

HEALTH AND STRESS

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THE HEALTH EFFECTS OF SUBTLE ENERGIES

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"Subtle energy" has become a progressively popular phrase over the past few decades, but what does it refer to? Like stress, it is difficult to define, much less measure. And, as Lord Kelvin, the 19th century physicist who defined the lower limit of temperature as absolute zero emphasized, "When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge of it is of a meager and unsatisfactory kind; **it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced it to the stage of science.**"

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According to scientists, all of the energy in the universe is derived from four sources: the strong nuclear force (an atomic bomb), weak nuclear force (radioactivity), electromagnetic forces (electrical or static magnetic fields) and gravitational forces (the attractive power of all masses in the universe to each other, and the earth's mass to bodies near its surface. Save for earth's gravity, electromagnetic forces account for most of the manifestations of energy we experience in our daily lives.

For primitive man, energy was in the wind, waterfalls, running rivers and streams, the ocean's waves, and sporadic bursts of lightning. These were forces in motion that could be seen or felt. There was also another abstruse and invisible type of energy that made it possible for living things to move, or plants and trees to grow. Today, we tend to view energy in terms of electricity and the various ways it can be harnessed to provide light, heat,

cold, and perform mechanical work. Indeed, the term "energy", is ultimately derived from *érgon*, a Greek word meaning "work". The addition of the prefix "en" was the basis of *enérgeio*, a noun used by Aristotle to conjure up the image of something that is active and lively. This is kinetic energy, or the energy of motion. However, **energy also includes the capacity for doing work**, which can exist in many different forms that have no visible motion. Energy stored in a compressed spring or battery is referred to as potential energy. A mass high above the ground, such as a wagon at the peak of a very steep hill, has gravitational potential energy that is increasingly transferred to kinetic energy as it travels back down. Electrical charges possess electrostatic potential energy that can also be converted to work by anything that causes them to move toward or away from each other.

One characteristic of electromagnetic energy is that it is always in motion, and that as it is expended, some of it is changed to another form. Heat, light, and electricity can be converted back and forth into each other or into mechanical energy that is either kinetic or potential. As its name implies, thermodynamics refers to the nature of heat and its conversion to chemical, mechanical, or electrical energy. The first law of thermodynamics is that **energy can never be created or destroyed. It can only be transformed**. The second thermodynamic law is that during the conversion of energy from one form to another, some of it is degraded, or "lost", with respect to its availability to do work. This process, which is called "entropy", is the reason perpetual motion is not possible in a closed system. Albert Einstein used the illustration of a roller coaster ride to explain entropy. A car develops potential energy as it reaches the top of the first loop which is converted to kinetic energy as it accelerates to earth. As the car ascends the next steep incline it acquires potential energy as it progressively resists the force of gravity on its way to the top. During its subsequent descent towards the earth, this stored potential energy is again converted into kinetic energy, and this sequence of events is repeated over and over, with potential energy being maximal at the top of each successive loop. If its conversion to kinetic energy was absolutely complete, then the car would always attain the same height on its way up and the same speed going down and we would have perpetual motion that did not require any other source of energy. However, this doesn't happen because of friction between the wheels of the car and the rails that creates heat. The more friction there is, the greater the amount of heat that is generated, but this heat energy is not available as work that will help power the car, and thus represents entropy. We know that energy is never lost or destroyed, and this heat energy is conducted to connecting structures or back into the environment by radiation or convection. Entropy occurs in all energy transactions, but what about subtle energies? Are they also subject to thermodynamic laws?

What Are Subtle Energies, Where Are They Located And What Do They Do?

The energy contained within a system by virtue of the forces between its constituent atoms and molecules is called internal energy. The internal energy of certain chemical systems can be converted into mechanical forces, such as when gasoline is burned in an engine to propel a car or plane. These energies can be readily measured in terms of mechanical work that is being performed or can be performed. They are expressed as a number, or a point on a scale that has magnitude, but not direction. Some energy measurement units are identical to those used for work, such as ergs, joules, watt-hours and foot-pounds. However not all forms of energy can be converted into these units or accurately measured by other methods. This is especially true for closed and complex biological systems like the human body, in which a variety of different chemical and physical forces are constantly interacting. Subtle energies seem to be outside the realm or range of any of the above. They refer to **esoteric and ethereal forces generated within the body or similar ambient energies that cannot be appreciated other than by their varied effects on the body.** Although such faint forces may be beyond the range of human perception save for hypersensitive individuals, many believe they can be harnessed to improve both physical and mental health.

