

# The Universe Within Us



The Universe Within Us  
of

## Negative Ions Creating Positive Vibes

by

Tina J Costello - DTAS

This is the **ONLY** situation  
where 'Negative' is better  
than 'Positive'!

Discover one of the most  
powerful enhancers of life  
force, supporting a greater  
self-healing capacity of the  
body, and clarity of the mind.

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## HAVE YOU EVER WONDERED WHY ...

Have you ever felt tired and uncomfortable inside a big office building, or while working on your computer surrounded by all the many peripherals that come with them? Or even in the kitchen surrounded by your microwave, refrigerator, dishwasher, stove, electric jug and toaster, etc. (the kitchen is the most *dangerous* room in every home). Forget about relaxing in the lounge room as well. There you are surrounded by the home entertainment system which is big and angry enough to zap even the healthiest person of their energy.



On the other hand, perhaps you remember feeling relaxed and energised standing near the ocean watching the surf crashing in, or experiencing the wonder of a waterfall?

There's a scientific reason for how you felt those days and it has nothing to do with work waiting to be done, or the promise of a nice vacation.



But speaking of vacations, have you every wondered why people feel more relaxed and energised after a holiday at the beach, than they do after a holiday in the city? This is even more so if they had their holiday at a surf beach. Surfers always look so healthy and full of energy, don't they? Why?

**"The action of the pounding surf creates negative air ions and we also see this immediately after spring thunderstorms when people report lightened moods," says ion researcher Michael Terman, PhD, of Columbia University in New York.**

Have you ever wondered why people retire to places near the ocean, or fast moving streams and rivers? Here in Australia we have a huge coastline and natural, untouched country areas. People retire to Queensland in their thousands. But the same can be said for Florida in America, etc. Doctors even recommend people make these moves "for their health". Even

though they may not know why, the health benefits are felt almost immediately.

There is a scientific reason for this, and it has nothing to do with diet and exercise. "Thank goodness!" I hear you say.

But why is it?

**The air all around you is made up of molecules, all of which have an electrical charge on them.**

Depending on where you are - and the things you surround yourself with - these electrically charged molecules will be your friend or foe - "Negative" or "Positive".

### **Negative and Positive what? And why haven't I been told about this before? Is it new?**

As far as ions are concerned, you can be 'positive' that 'negative' is a breath of fresh invigorating air, providing a self-healing capacity of the body, and clarity of the mind.

### **This is the ONLY situation where 'Negative' is better than 'Positive'!**

Ions are molecules that have gained - or lost - an electrical charge. The air around us is filled with these electrically charged particles. They are generated in invisible billions by cosmic rays, radioactive elements in the soil, ultraviolet radiation, storms, waterfall, winds, and the friction of blowing sand or dust. Every time we draw a breath they fill our lungs and are carried by the blood to our body cells. They appear to have a lot to do with such varied things as: influencing our moods; why cattle grow skittish before a storm; why rheumatic joints "tingle" when the barometer falls; and how ants know in advance that it's going to rain, in time to block their tunnels; as well as countless other duties.

Negative ions are the 'good guy' in the ion partnership. They are odourless, tasteless, and invisible molecules that we inhale in abundance in certain environments – the beaches, waterfalls and mountains we were just discussing. Once they reach our bloodstream, negative ions produce biochemical reactions that increase levels of the mood chemical serotonin, helping to alleviate depression, relieve stress, and boost our energy. We will be looking closer at serotonin in the following chapters.

Science agrees that ions act on our capacity to absorb and utilise oxygen. Negative ions in the blood stream accelerate the delivery of oxygen to our cells and tissues, frequently giving us the same euphoric jolt that we get from a few stiff sniffs of straight oxygen. Positive ions slow down the delivery of oxygen, producing symptoms markedly like those in anoxia, or oxygen starvation.

Ions are essential to life. Sodium, potassium, calcium and other ions play an important role in the cells of living organisms, particularly in cell membranes. They also have many practical, everyday applications in items such as smoke detectors, and are also finding use in unconventional technologies such as ion engines. Inorganic dissolved ions are a component of total dissolved solids, an indicator of water quality in the world. High levels of atmospheric anions can produce a relaxation effect in animals by decreasing activity in neural and muscular tissue. This atmospheric effect has been proven to reduce anxiety and manic symptoms.

### What Are Positive Ions?

The modern world today involves the production of positive air particles or ions immensely creating an imbalance in the entire environment in which we live and breathe. Cigarette fumes, transmission networks, electrical transmission lines, satellites, electrical equipment and appliances like television sets, computers, and mobile phones all produce these positive ions.

## Problems Created by the Positive Ions

These positive ions can penetrate deep down our lungs and can cause us to feel tired, weak, and have a weak immune system, lack of concentration, anxiety, migraines, psychological disturbances and lack of sleep, all kinds of respiratory tract problems.

