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## **TUNER PRO II**



# Reconnecting the Central Nervous System

#### The Birth of a New Brain Healing Tool

July 3, 1986 would never be fully remembered or fully forgotten. I was preparing for my senior year of high school and decided to participate in one more wrestling tournament before school would start in August. In the semifinals with 35 seconds to go in the match I was ahead by 10 points. In a last desperate attempt to change the outcome of the match my opponent caught me in a headlock and tried with all his might to put my shoulders on the mat. Somewhere during those violent last few seconds of the match an artery in my neck tore open and began flooding the area around my brain with blood while the areas fed by that artery were quickly starved of essential nutrients and all-important oxygen.

In an instant my life changed and would never be the same. Seconds and minutes were precious as emergency rooms, life flight, MRI's, CT scans, an intensive care unit, medications and then endless days of therapy became my new reality.



Regaining the ability to walk and use the left side of my body in a semiparalysed state after my stroke took a lot of effort! More difficult were the years of effort it took to regain working memory and the ability to learn and retain information. I dedicated my life and my career to helping others get their lives and abilities back as I had been helped. Years of working with individuals in chronic pain and rehabilitating from illness and injury kept me studying everything I could to help my clients. One night 12 years ago, I awoke with a distinct impression that vibration can be used to aid in healing the human nervous system. I threw myself into searching for the perfect tool that would target the areas of chronic pain and muscles that hold onto stress and tension causing conditions like migraine headaches, neck and low back pain, TMJ, stress, anxiety, depression, ADHD, autism, and a host of autoimmune conditions.

I could not find the right tool to help people in the way I knew they could be helped, so I took that night-time impression and set about experimenting with anything I could get my hands on that vibrated.

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My family members and patients became my test subjects as I experimented with frequencies, intensities, forms, and types of vibrational energy. I soon found that the body responded well to certain types of resonant frequency better than others, and key spots on the body seemed to be key entry locations that would allow positive improvements to be felt.

One day in my studies several light bulbs in my mind suddenly woke up as I realized the unique connection the 10th cranial nerve has with vibration! The Vagus nerve (CN X) has a branch, the recurrent laryngeal branch, that cues into and functions on vibration frequencies. I needed to know everything I could learn about how to affect that driver of the autonomic nervous system! I have come to understand how the vagus nerve and the trigeminal nerve (the 5th cranial nerve) work as a balancing mechanism in the fight or flight process. This understanding has led me to develop life changing therapies for many people suffering from chronic pain and brain injuries!



Several years of trying everything I could find that was safe and provided vibrational energy led me to better understand how the nervous system interacts with various forms of vibrational energy. I could not find the right tool that could help in the way I knew vibration could help people to heal as I knew it could by improving the function of the vagus nerve. With support of my wife and family, I set about to create the perfect tool, and Rezzimax® was born.

In 2016, we launched the first version of the Rezzimax® Tuner to fine-tune the nervous system, and it was a great start to helping thousands of people. Since the launch of that version, initial research showed the Tuner had great potential for the treatment of headaches and jaw pain. We knew that if we could perfect the Tuner, we could help so many more individuals learn to live our motto: "Tune Out Pain. Tune Into Life."

In late 2017, our invention was being made overseas, which resulted in some challenges that led to bringing production home to the USA. While already helping thousands of individuals, we envisioned even greater impact and help for our friends throughout the world. We set out working with a new set of engineers and manufacturing partners to create a much-improved healing tool. The Pain Tuner Pro has been designed and is now manufactured in the USA where we can closely monitor every detail and assist in the employment of our neighbors! Recently, an individual suffering from cluster headaches sent us this message:

"

Thank you thank you thank you thank you. It's been 5 days so far that my cluster headaches have been gone. God bless you guys! Since I got the Rezzimax Pain Tuner Pro Monday, I have not had a single cluster headache. I was absolutely debilitated for the past 3 weeks and didn't know where to turn. I am so grateful I found you guys. Thank you so much!!



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This is all possible because of the miracle of resonance and its effects on the vagus and trigeminal nerves.

What is the secret behind the ability of the Pain Tuner Pro in helping so many people in chronic pain and suffering from brain injuries? The Pain Tuner Pro is a master at improving **vagus** nerve functioning and reconnecting the Central Nervous System!







