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Health, Love, and Happiness **(A View on What it is all About, How Things are Connected, and What this Dental Practice Offers)**

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During the journey through life, thoughts obtained along the way make us who we are. I studied dentistry, but also received a Master of Science degree in histology—the microscopic study of cells and tissues. By understanding a single cell, we can better understand the 50,000,000,000,000 (fifty trillion) cells that make up humans.

Having an interest in my family, their interests became my interests. My wife Alexandra—introduced me to self-awareness, my daughter Athanasia—education, my daughter Eleni—the mind and psychology, my daughter Nikol—followed my footsteps into dentistry, my daughter Argiana—currently studying to be a naturopathic physician, while my son Alexander is still deciding on his future. Each one's field has contributed to my thoughts and has helped me grow.

To achieve a deeper understanding of the principles behind our dental practice, continue reading the various topics:

- *Cell Awareness*
- *Genetics vs. Environment*
- *Energy*
- *The Mind*
- *Growth and Protection*

Otherwise, those only interested in the philosophy of our dental practice read the last category "*How Our Dental Practice Applies these Principles.*"

By connecting many ideas, this paper is mainly about survival by promoting health and growth with the goal of a more meaningful, happy life. Try not to get turned-off by the section on cells. Challenge yourself and as you work through the sections, the paper will become increasingly more interesting. I understand this paper is not for everyone, but whoever takes the effort to read and reread, may be rewarded with a new insight. There are many subtle, powerful messages that may touch and inspire. For those who are open-minded and willing, this paper could be very helpful and perhaps life changing.

I would like to make a comment before beginning, which will make more sense if the paper is read. To me, Protagoras—an ancient Greek philosopher—made one of the most profound statements: “man” (and maybe more specifically man’s mind and heart) “is the measure of all things visible and invisible.”

Cell Awareness

Since we are concerned about health and life, we begin with *cells*—the basic unit of life. Cells are aware of their environment. To more easily understand cells, consider them little people. For our purposes, the basic parts of a cell are the *cell membrane* that acts like a skin surrounding and protecting the cell from the outside world, the *cytoplasm* which is a gel-like substance that contains small *organelles* and a large organelle called the *nucleus* that contains DNA—just like our body has its organs and organ systems.

Individual cells perform the same functions as our human body, such as digesting, excreting, reproducing, etc. **Cells demonstrate intelligence with the intent to live and survive.** Single cells can be removed from a human and placed into a culture, surviving on their own. They can intelligently analyze the environment around them, and respond in a manner that promotes their survival. Interestingly, when the *nucleus* and its genes are removed from a cell, the cell can still survive for a few months, but when the *cell membrane* (its protection from the outside world) is destroyed, the cell will die immediately.

For this reason, a special emphasis needs to be made of the *cell membrane*, since this histological microstructure (that exists in all living cells) controls what enters and exits the cell. **The signal the *cell membrane* receives from the environment affects the behavior of the cell.** Single cell animals, such as bacteria and protozoa, breathe, eat, digest, excrete waste products, and have a neurological component which can sense the location of food. The cell can move to the food location and the *cell membrane* then allows selected nutrients to enter the inside of the cell and waste products to exit the cell. The neurological components of cells are called *receptor* proteins and *effector* proteins, located within the cell membrane.

The *receptor* proteins are similar to our sensory organs, the equivalent to our eyes, ears, nose, taste, touch organs, and nervous system. These receptors appear to have micro-antennas which extend both inward and outward of the cell membrane to monitor what is happening on the inside and outside of the cell. The signals can be physical molecules and/or energy fields, such as light, sound, heat, and radio waves. So, biological behavior in cells can be controlled by invisible energies (which we will discuss later). In humans, invisible thoughts can affect our behavior. The *receptor* proteins are just the first part of the *stimulus-response* reflex mechanism, providing only the awareness.

