

# CHAPTER 1

## Everything Has a Frequency

*“We are slowed down sound and light waves, a walking bundle of frequencies tuned into the cosmos. We are souls dressed up in sacred biochemical garments and our bodies are the instruments through which our souls play their music.”* – Albert Einstein

Everything has a frequency. Even our bodies, the body cells can create and receive energy. This communication functions through energy, vibration is the message in that communication that functions by sending and receiving specific frequencies. That is how we make our music. When these natural frequencies become mixed up. So does the body's ability to self-regulate and maintain healthy functioning. We begin to feel unwell. Maybe we are more tired than usual or have a change in appetite. We may have a hard time focusing or concentrating. We may even become sick when this occurs, the body's frequency level or vibration must be changed. When we want to listen to a particular radio station, we need to tune into the correct frequency of that station to reach it. Our bodies are the same way. We need to tune into the correct frequencies to

reach the optimal state of being. As we go about our daily business in our biochemical meat suits that we call our body, what is the music we are playing daily as we go about our business, we call life?

It was shortly after 9:00am when my cell phone rang. I recognized the name on the caller ID as a former client. I had worked with her son nearly ten years before. He was having a difficult time in school. He was disruptive in the classroom, talked incessantly to others around him and had difficulty staying on, or even completing a task. I helped him gain his composure using neurofeedback training. A process of putting a cap with twenty electrodes on his scalp. It measured his brainwave activity. From the frequencies present and their location in his brain the patterns would show what was working too hard, as well as those frequencies that were not working hard enough. I had a special software program that would monitor the activity of the brainwave frequencies. I could setup a window of performance. If the frequency I wanted to either up-train if it was performing less than desired or down-train the frequency if it was over performing. This training would influence the dendrites of the brain allowing them to stay within the window of performance that I had setup. Doing this process again and again it would cause new neuropathways to be formed, like a highway in the brain to

traffic information and instructions. Thereby training the brainwave frequencies to develop on this new neuro highway that works better than the old one.

Sounds complicated right? For the client it is much easier. For them, they are simply watching a movie. The neurofeedback software would do all the work. It would transpose the brainwave activity to respond to operational window that had been setup. That brainwave activity was required to stay within the desired operational widow. If it did not, then there were consequences. Don't be alarmed, I am not talking about them being hooked up to a cattle prod to receive an electrical shock when brain did not perform in the desired window. It is somewhat less dramatic.

If the brain was performing either higher or lower than what the operational window was set at, the movie the client was watching would be interrupted very briefly. A different tone would come on if the performance was too high with a different sound if the performance was too low.

As smart as the brain is, it would quickly learn to compensate to increase or decrease the brainwave activity to stay within the operational widow that had been setup so there would be no disruption of the movie. The client did not have to do anything, just watch the movie. They could bring one of their favorite movies from home to watch if it was appropriate and held it attention of the client. Horror movies were never allowed, nor explicit videos that were

not appropriate or used for training the brain. This process took place once, sometimes twice a week. As a result of creating these new neuropathways his brain learned how to become less disruptive in the classroom and at home. With his new normal pattern, he was able to complete his homework assignments and stay on task during individual study time, as well as in his daily living. The client was not the only recipient of the change. His increased calmness, focus and demeanor were experienced by his family, teachers and friends.

As I answered my phone, I was curious to see what they were calling about? I asked mom how my former neurofeedback client was doing?

She said, “Oh, he is still doing great and growing like a weed! I am calling about his older brother.” Quickly doing the math in my head I said, “So, his brother would be high school age? What can I help you with?”

“You’re right he is in his last year of high school; we notice he is really struggling to keep up. He wants to go to college, but his practice ACT scores are so low we are worried that he won’t finish high school let alone go to college. You are the first person we thought of since you made such a huge difference with his younger brother.”

I responded, “Since you live close by, do you think he would be open having a brainmap done?”

“He’s right here, let me ask him...he says yes!”

We agreed on a time. They would come to my home office to do the mapping. Since I knew them well, I had no concerns of them coming to my home as opposed to going to my regular office and schlepping my equipment over there to do the brainmap.