## SHARIK IS THE CEO OF REZZIMAX, LLC

He has a degree in physical therapy from the University of Utah and a master's degree in counseling from Utah State University. He is passionate about pain relief and determining how the nervous system works. www.rezzimax.com









## The Magic of a Purr

The vibrations of a cat's purr have long puzzled scientists. Most agree that the larynx (voice box), the muscles that control it, and a neural oscillator are involved. The constant vibration still doesn't make sense, they should either purr when inhaling or exhaling, not both. Why is it that if a cat can roar (lions, tigers, jaguars, leopards) then they can't purr? Other wild cats such as cougars, bobcats, and lynx do purr, but can't roar. When I was a youngster (about four) I went with my dad to visit one of his friends. He had a trained cougar that used for movies. Dad was busy talking and didn't notice when I started playing with the great big kitty, soon I was curled up under its chin between its front legs. A little bit of chin scratching and the big kitty started purring! I still remember how impressive that purr was, it was so powerful and strong, it vibrated all of me! Dad freaked out when he saw what was happening, though.

Scientific studies have led to the discovery of a new magical property of purring, that of healing. Actually, it's not a new concept. Talk to any cat lover and they will tell you that when they hurt their kitty comes and gives them cuddles and purrs and they feel better. That's just crazy "cat lady" talk, though, isn't it? An old veterinarian's adage says:

## "

A happy purring cat can help you heal. Put a cat in a room with a bunch of broken bones – the bones will heal.



How can that be? Don't cats just purr because they're happy?



## Why do cats purr?

Cats do purr because they're happy (being stoked and loved), but they also purr for other reasons.

#### Cats purr when:

- They are nursing, kittens start purring when they are about two days old.
- While they are giving birth.
- When they are stressed.
- Recovering from illness.
- Severely injured or dying.

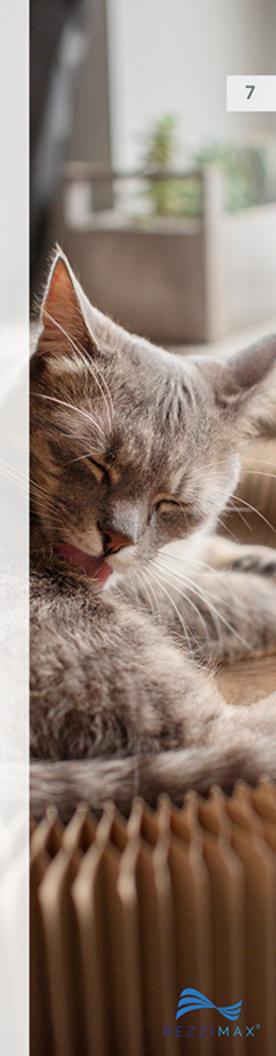
If you're cuddling a cat or if they are nursing, their purrs could be a sign of contentment, but these other times are definitely not happy times. Why would they purr when they are stressed, hurt, or even dying? Could it be because a cat's purr stimulates healing?

# Why would a cat purr when injured?

It takes energy to purr, if an animal (or person) is under stress or in a lot of pain, they aren't going to expend energy on something that won't benefit them. That goes against the laws of survival. When faced with a live or die situation, the body naturally expends energy on surviving.



Photo courtesy of **Kellie Foreman** (The story behind the picture)





## Vagus Nerve

#### **CN X - The Vagus Nerve**

- Modulates Inflammation
- Strengthens Memory
- Helps You Breathe
- Increased Salivation
- Controls the Relaxation Response
- Inhibits Depression How?
- Regulates Serotonin Production
- 3x more afferent than efferent fibers
- Visceral afferent information is relayed to limbic, forebrain, cortical regions, a role in attention, emotion, and anxiety.

#### CN X (The Wanderer) continued

- Driver of the Gut-Brain Axis? (Bi-Directional)
- Gag Reflex
- Heart Rhythm
- Helps regulate blood pressure
- Regulates stomach acid
- Vocal Cords



## Importance of Gratitude





#### Fuel for the vagal healing effects





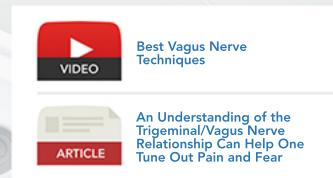
### **REZZIMAX** Techniques Table of Contents

MAIN TARGET AREAS OF **HEAD** NECK



## **Primary Techniques**

#### Migraine/Headache





- Place tongue in between the teeth and hum along with the **Tuner Pro II**.
- Starting with the back of the neck, as shown in the picture below, helps calm down the upper cervical muscles and improve blood flow.



 Place the prongs under the jaw with the ends resting on the sternum, both hands stabilizing the Tuner Pro II



• Apply the Tuner Pro II to Center of the Eyebrows



 Next, place the prongs between the eyes at the top of the nose with the pressure being applied towards the forehead.



• Run the Tuner Pro II over the top of the scalp over the sutures from front to back



- Should repeat this activity slowly for 7 - 8 repetitions.
- Then place the prongs on the center of the cheekbones



- Part 1: gently angle the Tuner tonge so as to sweep up and down along the inside of the cheeks.
- Part 2: open the mouth as far as possible and hold for 5-6 seconds and then to slowly close.