In the second part of the *stimulus-response* reflex mechanism, the *effector* proteins respond with an action that supports life. The genes in the nucleus act as a blueprint to

produce life-sustaining proteins. Together, the *receptor-effector* proteins perceive the environment and influence the cell's behavior. They work similarly to our nervous system and brain. In evolution, more and more *receptor-effector* complexes were added to the cell membrane until no more could be added to a single cell. To become more intelligent and increase awareness, cells started working together to form united multicellular communities, and eventually humans. As more cells work together to interpret the signals of their environment, their chances for survival increase for both the individual cell and for the community of cells.

The ability to grow and survive depends on how fast cells in humans can react to a continuously changing environment.

Genetics vs. Environment

We are all familiar with Darwin's Theory of Evolution based on chance determining the traits being passed down from parents to children. Our society has come to believe that genes control everything about us—how we look, how we feel, how we behave, how we think, and how happy we are. Erroneously, people think genes control our lives with us being victims to our genes.

In contrast to Darwin's theory emphasizing life's competitive nature, portrayed by his "survival of the fittest", a new emerging thought is **emphasizing life's cooperating role** with other life—the environment, our planet, and the universe. To eventually evolve to a human, more and more cells learned to **cooperate** with each other in order to gain a better awareness of the environment and increase their chance for survival.

DNA provides the blueprint for what is capable, but the environment controls which gene activity will be expressed. A new science, *Epigenetics*, studies how signals from nature or awareness of the environment can select, modify, and regulate the activity of our genes, ultimately influencing the behavior of our cells. The significance is that **by changing our environment we can change a gene's activity**. An example is when cells develop antibodies, protective proteins to hostile stimuli, to protect the cell. Environmental influences, such as nutrition, stress, and emotions can modify which genes are activated. In short, *Epigenetics* teaches us how signals from the environment control the expression of genes.

Regarding the health of cells grown in a culture, cells living in a **healthy** micro-environment flourish and thrive. In a substandard environment, they do not do as well. **When the environment is once again modified to promote health**, the cells are revitalized. When humans play the victim of the heredity role, they handicap themselves

from living a **healthy and happy** life. Only about 2% of disease can be attributed to defective genes. Most people have genes that would allow them to live a **healthy and happy** life.

Energy

Everything in the universe is made from energy. Einstein showed that mass (m) and energy (E) were interchangeable in the formula $E=mc^2$. He showed that **matter is a form of light**, since light can act like waves (energy) or a particle (mass). In our visible world, a tree looks like a tree, but if the atoms are viewed closer, they would look like hazy spheres. If we looked even deeper into the atom, we would see nothing since atoms are made of invisible energy with no physical structure.

When scientists view and try to split the smallest elementary energy particles of an atom, the result is two smaller divided particles of the same size and shape. These particles have the ability to communicate with each other over time and space. If one of the twin particles changes its spin, so does the other particle. This discovery explains Bell's Theorem that states once atomic entities are connected, they are always connected. This implies that everything in the universe is connected. More surprisingly, if a scientist that is viewing these energy particles changes his thoughts, what he observes also changes. For example, the scientist could change the direction of the spin of these energy particles just by his thoughts.

Every material in the universe radiates its own unique energy vibration, including humans. Energy vibrations play a role in health and disease. Modern instruments such as 3D scans and MRIs can detect disease non-invasively by differentiating the energy difference between healthy and diseased tissues, as in mammograms. Diseased tissue emits a different energy than healthy cells.

Cells and larger living organisms must be able to receive and interpret environmental signals to survive. The faster the signals transfer, the better the chance to stay alive. Electromagnetic energy signals move at 186,000 miles per second, whereas chemical diffusion moves at about 1 centimeter per second. Energy signals are so much more efficient and faster than chemical signals. The significance will become more apparent when we discuss growth and protection.

Unfortunately, scientists have not pursued energy solutions as a therapeutic treatment, preferring the use of chemical drugs. There is enough scientific evidence that **energy wavelengths can be tailored as therapeutic agents**. In dentistry, lasers are being used to provide this benefit.