## Negative Ions

**No life form can exist if there is no balance in the environment.** The excessive positive ions must be balanced with the negative ions. Himalayan Salt Crystal Lamps just do that – and do it all naturally. The heat produced by the electrical globe in the lamps releases the negative ions in the air. These lamps absorb the excessive electromagnetic radiation produced by surrounding electrical systems.

## Negative Ions - Vitamins of the Air

*"Generally speaking, negative ions increase the flow of oxygen to the brain; resulting in higher alertness, decreased drowsiness, and more mental energy,"* says Pierce J. Howard, PhD, author of *The Owners Manual for the Brain: Everyday Applications from Mind Brain Research* and director of research at the Centre for Applied Cognitive Sciences in Charlotte, N.C.

He continues, *"They also may protect against germs in the air, resulting in decreased irritation due to inhaling various particles that make you sneeze, cough, or have a throat irritation."*

One in three of us are sensitive to the effects of positive ions. *"You may be one of them if you feel sleepy when you are around an air-conditioner, but feel immediately refreshed and invigorated when you step outside or roll down the car window. Air conditioning depletes the atmosphere of negative ions, but an ion generator re-releases the ions that air conditioners remove."* Howard concludes.

Scientists believe that negative ions stimulate the reticuloendothelial system; a group of defence cells in our bodies which marshal our resistance to disease.

### Concentration of Negative Ions in Different Environments

- ▶ Waterfalls 95,000 – 450,000
- ▶ Mountains, seashores, breezy forest 50,000 – 100,000
- ▶ Breezy country meadow 5,000 – 50,000
- ▶ Cities 100 – 2000
- ▶ Rooms and offices 40 – 100
- ▶ Major capital cities at rush hour does not even reach 100
- ▶ Rooms with Air Conditioner 0 – 20

Approximate Concentration of Negative Ions per cubic centimetre (cc3)

### Negative Ions and the Treatment of Seasonal Affective Disorder (SAD)

Twenty-five subjects with winter depression underwent a double-blind controlled trial of negative ions at two exposure densities,

- ▶ 10,000 ions per cubic cm [small or low density] or
- ▶ 2,700,000 ions per cubic cm [high density].

Using an electronic negative ion generator with wire corona emitters...Using a remission criterion of 50% or greater reduction in symptom frequency/severity,

- ▶ 58% of subject's responded to high-density treatment, while
- ▶ 15% responded to low density treatment.

Journal of Alternative and Complementary Medicine: Treatment of Seasonal Affective Disorder with a High-output Negative Ion Generator

## THE GREEN ION CLEANING OPTION

We are all concerned about the Greenhouse Effect and are saving water; replacing our light globes for energy saving alternatives; refusing plastic bags at the supermarket; and the price of fuel reminds us that it isn't being drilled from a bottomless pit.

As we can't see ions, we either don't know they exist or are not continually reminded by their presence that we should do some cleaning there as well. Now, if positive ions were as easy to see as pollution, we would all be wearing smog masks like some of the unfortunate heavily polluted countries.

If someone told you that you had it in your power to naturally create a positive vibe around your home and office which would lift the spirit of everyone there, would you be listen? Even better is the fact you won't have to sell your home to pay to do it!

**Close your eyes and imagine this .....**

- ▶ **Your new baby is sleeping soundly and happily through the night.** (Did you know that the environment of an unborn baby is salt and water?)
- ▶ Your children are not constantly bickering over the smallest things.
- ▶ **You and your partner are not constantly bickering over the smallest things.**
- ▶ You can't remember the last time any of the family had a bad cold.
- ▶ **Your allergies have become a thing of the past, and your son no longer wakes up during the night to use his Ventolin puffer for his asthma.**
- ▶ You can now really relax and enjoy your entertainment system.
- ▶ **When you walk in your front door a warm glow and calm atmosphere reminds you how wonderful it is to be home.**
- ▶ Your office is now a place of boosted work productively.
- ▶ **Even the angriest of client relaxes and enjoys coming to your workplace.**

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- ▶ Your father seems to have lost his smokers cough – at last.
- ▶ **Your dog doesn't seem to be scratching as much as usual. Better still, he doesn't smell as bad as he used too.**
- ▶ You aren't scratching as much as usual as by filtering out dust mites and animal dander.
- ▶ **You maintain the same refreshed atmosphere at home as you experience on your holidays.**
- ▶ You are no longer dragging yourself through everyday, crossing the date off your calendar like a prisoner, as one less before you go on your holiday.
- ▶ **The 'stuffy' odour has gone and so has any problems with mould**
- ▶ **You now enjoy a positive vibe all around you!**

The list could go on and on. You are probably now wondering who you will have to kill to achieve this bliss.