• Lastly, place the Tuner Pro II on the floor with the prongs under the middle of the feet and the big toes on the top of the tips of the wings of the Tuner and run it on the first cycle (blue).



For the following conditions, use some or all the above vagus nerve techniques.





## Brain Section

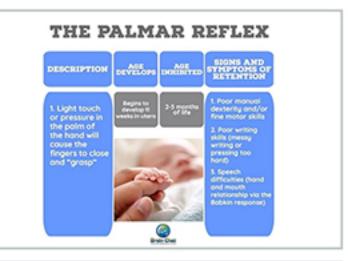
- ADD/ADHD
- Addictions
- Allergies
- Cancer pain and Neuralgia
- Brain Fog
- Autism

- Concussion
- Depression
- Focus
- Chronic Fatigue Syndrome
- Mental Health
- Anxiety



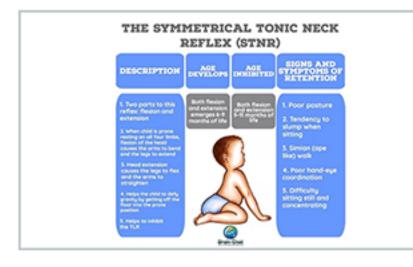
## Primitive Reflexes – Based on the work of Dr. Robert Melillo

(images courtesy of BrainChat)







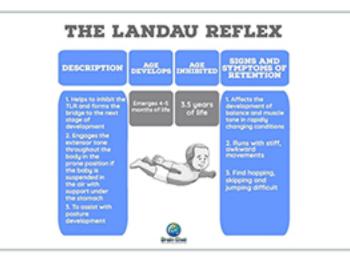


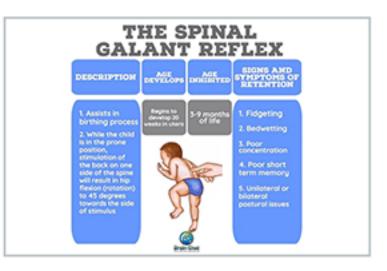












## Get Your Game Face On!



Get Your Game Face

PG. 25 By Sharik Peck

In 2019 I found myself in Australia helping athletes from 3 nations compete in a large track meet. My daughter was competing in the sprinting events. Our conversations are not about winning or losing; we focus on finding joy in the experience and in doing the best we can. Finding joy in the journey has become a theme for our family and for my patients.

Automobile collisions, concussions, head injuries, strokes, chronic pain, tumors, aneurysms.....The list goes on and on, but one common theme I have seen in over 25 years as a physical therapist is how fast people can go from happy, healthy, vibrant, and strong to depressed, angry, sullen, irritated, listless, and sad.



The study of the human nervous system and how it recovers from injury and illness has fascinated me. I wanted to know why we often saw two individuals come into the clinic with the same injury, the same forces, the same diagnosis, and seemingly the same accident, and yet never was the healing process the same. Provide the same treatment to both and one of the individuals was likely to get better and one of them was not. What made the difference? Was it the way they were treated in therapy? Was it the way they lived at home? What were their relationships with co-workers and family members? Patterns emerged that helped me in practice and designing treatment approaches.



REZZIMAX

I learned to tip-toe around conditions such as fibromyalgia, trigeminal neuralgia, and migraine headaches and accepted the fact that these conditions would likely slow down the healing process, but I did not understand why.

One thing became clear in those "difficult" cases. There was a powerful emotional component involving the nervous system and affecting the healing process that made very little sense to me. Watching my clients after injury, I felt like Spock on Star Trek trying to make sense of emotions I did not feel or understand and that did not seem logical. Well, I did what any reasonable person would do, I went back to school to obtain a master's degree in counseling. I hoped to figure out how to help people through the psychology of an injury and help them learn how to recover better.

Here is what I have learned from 26 years of practice and study, hoping to help people recover from illness and injury:

Emotions are electro-chemical equations in the nervous system. You can create happy chemicals by thinking of things that make you happy. Perhaps this could account for some of the benefit many people have gained from watching Bob Ross teach important life philosophies while painting "a happy little cloud." It calms the heart and puts a smile on the face. Those are healing chemicals!

If you look at the world through a negative lens, you will slow down the healing process. When all we can see is the past, thinking about how good life used to be, we find ourselves wallowing in a depressive state.

If you find something to be passionate about, you will speed up the healing process. Live in the present, right here, right now, and you will have less of the chemicals of anxiety flowing through your nervous system, elevating your blood pressure, and making it difficult the think.