Essentially, humans are fields of energy. We seek additional energy from other people. Where our attention goes, our energy flows. When two people give their attention to each other, they combine their energy fields. Often their energy combines positively (*constructive interference*) and both share high vibes, but sometimes negatively (*destructive interference*) when two people are in an argument. If one individual dominates by getting the other person to see the world his way, the dominating individual captures both energies as his own. He feels a rush of power, security, and self-worth, while the other individual feels anxious and drained of energy.

There are times we feel elated and powerful with high self-worth, especially during positive thoughts. These are moments of constructive energy. Other times we feel anxious and afraid, drained of our energy, overpowered by our negative thoughts. These are moments of destructive energy. The human mind is a form of energy.

In experiments containing sealed bottles of rice, children passing by the bottles expressed either a positive or negative thought towards the bottles; consequently, over time, in the jars receiving the positive thoughts, the rice remained white, while in the jars receiving negative thoughts, the rice turned black. In another experiment involving prayer, patients prayed for by others, improved their health more than those not receiving a prayer.

The Mind

Beliefs and thoughts can control our biology. To understand this statement, let's review the two parts of the mind—the *conscious* (forebrain) and the *subconscious* (hindbrain). The **conscious mind is our “manual pilot”** and the **subconscious mind our “autopilot.”**

The conscious mind is the creative part of our brain that looks into the past or future and can even ignore the present as it directs thoughts. The conscious mind contains our wishes, our desires, and our hopes. It can shift our mind's energy to positive, life generating thoughts.

The subconscious mind deals with *stimulus-response* reactions learned from our past experiences or our instincts. It responds the same way over and over to life's signals. **The subconscious mind is more powerful than the conscious mind, controlling 95% of our life experience;** while the conscious mind runs the show about 5% of the time. The conscious mind processes 40 environmental stimuli in one second; while in the same second, the subconscious mind can process 20,000,000 stimuli. The subconscious mind observes the surrounding outside world and the body's inside world, immediately engaging

in previously learned and acquired behaviors without the awareness, supervision, or help of the conscious mind.

Both minds work together. When learning to ride a bike or drive a car, the conscious mind focuses to learn and program the new behaviors into our mind. After learning these skills, we never forget how to ride a bike and can drive a car from home to work daydreaming, while our subconscious mind performs the task. The subconscious mind takes over when the conscious mind is not paying attention.

Unfortunately, the attitudes, beliefs, and behaviors learned from others, present in our subconscious mind, may not support the desires, hopes, and goals of our conscious mind. **The biggest obstacles to achieving success are the limitations programed into our subconscious mind, which can have a significant role in our health.**

Even if we have current positive thoughts that we are wonderful, but as a child heard that we are useless, our subconscious is hard to override to change our life. **The subconscious mind makes our everyday decisions, without us even being aware, preventing us from reaching our goals.** The subconscious mind was programmed when very young, often learning the true or false beliefs of our parents, family, and society without actual experiences. Children observe their environment, hardwiring their parent's beliefs, behaviors, and attitudes into their subconscious mind. As an important evolutionary advancement, there has been a shift to more consciousness, allowing the human brain to think, plan, make decisions and choose how to respond to environmental signals and emotions. Emotions are the chemical communication experienced by all cells in the body. The subconscious mind works in the now, often responding to programmed misconceptions, which we can consciously change if we make the effort.

Our conscious mind can change our beliefs (*free will*) as evidenced by the *placebo effect*. Many studies have shown if a person believes he is taking medication to treat a health issue, his health often improves as much as the person actually receiving the medication. Your mind can work miracles. Conversely, your mind can believe negative thoughts, and damage your health (*the nocebo effect*), such as when a doctor says you only have so much time to live or your condition can't be treated. Henry Ford said, "*If you believe you can, or if you believe you can't...you're right.*" However, you can choose what to believe and our beliefs control our lives. **We can choose a life full of love or a life full of fear, and our body will respond by growing in health or compromising our health.** Only thought energy can change our subconscious mind. Napoleon Hill said, "We are the masters of our fate, the captains of our souls, because we have the power to control our thoughts." How a man thinks, is how a man is.

