances

## Humate - Humic Acid (cont)

Humates within the body work with DNA and cellular division.



It has been noted that the **humate tends to prevent cellular mutation during reproduction**. Several technical papers were noted during literature research for this paper regarding cancer research with humates. Natural humic acid administered prophylactically to rats can decrease significantly the amount of gastric mucus damage induced with ethanol. Humic acid also significantly accelerated the healing process of experimentally induced ulcers (52).

Humates exhibit anti-microbial and anti-viral properties, thus bolstering the immune system.

Dr. Daryl See, MD, formerly an Immunologist of UCI Medical School, suggests that the mechanism is related to the humates ability to complex (assemble) sugars within the body.

**The abundance of these complexed sugars allows the body to manufacture glyco proteins (glyco nutrients) that attach to the killer and T cell acting as a modulator or communication link between the cells.**



## 8 Essential Sugars - Glyconutrients

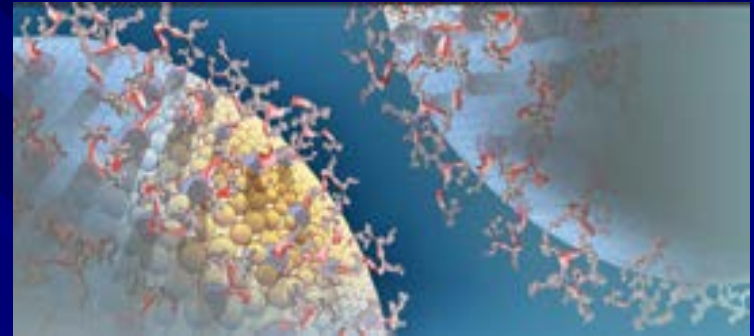
Glyconutrients are known as the 8 essential sugars needed for optimal health and functioning in humans.

Nutritional scientists and glycobiologists have identified over 200 glyconutrients found in nature but only 8 are essential for cell-to-cell communication in people.

All of the 8 essential sugars (saccharides) aid in intercellular communication, but each glyconutrient also has special properties as well on a cellular level.

*Here is a list of the 8 essential sugars:*

1. Glucose
2. Mannose
3. Galactose
4. Fucose (*not to be confused with fructose*)
5. N-AcetylGalactosamine
6. N-AcetylGlucosamine
7. N-AcetylNeuraminic Acid
8. Xylose



Glyconutrients are plant carbohydrates (monosaccharides). There are over 200 carbohydrates or sugars but only 8 are essential to bodily function. They help your digestive system know which food components to absorb into the blood stream and which to ignore... which cells to attack and destroy, and which to protect and nurture.

# Glyconutrient & Glyco Science Validation

Royal Society of Medicine



Society for  
Glycobiology

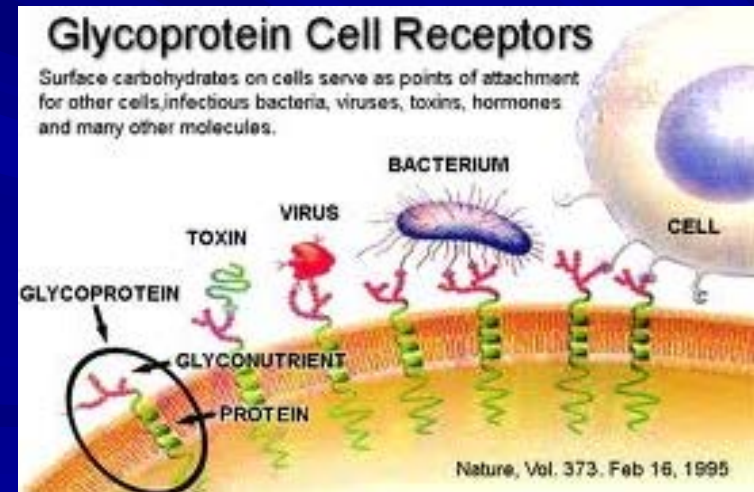
Certain carbohydrates (glyconutrients) are vital for the correct structure, function relationship of the following:

- Cells
- Membranes
- Enzymes
- Hormones
- Signaling
- Messenger molecules
- Tumor spread
- And all biological systems
- Every cell in your entire body

Your body will repair itself, regenerate itself, restore itself, and defend itself as long as you provide your body with the right tools it requires to function correctly.

**Glycoforms**, with their hair like cell surface structures, interact and communicate with other cell surfaces.

Science is validating that virtually every disease has altered and missing structures of glycoforms on the cell of the person affected with the specific disease... where a healthy person has the proper structure and assembly of glycoforms coating their cells.



**MSM, methylsulfonylmethane (METH-ə-l-sul-FON-il-METH-ane)** provides sulfur, a vital building block of joints, cartilage, skin, hair and nails, and methyl groups, which support many vital biochemical processes in the body, including energy production.

MSM is a naturally-occurring nutrient found in small amounts of many foods. As a dietary supplement, MSM is synthesized. When made correctly, it is identical to that found in nature. MSM can be taken alone or in combination with other joint health supplements, such as glucosamine and chondroitin.

**GMS Ribose** - a patented, proprietary blend of glycine complexed with methyl sulfone and Ribose providing methyl sulfur metabolites with Riboperine. Methyl sulfone is an important nutrient (the prime source of bio-available sulfur) used by the body for healthy and proper enzyme activity and natural hormone balance. Methyl-sulfone is a natural form of organic sulfur found in all living organisms, including humans' body fluids and tissues. Sulfur along with Vitamin C is necessary for making collagen, the primary constituent of cartilage and connective tissue.

# WHAT'S HYDROGEN GOT TO DO WITH IT?

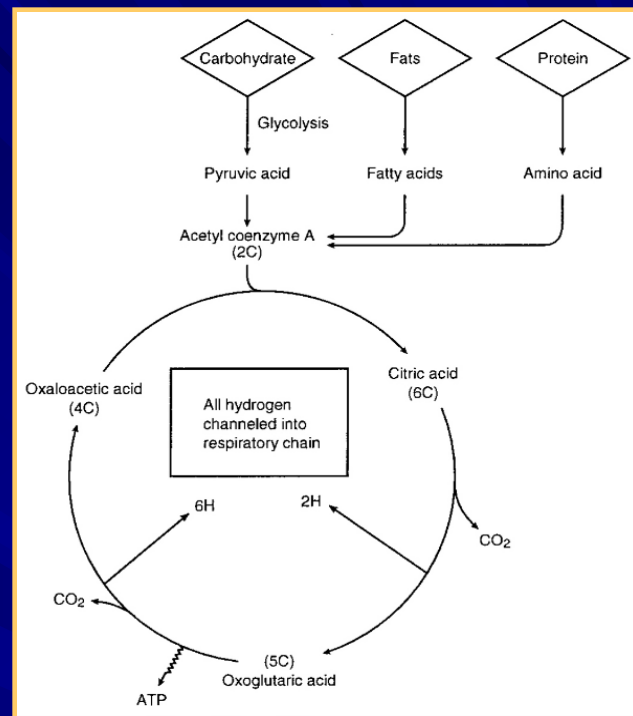
Albert Szent-Gyorgyi, the Hungarian Nobel Prize winning biochemist who discovered Vitamin C, said that hydrogen rather than oxygen, is the fuel of life.

Hydrogen is the body's most needed nutrient.

Everyone is deficient in H-. A machine called the BTA or Biological Terrain Analyzer developed by a Dr. Morrell which tests blood, saliva and urine for H+, H- and minerals found 100% of people low in H-, especially as they got older. They were all over oxidized. The absence of electrons causes numerous diseases.

Electrons don't move in the body unless they are associated with hydrogen. A body in good health has abundant H- ionised molecules.

When you hydrate the cells they plump and become healthy and the body goes into an anabolic state - when the cells become dehydrated, the body goes into a catabolic state and eats its own muscles.



J Altern Complement Med. 2007 Nov;13(9):955-67.