To live this wonderful fantasy could be as easy as changing something you can't see, but will definitely begin to feel.

Personally, I am not a great fan of cleaning anything. As far as I was concerned, if I couldn't see it, I didn't have to dust or clean it! I am not a natural 'nester'.

But this isn't the annoying chore of "**ironing**". It is wonderfully refreshing "**ionising**". And it only takes a few simple things for you to do before the negative ions begin invisibly doing all the work for you.

## GREEN, HEALTHY, AND DOES THE WORK ITSELF. WHERE DO I SIGN?

Okay, so there might be a little shopping for you to do before magically improving your home and work atmosphere. But there are a lot of really inexpensive and natural options. You could select one of these options, or combine several of them, depending on your personal requirements. They are all easy and you are able to find them in any retail speciality shop.

### Option One - The Shower

Every home has a built in natural ioniser - the shower.

### Option Two - Beeswax Candles



Beeswax, derived from flowers and bees, is non-toxic, naturally aromatic, and when burned emits beneficial negative ions that actually help purify the air. But beeswax supplies are limited, making it rather expensive.

### Option Three - Water Fountains



Small decorative water fountains which cascade - or spray - are not only visually appealing, but also provide the pleasing sound of moving water. Feng Shui uses indoor water fountains, natural sprays and ferns to generate negative ions.

### Option Four - Binchotan or Bamboo Charcoal



Binchotan and bamboo charcoals not only dissipate 'hazardous' electromagnetic waves from computers but also generate negative ions. More accurately, the infrared rays

emitted constantly from charcoals reduce moisture in the air into fine particles that naturally change into negative ions. **This means that a certain amount of moisture must be present** in the computer room/office if charcoal is used to increase the room's negative ion ratio. The ideal degree of humidity is between 45 and 55%. In winter, when buildings are heated, the computer room/office tends to be too dry. Of course, you could install a humidifier capable of controlling the degree of humidity in the air, but a few wet towels around the rooms will suffice.

In order to keep a room 10 ft x 10 ft (3.2 m x 3.2 m) in an ideal ionic state, you will need 9 lbs. (4 kg) of binchotan or 7 lbs. (3 kg) of bamboo charcoal (about AU\$130.00). An important difference between binchotan charcoal and bamboo charcoal is that the latter tends to break easily as it is a lot more fragile.

However, once charcoal is placed in a room, it keeps working forever. Obviously, this isn't a good choice for children's rooms, and if you don't like the idea of having to keep wet towels around your home and office, we have more options to choose from.

### Option Five - Therapeutic Ioniser

You could purchase a therapeutic ioniser similar to those used in hospitals, and many offices throughout Europe.

They come in a variety of price ranges. I recommend you research those available thoroughly. You could make a very expensive mistake and not get the benefits you hoped to achieve. Some ion generators can claim to produce negative ions, but they are not small or ingestible, and cannot enter your body. These inferior ionisers are only useful as air cleaners – if that.



We recommend the **Elanra Therapeutic Ioniser MkII**. You will be able to learn more about it at: [www.azest4health.com/elanra-ioniser.htm](http://www.azest4health.com/elanra-ioniser.htm)

We found it to be excellent quality and is offered at a reasonable price.



The Elanra is also available as Portable Ioniser. This is the world's only Portable Therapeutic Ioniser bringing health benefits and protecting users from unhealthy, dirty air

wherever they go. You will find out more about this model at: <http://www.azest4health.com/elanra-portable.htm>

## Option Six - Salt Crystal Lamps

This last option is my favourite. I have these lamps throughout my home and office. Not only can I feel they are doing the job, because I have achieved the health benefits from them, but I also love the wonderful glow they provide. My home took on a completely different atmosphere through that alone. I have an assortment of lamp sizes and designs, as well as many of the tealight holders, and a salt crystal night light in my hall.

As much as I enjoyed all the other options I have provided here, the **Himalayan Salt Crystal Lamps**: don't have to be continually replaced like the beeswax candles; **require the humidity/towels of the Binchotan and bamboo charcoals**; and my cat, Toulouse, used to splash the water out of the fountain. (Yes, he is the only Birman Sealpoint cat in the world who likes playing in water.) **The therapeutic ionisers are wonderful, but I enjoy having the benefit and glow of the Himalayan Salt Crystal Lamps throughout the house.** They are so beautiful!



## How do the Himalayan Salt Crystal Lamps Ionise?

Crystal salt is one of the few minerals whose atomic structure is bound electrically, not molecularly.

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This characteristic of the mineral structure enables the crystal to change back and forth from crystalline to liquid state.