Growth and Protection

Two mechanisms for all creatures to live and survive, including cells in humans, are *growth and protection*. In our human bodies, billions of cells wear out daily and need to be replaced, requiring food and energy. The cells in our body today are not the same cells we had five years ago, or even yesterday, however, **growth and protection cannot operate to their highest potential at the same time.**

Cells in a cultured dish (or to environmental stimuli in life) have three options. They can move towards nutrients to build up energy and grow, move away from toxins to protect themselves, or do nothing and remain where they are in a neutral position. The cell can either move towards or away from a stimulus, but cannot do both at the same time. Likewise, when humans shift to a protective mode, such as escaping from a charging bear, the energy needed healing and growth is shut down to be used for survival, such as running away from the bear. **In a sustained protective mode, more energy reserves are being used up and not replenished,** compromising our growth and health. This protective mechanism was not designed to always be turned on.

Human bodies have two separate protection systems. The first protects against external threats and is called the *Hypothalamus-Pituitary-Adrenal Axis* or *HPA axis*. The second protection system is the body's *immune system* protecting us from internal threats, such as bacteria and viruses. Either protective response consumes much of the body's energy supply, whether you are in a fight-or-flight response or fighting infections like the flu.

To simply explain the HPA axis, the hypothalamus perceives an environmental threat and engages the HPA axis by sending a signal to the pituitary gland, which in turn sends a signal to the adrenal glands to produce stress hormones as a response to the threat. In the bear-chasing-you scenario, the growth functions are suspended so the blood's nourishment can go to your arms and legs in the fight-or-flight response. In this situation, the HPA axis responds with a *stimulus-response* reflex mechanism due to the need for speed. This need for speed uses the quicker responding subconscious mind by redirecting blood (to provide nutrients and energy) from the forebrain (conscious mind) to the hindbrain (subconscious mind) since using reflex actions in emergency will increase the chance for survival.

This response decreases the ability to think clearly. So, when we are afraid and live in or with fear, we are dumber. This is seen with students that do poorly on a test, even though they know the material. Because of their fear, they cannot access their conscious mind's stored information. **This HPA axis has not been designed to be continuously turned on.** Even though today we don't have the same threats and fears from an attacking

bear, we do worry about our personal life, our jobs, our family, our money, the world, politics, the past, the future, our self-worth, etc. However, the body's response is similar—chronically elevated stress hormones. We live as if we are racers on the starting line, pumping adrenaline and stress hormones in our body, ready for action. The starter says “on your mark” and “get set” but never releases the “go” command. We live in a “get set world.”

These daily stressors in our lives (diseases and our chronic fears and concerns) constantly activate our HPA axis, priming our body for action. **There should be no surprise that almost every major illness has been linked to chronic stress.** This constant release of adrenal hormones results in a condition called *adrenal fatigue*. Some signs and symptoms include: difficulty getting up in the morning, continuing fatigue not relieved by sleep, lack of energy, increased effort to do everyday tasks, decreased sex drive, decreased ability to handle stress, increased time to recover from illness and injury or trauma, mild depression, light-headedness, less enjoyment or happiness with life, increased PMS, symptoms increase if meals are skipped or inadequate, thoughts less focused and fuzzy, memory less accurate, decreased tolerance, and decreased productivity.