## **Can electrons act as antioxidants? A review and commentary.**

Oschman JL. PMID: 18047442 [PubMed - indexed for MEDLINE]



**It is well established, though not widely known, that the surface of the earth has a limitless and continuously renewed supply of free or mobile electrons as a consequence of a global atmospheric electron circuit.**

**Wearing shoes with insulating soles and/or sleeping in beds that are isolated from the electrical ground plane of the earth have disconnected most people from the earth's electrical rhythms and free electrons.**

**Studies have demonstrated that connecting the human body to the earth during sleep (earthing) normalizes the daily cortisol rhythm and improves sleep. It is also suggested that free electrons from the earth neutralize the positively charged free radicals that are the hallmark of chronic inflammation. The research summarized here and in subsequent reports provides a basis for a number of earthing technologies that restore and maintain natural electrical contact between the human body and the earth throughout the day and night in situations where going barefoot on the earth is impractical.**

**It is proposed that free or mobile electrons from the earth can resolve chronic inflammation and pain by serving as natural antioxidants.**

*Biochim Biophys Acta. 2005 Sep 25;1756(1):1-24.*

## **The role of pH dynamics and the Na<sup>+</sup>/H<sup>+</sup> antiporter in the etiopathogenesis and treatment of cancer.**

### **Two faces of the same coin--one single nature.**

Harguindey S, Orive G, Luis Pedraz J, Paradiso A, Reshkin SJ.  
Centro Médico La Salud, Independencia, 13-01004 Vitoria, Spain.



Conventionally, cancer represents a daunting and, frankly, confusing multiplicity of diseases (at least 100) that require an equally large variety of therapeutic strategies and substances designed to treat the particular tumor. However, when analyzed phenotypically, cancer is a relatively uniform disease of very conserved hallmark behaviors across the entire spectrum of tissue and genetic differences.

Cancers share common biochemical and physiological characteristics independent of the varied genetic backgrounds, and that there may be a common mechanism underlying both the neoplastic transformation/progression side and the antineoplastic/therapy side of oncology.

**Hydrogen ion-dependent oncogenesis and parallel new avenues to cancer prevention and treatment using a H<sup>+</sup>-mediated unifying approach: pH-related and pH-unrelated mechanisms.**

**Cancer cells have an acid–base disturbance that is completely different than observed in normal tissues and that increases in correspondence with increasing neoplastic state: an interstitial acid microenvironment linked to an intracellular alkalosis.**

## Hydrogen sulfide and nitric oxide are mutually dependent in the regulation of angiogenesis and endothelium-dependent vasorelaxation

Ciro Coletta, Andreas Papapetropoulos, Katalin Erdelyi, Gabor Olah, Katalin Módis, Panagiotis Panopoulos, Antonia Asimakopoulou, Domokos Gerö, Iraidia Sharina, Emil Martin, and Csaba Szaboa



**Hydrogen sulfide (H<sub>2</sub>S) is a unique gasotransmitter, with regulatory roles in the cardiovascular, nervous, and immune systems.** Some of the vascular actions of H<sub>2</sub>S (stimulation of angiogenesis, relaxation of vascular smooth muscle) resemble those of nitric oxide (NO). Although it was generally assumed that H<sub>2</sub>S and NO exert their effects via separate pathways, the results of the current study show that H<sub>2</sub>S and NO are mutually required to elicit angiogenesis and vasodilatation.

The actions of H<sub>2</sub>S and NO converge at cGMP; though H<sub>2</sub>S does not directly activate soluble guanylyl cyclase, it maintains a tonic inhibitory effect on PDE5, thereby delaying the degradation of cGMP. H<sub>2</sub>S also activates PI3K/Akt, and increases eNOS phosphorylation at its activating site S1177. **The cooperative action of the two gasotransmitters on increasing and maintaining intracellular cGMP is essential for PKG activation and angiogenesis and vasorelaxation.** H<sub>2</sub>S-induced wound healing and microvessel growth in matrigel plugs is suppressed by pharmacological inhibition or genetic ablation of eNOS. **Thus, NO and H<sub>2</sub>S are mutually required for the physiological control of vascular function.**

## The CD47-signal regulatory protein alpha (SIRPα) interaction is a therapeutic target for human solid tumors

doi: 10.1073/pnas.1121623109

CD47, a “don't eat me” signal for phagocytic cells, is expressed on the surface of all human solid tumor cells. Analysis of patient tumor and matched adjacent normal (nontumor) tissue revealed that CD47 is overexpressed on cancer cells.



## Cancer Drug That Shrinks All Tumors Set To Begin Human Clinical Trials

The Huffington Post | By Sara Gates

Posted: 03/28/2013

A study published March 2012 discusses researchers' find that the one-for-all antibody drug successfully blocks a specific protein, CD47, from tricking the body's immune system into not destroying harmful cells. Though this protein is present on the surface of healthy blood cells, the team from Stanford University's School of Medicine determined that CD47 levels were significantly higher in all cancer cells.

*"By either killing or shrinking each tumor, the innovative antibody drug prevented the cancer from spreading to other parts of the body."*

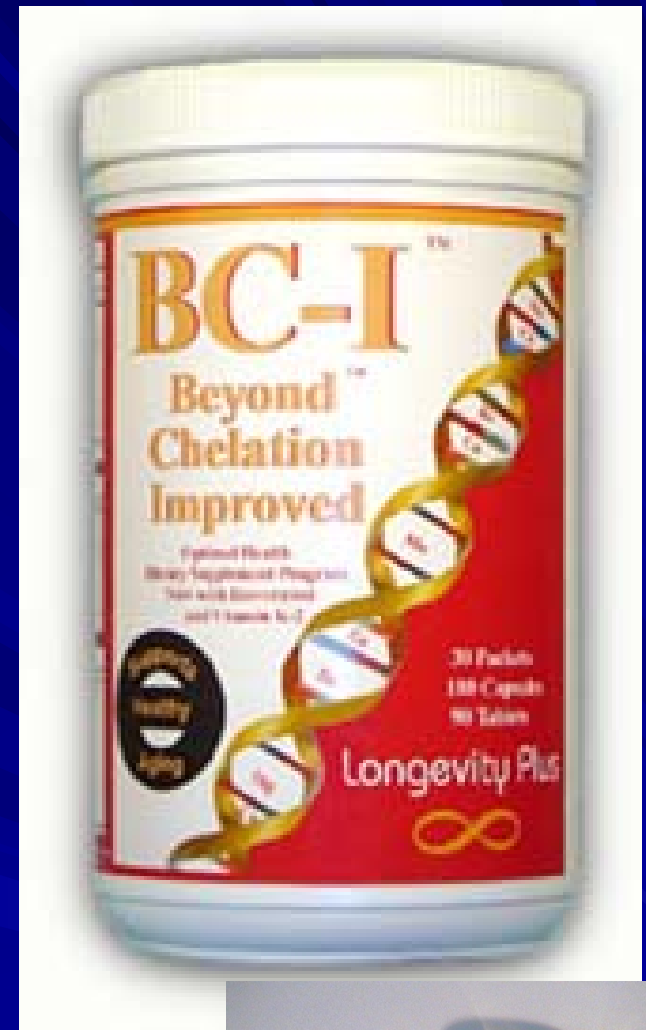
**Wobenzyme** 10 TID – AC does this every day!  
More Safely, more effectively, and more affordably!



## Beyond Chelation Improved (BC-I)

Each canister of Beyond Chelation Improved™ contains 30 packets. Each packet consists of:

- 3 *Beyond Any Multiple*™ caplets with **Vitamin K2**, Resveratrol, Tocotrienols, and Utah Sea Minerals
- 3 *Essential Daily Defense*™ capsules (which deliver a combined total of 400 mgs of EDTA)
- 1 Omega 3 marine lipid concentrate
- 1 Evening Primrose Oil capsule
- 1 Phosphatidyl Ginkgo Biloba capsule.



# **Ninety Percent Reduction in Cancer Mortality after Chelation Therapy With Ca-EDTA**

Walter Blumer, M.D. and Elmer Cranton, M.D.

