

EUROPEAN CONGRESS ON ANTI-AGING & AESTHETIK MEDICINE
DUESSELDORF, GERMANY, 11-14 SEPTEMBER 2008

COUNTERACTING AGING WITH BASIC PHYSICS PART TWO

Part two

By Dr. Wolf-Dieter Kessler

This presentation shows that the donation and activation of electrons, as well as synchronizing their activity by specific electromagnetic vibrational fields seem to have a most powerful anti-aging effect.

According to Norman Hollenberg, professor of medicine at Harvard Medical School, epicatechin, an antioxidant in green tea can reduce the risk of four of the major health problems: stroke, heart failure, cancer and diabetes.

In May 2008 - a green tea and Alzheimer's disease study, conducted by a German team, discovered how it makes deadly brain plaque harmless. Researchers of the Max Delbrueck Center for Molecular Medicine (MDC) Berlin-Buch, a national research laboratory of the Helmholtz Association in Germany have made this discovery in the test tube and in cell models.

The substance ECGC (Epigallocatechin-3-gallate) from green tea can redirect the deadly process which leads to the accumulation of protein aggregates in Parkinson's and Alzheimer's disease. EGCG modulates a cascade of protein misfolding in such a way that the formation of deadly plaques is interrupted, and harmless protein structures emerge instead.

A study published in the December 2006 issue of *Brain Research* suggests that it might help⁹ to decrease the oxidative stress that plays an important part in the degeneration of the retina. Age related macular degeneration can be improved by green tea.

Specific electromagnetic frequencies and their fields cause a dramatic pain relief in patients with severe osteoporosis (Kessler et al., 2006)¹² Patients who could not move on their own will become motile again. There is evidence that the bone density is increasing.

There are case studies with specific electromagnetic fields (S. Lieberman et al., 2007) [12](#) on a variety of other health disorders that indicate clear improvements in otherwise helpless patients.

The physical laws for these improvements are based on electrons .

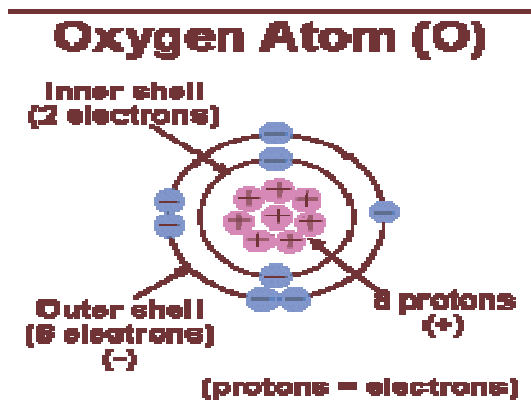
Electronic activity and anti aging could be largely improved by:

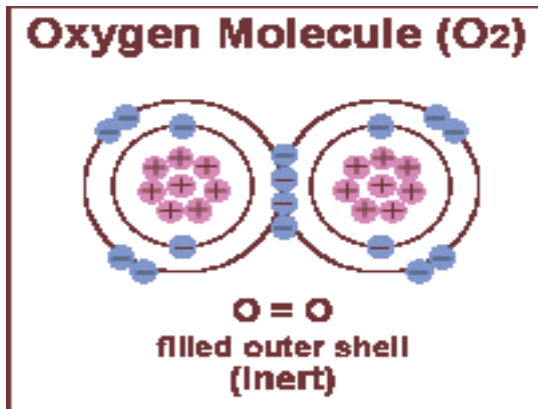
1. “Antioxidants”, such as chemical substances and specific electromagnetic fields, which would donate electrons to so called free radicals. Free radicals would otherwise destroy cell structures by stealing their electrons
2. The physical laws of wave mechanics regarding sound, waves and vibration. [10](#)
3. Epigenetics [11](#)

Today, free-radicals are being implicated in virtually all of the diseases of aging and in the aging process itself. Electrons play a major role in degeneration, aging and anti-aging.

The free radical is an atom, ion or molecule with one or more unpaired electron.

1. Anti aging , antioxidants and free radicals





Because the free radical has one or more unpaired electrons, it has charge and magnetic properties that make it highly reactive. It is very unstable. Many free radicals are so unstable that they can exist for only a fleeting moment, a microsecond or less.

In 1900 Moses Gomberg discovered the first persistent free radical.



When such electrons move about in an atom, they create both electrical and magnetic fields that attract them to nearby molecules. They combine with them readily. In other words, they steal electrons from other molecules. If these molecules belong to cell structures such as membranes etc., the cell function will eventually collapse. Loss of electrons, loss of energy, causes degeneration and aging.

Over decades antioxidants have been the answer of the medical community. Antioxydants such as vitamin C and E would donate electrons and thus stabilize the greedy free radicals. Thereby the stability of the macromolecues of inflamed or aging tissues and their structures remain unharmed.