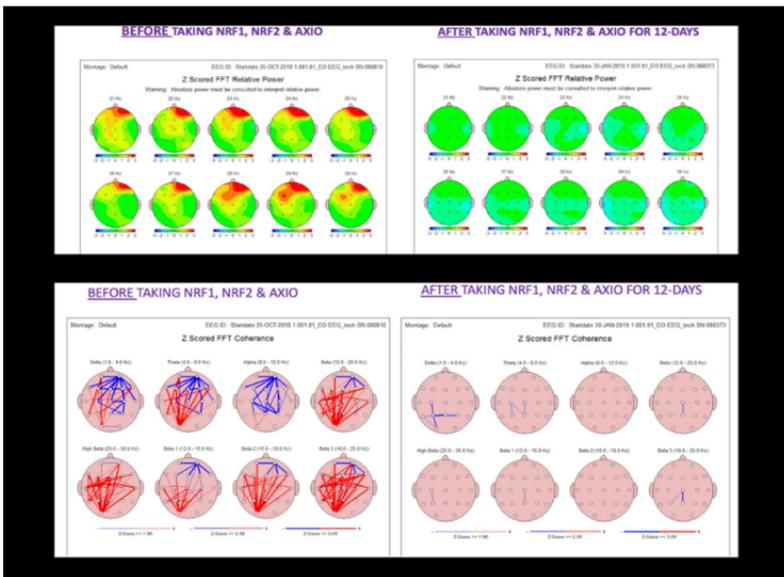
I did what I consider standard baseline recordings of 4-minutes each, eyes open, eyes closed and brain on task...reading silently to himself from a book.

I processed the recordings and reviewed the result. There was a very little slow wave in his delta and theta brainwaves; that can interfere with focus and concentration. There wasn't enough to be that significant. I wasn't very concerned about it.

What was more alarming to me were two other conditions, happening in the frontal lobes. The frontal lobes are important for voluntary movement, expressive language and for managing higher level executive functions. Executive functions refer to a collection of cognitive skills including the capacity to plan, organize, initiate, self-monitor and control one's responses to achieve a goal. His brain, where we do our cognitive thinking, was all red... meaning his brain when it was doing a task it was like a run-a-way freight train going full speed. His thinking

activity was going a mile a minute...so many thoughts that his brain couldn't keep up with them.

**The products mentioned in this chapter are not intended to diagnose, treat, cure, or prevent a disease, or mitigate the symptoms of a disease. They are not drugs but dietary supplements. Supplements are intended only to supplement the human diet.**



**Figure 1: Before & After QEEG Brainmaps**

(UL) Cognitive Thinking Before Nrf1, Nrf2 & Axio

(UR) Cognitive Thinking After Nrf1, Nrf2 & Axio

(LL) Cognitive Coherence Before Nrf1, Nrf2 & Axio

(LR) Cognitive Coherence After Nrf1, Nrf2 & Axio

The second concern I had was with his coherence as seen in Figure 1 Lower Left (LL). Brain coherence addresses connectivity within the networks of functional and anatomical connections to communicate across the brain. These functional networks of communication are dependent on neuronal oscillations (vibrations) to function well. Detection of the synchronous activation of neurons can be used to determine the wellbeing or integrity of the rest of the connectivity in brain networks. Well-connected highly synchronous activity can be measured by Electroencephalography (EEG). Once I recorded EEG it was converted to QEEG (Quantitative Electroencephalogram) to evaluate brainwave patterns and the brain's condition, in Figure 1 I could see both hypo & hyper-coherence. The hypo/hyper coherence might link to different symptoms, namely cognitive and psychotic impairments. The words psychotic impairments are disconcerting to most people. It sounds like someone belongs in the loony bin. But that isn't the case here. Hyper coherence patterns are correlated among each other and specifically with the client's symptoms measures the levels of various markers of oxidative stress and inflammation in may be present in blood samples. It also examines the association between these peripheral biomarkers and their cognitive (thinking) performance. Researchers and the

creators of Nrf2 to synergizer are leading authorities in what is known as “*nutrigenomics*.” Using nutrition, naturally occurring compounds to change your gene expression for a healthier life. Their expertise and knowledge of the Nrf2 protein led to a breakthrough with Nrf1, the protein that regulates the expression of genes involved in mitochondrial DNA, for the repair mitochondria produce up to 95% the energy your body and brain uses. It is known as muscular microscopic powerhouses that will break down over time. It's a natural part of the aging process and can be accelerated by an increased exposure to oxidative stress. We are all affected by oxidative stress...it is in the water we drink, the air we breath and the food we eat.

“Oxidation” is the chemical term that describes removing electrons from an atom. Your cells are made of molecules that contain electrons, and these electrons can be “stolen” by an unstable atom that needs another electron to be stable. That is what is referred to as “electron stealing.” When this happens in your body, it can lead to “oxidation” or “oxidative stress.” The breaking down of the cells begins. Think about an apple that you cut into two halves. You eat one half and leave the other half sitting on the countertop. You come back later to find the apple has started turning brown in color, and it starts to shrivel and

wrinkle, and get “mushy.” That’s oxidation. Another example is rust—that’s metal oxidizing, getting holes and metal becoming weak and discolored.