## **ABSTRACT:**

**Mortality from cancer was reduced 90% during an 18-year follow-up of 59 patients treated with Calcium-EDTA. Only one of 59 treated patients (1.7%) died of cancer while 30 of 172 non-treated control subjects (17.6%) died of cancer (P=0.002).**

Death from arteriosclerosis was also reduced. Treated patients had no evidence of cancer at the time of entry into this study. Observations relate only to long-term prevention of death from malignant disease, if chelation therapy is begun before clinical evidence of cancer occurs. Control and treated patients lived in the same neighborhood, adjacent to a heavily traveled highway in a small Swiss city. Both groups were exposed to the same amount of lead from automobile exhaust, industrial pollution and other carcinogens.

Exposure to carcinogens was no greater for the studied population than exists in most other metropolitan areas throughout the world. Statistical analysis showed EDTA chelation therapy to be the only significant difference between controls and treated patients to explain the marked reduction in cancer mortality.

## Effect of Disodium EDTA Chelation Regimen on Cardiovascular Events in Patients With

## Previous Myocardial Infarction - The TACT Randomized Trial

Gervasio A. Lamas, MD; Christine Goertz, DC, PhD; Robin Boineau, MD, MA, et al. for the TACT Investigators  
JAMA. 2013;309(12):1241-1250. doi:10.1001/jama.2013.2107.

**Importance** Chelation therapy with disodium EDTA has been used for more than 50 years to treat atherosclerosis without proof of efficacy. Objective of study is to determine if an EDTA-based chelation regimen reduces cardiovascular events.

**Conclusions and Relevance** The 5-year estimate of reaching the primary end point shows that those given the EDTA chelation had a 18% lower risk (Hazard Ratio 0.82) which met the stringent level of statistical significance ( $p=0.035$ ). The expectant lukewarm conclusion by authors was that the therapy “*modestly reduced the risk of adverse cardiovascular outcomes, many of which were revascularization procedures. These results provide evidence to guide further research but are not sufficient to support the routine use of chelation therapy for treatment of patients who have had an MI.*”

It should be mentioned that in the sub-group analysis, they saw much greater benefits in patients with diabetes (risk reduction of 39%,  $p=0.002$ ) or with previous anterior MI (risk reduction of 37%,  $p=0.003$ ) when given EDTA.

# Chelators as Life-Extending Substances

**A number of studies confirm that chelating agents — particularly, EDTA — may have life-extending properties.**

**Johan Bjorksten and other scientists demonstrated the life-extending effects of EDTA on lowly rotifers (small multi-celled animals found in freshwater lakes and ponds).**

**In the Soviet Union in the 1970s, Dr. T.L. Dubina performed a series of studies with EDTA on the life span of rats. In most of the studies, the mean life span of female rats treated with EDTA was increased by nearly 50%, and in one study the maximum lifespan increased 18-25% over the control animals.**

**Other natural chelators include garlic, (10) Chlorella, (11) lactic acid, citric acid, and malic acid. Bjorksten demonstrated that lithium was also an effective aluminum chelator and crosslinkage inhibitor, stating that lithium continues to be the most effective electrolyte for aluminum detachment.**

**Bjorksten also believed that one of the benefits of exercise is that toxic heavy metals (especially aluminum) are chelated by the lactic acid that is generated.**

**Based on these and other studies, Bjorksten's associate, Prof. Donald Carpenter, calculated that the widespread use of chelation therapy would result in an average lifespan increase of over fifteen years.**

Arch Virol. 1982;73(2):171-83.

## **Disintegration of retroviruses by chelating agents**

Wunderlich V, Sydow G.



### **Abstract**

**Exposure in vitro of various mammalian retroviruses to the chelating agents EDTA or EGTA in millimolar concentrations resulted in partial disintegration of viral membranes as measured by accessibility or even release of reverse transcriptase, an internal viral protein, without any other treatment usually required.**

**Among the viruses responding to chelators were mammalian type C viruses, primate type D viruses and bovine leukemia virus. The effect was dose-dependent. The avian type C virus AMV, however, was found to be not susceptible to the agents. Rauscher mouse leukemia virus treated in vitro with EDTA or EGTA showed reduced infectivity in mice.**

**The results are considered as evidence for some association of divalent cations with membranes of mammalian retroviruses. The disintegrating activity of EGTA suggests that  $\text{Ca}^{2+}$  is an integral constituent of viruses but  $\text{Mg}^{2+}$  may also be involved. These cations seem to be responsible for maintaining integrity of retroviral membranes which, after chelation of ions, are either disrupted or become permeable for the exogenous template of reverse transcriptase.**

**In addition, the disintegrating activity of trifluoperazine may indicate that a calmodulin-like protein occurs in retroviral membranes.**

PMID: 6816193 [PubMed - indexed for MEDLINE]

<http://www.ncbi.nlm.nih.gov/pubmed/6816193>

# Essential Daily Defense™

No other garlic-based product comes close to the powerful, synergistic combination of natural chelating and detoxification activity of this unique formula.



Formulated to help the body excrete undesirable toxins, heavy metals and lipids, while helping control excessive blood clotting tendencies. Blood clots are believed to cause 85% of the deaths from heart attacks and/or strokes!

*Essential Daily Defense™* is such a powerful chelator that many health professionals now use this formula (in therapeutic levels of 6-18 caps a day) in place of intravenous therapies for most heavy metal toxicities, including lead, mercury, cadmium, etc.

*Let's take a closer look at some of the natural ingredients in EDD...*

## Supplement Facts

Serving Size: 3 capsules

Ingredient	Amount Per Serving	% Daily Value
Niacin	20 mg	100
Vitamin B-6 (pyridoxine HCL)	20 mg	1000
Garlic Powder (organic high-Allicin)	800 mg	*
Calcium Disodium EDTA	400 mg	*
MSM (Methylsulfonylmethane)	100 mg	*
Malic Acid	50 mg	*
Betaine HCL	50 mg	*
Carrageenan (Red Algae)	600 mg	*
Papain	100 mg	*
Horsetail Powder	40 mg	*
Red Yeast	100 mg	*
dl-Methionine	50 mg	*
Beta Sitosterol	100 mg	*
Hawthorne Extract (Crataegus oxycantha) 1.8% Vitexin	10 mg	*

\*Daily Value not established.

Other Ingredients: Gelatin, Vegetable Grade Stearic Acid, Magnesium Stearate, and Maltodextrine.

Contains: Soy

Store in a cool, dry place away from sunlight.  
KEEP OUT OF THE REACH OF CHILDREN.



## Carrageenan

A seaweed extract common in the Atlantic Ocean. A promising microbicide, The laboratory of Cellular Oncology at the National Cancer Institute reported that carrageenan is an extremely potent infection inhibitor for a broad range of sexually transmitted HPVs.

## Garlic

An effective blood purifier and liver/gastrointestinal detoxifier, garlic has native organosulfurs that boost levels of enzymes in the body that detoxify potential carcinogens.



## Red Yeast Rice

Used for more than 1,000 years in China as both a food and a medicinal product. Today it is known as a nutrient that has been shown in clinical trials to lower LDL ('bad') cholesterol and triglyceride levels, and raise HDL ('good') cholesterol levels.



## Additional Natural Supportive Nutrients

**MSM, methylsulfonylmethane (METH-əl-sul-FON-il-METH-ane)** provides sulfur, a vital building block of joints, cartilage, skin, hair and nails, and methyl groups, which support many vital biochemical processes in the body, including energy production.

MSM is a naturally-occurring nutrient found in small amounts of many foods. As a dietary supplement, MSM is synthesized. When made correctly, it is identical to that found in nature. MSM can be taken alone or in combination with other joint health supplements, such as glucosamine and chondroitin.

**MALIC ACID** is both derived from food sources and synthesized in the body through the citric acid (Krebs) cycle. Its importance to the production of energy in the body during both aerobic and anaerobic conditions is well established. Studies have concluded that the use of malic acid may be beneficial for patients suffering from fibromyalgia, as well as other conditions.

**BETAINE HCL (hydrochloric acid)** is used to increase the level of hydrochloric acid in the stomach. The stomach needs a ready supply of hydrochloric acid (HCl) to convert the inactive precursor pepsinogen into the active digestive enzyme pepsin, which is needed for the digestion of protein. HCl also protects the body from orally ingested pathogens, prevents bacterial and fungal overgrowth in the small intestine, and encourages the flow of both bile and pancreatic enzymes. It also helps the body to absorb folic acid, vitamin C, beta-carotene, iron, calcium, magnesium, and zinc.