The gentle heat of the lamp in the salt crystal creates a higher surface temperature than the surrounding air. This attracts the water molecules in the cooler surrounding air. The natural humidity in the air condenses on the crystal's surface. This enables the electrically bound sodium chloride mineral to split into independent (positive) sodium and (negative) chloride ions.

This natural ionisation creates an electric charge. After the water molecules evaporate again, the sodium and chloride ions turn back into their crystalline mineral form. When the sun heats up our largest natural salt solutions, the oceans, it generates the natural energy vibration of which our entire global environment consists. Salt crystal creates exactly the same natural energy field.

Scientifically speaking, this natural ionisation process takes place millions of times - invisible to the eye - and without any influence to the quality of the crystal. Similar to the concept whereby tree leaves absorb dangerous dioxides and transform them into essential oxygen, without damaging the plant.

The atomic structure of crystal salt contains more negative, chloride ions than positive, sodium ions which result in the emission of negative ions during the natural ionisation process. Negative ions become dust collectors, attaching themselves to positively charged dust particles and cigarette smoke, purifying the circulating indoors air from dust, bacteria and pollutants.



**A series of scientific studies showed that Salt Crystal Lamps  
can increase the negative ion count by up to 300%.**

## 250 Million Years in the Making



**250 million years ago two of the worlds land masses collided and pushed up the ocean floor.** The bottom of that ancient sea bed became the Himalayan Mountains and the beautiful Himalayan salt crystal lamps were born.

Himalayan Crystal Salt lamps are naturally beautiful, especially when glowing in low light. **No two salt lamps are identical.** Each is unique and **hand-carved from 250-million-year-old Himalayan Crystal Salt,** ready to illuminate any indoor environment with a healthy, natural glow. These lamps make excellent and unique gifts.

## Please Beware of Cheap Imitation Lamps - Our Quality Assurance

### Please consider these points:



We import the very finest quality Salt Crystal Lamps directly from the Himalayas.



They are Hand Carved 100% Genuine Himalayan Salt Crystals



Our Himalayan Salt Crystal is pure, unpolluted, and without environmental impact - it contains no impurities from environmental pollution.



Not only are our Himalayan Salt Crystal products the finest quality, but also include electrical cords and globes which conform to Australian Safety Standards.

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Our Salt Crystal Lamps are mined using techniques that protect the surrounding natural environment.



The Himalayan miners, and the craftspeople who prepare the lamps, are paid fair wages for their work.



When you purchase a Salt Lamp from us you will always receive a few free **“Thank You Gifts”**. It is in our Mission Statement to give more than the customer asks.



We also offer a **THREE MONTH WARRANTY** on all electrical components.



As these lamps are from **The Universe Within Us** you can be assured of the very fairest price available, and safe courier delivery door-to-door Australia wide.

We have received more positive feedback for the Salt Lamps than any other ionising product we have offered. People love them - and the results - as much as we do.

### What size must a Salt Lamp be to give the best results?

For a room size of 20 square metres, a lamp of about 2-3kg, for 30 square meters 3-4kg, 44 square meters a lamp of about 4.5-5.5kg, for 70 square meters 7-9kgs to get the optimum result. You can use several small lamps; tea lights instead; or a mixture of both as long as they amount to the same respective weight.

**Himalayan Salt Crystals are one of the most powerful enhancers of life force thereby supporting a greater self-healing capacity of the body and clarity of the mind.**

For more information on our comprehensive range, please visit:

**[www.TheUniverseWithinUs.com/  
HimalayanSaltCrystalLamps.html](http://www.TheUniverseWithinUs.com/HimalayanSaltCrystalLamps.html)**

## WHY ARE NEGATIVE IONS THERAPEUTIC?

But why are ions therapeutic? It is partly because they kill bacteria. Back in the 1930's a Russian team headed by A L. Tchijevski found that large negative ion doses retarded bacteria colony formation on plates. Negative ionisation also sterilised enclosed air. Latter experiments duplicating Tchijevski's work noted an exponential bacteria decay rate of 23 percent per minute for untreated air; 34 percent per minute for air with positive ions; and 78 percent per minute for negative ion charged air. They concluded that the poison decay rate was due to simple bonding of the ions with the bacteria, whereas the negative ions actually killed them.

## Negative Ions and Animals

Interestingly, animals larger than microbes find negative ions beneficial. Scientists discovered that rats learned better and were less anxious. Mice live longer. (Mice with flu die more quickly if deprived of negative ions.) Silkworm eggs hatch earlier, larvae grow faster, spinning begins sooner and cocoons are heavier. Chickens lay more eggs and grow plumper. Sheep grow faster and supply more wool.

Pets recovered sooner from illness, and demonstrated a 'happier disposition' and increased energy. This was particularly obvious in older pets.