Our body is busy. Digesting food, breathing in and out, using our muscles, even thinking, are all hard work. This work can generate byproducts—like free radicals. Free radicals are unstable molecules that start oxidation—they need an electron from another molecule to become stable. You need some free radicals to stimulate important physiological processes, such as helping the immune system function correctly and stimulating cellular signaling pathways. We just don’t want an abundance of them. But when there are too many free radicals circulating through the body, that imbalance starts a chain of electron stealing that can eventually lead to oxidative stress.

To combat the effects of oxidative stress, your body has defenses: physical barriers to stop free radicals, enzymes that neutralize oxygen, antioxidants that can donate electrons where they are missing and support natural cellular repair mechanisms. Whenever there is an imbalance between the number of free radicals rampaging through the body and the body’s natural defenses or antioxidants to fight the free radicals, you have oxidative stress.

The long and short of it goes back to the result of the QEEG brainmap I performed for this young man and the confused connectivity in our subject's brain and his ability to learn and function were compromised. Basically, the red and the blue in the coherence seen in Figure 1 is that his brain coherence had more to do with oxidative stress and inflammation in the body than it did with any psychotic impairments.

## Oxidative Stress

It has been reported on ABC, NBC and PBS featured in the Wall Street Journal and described chief medical correspondent, Dr. Sanja Gupta's book, “*Chasing Life. The Quest for Immortality.*”

John Quinones of the ABC investigative program, Primetime Live talks about oxidative stress in his investigative report. *Oxidative stress: Imbalance between the production of free radicals and the ability of the body to counteract their negative effects by neutralizing them with antioxidants.* To combat the effects of oxidative stress, your body has defenses: physical barriers to stop free radicals, enzymes that neutralize oxygen, antioxidants that can donate electrons where they are missing and support natural

cellular repair mechanisms. Whenever there is an imbalance between the number of free radicals rampaging through the body and the body's natural defenses or antioxidants to fight the free radicals, you have oxidative stress.

In his report he goes on to say, *“The problem of aging begins with the very food we eat to give us energy. As our cells burn that food. They also release toxic chemicals. Those chemicals, you may know them as free radicals react with all the components of our cells. Literally bombarding them millions of times per second, damaging all our cells, the result, oxidative stress, and we all have it. The body fights back with the system of defenses. It makes two antioxidant enzymes Catalase, and S O D whose job is to gobble up the free radicals before they can harm us. But as we get older, some of those toxic free radicals overwhelm our enzymes and raise havoc for a long time. Scientists thought that antioxidant vitamins like C and E would lower it, but they don't.”*

The fact is there are too many free radicals to contend with. The truth of it is that at any given moment we have millions of free radicals running around in our body. The other inconvenient truth we have been taught that if we eat enough fruits and vegetables, it will take care of the free radicals. The truth is that one antioxidant will get rid of one

free radical. Basically, it is a 1:1 ratio. Think about that, if we literally have millions of free radical in our body at any given moment, we can't possibly deal with that effectively. Taking Nrf2 daily we will have a million to one ratio to help our body. I am no mathematician but even I can see that a million to one ratio is much better than a 1:1 ratio if you want to keep your well-being.

Nrf2, more commonly known as Protandim, suggests that the immune and inflammatory systems may present the largest demand for increased antioxidant protection, apart from the oxidative stress resulting from mitochondrial oxygen consumption in our cells.

Our bodies are producing hundreds of millions of free radicals at any given time. And the notion that we're going to put out that fire to quench that number free radicals with a single capsule of vitamin E or vitamin C is just plain crazy.

Really, when you think about it, doesn't make much sense that the 1:1 ratio of dealing with the free radicals is going to keep things under control. Rather, the better approach is to turn on the genes, to make huge numbers of copies of, of antioxidant chemicals in our body let them do their work.

## Things like Catalase and Super Oxide Dismutase (SOD) and Glutathione.

Catalase is a well-studied enzyme that play critical roles in protecting cells against the toxic effects. SOD protects from oxidant stress, which is highly expressed in selected tissues including blood vessels, heart, lungs, kidney, and placenta. Glutathione has the most abundant low molecular weight *thiol*, a compound synthesized in cells. Glutathione plays critical roles in protecting cells from oxidative damage and the toxicity and maintaining normal levels in the body.

John Quinones in his investigative report goes on to say, *“All we know is that Oxidative stress is not a disease, just like aging is not in itself a disease, but it's something that companies and researchers have attached oxidative stress to many disease processes.”*

### T-Bars

Normally oxidative stress measured by T-bars, the number T-bars increases with age. During the ABC report they wanted check his levels of T-bars, which is a rough indicator of a person's actual age T-bars, can identify oxidative stress, a kind of measure of the wear and tear on

our bodies. Oxidative stress like the rusting of an engine is not a good thing.