This notion is hardly new. Thousands of years ago, the Chinese developed a system of medicine based on the premise that health depended on the orderly circulation throughout the body of a vital energy called *Qi (chi)*, with its complementary *yin* and *yang* components that maintained equilibrium. Illness resulted when the level of *chi* was deficient, its normal flow was blocked, or the balance between *yin* and *yang* was disturbed. Our oldest extant medical text, *The Yellow Emperor's Canon of Internal Medicine*, which dates back 4,000 years, explains how such perturbations could be corrected by inserting needles (acupuncture), applying heat (moxibustion), or lodestones (magnetic fields), at specific sites where these pathways (meridians) were close to the skin. In some instances, deficient levels of *chi* could be corrected or the balance between *yin* and *yang* could also be restored by specific foods or herbal preparations. The ancient Chinese believed that *chi* was pervasive in all of nature, including the air we breathe, but that it was beyond our perception or even comprehension. The Chinese sage Lao Tsu described *chi* as follows:

Look, it cannot be seen - it is beyond form.

Listen, it cannot be heard - it is beyond sound.

Grasp, it cannot be held - it is intangible."

While Western medicine has generally disregarded or scoffed at such beliefs, the therapeutic benefits of acupuncture, certain magnetic fields and some herbal therapies have been increasingly verified. Acupuncture points known

since antiquity have been shown to have electrical conduction characteristics different from skin sites a few millimeters away and acupuncture is recognized by the World Health Organization as being effective in a wide variety of disorders. The FDA has also approved acupuncture needles as medical devices for use by licensed practitioners to treat pain and nausea.

Dynamic internal and environmental energies analogous to *chi* have resurfaced over the centuries as *prana* in Ayurvedic teachings, Paracelsus' *archaeus*, Newton's cosmic aether, Mesmer's "universal fluid" and "animal magnetism", the Odic force of Reichenbach, Brunler's biocosmic energy, and Reich's orgone. These can also purportedly be utilized to treat disease and enhance health along with other subtle energies such as faith healing, intercessory prayer, the "king's touch" and laying on of hands, as well as therapeutic touch healing that does not require any physical contact.

One of the first organizations dedicated to the scientific investigation of the existence and nature of these and other poorly understood forces was The International Society for the Study of Subtle Energies and Energy Medicine (ISSSEEM), founded in 1989 under the aegis of Dr. Elmer Green. A pioneer in biofeedback therapy at the prestigious Menninger Foundation, Elmer's emphasis was on how such feeble forces could influence "the experience of consciousness, healing, and human potential." Along with his wife Alyce, he did extensive studies of yogis who allegedly could consistently perform supernatural feats in many of these areas. A Himalayan yogi, who was investigated at Menninger by a team of specialists, **could predictably move needles 5-10 feet away by just looking at them.** In another experiment in which he had stopped his heart, the supervising cardiologists became alarmed about his ECG and halted the study after 16 seconds. The yogi reassured them that **he could stop his heart for 15 minutes** if he had two days time for yogic preparation and fasting, but his request was refused. At one of our Montreux Congresses, in which Elmer gave his Hans Selye Award lecture, "The Detection and Measurement Of Subtle Energies", he demonstrated that a **healer's energy could produce changes of 80 volts or more in EEG (brain wave) tracings of an invisible subject seated 10 feet away in an enclosed and shielded booth.**

At a prior Congress honoring Dr. Yujiro Ikemi for his studies of spontaneous remission in cancer and other deadly diseases, the audience was amazed at how **Chi Gong masters could raise the temperature of water, change the taste of scotch, and repel anyone approaching them without any physical contact, merely by focusing their chi energy.** We also learned that Japanese scientists were using electron microscopy, very sophisticated imaging and novel sensing techniques to determine the mechanisms that mediated these phenomena and why these exceptional powers are highly