## Negative Ions and Vegetables

In the vegetable kingdom, plant seedlings grow up to 50 percent more when charged with negative ions. Fruit stays fresh longer – during a controlled example, after 10 days ionised tomatoes were still fresh while untreated one rotted.

Researches offer a variety of reasons for ion effect. Dr Krueger explains that plants benefit from both positive and negative ions because "ions expedite both the

uptake of ion and its utilisation in the production of iron containing enzymes (and) stimulate the metabolism of ATP in the chloroplasts and augment both nucleic acid metabolism and oxygen uptake."

### Negative Ions and Humans

In humans, most researchers think that negative ions act on **our capacity to absorb and utilise oxygen, accelerating the blood's delivery of oxygen to our cells and tissues**. Dr. R. Gualterotti of the University of Milan says they make wider cell nuclei with more volume. The weight of evidence supports Krueger's theory that ions break down serotonin in the bloodstream. Dr. Krueger concludes, "Lest negative ions sound too much like a cure-all, testers report that **negative ions work only so long as they're being inhaled**. As the charge is most readily absorbed through the olfactory nerves, **you need to breathe them in through your nose, not your mouth.**"

### Negative Ions - Airborne Allergens and Smoking

At the University of Pennsylvania's Graduate Hospital and at North-eastern and Frankford hospitals in Philadelphia, Dr. Kornblueh and his associates have administered negative ion treatments to hundreds of patients suffering from hay fever or bronchial asthma. Of the total, **63 percent have experienced partial to total relief**. *"They come in sneezing, eyes watering, noses itching, worn out from lack of sleep, so miserable they can hardly walk,"* one doctor comments. *"Fifteen minutes in a negative ion environment and they feel so much better they don't want to leave."*

Experiments by Dr. Albert P. Krueger and Dr. Richard F. Smith at the University of California have shown how ionisation affects those sensitive to airborne allergens. Our bronchial tubes and trachea - or windpipe - are lined with tiny filaments called cilia. The cilia normally maintain a whip like motion of about 900 beats a minute. Together with mucus, they keep our air passages free of dust and pollen. Krueger and Smith exposed tracheal tissue to negative ions, found that the ciliary beat was speeded up 1200 a minute and that

mucus flow was increased. Doses of positive ions produced the opposite effect: ciliary beat slowed to 600 a minute or less; the flow of mucus dropped.

In experiments that may prove important in cancer research. Drs. Krueger and Smith also discovered that cigarette smoke slows down the cilia and impairs their ability to clear foreign, and possibly carcinogenic (cancer-inducing), substances from the lungs. Positive ions, administered along with cigarette smoke, lowered the ciliary beat as before, but from three to ten times faster than in normal air.

Negative ions however, counteracted the effects of the smoke. Observed Dr. Krueger, "The agent in cigarette smoke that slows down the ciliary beat is not known. Whatever it may be, its action is effectively neutralized by negative ions, which raise the ciliary beat as well in a heavy atmosphere of cigarette smoke as they do in fresh air."

### Negative Ion Burn Therapy

In Philadelphia Dr. Kornbluh studied brain-wave patterns and found evidence that negative ions tranquillised people in severe pain. In one dramatic test he held a negative ioniser to the nose and mouth of a factory worker who had been rushed to North-eastern Hospital with second-degree steam burns on his back and legs. In minutes the pain was gone. Morphine, customarily administered in such cases, was never necessary.

Today all burn cases at North-eastern are immediately put in a windowless, ion conditioned room. In ten minutes, usually, the pain has gone. Patients are left in the room for 30 minutes. The treatment is repeated three times every 24 hours. In 85 percents of the cases no pain-deadening narcotics are needed. *"Negative ions make burns dry out faster, heal faster, and with less scarring. They also reduce the need for skin-grafting. They make the patient more optimistic. He sleeps better."* says North-eastern's Dr. Robert McGowan

Encouraged by this success in burn therapy, Dr. Kornblueh, Dr. J. R. Minehart, Northeastern's chief surgeon, and his associate Dr. T. A. David boldly tried negative ions in relief of deep, postoperative pain. During an eight month test period they exposed 138 patients to negative ions on the first and second days after surgery. Dr. Kornblueh announced the results at a London congress of bioclimatologists. In 79 cases 57 percent of the total negative ions eliminated or drastically reduced pain. *"At first," says Dr. Minehart, "I thought it was voodoo. Now I'm convinced that it's real and revolutionary."*

[It sounds like a "mysterious, New Age" sort of thing.](#)

This is not new, and there is no mystery here. People have been aware of negative and positive ions for centuries.

