

Physiological Benefits of Negative Ions on the Human Body

For years researchers have advised consuming more alkaline foods, (i.e. vegetables and some fruits with a higher pH) is beneficial to your health. If you have an acidic pH, (i.e. lower pH) balance of the body, on the other hand, it is likely that you'll feel weak and susceptible to sickness. What is the cause of Acidosis of the blood? Essentially it comes as a result of the loss of electrons. It can be prevented by an influx of negative electric ions which contain an abundant amount of electrons needed to improve the body's immunity and resistance to illnesses. Acidosis of the blood is the reason negative electric ions products are becoming a more regular part of the consumer's regimen toward better health.

Metabolism, which is the process of acquiring nutrients from the blood and excreting waste out of the body, is extremely important to the human cells. The more Negatively Charged Electric Ions there are in the blood, the more efficient the cell's metabolic processes.

On the contrary, the more Positively Charged Ions, (i.e. free radicals) there are in the blood, the slower and less efficient the cell's metabolism. This causes the body's cells to become weak and the body will tend to get sick more easily and age faster. It will cause the body's immune system to completely shut down.

The key then is to encourage the production of Negative Electric Ions and the reduction of Positively Charged Ions. Researchers experiment on electric ions and the permeability of the cell membrane. In the experiment, skin was used to exemplify the cell membrane. When positively charged ions were permeated into the surface of the skin, its pores and sweat glands began to contract. However, when Negative Electric Ions were permeated into the surface of the skin, its pores and sweat glands expanded, which demonstrates good metabolism of the cell membranes. This phenomenon is called Prototype Plasma Membranes of Dermal Reflectivity.

The human body is surrounded by ions; therefore, the function of electrons inside and outside the cells has significant influence on the human body. It makes the body strong if good ions are taken. When the amount of Negative Electric Ions contained one cc of air inhaled reached 5,000 to 50,000, it strengthens the body's resistance and immunity; and when the amount of Negative Electric Ions contained in one D.C. of air reached 100,000 to 500,000, it relieves illnesses. Negatively Charged Electric Ions in our body are essential in sustaining and improving our health. Whereas 85% of the Negative Electric Ions are absorbed from our skin, only 15% is inhaled and absorbed through our lungs. (quoted from page 56 of Negatively Charged electric Ion Treatment, issued by Youth Publishing)

Negative ions are beneficial to the Human Body in four major ways:
Reprinted from "Economy Daily News" - January 30, 2002

- Strengthen the functions of autonomic nerves
- Reinforces collagen (tissues that are resilient and tension-related)
- Improves the permeability of the cell's prototype plasma membranes (improves metabolism)
- Strengthens the body's immune system

(Note: Mitochondria can be called the "powerhouse" of the cell. Most living organisms use food and oxygen to make ATP/energy in a process called cellular respiration. Most of cellular respiration takes place inside the mitochondria)

Negative Ion Regeneration for Youthfulness and Longevity
by John Heinerman, Ph.D.

Negative ions neutralize pollutants and provide positive effects on health to

- Stimulate the reticulo-endothelial system, a group of defense cells in our bodies that marshal

- our resistance to disease
- Act on our capacity to absorb and utilize oxygen. Negative ions in the bloodstream accelerate the delivery of oxygen to our cells and tissues
- Speed up oxidation of serotonin (5-hydroxytryptamine) in the blood. This is well known to have far reaching effects on mood, pain relief and sexual drive.

How Negative Ion Affects the Human Body?

Dr. Robert O. Becker, pioneering researcher and author of the book, *The Body Electric and Cross Currents*, has established that energy system within our bodies consists of two forces, magnetism and electricity, with the electricity component consisting of low-frequency direct-current (DC) electric field. This electromagnetic energy system is affected by the earth's natural electromagnetic environment, which is normally relatively quiet, with minor rhythmic variations, but which experiences great increase in an electromagnetic charged environment.

Numerous studies have established the effect of Negative Charged Ion environment on the human body. The negative charged environment has stimulated the body's own healing mechanism in the case of stress and specific physical problems.

Increase blood flow with resultant increased oxygen-carrying capacity, both of which are basic to help the body healing itself;

Changes in migration of calcium ions which can either bring calcium ions to heal a broken bone in half the usual time, or can help move calcium away from painful, arthritic joints;

The pH balance (acid/alkaline) of various body fluids. (Often out of balance in conjunction with illness or abnormal conditions)

Hormone production from the endocrine glands can be either increased or decreased by Negative Ion stimulation;

Altering of enzyme activity and other bio-chemical processes.

Studies Providing Effectiveness of Negative Ions:

U.S. Dept. of Agriculture

A recent study by the U.S. Dept. of Agriculture found that ionizing a room led to 52% less dust in the air, and 95% less bacteria in the air (since many of the pollutants found in the air reside on floating dust particles).

The USDA also performed another study to test the effectiveness of negative ionization at removing airborne *Salmonella Enteritidis*. The negative ions drastically reduced the airborne salmonella particles, prompting the following statement from the USDA:

"These results indicate that negative air ionization can have a significant impact on the airborne microbial load in a poultry house and at least a portion of this effect is through direct killing of the organisms."