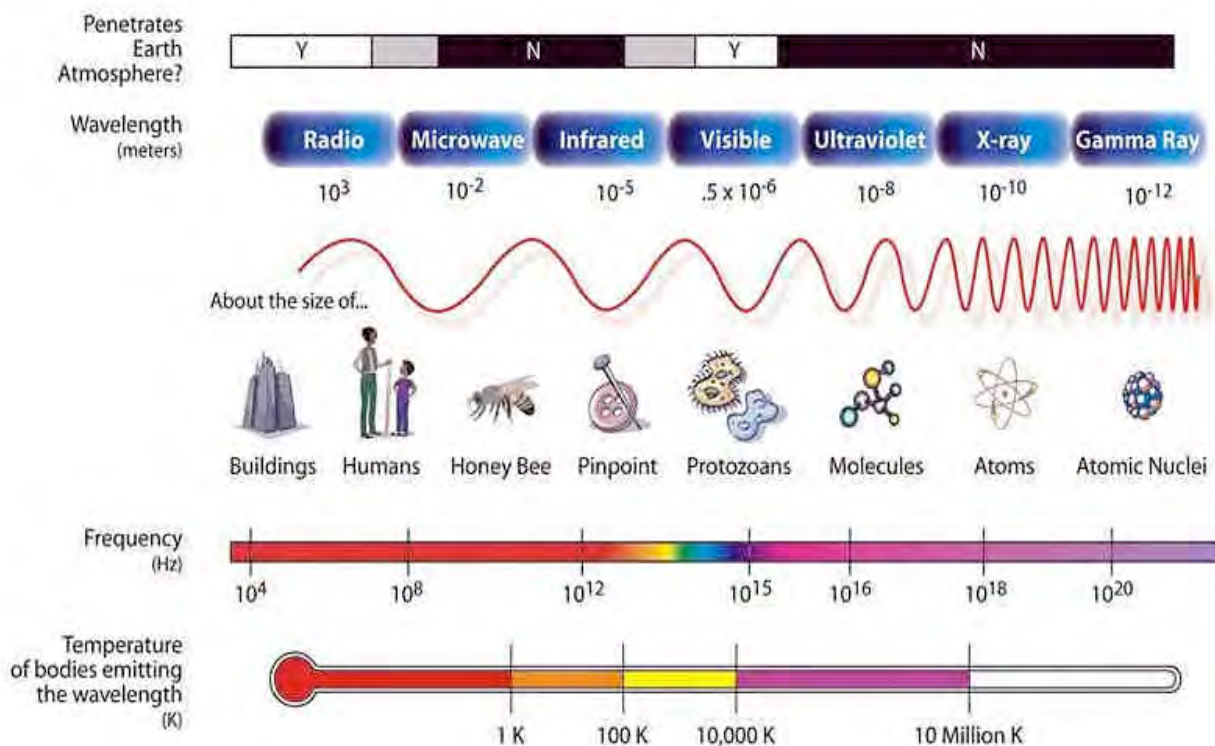
developed in certain individuals. If they lie dormant in each of us, how can they be activated? Other Congresses featured Björn Nordenström's "electrical circulatory system", Boris Pasche's Symtonic Low Energy Emission Therapy, Daniel Benor's Wholistic Healing, Stewart Wolf, Robert Ader and others on the nature of placebo responses, Richard Gerber's "Vibrational Medicine", Michael Haslam's Somlec electro-sleep and stress relief therapy, Norman Shealy's "Energy Medicine" and "Ring of Fire" acupuncture sites, Roger Coghill's magnetotherapy, cranioelectrical stimulation therapy by Daniel Kirsch and Saul Liss, Demetrio Sodi-Pallares' magneto-metabolic therapy, Jacques Benveniste's "memory in water", bioenergetic diagnosis and healing by Mietek Wirkus, Peter Huebner's medical resonance therapy music, Holosync and other auditory stress reduction approaches. Some of the above have been found to be effective in treating certain cancers.