## SCIENTIFIC ION FINDINGS AND EXPERIMENTS THROUGH HISTORY

The ion 'mystery' first began to unravel during 1789, the Abbe Bertholon, European monk speculated that ions exist and affect people. He recorded the responses of medical patients and normal people to changes in the electrical state of the ambient air. As detailed below, it was more than a century later, in 1899, two scientists named Elster and Geitel **proved the existence of ions.**

Late in the 18<sup>th</sup> century Giuseppe Toaldo, a famous Italian physicist and professor, **observed that static electricity could affect the growth of plants.** He noticed that plants growing next to a lightning rod grew almost ten times taller than identical plants only a few feet away.

A French physicist by the name of Jean Antoine Nollet, planted several dozen mustard seeds in two separate containers and electrified one of them using an electrostatic generator. At the end of the week, every seed in the electrified container had sprouted and grown a few millimetres, while the other container showed little progress.

A friend of Benjamin Franklin, Abbe Bertholon, noticed that vegetables watered from a can that was electrified by an electrostatic generator, grew to an extraordinary size. He even invented an "electrovegetometer," to collect atmospheric electricity by means of an antenna and pass it on to plants growing in a field.

Even though it was repeatedly shown and documented that static electricity can improve the growth of plants, no one really understood why. It wasn't until 1899, when German physicists Julius Elster and Hans Friedrich Geitel, proved that electrostatic fields were based upon the existence of electrically charged particles called ions. Experiments later conducted at the Air Ion Laboratory of the University of California verified that these electrically charged particles did, in fact, have a physiological effect on plants.

It was Dr. Clarence W. Hansell of RCA Laboratories who was the first to discover that **ions could also have an impact on a person's state of mind**. One day, in 1932, he started noticing the wild mood swings of a co-worker who worked beside an electrostatic generator. After investigating the matter further, **he found that his colleague was happy and ebullient during the days when the generator was adjusted to produce negative ions**, but more depressed and ill tempered on other days when it was producing positive ions.

Dr. Hansell then started noticing the effects of naturally occurring atmospheric ions. One day, while watching the approach of a thunderstorm, his ten-year old daughter suddenly began to dance across the grass with a radiant look on her face. She leaped up on a boulder, threw her arms wide to the dark sky, and cried, "Oh, I feel wonderful!"

One sweltering day in Philadelphia a man sat before a small metal box resting atop a hospital file cabinet. It was plugged into an ordinary wall socket. A doctor flipped a switch. Inside the box a small fan whirred; the box hummed distantly, like a high-tension wire, and gave off a faint, sweetish odour. Soon the man felt alert, magical, refreshed, as though he had been taking deep gulps of sparkling air. The doctor turned the machine off, switched on another that looked just like it. The air grew quickly stale. The man's head felt stuffy. His eyes smarted. His head began to ache. He felt vaguely depressed and tired.

With this simple experiment, the scientist, Dr. Igbo H. Kornbluh, of the American institute of Medical Climatology, demonstrated the effect that atmospheric ions can have on human beings. The first machine generated negative ions, the second generated positive ions.

Research conducted during the late 1950's by Albert P. Krueger, Emeritus Professor of Bacteriology at the University of California, may have uncovered the mechanism underlying the mood altering effects of ionised air. He found a significant and consistent reduction in blood levels of serotonin (a powerful neuro-

hormone) in mice exposed to air ion densities of 400,000 negative ions per cubic centimetre. He hypothesized that negative ions stimulate the action of monamine oxidase, speeding up the metabolic removal of serotonin. Further tests indicated that positive ions produced the opposite effect by blocking the action of monamine oxidase, causing blood serotonin levels to rise.

Dr. Felix G. Sulman, head of the department of Applied Pharmacology at Hebrew University in Jerusalem, corroborate Krueger's findings when he discovered the underlying cause behind the unpleasant symptoms experienced by people that are sensitive to hot desert winds. These winds, also known as the infamous "witches' winds," are synonymous with the winds of Sirrocco in Italy, Sharkije in Egypt, Sharav in the Middle East, the Foen in Central Europe, and the Santa Ana in California. **He found that the high concentration of positive ions that are carried by these winds would stimulate an over-production of serotonin and histamine in their bodies, causing allergies, migraines, difficulty in breathing, irritability, and anxiety.** In addition, he found that **an excess of positive ions would also stimulate the production of adrenaline and noradrenaline, which initially induces a state of euphoria and hyperactivity, but quickly leads to depletion, exhaustion, anxiety, and depression.** Although serotonin is extremely crucial to the functioning of our bodies, he concluded that these "weather sensitive" individuals were producing too much and were being poisoned by their own serotonin. He thus coined the term "Serotonin Irritation Syndrome."

Dr. Sulman also studied the biological effects of artificially produced positive and negative ions. When he exposed a group of people to high-density positive ions in an enclosed room, they became irritable and fatigued. Yet these same people, when exposed to high-density negative ions, experienced increased alertness and relaxation. They also exhibited slower and stronger brainwaves (alpha waves), which were recorded on an electroencephalogram.