In written chemical equations, free radicals are frequently denoted by a dot placed immediately to the right of the atomic symbol or molecular formula as follows:

Chlorine gas can be broken down by ultraviolet light to form atomic chlorine radicals.



Free radical theory of aging

In 1954 Denham Harman MD, PhD, FACP became the “father of the free radical theory of aging”.

The concept that free radicals were involved with the deterioration of human biochemistry was the biggest advance since the discovery of germs.



In 1954 Dr. Harman became a research associate at the Donner Laboratory of Medical Physics at UC Berkeley, where he pursued the puzzle of the cause of aging. After four months of frustration he hit upon the idea that free radicals damage macromolecules and that this is the fundamental cause of aging. While many were reluctant to accept this theory, in 1956 Harman published an article in the Journal of Gerontology that is now widely cited.³

In 1995 Denham Harman was nominated for the Nobel Prize in medicine. Of all the theories of aging, Harman's has the most consistent experimental support.

Harman drew inspiration from two sources: 1) the rate of living theory, which held that lifespan was an inverse function of metabolic rate and oxygen consumption. 2) Rebecca Gershman's observation that hyperbaric oxygen toxicity and radiation toxicity could be explained by the same underlying phenomenon: oxygen free radicals. In 1954, in collaboration with Daniel Gilbert, Gershman developed a free radical theory of disease in which highly reactive oxygen species (ROS) damage living tissue. Their discovery was the result of a search for the cause of a serious disease called retrolental fibroplasia. The condition was traced to the elevated oxygen concentrations that had been routinely used in incubators³ for premature newborns. Gershman and Gilbert, linked the development of the disease to oxygen free radicals.

It is interesting that Joseph Priestly, the English chemist who discovered oxygen in 1774, had questioned whether the gas, which is so essential to life, might also in some way be harmful.

Modern research has revealed that oxygen is actually a very toxic material, and that the body has a number of antioxidant defense systems that act continuously to keep tissue oxygen levels from getting too high. One of the built-in systems that accomplishes this is the enzyme, superoxide dismutase, discovered by Irwin Fridovich and Joe McCord.⁴

Noting that radiation causes "mutation, cancer and aging" Harman argued that oxygenfree radicals produced during normal respiration might also cause cumulative damage which would eventually cause the organism to lose functionality, and ultimately lead to death.

Today, the National Library Database has

- 80.000 articles on free radical induced inflammation and disease
- 5000 on relationship between free radicals and aging

Recognition of the free electron as the ideal antioxidant⁸ has led to an explanation of why a number of devices that introduce or induce microcurrents into tissues can produce profound anti-aging effects.

Specific microcurrents:

In 1995, Sisken & Walker listed some of the healing frequencies being tested in medical research laboratories and the types of tissues they affect.

2 Hz	Nerve regeneration, neurite outgrowth from cultured ganglia
7 Hz	Bone growth
10 Hz	Ligament healing
15, 20 and 72 Hz	Decreased skin necrosis, stimulation of capillary formation and fibroblast proliferation
25 and 50 Hz	Synergistic effects with nerve growth factor

Healing effects of specific frequencies (frequency window of specificity) (from Sisken & Walker 1995) in Energy Medicine by JL Oschman, 1988 [13](#)

In osteoporosis we see a dramatic decrease of pain after one or two applications of specific em fields [12](#). There are over 1,5 million fractures per year. 1 out of 2 women over 50 are linked to osteoporosis in the US

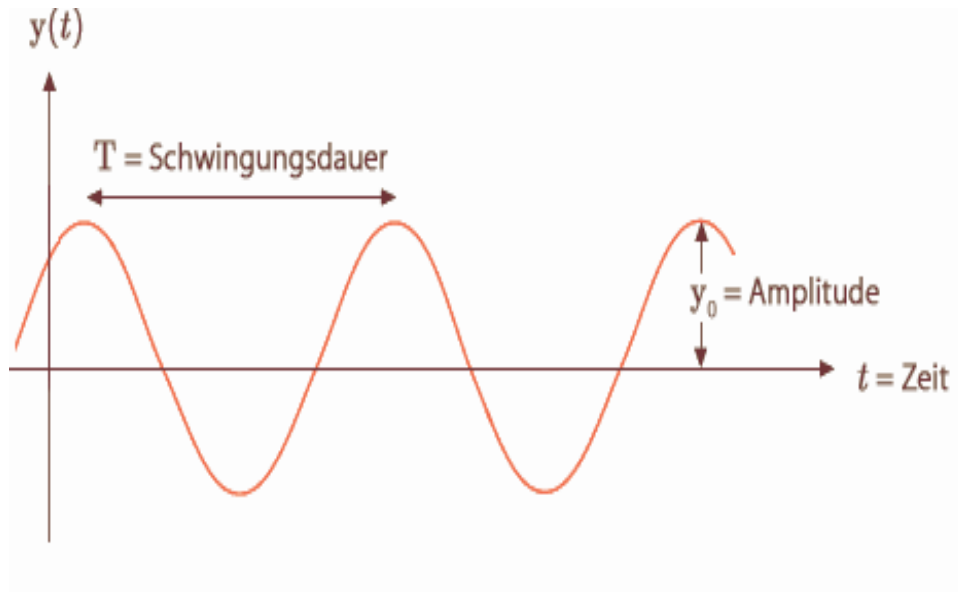
Direct application of specific electromagnetic fields to non functional tissues:

Since pain is the cry of the tissue for energy, the application of specific em fields will magnify the amplitude of the repair field through the Transversal Hall Effect. [12](#) Pain will cease. According to Robert Becker, 1995, the direct current (the current of injury) of the perineurium, perivasculum, periosteum and perilymphaticum is providing the repair of degenerating or inflamed tissue. [12](#) .

The Repair Field

Robert Becker et al. , (1995), discovered the dual nervous system. The nerve system consists of two parts: There is the axon which works with digital shots in the all-or-nothing mode. Around the axon there are, regularly arranged, the perneurial cells.

They are the wrapping material around the nerves. They produce a direct current which is called 'current of injury'. In any case of inflammation, trauma, or repair need in an area, this current of injury will be the repair field. It's electromagnetic field is based on the electronic activity of the perineurial cells. More electronic activity means higher amplitude and more energy to repair. Less activity means lower amplitude, less energy, and pain. Aging and degeneration correlates with lacking energy, poor electronic activity. If we specifically amplify electronic activity in osteoporosis and other issues, degeneration is slowing down – pain ceases – the person feels better.



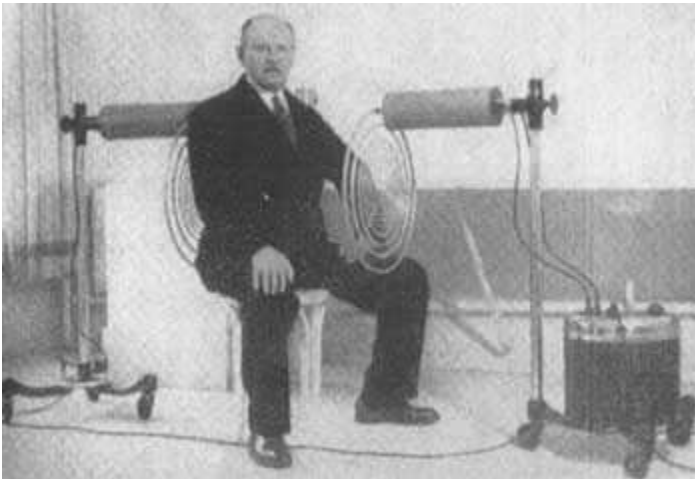
Each tissue is emitting a specific electromagnetic emission as published by the MIT in Boston in 1997. Each tissue also needs specific frequencies to regenerate as shown by Siskin and Walker in numerous studies. Consequently, we need to apply specific electromagnetic microcurrents in order to boost and amplify the energy of the repair field. Both the lack of healing power and the process of degeneration/aging can be attributed to insufficient elimination of free radicals in diseased tissues.

The idea that energy within a living system may be transported within semiconductive bands of proteins was suggested by SZENT-GYÖRGYI in 1941. ¹⁴ He probably knew about Lakhovsky, the Russian scientist who had already successfully experimented with em fields.



SZENT-GYÖRGYI

GEORGE LAKHOVSKY in 1930: "each living being is simultaneously and emitter and receptor of electromagnetic radiation." The above statement was justified by this researcher in the following manner: in every living system, and particularly within the cell (and its nucleus), we have the components of an electrical oscillator. 15



GEORGE LAKHOVSKY

2. Anti aging by wave mechanics

Sound and standing waves are responsible for regular aggregation of atoms. Arrangement of atoms in regular order is called "crystalline" structure. According to Itzhak Bentov 10 such an atomic formation vibrates in harmony

and provides a maximum of healthy coherence and energy. This stability may be undermined by other deposited elements such as viruses, bacteria, fungi, parasites, environmental factors that exert their own vibration and consequently produce a chaotic interference wave pattern in the prior harmonious tissue. By specific sound and waves, microcurrents can detect those spots and re-establish a harmonious vibration of the weakened tissue. Harmonious entrainment of atomic and molecular vibration is considered to be the key for healing.