# The Healing Light

Low Level LASER (Soft LASER) for Your Radiant Health

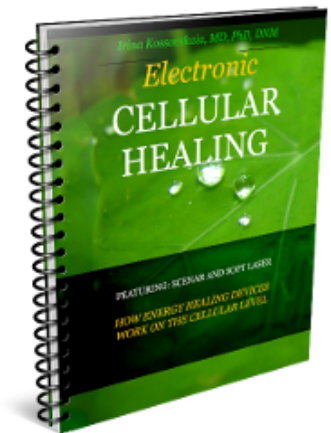
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Get **FREE INSTANT ACCESS** to the **ARTICLE** revealing the **Secrets of Cellular Healing with Energy Healing Devices**

Want to Know Why We Call Them **'UNIVERSAL HEALERS'**?, Enter your **Name** and **Email** below and **Click** the Big Orange Button

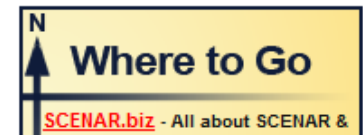
**FREE INSTANT ACCESS!**



[Privacy Policy](#)

Wednesday, May 15, 2013

Ever since **LIGHT** appeared as the first creative act of God, as per Genesis 1, we associate it with goodness. Because of light, we can see; because of light, we can breathe oxygen; because of light, we have food. It is light that powers up our bodies, and, as science is discovering now, it is light that our cells use for communication the most. In essence, we are **LIGHT BEINGS**..



**No drugs, no side effects, no complications!**  
**Just The Healing Light of Soft Laser!**

<http://softlaser.net/>

# Cells emit and absorb photons...

Photons are energy particles or waves of light in the electromagnetic spectrum. A bio-photon is a photon of light emitted from a biological system, and detected by biological probes as part of the general electromagnetic radiation of living biological cells.

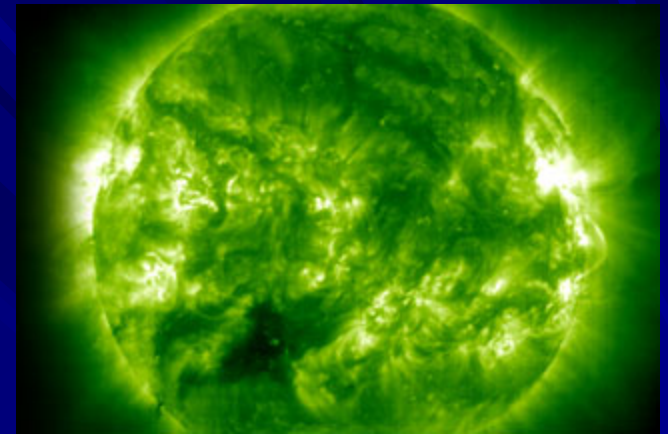


Cells absorb photons and transform their energy into ATP (Adenosine Triphosphate), which is a form of energy that cells utilize. The resulting ATP is then used to power metabolic processes and to synthesize DNA and RNA (proteins & enzymes.) ATP is needed to repair and regenerate cellular components, foster an abundance of cell reproduction, and increase circulation thus restoring balance to the body.

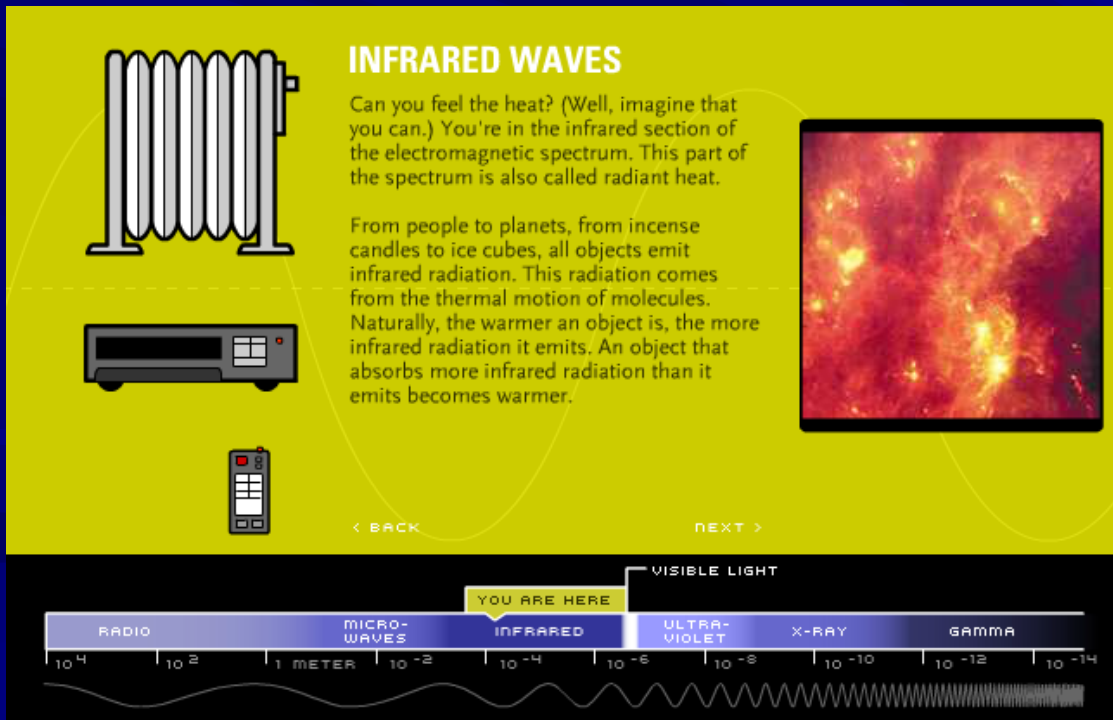
**Quantum biology-based energy medicine**, including LED light therapy, low level laser therapy (LLLT), ultrasound resonance therapy, and pulsed electromagnetic frequency (PEMF) therapy, are all safe, effective, non-invasive modalities being used to restore cellular energy and functioning.

# Electromagnetic Spectrum

Light, heat, radio signals, and medical X-rays are all forms of electromagnetic radiation—waves moving through space that are delivered by mass-less particles called **photons**.



The only thing that differentiates one type of electromagnetic radiation from any other is the **energy carried by its photons**.



Electromagnetic energy is created at the atomic level, as electrons release energy while switching from higher- to lower-energy orbits, or while freeing themselves from atomic bonds. This movement of electrons results from the need to maintain energy balance within the atom under the input of some form of external energy.

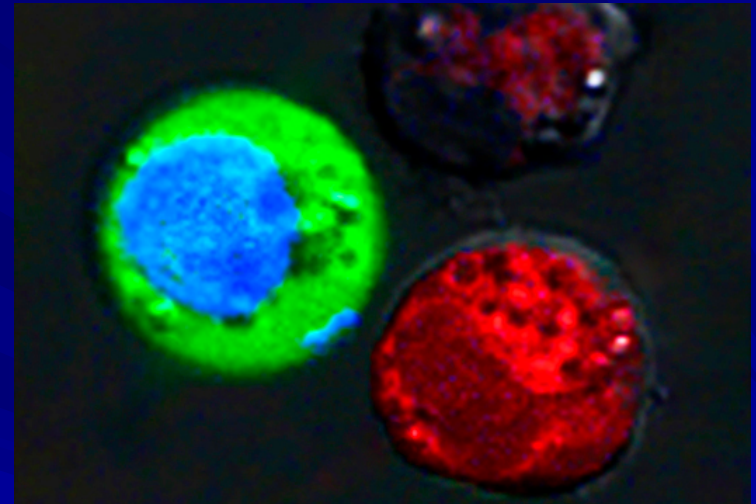
# Physicists Kill Cancer Cells with NANOBUBBLES

Jade Boyd – February 2010



**Activated by a pulse of laser light, nanobubbles can kill diseased cells while leaving healthy cells untouched.**

Nanobubbles are created when gold nanoparticles are struck by short laser pulses. The short-lived bubbles are very bright and can be made smaller or larger by varying the power of the laser. Because they are visible under a microscope, nanobubbles can be used to either diagnose sick cells or to track the explosions (apoptosis) that are destroying them.