During the past 100 years, there have been dozens of studies published in respected journals - all reporting

the beneficial effects of negative ions. Below are a few examples.

### 1935 Journal of Industrial Hygiene

#### The Effect of High Concentrations of Light Negative Atmospheric Ions on the Growth and Activity of the Albino Rat

Researchers Herrington and Smith found that rats displayed a significant increase in activity (measured by an activity wheel) when subjected to a negative ion concentration of 1.2 million ions per cubic centimetre.

### 1965 Psychophysiology

#### Behavioural Effects of Ionised Air on Rats

Researchers Duffe and Koontz studied the effects of negatively ionised air on the mental functioning of rats. They reported that their water-maze performance improved by 350%, showing a dramatic improvement in cognitive functioning.

### 1967 Journal of Comparative and Physiological Psychology

Allan H. Frey at the Institute for Research, Pennsylvania State University noted that animals were less inhibited and less likely to experience fear and anxiety when treated with negative ions. These results were similar to the anti-anxiety effects of Valium and Xanax.

### 1978 Ergonomics

#### Air Ions and Human Performance

Research was conducted at the University of Surrey, England to study the effects of artificial negative and positive ionisation on the performance of psychomotor tasks with 45 healthy adults. It was observed that negative ionisation showed a significant improvement in performance as compared to both positive ionisation and ordinary air.

## 1981 October issue of Human Factors

### The Influence of Negative Air Ions on Human Performance and Mood

Subjects who were exposed to a negative ion environment for fifteen minutes were more energetic and achieved faster time reactions on performance tasks than when they were in normal air conditions.

## 1981 December issue of Journal of Environmental Psychology

California State University asked over a hundred employees to keep daily records of their overall well-being for a three month period. **After the introduction of a negative ion generator into their office environment, employees reported an increase in overall friendliness, alertness, atmospheric freshness, and a significant reduction in the number of headache, nausea, and dizziness complaints.**

## 1982 August issue of Aviation, Space, and Environmental Medicine

### Subjective Response to Negative Air Ion Exposure

A double-blind study was conducted at the medical research laboratory at Wright-Patterson Air Force Base in Ohio to test the psychological effects of negative ions. One group of subjects stayed in a room under normal air conditions, while another group stayed in a room filled with negative ionised air. They were both confined for six hours and monitored. **The group exposed to negative ions were observed to be calmer, less irritable, less sensitive, and more responsive than the control group.**

## 1984 Journal of Abnormal Child Psychology

### Negative Air Ionisation Improves Memory and Attention in Learning-Disabled and Intellectually Handicapped Children

The cognitive abilities of intellectually handicapped children as well as 'normal' children were tested while exposed to a negative ion-rich environment. Short-term memory improved 8.4% for the 'normal'

children, 23.6% for the learning-disabled, and 54.8% for the mildly intellectually handicapped.

### 1995 February issue of Journal of Alternative and Complementary Medicine

Michale and Juan Su Terman, research psychologists at the New York State Psychiatric Institute at Columbia University, conducted a study to test the effects of high density ionisers on "**Seasonal Affective Disorder.**" Subjects diagnosed with SAD were seated three feet away from a high density negative ion generator that produced 2,700,000 ions/cubic centimetres for 30 minutes a day. About 58 percent of the subjects experienced total relief from symptoms of depression. Dr. Terman believes that high density ion therapy seems to be as effective as antidepressant medications.

Only since the 1930s have researchers been fully probing the secrets of Negative Ions.

## POSITIVE IONS IN THE 20<sup>TH</sup> CENTURY

*" People are allergic to the 20th Century," said Bio-Environmental Systems President William Radley. " Our architects and interior designers are poisoning us. Some people are so sick, or so intolerant of chemicals, that sometimes the results of ionisation are quite dramatic."*

Since the 1950s, manufacturers have produced dozens of ion generators for laboratory and home use. Early machines ionised atoms and molecules via high-voltage electrical fields, incandescent materials, ultraviolet light, x-rays and alpha or beta radiation from isotopes. The output of the electrostatic, incandescent, and ultraviolet generators tended to deteriorate rapidly. In addition, electrostatic and ultraviolet machines produced ozone, a toxic oxygen allotrope, as a by-product.

Dr. Krueger - the University of California - used tritium-based generators during the 50's. Tritium is a beta radiating hydrogen isotope with a half-life of 12.5 years. A minute amount of the gas is sealed in zirconium and deposited on a stainless steel foil. An electrical potential difference varying from 300 to 2000 volts DC is used to separate positive ions from negative ions before they recombine in the plasma. Tritium machines allow precise dosages, but unfortunately tritium is so dangerous that it's illegal (except in fusion power plants). The tritium generators manufactured during this period were seized by the FDA.