3. Anti aging by epigenetics

External electromagnetic fields are read by the cellular membrane and consequently program the genes in the nucleus of the cell. According to his pioneering research on cellular biology, Bruce Lipton [11](#) visaged the revolutionary field of epigenetics, a new science of how the environment and perception control genes. Former belief that each protein has an own gene as a producer is obsolete. Also David Baltimore, one of the world's preeminent geneticists and a Nobel Prize winner states that there must be other ideas about how life is controlled than by the genes. Fact is that we have only 25.000 genes, about the same number as *Caenorhabditis elegans*, a primitive worm comprised of exactly 969 cells and a simple brain of about 302 cells. Lipton's research at Stanford University revealed that cell cultures of the same cell, in three different Petri dishes, would grow into different tissues depending on the environment they were put in. Thence each gene would produce very different proteins if programmed differently by external stimuli. The bottom line is: the environment controls genes. The cellular membrane is reading electromagnetic fields and programs the nucleus, which is the blueprint for building cellular structures. As shown already by Siskin and Walker, specific em fields would support specific tissue growth.

MECHANISMS BEHIND SUCCESSFUL ANTI AGING

Successful anti aging by the use of antioxidants and specific electromagnetic fields are based on the same principles in physics-electronic activity. Specific electromagnetic fields seem to be superior by far in certain health disorders.

Specific microcurrents can be very effective in inflammation, disease, and anti aging by electron donation, by wave mechanics, and by external

stimuli – epigenetics-. To re-integrate the free radicals seems to be at the core of health.

Today, free-radicals are being implicated in virtually all of the diseases of aging and in the aging process itself. Electrons play a major role in degeneration, aging and anti-aging.

Clinical applications

These discoveries have profound clinical implications. The electrical and magnetic properties of free radicals bring energy medicine to the forefront of the most active area of biomedical research today: the investigation of inflammation, cell death and aging.

Energy medicine, in turn, paints much clearer pictures of the physical interactions taking place in aging. As a field of investigation, energy medicine brings the discoveries of physics and biophysics into clinical practice. Recognition of the free electron as the ideal antioxidant⁸ has led to an explanation of why a number of devices that introduce or induce microcurrents into tissues, when combined with appropriate nutritional supplementation (Orthomolecular medicine) can produce profound anti-aging effects.

Above all, using specific electromagnetic fields to find the main responsible focus of a health disorder has opened up a new dimension in healing [12](#)

Footnote:

¹ Gomberg M 1900 An instance of trivalent carbon: triphenylmethyl. J. Am. Chem. Soc. 22 (11): 757-771.

² Paneth FA Hofeditz W 1929 Uber die Darstellung von Freiem Methyl. Ber. D. Deutschen Chem. Ges. 62:1335.

³ Harman D 1956 Aging: a theory based on free radical and radiation chemistry. Journal of Gerontology 11 (3): 298-300.

⁴ Fridovich, I. (1998) The trail to superoxide dismutase. *Protein Sci.* **7**, 2688–2690.

⁵ Jamison JM Jacques Gilloteaux J Taper HS Calderon PB and Summers JL 2002 Commentary: Autoschizis: a novel cell death. *Biochemical Pharmacology* Volume 63, Issue 10, 15 May 2002, Pages 1773-1783.

⁶ Gilloteaux, J Jamison JM Arnold D Ervin E Docherty JJ Summers JL 1998 Cancer cell necrosis by autoschizis: synergism of antitumor activity of vitamin C: vitamin K3 on human bladder carcinoma T24 Cells. *Scanning* 20: 564–576; Gilloteaux J Jamison JM Venugopal M Giammar D. Summers JL 1995 Scanning electron microscopy and transmission electron microscopy aspects of synergistic antitumor activity of vitamin C: vitamin K3 combinations against human prostatic carcinoma cells. *Scanning Microsc.* 9: 159–173.

⁷ Majno G Joris I 1995 Apoptosis, oncosis, and necrosis. An overview of cell death. *Am J*

⁸ [12](#) *Apoptosis, oncosis, and necrosis. An overview of cell death. Am J*

Pathol. 146(1):3-15.6

8 Oschman JL 2007 Can Electrons Act as Antioxidants? A Review and Commentary.
Journal of Alternative and Complementary

⁹Zhang B, Osborne NN. Oxidative-induced retinal degeneration is attenuated by epigallocatechin gallate. *Brain Res* 2006;1124(1):176-87.

10 Bentov, Itzhak, *Stalking the wild pendulum*, 1977, Destiny Books

11 Lipton, Bruce, *Biology of Belief*, Mountain of Love/Elite Books, Santa Rosa, CA 95404

12 Kessler, Wolf-Dieter, ebook (www.dr-kessler.com) *A Method Designed For You To Succeed With Your Patient, A New Concept In Medicine*

13 **Oschman James L: 1988, Energy Medicine, The Scientific Basis**

14 Szent-GYÖRGYI, A 1941 Towards a new biochemistry? *Science* 93:609-611

15 Lakhovsky, George 1929: *The Waves Which Cure* (Gauthier-Villars and Co).