**After the laser pulse, red-stained sick cells show evidence of massive damage from exploding nanobubbles, while blue-stained healthy cells remained intact, but with green fluorescent dye pulled in from the outside. (Credit: Plasmonic Nanobubble Lab/Rice University)**

# B-Cure Laser *Soft laser for Strong Relief*

# NuBioMed

*NOW available for Home Use...*



By utilizing proprietary technology the B-Cure Laser delivers an exceptional combination:

- The power and full coherence of a clinic's soft-laser machine utilizing the selection of the best penetrating 808nm wavelength emitting 5 Joules per minute over a large area of 4.5 cm<sup>2</sup>.
- With a portable, rechargeable, safe and easy-to-use machine.

Approved Uses for European CE markets:

- Knee Pain
- Lower Back Pain
- Neck & Upper Back Pain
- Achilles Tendonitis
- Muscle Pain
- Carpal Tunnel Syndrome
- Tennis Elbow
- Sports Injuries
- Arthritis & Joint Disorders
- Myofascial Pain Syndrome
- Acupuncture

Dental Benefits:

- Reduce intensity & period of pain
- Decreases swelling & bruising
- Accelerates the healing process

# Cancer, Dental Heavy Metals & Lasers

## Dr. Simona Pop

### Criteria of research

Thirty people took part in the study:

- Ovarian Carcinoma, 19 women (24 -60 yrs)  
( CA-125 > 35 U/ml, Stage II, III, )
- Prostate cancer, 11 men, (27-55 yrs)  
( PSA 10 – 28 ng/ml)

- All the patients have been given vaccines in the past, had amalgam fillings, had prosthodontic treatment , orthodontic appliances or implants.
- At the time of the study, all the patients had complete dental metal replacement.
- All the patients had the Melisa test and the most positive responses were to: [mercury](#), [gold](#), [platinum](#), [palladium](#), [silver](#), [copper](#), [titanium](#), [tin](#), [nickel](#), [chromium](#), [cobalt](#), [cadmium](#), [manganese](#), and [thimerosal](#).

- All patients had undergone minimum one conventional treatment during a period of 10 to 25 years.
- The conventional treatment was unsatisfactory, some patients had had metastasis 0.5-3 years prior to the study.

- During the heavy metal detox treatments, from the total of 30 patients
- Half were in the control group without laser treatments,
- The other half were exposed to laser therapy (SLBP) one or more sessions.

## Treatment

- All the patients in both groups were treated with detox treatment:
  - DMSA,
  - Vitamin C,
  - Glutathione,
  - Na Selenite
  - Mineral and Vitamin supplements.
- Half of them receive the laser therapy

## Laser Therapy

- The treatment course consisted of 22 exposures distributed over 5 ½ weeks. There were four sessions per week.
- Another 22 sessions over 4 weeks were offered to patients who received the first course but showed minimal improvement after the first course.
- Ten patients completed the second course of 22 laser treatments

## Laser Specifications

- soft laser
- category 1 or lower
- penetrates up to 17 mm
- improves the energy supply of the cell by direct effect on ATP- production
- improves cell regeneration - photonic effects take place in the cellular field

- The preliminary data show that increasing the number of laser sessions from 22 to 44 sessions did improve the efficacy of the treatments and resulted in total recovery in the majority of treated patients.

# Conclusions

- The health in all patients treated by dental metal replacement and detoxification improved .
- Patients who received laser treatments had faster recovery.
- Patients who received the additional 22 laser sessions had complete health recovery in a short time.



# Natural Healing with Intranasal Light Therapy

Intranasal Light Therapy is a way to stimulate self healing and boost immunity by illuminating the blood capillaries through the nasal cavity.