Remote Viewing, ESP, Electromagnetic Fields And Subtle Energy Life Auras

The problem is there is no definition of subtle energy that everyone agrees with. In 1972, two renowned physicists, Hal Puthoff, who was interested in gravitational forces and levitation, and Russell Targ, a pioneer in the development of lasers, embarked on a 23-year, \$25-million research program to research paranormal psychic abilities at Stanford Research Institute. Federally funded, it was classified TOP SECRET, since it was designed to determine whether such powers existed, and if verified, whether they could be utilized by the CIA, Defense Department and others in the intelligence community. One of the individuals studied was Uri Geller, who could bend spoons, describe drawings hidden in envelopes, and make watches stop or run faster, by using the strength of his will power. Another was Ingo Swann, who was investigated at the Stanford department of physics while a quark-detection experiment was in progress. He was able not only to perturb the operation of a magnetometer located in a vault below the floor of the building shielded by mu-metal, an aluminum container, copper, and a superconducting shield, but also drew a fairly good facsimile of its unpublished, complex structure. Pat Price and others were able to sketch reasonable replicas of U.S. secret military facilities and foreign installations, as well as information about the contents of their interiors and code words, when given only their approximate longitude and latitude.

But in addition to these remote viewing" and other ESP phenomena, T.M. Srinivasan, co-founder of ISSSEEM, suggested that subtle energies should include components of the electromagnetic spectrum that affected biological systems, but were of such low intensity, that these effects could not be accurately measured. It is important to understand what he meant by this.

THE ELECTROMAGNETIC SPECTRUM

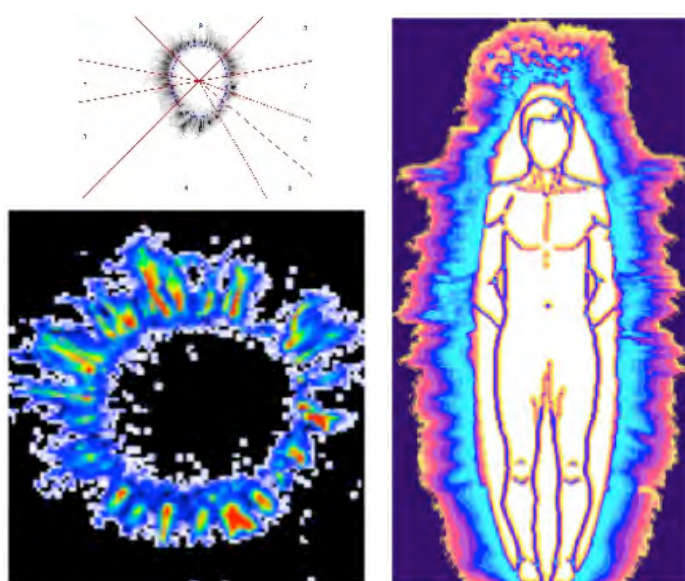


Electromagnetic energies vary in wavelength and frequency, all travel at the speed of light, and save for radio waves and visible portions of the light spectrum, are not perceived by people, but may be by other forms of life. Many animals and fish can often detect the onset of a hurricane or other natural disaster before it occurs due to sudden and subtle electromagnetic changes in the atmosphere. The major characteristic of any electromagnetic field (EMF) is its frequency and corresponding wavelength. Frequency refers to the number of oscillations or cycles per second, whereas wavelength refers to the distance between one wave and the next. As illustrated in the above diagram, the two are also inextricably intertwined: the higher the frequency the shorter the wavelength. Electromagnetic fields affect us in different ways depending on their frequencies. This is especially true for those that have been created by man and can be administered in pulses with varied frequencies. It has long been known that some of these artificial fields, such as those emanating from high power lines, can be carcinogenic. **It has now been established that others have anti-cancer effects.**

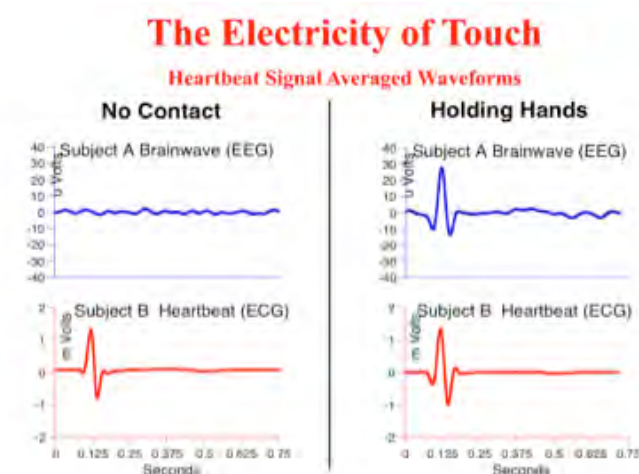
However, our emphasis in this segment will be on subtle energies that are generated from within that appear to be maximal with robust health, are barely detectable during severe illness, and can be influenced by emotions. While difficult to measure, they can be sensed by those who are sensitive to such forces, and visualized with special techniques as illustrated below.