The HPA axis is more powerful than the immune system. When the HPA axis is activated, the adrenal stress hormones repress the actions of the immune system to conserve energy reserves. In some cases, doctors purposely provide stress hormones to patients with transplants so their immune systems won't reject foreign tissues. The overriding of the HPA axis over the immune system also benefits survival because the brain must decide on the greater threat. If you are in a tent on a camping trip, suffering from an infection and diarrhea, there is no point to battle the bacteria and let the bear eat you. Your body stops the fight against the infection to survive the encounter with the bear. So we must realize that **stress activates the HPA axis, interfering with our ability to fight disease.**

Just as individual cells have an awareness to move towards growth and away from fear, or remain just where they are, as humans, we should move towards growth and away from fear. We are not victims of our genes. Changes in our environment (physically, mentally, emotionally, and spiritually) can promote our health. Self-awareness can change our thoughts and our thought energy can change our subconscious mind. The subconscious mind could be changed by *repeated autosuggestion*. Think it, say it, believe it, feel it, create it, even fake it, until you become it. Dominating thoughts (hopefully positive) in the conscious mind can reach and influence the subconscious mind. These thoughts must be mixed with feeling and emotions (desire, belief, love, enthusiasm, etc.) for the subconscious mind to act. Only emotionalized thoughts, not simply reasoning, have an influence on the subconscious mind. **You are what you feel and think you are.**

Try to move away from fear and towards love, since **love is the best growth promoter**. Change your awareness, change your environment, change your energy, change your mind, and change your stress and fears by changing your thoughts. **Love more, since the more you love, the happier you are**. You will live a fuller, more satisfying life; a healthy, happier life; and a joyful, loving, fulfilling life—a meaningful life. **Simple kindness and love to oneself, to all that lives, and to God, in the now, is the most powerful transformational force**. The way to master any skill is to practice the skill; therefore, the way to master love is to practice love. Love the trillions of cells in your body. Take care of them. The relationship you have with yourself reflects your relationship with others. So, love yourself and take care of yourself. You are the measure and judge of the visible and invisible world around you, the chooser of your own thoughts—physically, mentally, emotionally, and spiritually. To help, **look with and through the happy eyes of love with a loving heart**.

How Our Dental Practice Applies these Principles

Health and Happiness - Periodontics, Endodontics, Implant Dentistry follows scientific principles, based on research, with a holistic approach by caring about the whole person using dental techniques to achieve results that are optimal to maintain health in the body, mind, and spirit, to the extent that dentistry can contribute to these goals.

How does our dentistry maintain health in the body? Dental diseases includes mainly periodontal disease (affecting the gums and jaw bone surrounding teeth), endodontic diseases (abscesses and conditions regarding the nerves within teeth) and dental caries (decay that destroys actual tooth structure). In addition, there are hundreds of other diseases that can affect the mouth and jaws, some being life threatening, that often can only be definitively diagnosed with a biopsy. One may think the mouth is only a small part of the body, so what does it matter that I have decay or abscesses or bleeding gums? Periodontal disease has a strong correlation to heart disease, strokes, diabetes, respiratory problems, low weight babies, etc. Abscesses are a main source for septicemia (multiplication of bacteria in the bloodstream) leading to symptoms such as high fever, chills, system shutdowns, multi-organ failure and death. Tooth loss has been associated with shorter life spans—**people who have teeth generally live longer**. Small things matter. Anywhere on the body, if a melanoma is less than 0.6mm when removed, the survival rate for five years is 100%, but as the depth increases to 1.7mm the survival rate becomes only 60% and at 3.3mm only 25%. An individual with 28 teeth exhibiting gum disease has as much infection draining into his body as would drain from an infected wound 3 inches by 2.5 inches in size. Periodontal and endodontic infections can contribute to more serious infections in the body.

All disease, including oral disease, increases the production of stress hormones by the HPA axis often deactivating the immune system. At the subconscious level, the response is chronically elevated stress hormones resulting in the signs and symptoms associated with adrenal fatigue. Each cell in the body sends signals requiring a response, as many as 20,000,000 per second, through the subconscious mind. **When your body is in a protection mode, growth and health cannot operate to their highest potential,** since only protection or growth can operate optimally at one time. Stress interferes with our ability to fight disease and interferes with our mental, physical, emotional, and spiritual health.