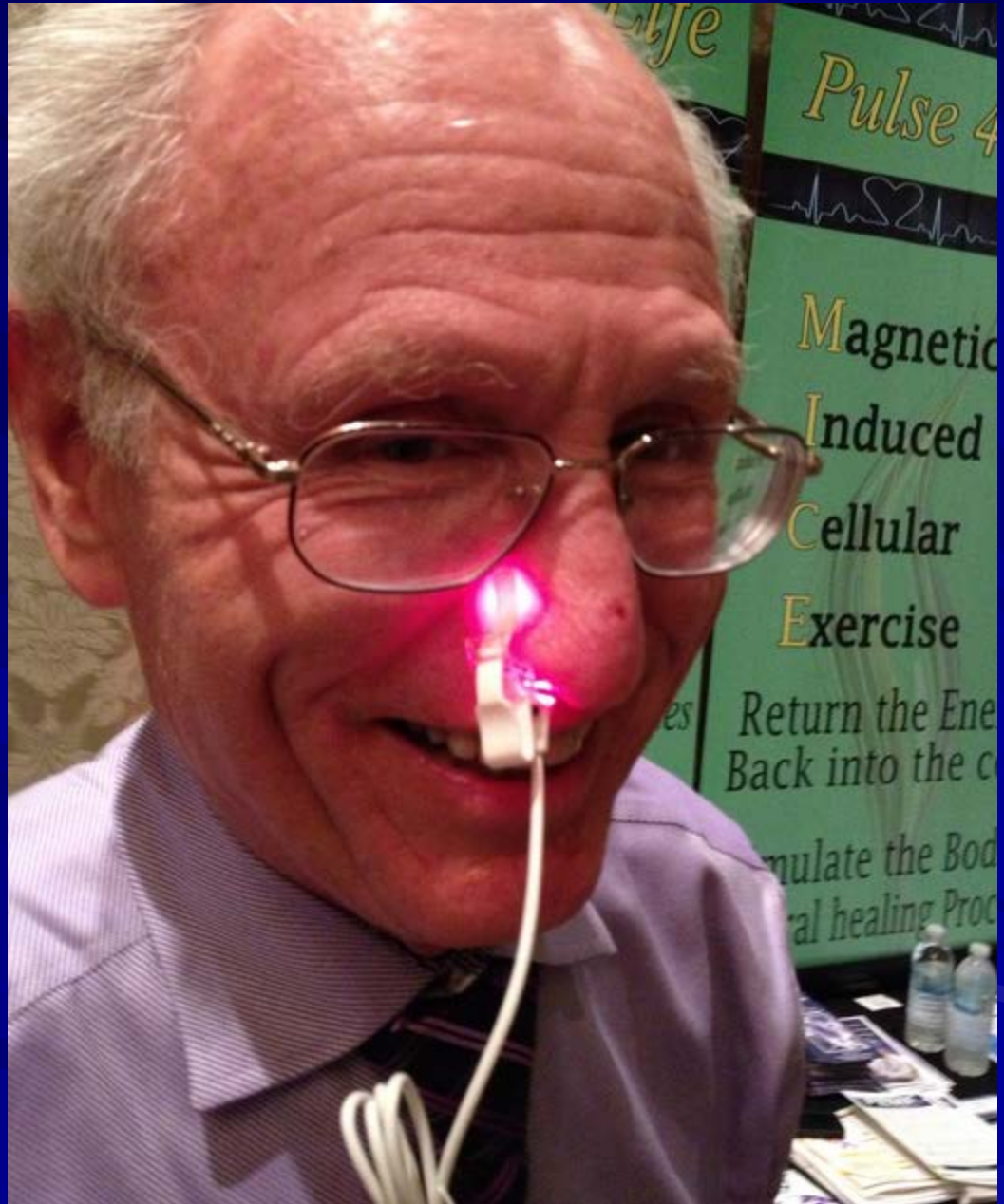


**Intranasal light therapy stimulates restoration of body balance (homeostasis).**

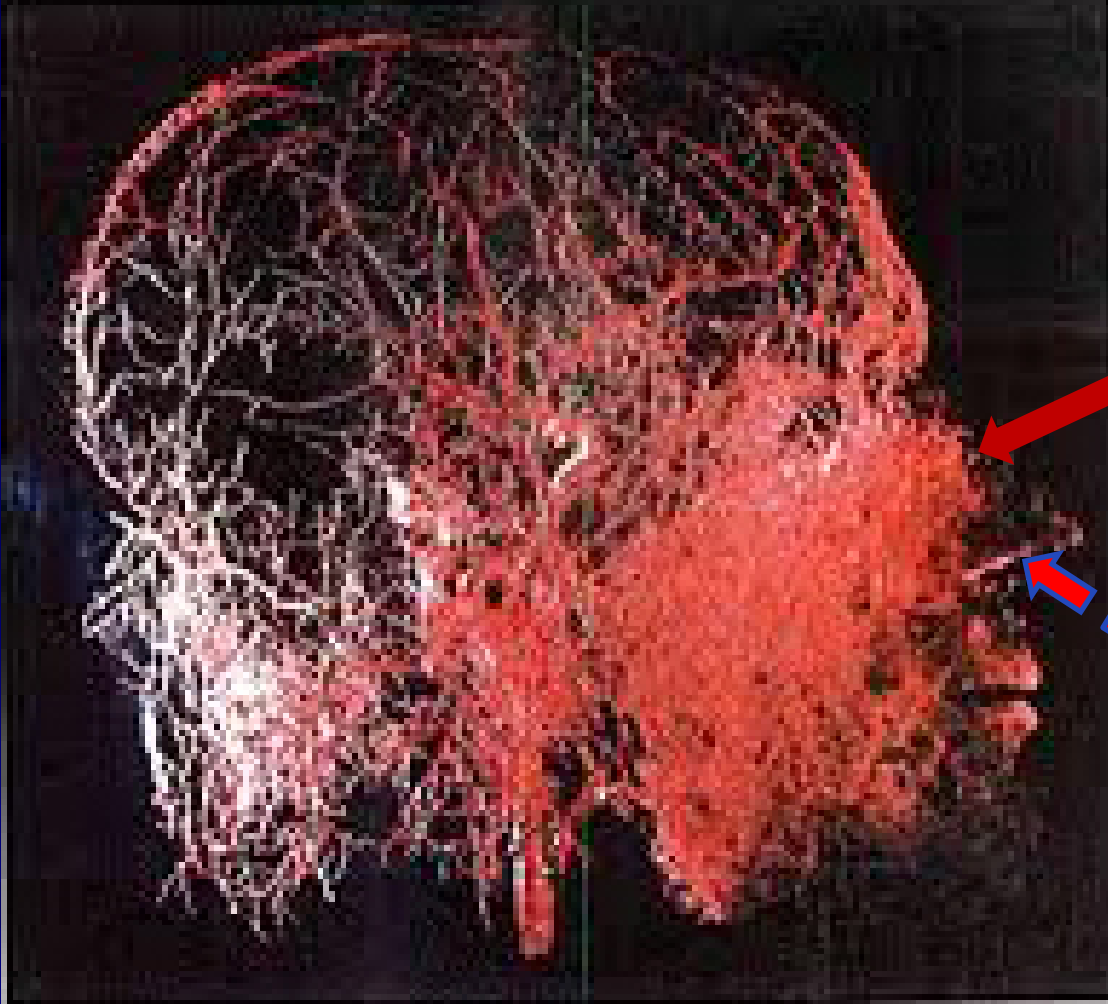
VieLight is a small light diode of certain specifications designed to be inserted into either nostril for 25 minutes per day. Homeostatic stimulation is achieved through the response of the mid-brain area, particularly the hypothalamus being in close proximity to the nasal cavity, and the stimulation of redox signaling molecules and their subsequent distribution through the nasal capillaries and the circulatory system.



The facial area also responds directly to the light, often resulting in the immediate treatment of sinusitis, congestion, headache and, facial and pain in the neck area.



# Blood vessels of the Human Head



The most concentrated area

Light source

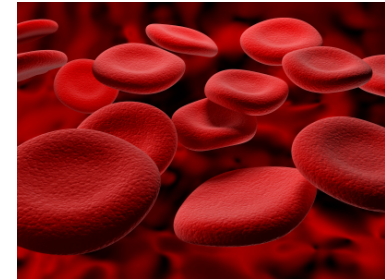
# Intranasal Low Intensity Laser Therapy (ILILT) blood purifying effects



ILILT



blood circulation and effects to whole body's blood



## ILILT's Biostimulatory effects to blood

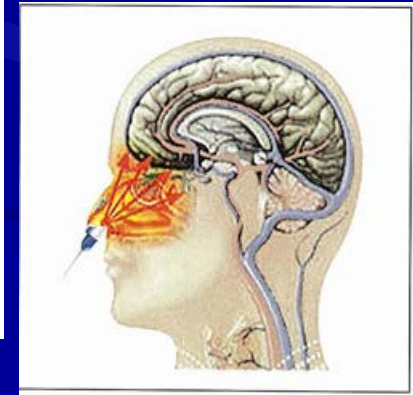
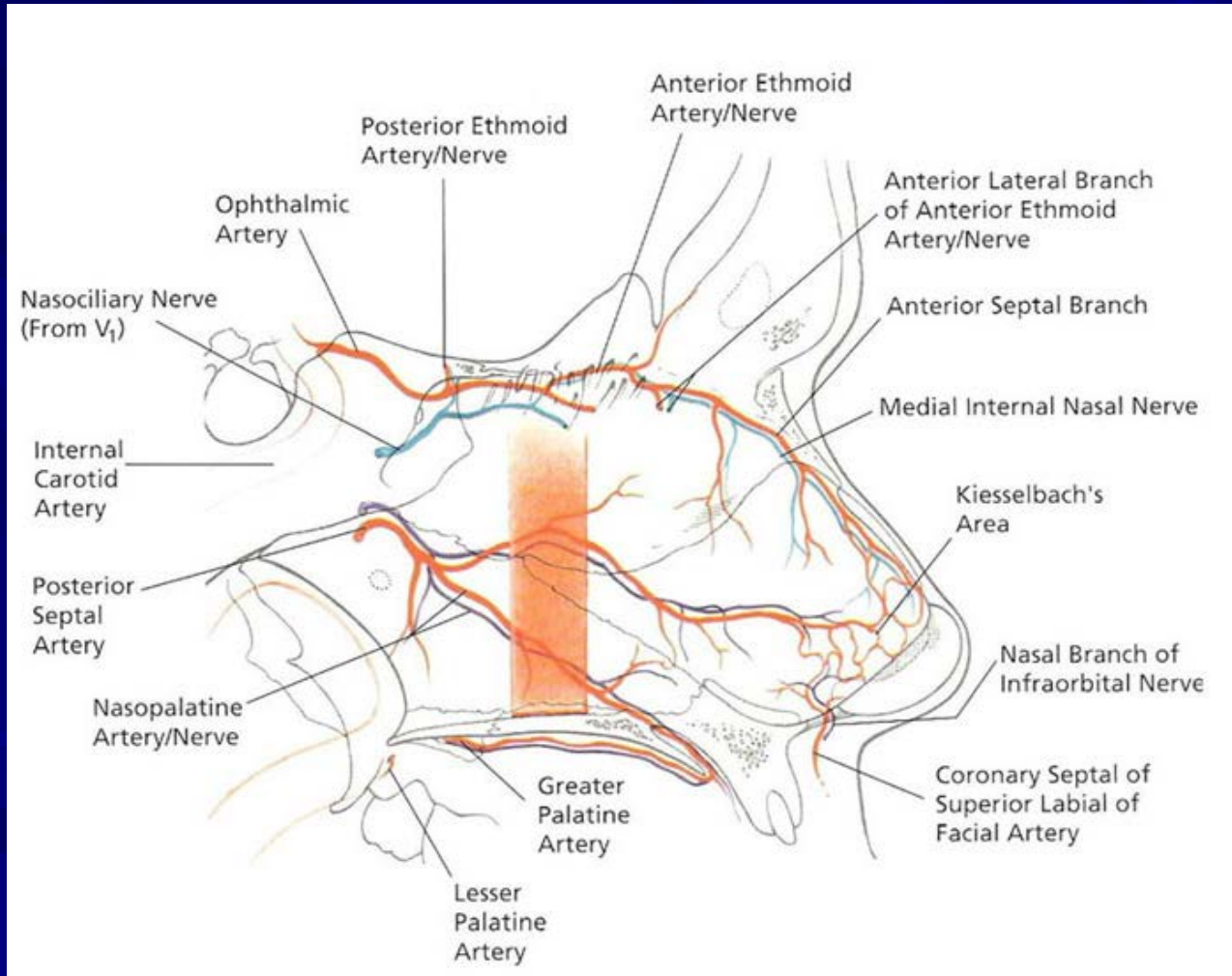
1. Increased ATP production by the mitochondria and increased oxygen consumption on the cellular level, which may result in muscle relaxation
2. Increased serotonin and increased endorphins
3. Increased anti-inflammatory effects through reduced prostaglandin synthesis
4. Improved blood circulation to the skin in cases like neuralgia and diabetes mellitus
5. Decreases permeability of the membrane of the nerve cells for Na/K causing hyperpolarisation
6. Increased lymphatic flow and decreased edema