Left – Kirlian photograph of the energy from a healer's finger tip at rest prior to a healing session
Center- Kirlian photograph of the same finger tip energy during a healing session. Note how the normal light blue emanations now become orange and yellow that extend out much further
Right – Kirlian photographs of the energy from the finger tips of a boy and girl in a passionate embrace showing intense white energy projections not present at rest. (Compare with left)



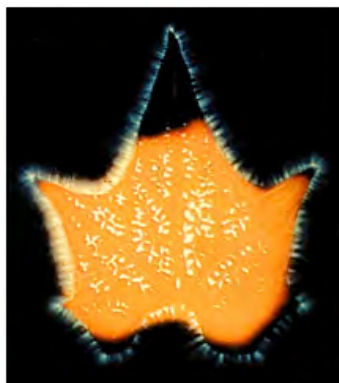
Gas Discharge Visualization (GDV) photographs
Upper left – normal finger pad energy aura
Lower left – finger pad aura during faith healing
Center – energy aura around a healthy body
(Courtesy of Dr. Konstantin Korotkoff)



Signal averaged waveforms showing detection of electromagnetic energy generated by Subject B's heart in Subject A's EEG. Left - subjects seated four feet apart with no physical contact. Right – while subjects were holding hands. **This response is also seen with no physical contact in subjects seated less than three feet apart.**
(Courtesy of Dr. Rollin McCraty & HeartMath)

All cells, tissues and organs emit their own varied frequencies. The heart's electromagnetic field, which is 5,000 times stronger than the brain's, can

extend three feet around the body and affect others within this range. As seen above, GDV photos show an energy field or aura surrounding the body that rapidly diminishes in strength with increasing distance, similar to the static fields that are concentrated around the poles of a permanent magnet.



These energy fields are considered by many to represent the basis of health and life itself, since they seem to be more prominent, uniform and extend out further in healthy robust younger people than those who are ill or elderly. They can also be seen around all living things, including plants, and disappear with death. The Kirlian photograph to the left shows this life field around a leaf whose top had just been cut off. Despite this, the aura of the missing piece can still be seen before it gradually fades away.

Harold Saxton Burr's "L-Fields" And The "Electrodiagnosis" Of Cancer

George Lakhovsky proposed the theory that the basis of life was not matter, but rather electrical vibrations that provided energy. In his 1925 *L'Origine de la Vie*, he wrote that all living things emitted energy, and that cells were simply oscillating circuits that received and sent electromagnetic signals, much like the wireless radio sets that were popular at the time. Disease was essentially due to a disturbance in these frequencies caused by pathogenic microbes or other stressors that had more powerful vibrations. He also reasoned that if an injured cell's disturbed oscillation could be corrected, its health would be restored. E. J. Lund showed that plant growth was triggered by such signals rather than hormones or chemicals as was commonly taught.

Probably the most comprehensive investigations of these and allied topics can be found in the research conducted by Harold Saxton Burr, Professor of Anatomy at Yale. From 1916 to 1956 he authored or co-authored over 90 scientific papers, including "The electro-dynamic theory of life" and "Electrical characteristics of living systems". He had developed a vacuum tube microvolt meter to measure bioelectric phenomena and did extensive studies on trees for decades that showed how their growth was influenced by phases of the moon, sunspot activity and thunderstorms. Burr summarized much of his research in his 1972 *Blueprint for Immortality: The Electric Patterns of Life*, which contended that what he referred to as "L-fields" (fields of life) molded and controlled each organism's development, health and mood. Although invisible and intangible, these electrodynamic force fields could be mapped and measured to study physiologic processes and detect disease. His voltmeter studies of ovulation and menstruation later led to female fertility detection devices. As he wrote in his Foreword,

The Universe in which we find ourselves and from which we can not be separated is a place of Law and Order. It is not an accident, nor chaos. **It is organized and maintained by an Electro-dynamic Field capable of determining the position and movement of all charged particles.**