Cells are aware of their environment. They monitor what is going on inside and outside the cell. Cells use their DNA blueprints to either grow or protect themselves. **Our practice aligns with *Epigenetics* by changing to a healthy micro-environment, allowing the cells to flourish and thrive, revitalizing them to promote growth and away from a protection mode, which is stress producing.**

Listing all the technologies that our practices uses to change the environment is listed elsewhere, but an example would be the use of electromagnetic energy in the form of lasers. The electromagnetic spectrum consists of bands of different wavelengths and frequencies including gamma rays, X-rays, ultraviolet light, visible light, infrared rays, microwaves, and radio waves. Generally, wavelengths above visible light are good wavelengths that can treat conditions depending on their pulse duration and depth. A laser beam is a frequency of electromagnetic energy of a single wavelength with all the waves in phase moving in one direction (constructive interference). Energy wave lengths can be tailored as therapeutic agents.

Three lasers are used in our practice. They include a diode laser (with a 940 nm wavelength), a Nd:Yag laser (with a 1064 nm wavelength), and an erbium or Er:Yag laser (with a 2940 nm wavelength). The diode laser is good for cutting and disinfecting. The deep penetrating Nd:Yag laser energy is superior for coagulation, deep infection, attacking pigmented bacteria, biostimulation (promoting healing by stimulating the mitochondria, the powerhouse of cells, warming the tissues and increasing blood supply) and photobiomodulation (treating oral lesions via laser energy). The Er:Yag is uniquely efficient in treating hard tissues, such as bone and teeth, sterilizing implant surfaces, cleaning and debriding root canal systems, destroying non-pigmented bacteria and pathogens and is also used to reduce wrinkles and treat the soft palate by opening the airway to improve sleep apnea and snoring.

The main point is different dental treatments require different laser wavelengths. Wavelength is important since specific body tissues interact differently depending on the particular wavelength. Very few dental practices make the investments to use the appropriate laser and technique for the appropriate tissue being treated.

Recognizing, treating, and preventing oral disease is one focus of our practice. The next concentration of our practice is to treat the ravages, the ruinous damages, of dental disease with our referring dentists or within our practice for non-referred patients. Tooth loss results in a diminished physical appearance of patients, often robbing the pleasures, confidence, and comfort associated with eating, smiling, laughing, and talking. Tooth loss results in bone loss in the jaws and facial structures resulting in an older, collapsed, and dilapidated condition.

By using the latest and appropriate technologies available, with the best of our ability to provide the highest quality of dental care, and recognizing that each individual has unique needs and wants, trying not to fit a patient into predetermined treatments, **Health and Happiness - Periodontics, Endodontics, Implant Dentistry** will use our best efforts to restore the patient to a functional and esthetic, good and truthful, restorative outcome. We have the explicit objective to first preserve a patient's natural teeth through periodontal, endodontic, and restorative techniques. If teeth need to be removed, we are devoted to preserving a patient's bone and facial structure through regenerative procedures and dental implants, using traditional and mini implants. To restore function, to better the appearance of a smile, to help a patient feel better and look younger and smile more often, we use an assortment of restorative modalities from the best laboratories we know. Our fees are not extraordinary when compared to other dental practices, but the range of treatments we can do is rare to find in one practice.

Our practice is flexible in execution, completing treatment plans in stages if needed, but **caring, serving, and loving** the patient enough to really give them what they need to have optimal dental health.

By promoting growth and survival, by clearing the body of some unneeded stress, by changing the environment physically, by eliminating disease and restoring function and energy, **Health and Happiness - Periodontics, Endodontics, Implant Dentistry** aspires patients to feel better about themselves and look younger and perhaps improve their self-esteem—by changing their thoughts about themselves, by loving themselves more, by becoming more outgoing with better social interactions, and by receiving the simple kindness and gratitude for being our patients. Smiles are contagious — good for one's health by reducing stress while blessing those on the receiving end. Smiling metaphorically hugs another person with love without even the slightest touch. Laughter is healing. Positive and constructive energy improves relationships, and good relationships make us happy.

Health and Happiness - Periodontics, Endodontics, Implant Dentistry chooses to align with beauty, *“to create beauty for those who appreciate beauty.”*