During the 1960s, ion collectors drew air through an electrostatic field between parallel plates or concentric cylinders: the ions were collected on the plates. Present ion units apply a high voltage electrical signal directly to the air to create an intense electric field around the emitters.

Why not set up a monster ioniser over every city? Well, safety dictates a size limit. Dr Robert Massy of the University of the Trees reported at the Ions and Light Conference that, whereas a 5 ,000-volt machine produces less than .05 parts per million of ozone (the

limit allowed by the FDA), extremely high-voltage units invariably fail to meet standards.

Ion-wise, generators have been popular in the world for decades. **In World War 11, Luftwaffe planes were negatively ionised by electric field generators, in order to reduce pilot fatigue. And it worked!** Electric field generators are like female ion generators: instead of ejecting ions, they attract them. Germany and the USSR use them in government buildings, hospitals, schools, factories, restaurants, health spas, beauty salons, homes, offices, cars and trucks.

The U.S. has equipped nuclear submarines with ion machines. Ionisers are being used industrially in auto spray paint booths, food processing plants, grain storage bins and chemical spray factories.

Architects and designers are beginning to see the health benefits from fountains and rooftop solariums placed in urban environments, echoing the wisdom of their forefathers in the Roman culture. The growing recognition of our biological needs amidst our artificial interiors is opening up whole new industries armed at replicating nature indoors. In addition, we could all take Rosenberg's advice and wear underwear of polyvinyl chloride to attract neg-ions. From BVD's to PVC's then, it's the negative ion generation!

Several machines are now on the market for home and office use ranging in cost from about \$100 to several thousand dollars You just plug them in and they ionise away. But, here are some considerations to keep in mind if you purchase a cheap machine. If something or someone is between you and the generator, the ion count around you will drop. If you and the machine are in contact with the same dielectric material (as for instance, if it and your arms are on the same desk), a charge will build up between you and it, and this charge will repel ions. (This doesn't happen with the latest quality machines.) Also, your own static charge will often repel ions, especially in dry indoor wintertime air. **Synthetic clothing absorbs ions: wear cotton or wool, which have neutral charges.**

## Electronic Smog Carriers in the 21<sup>st</sup> Century

At the beginning of 21st century, we can hardly imagine living without many electric devices. They have made it easier for us to work in the office and at home.

However, we do not realise that they are also a source of very harmful positive ions the so called “Electric Smog”.

In closed air-conditioned rooms where a few people work at the same time the amount of negative ions may fall to as low as 20/cm<sup>3</sup>. Where we know that the positive effect of negative ions can be experienced on a visit to a salt mine, by the sea or walking right after the storm. But very few of us work in a salt mine, or by the sea and surf. We should know how important it is to make sure that harmful effect of electric smog is reduced to a minimum in the rooms where we work.

These devices are getting so small that we can even carry an entire office around in our jackets! I was recently talking about this very subject with a friend and commented that his jacket would be worth a couple of hundred dollars, but all the equipment he carried around in his pockets was worth thousands. Among these items were: his mobile phone; his GPS (removed from the car for safety); his palm pilot; new model video ‘thingy’; etc. etc. etc. And this was a social outing – not a work function where I am sure he would be carrying even more electrical gadgets. You only need a few people like him in a room, and that will be the end of all the negative ions!

The cheapest and simplest method of fighting against electric smog is to air rooms regularly, particularly those where few people stay together and have many computers and electronic resources. With so many high rise office blocks with sealed windows, this is impossible.

## Negative Ions Creating Positive Vibes from [TheUniverseWithinUs.com](http://TheUniverseWithinUs.com)

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One positive component of the 21<sup>st</sup> century is mobile computers and broadband. Hopefully we will be seeing more office workers leaving their 'sick buildings' and working on their laptops in the parks, or at home where they can control the negative ions and increase their comfort and work productivity and concentration.

The effect of air ionisation by salt originates from physical and chemical properties of salt, discovered many thousands of years ago.

**I my opinion, you can't beat a natural 250 million year old Himalayan Salt Crystal Lamp.**



### **IN SUMMARY - IONS HAVE BEEN AROUND FOR EONS.**

Science has had its eye on the ion for over 100 years. But public ignorance, generally non-ionised interiors and lack of generator standards, is the hallmark of a science and industry still in its infancy. Dr. E.R. Holiday thinks we know as much about air today as we did about 100 years ago when biochemists thought proteins, fat and carbohydrates were all we needed. **Then a substance was discovered that prevented rickets: the first vitamin. Ions might well be, as Holiday suggests, "the vitamins of the air."**