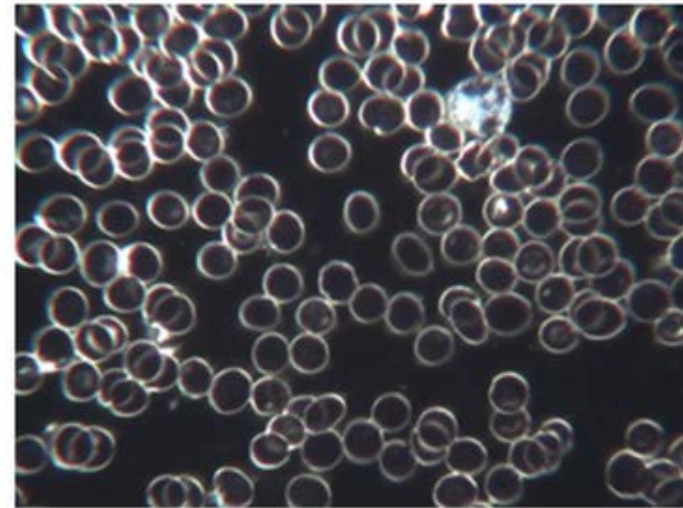
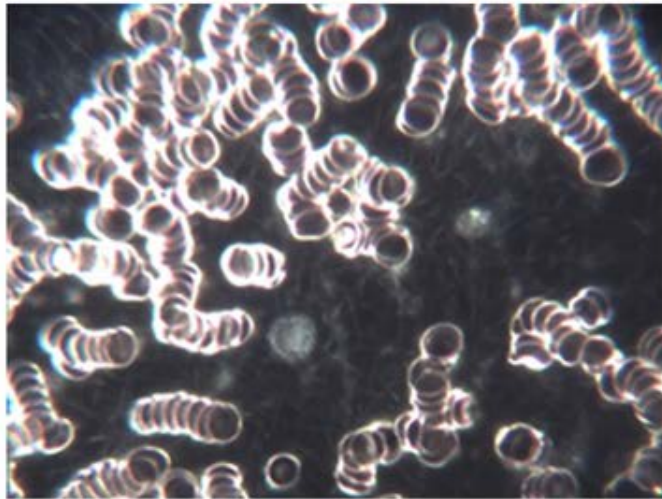
## Adjuvant therapy

## Health care

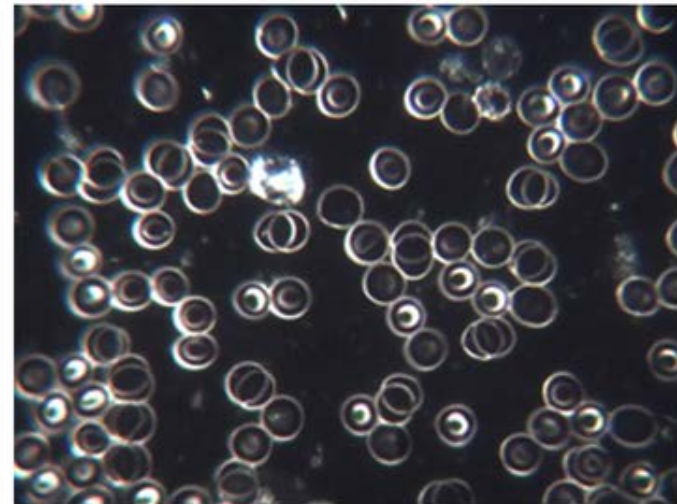
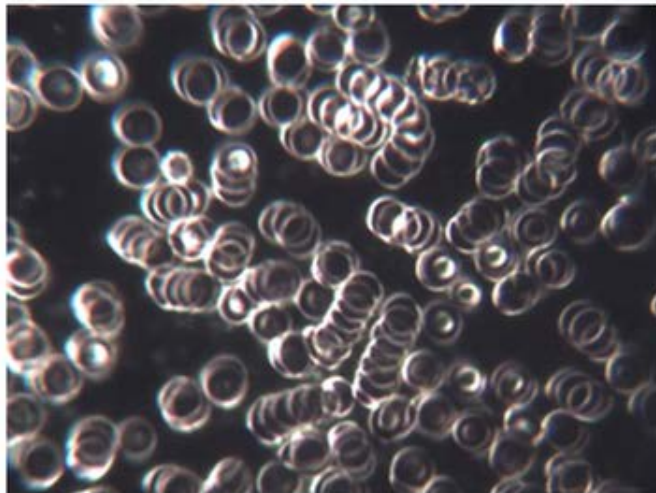
- **Hypertension** <<Learn more
- **Hyperlipoidemia** <<Learn more
- **Hyperviscosity** <<Learn more
- **Stroke** <<Learn more
- **Sugar diabetes** << Learn more
- **Insomnia** << Learn more
- Blood health care
- Improve natural immunity
- Anti-ageing
- protect the ischemic anemia

# ILIT Biomechanism: blood mediation





**Left before and after 25 minute use of the Vielight on the right notice the red blood cells on the left are stacked with poor amount of surface area available for the exchange of oxygen**

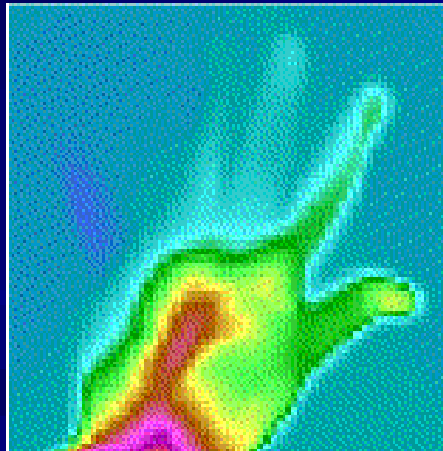


## Healing Distributed through the Circulatory System

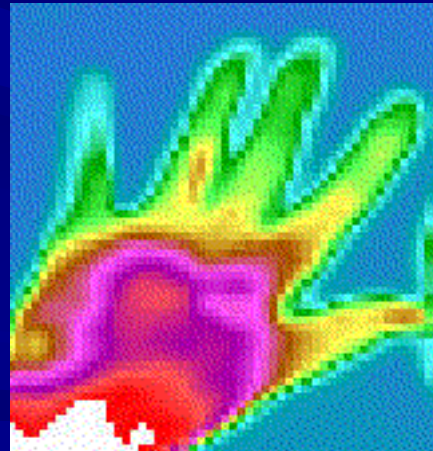
The combined roles of singlet oxygen, ROS, Redox Signalling and the activity of SOD best explains the mechanism behind the healing success of Intranasal Light Therapy. The key to the efficacy of the intranasal pathway is that it is essentially an in vivo method without the invasiveness of the older intravenous method.

The rich vascular bed in the nasal cavity is an excellent starting point to carry and distribute Redox Signalling molecules throughout the body to stimulate the healing process.