These "Electro-dynamic" L-fields determined the future format of all cells and tissues throughout the body, since although they were constantly being destroyed and rebuilt, they inevitably rearranged themselves in the identical patterns as their predecessors. In this respect, L-fields were analogous to magnetic fields that cause iron filings scattered on a paper held over a permanent magnet to arrange themselves in the magnet's force field pattern at both poles. If the filings are discarded, and new filings are substituted, they will immediately assume the same symmetrical pattern. Burr's L-fields acted like a similar matrix or mold to preserve the same shape of anything it contained, regardless of its previous form. As he noted,

When a cook looks at a jelly mold, she knows the shape of the jelly she will turn out of it. In much the same way, inspection with instruments of an L-field in its initial stage can reveal the future 'shape' or arrangement of the materials it will mold. When the L-field in a frog's egg, for instance, is examined electrically, it is possible to show the future location of the frog's nervous system because the frog's L-field is the matrix that determines the form which will develop from the egg.

And just as a cook who uses a battered mold would expect to find dents or bulges in the jelly, an L-Field with distorted voltage patterns might indicate the presence of abnormalities well in advance of any symptoms or signs.

He reasoned that if healthy cells had an L-field matrix that programmed normal tissue growth, then cancer cells with unusually rapid growth might have different field characteristics that might lead to an earlier diagnosis. In 1926, H. Frick and S. Morse had reported it was possible to differentiate malignant and benign breast tumors by their electrical characteristics and Burr began studying a strain of mice that spontaneously developed mammary tumors. He found large voltage changes in electrodes placed on the chest 10 days to 2 weeks before the tumors were detectable by other methods. In another strain prone to develop cancer after implants of malignant tissue, voltage gradients started to rise within 24 to 48 hrs. and increased to a maximum of 5mV around the 11th day, after which they fell. This increase corresponded with the period of most rapid cancer growth. Along with L.H. Langman, Burr measured changes in potential between a cervical electrode and one placed on the abdomen in patients admitted to New York's Bellevue Hospital for gynecological complaints. In 1947, they reported that 99% of those with documented cervical cancer showed electronegativity of the cervix, and in 1949, confirmed similar results in varied cancers involving the cervix, body of the uterus, ovary and vagina.

Why Some Energy Based Therapies Could Provide New Hope For Cancer

In 1959, Leonard Ravitz verified Burr's view that L-fields were strongly influenced by stressful emotions and mental processes. Robert Becker, considered by many to be the father of electromedicine, later mapped a complex energy field shaped like the body and the central nervous system that he called the Direct Current Control System, which also changed shape and strength due to psychological and physiological influences. Becker noted that cancer is rare in lower forms of life with remarkable regenerative capacities. If the tail of a salamander is severed, it will grow a new tail to replace it. When a chemical that causes cancer in humans is applied to the tail, it will also grow a new tail. If a frog cancer is implanted in the tail of a salamander, the malignancy will grow and metastasize. However, **if you sever the tail by cutting through the transplanted cancer, it, as well as all the metastases, will vanish as a new tail is regenerated.**

Becker found that electrically generated silver ions could also cause cancer cells revert to normal cells, so that both internal biomagnetic and external electromagnetic energies have this capability. The latter may seem strange, since **electromagnetic fields have long been known to cause cancer – but the same is true for radiation and chemotherapy!!** We have also seen the powerful anticancer effects of electromagnetic fields applied by Demetrio Sodi Pallares and Björn Nordenström's DC electrochemical successes. Cranioelectrical stimulation therapy, which is widely used for pain, depression insomnia and other stress related complaints was recently also approved by the FDA to treat certain brain tumors. The Symtonic low energy emission device is effective for treating anxiety and insomnia, but Boris Pasche has now shown how tweaking its output can cause regression of liver cancer or potentiate the efficacy of chemotherapy in other malignancies.

Our next Newsletter will have a focus on all the above and other achievements by physicians with impeccable credentials whose research has been published in peer-reviewed journals. It will also discuss the differences between man made electromagnetic and biomagnetic energies, how the latter may explain why some cancer patients do much better than others because of their "attitude", as well as spontaneous remission. More importantly, this may provide insights into how we can access our vast innate potential for self-healing — so stay tuned!

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