Agriculture Research Service (of USDA)

The Agriculture Research Service of the U.S. Dept. of Agriculture tested the effectiveness of ionizers for removing dust in a poultry hatchery. The dust level is very high in such an environment. In this study, the use of an ionizer resulted in dust removal efficiencies that averaged between 81.1 ~ 92.2%. The airborne transmission of salmonella (to the eggs) was also significantly reduced as a result. (Summary of Study: <http://www.nalusda.gov/ttic/tektran/data/000008/54/0000085456.html>)

Journal of Hygiene

Scientists showed that ionization reduced bacterial levels in burns and plastic surgery units by over 96% after a two-week period, which results in much better and more rapid healing of patients.

Journal of Applied Microbiology

The use of negative ions was even found by scientists to reduce the presence of airborne viruses by about 40%. A study featured in the 1987 issue also showed the negative ions are free from any adverse side effects.

Science

A 1976 study featured in this publication provided evidence that negative ions can have a biologically lethal effect on airborne microorganisms.

Journal of Hygiene

A 1979 study found that using negative ionization in the air protected chickens from airborne infection of the deadly Newcastle Disease Virus.

Journal of Food Protection

A 2001 study found that airborne negative ionization was highly effective at destroying airborne and surface salmonella.

University of Medicine and Pharmacy (Romania)

A test on male rats showed that just moderate levels of negative ions increased the resistance of the rats, reducing or eliminating the effect of some chemicals. (Summary of study:

<http://www.fjokk.hu/cejoem/files/Volume4/Vol4No1/Ce981-08.HTM>

Effect of Negative Ions on Drivers

A study by Toyota Central R & D Labs, Inc. found that negative ions can improve fatigue and cognition of drivers. (Copy of study - PDF File

http://www.tytlabs.co.jp/office/elibrary/preview/erev371pdf/e371_065sakakibara.pdf)

Negative Charged Ions are Effective in Treating Cancer (Cited from High-Voltage Treatment published by Youth Publishing)

In 1950; Dr. Haskell applied Negatively Charged Ions to patients of Hypertension. Amazingly, Negative Ions were proven to have a positive effect in lowering one's blood pressure, while no beneficial effects were observed with Positive Ions. Negative Ions are also effective against influenza, asthma and especially bronchial disease. Another study done by the University of Frankfurt involved a "Cancer Team" in order to further study the physical effects of Negative Ions to cancer cells. Different types of cancer cells were transfused into the bodies of mice. In order to have a base of comparison, one group of mice was put into a negative ion environment each day while the other group remained untouched. As a result, the mice in the negative ion environment lived, on average, for 59 days, while the mice that were untreated lived no longer than 34 days. The mice from the experimental team lived 25 days longer; some even lived as long as 80 days! The experiment's result confirms the effectiveness of Negative Ions in treating cancer.

"Negative Air Ions Stimulate Mitochondria" Institute of Theoretical and Experimental Biophysics, Russian Academy of Sciences, Pushchino, Moscow Region, Russia.

http://www.cryonet.org/cg_i-bin/dsp.cgi?msg=12330

Other Negative Ion Benefits

Asthma, Allergies, and other Respiratory Problems and Illnesses. Many scientific studies have been conducted over the years (mostly in Europe and Russia) showing how exposure to high levels of negative ions drastically or significantly reduce asthma and allergy symptoms, as well as respiratory-related illness.

Studies have also shown a link between negative ion treatment and benefits for the following:

Migraine Headaches

Inhaling negative ions regulates the production of serotonin inside the brain. The overproduction of serotonin inside the brain is the cause of migraine headaches.

Depression

A study at Columbia University suggested that negative ion treatment is more effective than anti-depressant drugs such as Prozac and Zoloft, and there are no side effects with negative ions.

Fatigue

The overproduction of serotonin (chemical produced inside the brain) also causes fatigue, and negative ions regulate the production of serotonin inside the brain.

Sleep

A study in France found that negative ionizers helped people to sleep better, by regulating the

production of the chemical serotonin in the brain.

Mental Performance and Concentration

Several tests have shown people exposed to negative ion treatment perform much better in mentally-oriented activities than those who are not.

Physical Performance

Due to test results performed by Russian scientists, negative ionizers were always installed in the locker rooms and resting places for the Russian athletes.

Burns

Studies performed in one hospital found that burn patients were far more likely to recover more quickly and thoroughly.

Negative Ions for Alternative Ideals in Health, Science, and Medicine

The article in Alternative Ideas in Health, Science, and Spirituality

(<http://www.sumeria.net/health/ions.html>) concluded that

1. Negative ions ACCELERATE the oxidative degradation of serotonin whereas Positive ions have the opposite action and inactivate the enzymes which break down serotonin.
2. An INCREASE in the serotonin level (5-hydroxytryptamine) produces:
 - o tachycardia,
 - o a rise in blood pressure,
 - o bronchospasm going as far as asthma attack,
 - o increased intestinal peristalsis (contractions and dilations of the intestines to move the contents onwards),
 - o increased sensitivity to pain,
 - o increased aggression.
3. A DECREASE in the serotonin level is calming and increasing defenses against infections (as proven with influenza 'the flu').
4. Negative ions produce an INCREASE in hemoglobin/oxygen affinity so that the partial oxygen pressure in the blood rises but the partial carbon dioxide pressure decreases.

This results in reducing respiratory rate and enhancing the metabolism of water-soluble vitamins.

In addition, negative ions produce an INCREASE in PH and, in particular, an INCREASE in the secretory performance of the mucosa with an INCREASE in ciliary movement in the airways.