### Peripheral blood circulation



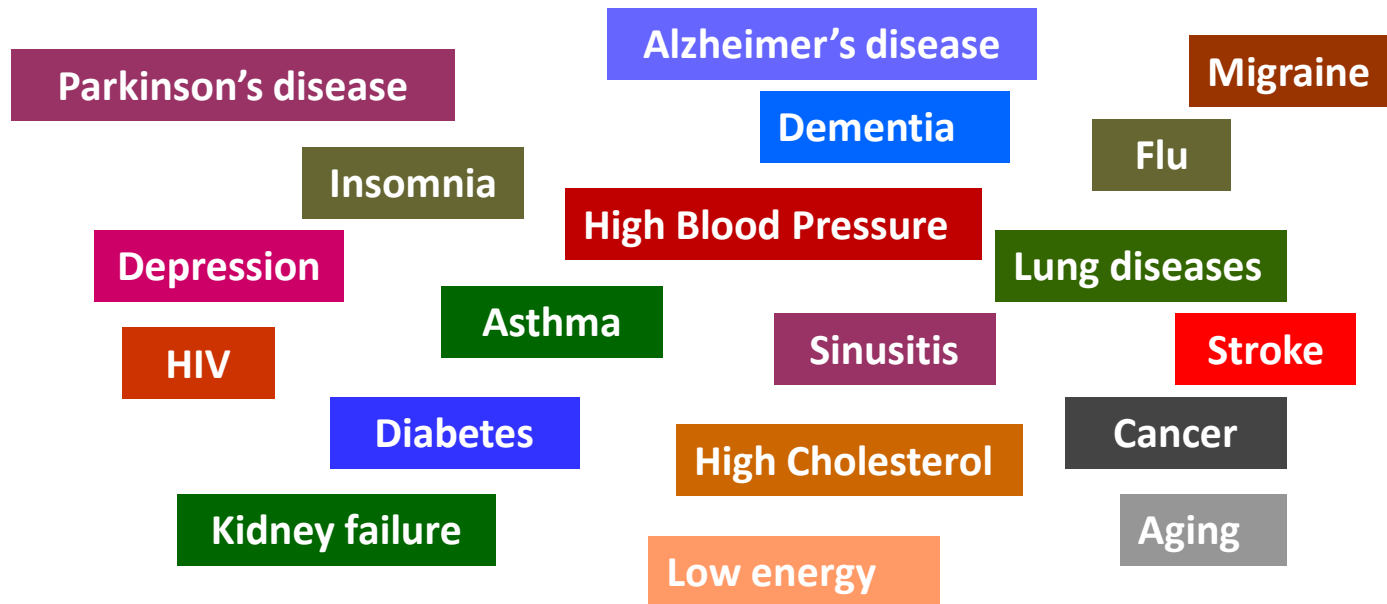
Before



After



# Clinical Evidence for...



**and more....**



# Detoxification is a LIFETIME challenge

**LEAD in bones requires years of continuous oral chelation with EDTA and/or Zeolite.**

**Because bones take an average of 15 years to fully regenerate, IV EDTA chelation therapy over several months only removes lead and other toxic metals from the body's blood and tissues, NOT from bones.**

**Harvard studies prove that bone lead leads to heart disease and cataracts, as Bones are the MAJOR storehouse of lead in the body.**

**For more information see the  
507 References Supporting Oral EDTA**

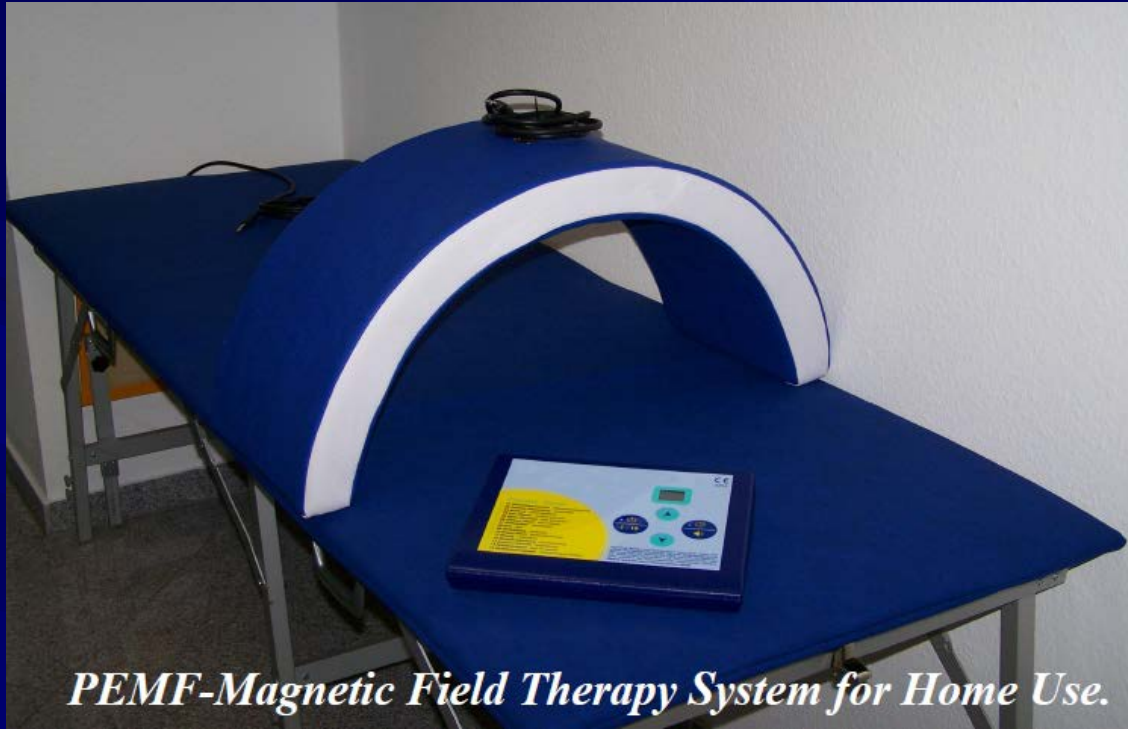
**On the Gordon Research Institute Website at**

**[www.gordonresearch.com](http://www.gordonresearch.com)**

# PEMF – Home System

*Advanced Magnetic Cellular Exercise*

**NuBioMed**



*PEMF-Magnetic Field Therapy System for Home Use.*

System includes a therapy Mat, controller with 15 different programs, and a Half Ring.

Use both attachments together or use them separately.

Recommended for use 30 minutes at a time in session. Use daily as needed.

This type of PEMF Advanced Cellular Exercise is designed to influence the cells of the body horizontally and vertically, all at one time for maximum results.

For more information: [info@nubiomed.us](mailto:info@nubiomed.us)

# MTS-7 Multiple Therapy System

## 6 in 1- Home System

**NuBioMed**

PEMF • LED Red Lights • LED Infrared Lights • E-Stim • Micro Current • Vibration Massage



**Effective in treating the following conditions:**

- Inflammation
- Pain Control
- Increased blood flow
- increased oxygen levels
- Temporary relief of minor muscle and joint pain
- Promotes the relaxation of muscle tissue
- Relief of post-surgical or post traumatic pain

For more information: [info@nubiomed.us](mailto:info@nubiomed.us)



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March 2013

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Join Dr. Gordon on Monday, 3/4/13 at 3 pm AZ time. "Energy Medicine, Lasers and Degenerative Disease." Click photo.

# Health Consultations

Get a personalized health consultation! Dr. Garry Gordon offers his 53+ years of advanced medical experience to you personally via telephone for \$450 per hour.

Appointments may include a review of all prior medical records and/or any new tests that can be ordered in preparation for your personalized consultation. Test panels can be more focused on ANTI-AGING, or cancer, depending on your concerns.

Since Dr. Gordon does not accept insurance, he has made arrangements for cash paying patients to obtain substantial discounts of 70% or more for any blood tests that he orders. In Addition, Dr. Gordon now offers the most advanced and comprehensive 72 gene test panel available anywhere for \$425.

For more information please contact Gordon Research Institute  
Ph 928-472-4263 x134, Fax 928-474-0545,  
or email [info@gordonresearch.com](mailto:info@gordonresearch.com)

***THANK YOU***



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