In John Quinones's case, in two weeks of taking the Protandim (Nrf2) reduced to the level of oxidative stress and T-bars by 45% that is the level one would expect in a newborn or a very young child.

## AXIO

In addition to Nrf1, Nrf2 to deal with my subject's neuronal dilemma, I added to the mix AXIO. Science explains that Axio is a neutropic you might be asking yourselves what is a neutropic? Simply put, a neutropic is something that supports cognitive function. The third component in the trifecta I recommended to my client is a natural energy drink AXIO. Axio has been formulated to support all aspects of cognitive function. We can lump the ingredients in Axio into three general categories. One is nutritional support. Two, these compounds that are binding to receptors on neurons to help support their cognitive function. And then lastly, antioxidant protection.

Both ingredients have been shown to help support cellular energy production, especially in the brain. But then also help with how the nerves are communicating with each

other. What we call it nerve conductivity. Second, we talk about these compounds that specifically bind to neurons in the brain. And in other neurons in our body, these compounds are helping these neurons work at their maximum capability. And some of them you might be familiar with and others, not so much. I think we've all heard of caffeine. Caffeine is an amazing compound with massive effects throughout our body. I think those of us that have ever consumed caffeine in our lives, we, we kind of feel awake and lively. When we drink caffeine, we really kind of come to life and we feel ready to tackle the world. Then we've got another compound in Axio called DMAE, and this is designed to help support that healthy nerve function, but again, it is binding to specific receptors that are going to help that nerve conductivity work properly.

The last compound I want to mention is L-theanine works by complimenting caffeine and DMAE, but it doesn't have that stimulatory effect that let's say caffeine might have. So, while it's still working to support that neuronal conductivity, that neuronal function, it's going also have a bit of a calming effect. So, it's really going to help with mental clarity that focus what we need to tackle whatever task we might have before us.

And then the last category, the antioxidants, because the brain is consuming so much energy. We must make sure

that we're supporting our antioxidant protection. So how are these working? The compounds that are in Axio, the green tea, the quarsidine and the pine bark, they're working as both direct antioxidants. So that means, they can go out and suck up all these free radicals and oxidants, but they're also working as indirect antioxidants. For example, these can go in and turn on the proteins or the pathway NRF2 then goes into the nucleus and flips the switches on several antioxidants for detoxification genes to help support overall brain health. I hope you are getting the picture now and it helps you all understand just a little bit better why I recommended this direction for the client. All the science that's gone, into science of axio and receive the benefits that you can expect to have when you use it.

Looking at Figure 1, the left side of the figure shows what his brain was doing BEFORE recommending Nrf1, Nrf2, and Axio. The right side of Figure 1 is the AFTER taking this regimen for twelve days, I did another QEEG brainmap to see if anything had happened. I did not expect what I saw in the second mapping. In over twenty years of working with brainwave entrainment I had NEVER seen anything like what is in Figure 1. My mind was stunned...I was asking myself, "How is that even physically possible?" For days I tried to explain it away. There must be an equipment malfunction, the data is not accurate, and on and

on I tried to find an answer that would explain it. The equipment checked out; the data was accurate...what could it possibly be? I examined all the things I thought could be the cause, but the answers weren't there. I began searching quantum physics for some insight. After some diligent research I began to understand how and why the shift took place.

As Paul Harvey would say, "...and now the rest of the story!" My client wanted to go to college, his school of choice was UNLV, University of Nevada at Los Vegas. Reality was closing in fast for him. He was starting to feel dumb, stupid, and broken. At his age that is no way look at a promising future. He couldn't focus, concentrate, or think the way he wanted to. Clearly, he was intelligent from talking with him. However, he had several deficits in his ability to think and learn.

The first step was to get him on the Nrf1, Nrf2 and Axio. We did the second QEEG brainmap twelve days after he started taking the activators. The second mapping compared his demographics to those like him in the normative database (male, female, right or left handed, age were some of the factors to compare others that matched his demographics.)

For the first time in a long time, he could learn and understand from his tutor. As he took more ACT practice tests and kept improving. He not only got high enough

scores on his ACT to get into a college but today he is finishing his first year at UNLV and doing very well.

Since that time, I have more stories like his. It isn't luck...its science! Now you know the bigger story.

In the next chapter I am going to address what holds us back. All of us build a box for ourselves and have a very difficult time breaking out to create the life we are meant to live...No matter what stage of life you are in or circumstances you find yourself dealing with, I am going to show you a way to build a new box of your choosing! You have the ability...you just don't have the knowledge yet!!

## Chapter 1 Endnotes

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