The balance needed in your nervous system to help you have the best potential to heal is controlled through the parasympathetic nervous system. That is the part of the nervous system dedicated to helping you recover from all of life's challenges. Your parasympathetic nervous system encourages you to sleep, digest, breathe, and keep the heart beating at a healthy pace. If you actively engage the vagus nerve in the healing process, you will improve sleep, decrease inflammation, reduce pain, and generally feel better. How do you improve functioning of the parasympathetic nervous system? Here are a few ideas to keep you living in the present, free from unnecessary depression and and anxiety: try yoga, get a massage, learn to breathe properly, hum, meditate, and keep a gratitude journal. A game face should not be an angry or scary face. For best results, try keeping a smile on the inside and out!

- Neuropathy
- Parkinson's

POTS

PTSD



- Reading
- Sleep Disorders
- Traumatic Brain Injury
- Sensory Processing Disorder



### Face









#### Nose

Loss of Smell



#### • Sinus Congestion

With the prongs of the **Tuner Pro II** on the center of the cheekbones, have the patient open and close their mouth slowly, several times to drain the Eustachian tube.

#### Mouth

 Jaw → TMJ Disfunction → Pain & ROM
 VIDEO
 Techniques for TMJ Disfunction Relief
 VIDEO
 Trigeminal Nerve Role in TMJ
 VIDEO

VIDEO Intraoral Techniques with Dr. Ceraso

• Loss of Taste

**Techniques** 

for Severe TMD

and Whiplash





Teeth → Teething

#### **Trigeminal Neuralgia**





## Balance and Proprioception



#### THE BRANN HEALTH

Balance and Proprioception By Sharik Peck

Once again, I was standing on top of a skyscraper with that all too familiar nausea kicking me in the stomach. I knew I had to climb out onto the ledge and get across the plank that connected the two buildings. Part way across, sweating profusely and with a heart pounding I froze.

Feeling the scream rise from deep within I was surprised I could not hear my own scream.

Suddenly I felt myself falling and had no power to stop. Awakening with a start I felt the sweat roll over me, and my heart felt it would burst. The nightmare had happened again.

Nightmares with a theme of falling from a building or from a cliff or down a hole, sometimes while trying to save someone, sometimes while trying to get away from someone were a regular occurrence for several years after my traumatic brain injury. Another frequent companion was the startle that would jerk me awake often while beginning to fall asleep. According to research published through the National Institutes of Health sleep disturbances affect between 30 and 70% of people after TBI.

Years of studying the human nervous system and treating thousands of patients helped me understand why I had those recurrent night terrors after my TBI and why they finally stopped happening. You see, working on your own sense of balance and proprioception (knowing where all parts of the body are at all times) will help your brain recover from the effects of a TBI and is one of the best things anyone can do to diminish the potential of developing Alzheimer's and dementia.

One of the first exercises I have my balance impaired clients perform is standing on one leg. This simple exercise has been used to reduce injuries in the NFL by as much as 77%! Here is what we learned in a study involving receivers and ball carriers in the NFL. Standing on one leg for 5 minutes each day in the pre-season and for 5 minutes on each leg 2 times each week during the regular season had that profound effect on their injury rate! We also know from research that practicing balance exercises will enhance the brain's healing potential, creating new neurons to help the nervous system improve its efficiency to



protect you.

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The question my clients frequently ask is if they can hold on while practicing their balance. The answer is that the proprioception system is not needed when holding on or stabilizing the body, So, when it is safe to stand without holding on to something with the hands or leaning against something to steady the body, let go to give those balance and proprioception systems a workout. Often I will have a client practice standing in front of a couch or somewhere so that losing their balance will not end in injury.



Another great help to the balance is observed having clients scrape the toes and feet and legs to wake up the sensors that help with balance. This technique comes from ancient Eastern medicine where the scraping is found to help the nervous system heal by waking up the connections to that area.

Lastly, one of our favorite techniques to help retrain balance comes when strapping the **Pain Tuner Pro** to the leg and sending our clients standing or walking about, while sending billions of bits of information to the brain through the joint receptors and connective tissue of the body, giving the brain a better sense of where those parts are in space. This increased communication, practiced a couple of times each week can help the nervous system become aware of all of the connected parts and trains the balance systems. Retraining my balance took away my night terrors and it can help you too.





## Neck

Neck Pain



Techniques for Neck and Shoulders



Neck Pain Techniques

- Stiff Neck
- Vocal Cord Paralysis



Techniques for Vocal Cord Paralysis Vocal Performance



Broadway Voice Teacher: Rezzimax Tuner for Singers



## An Understanding Of The Trigeminal/Vagus Nerve Relationship Can Help One Tune Out Pain And Fear Part 1: Changing the Face of Pain

Sharik L. Peck, PT, MRC, CEAS; J. Brent Feland, MSPT, PhD; Clinical Contribution from Michael Bennett, DDS



any people experience a deep fear of sitting in the dental chair even though dentistry can significantly improve their health. By understanding a few key basics about the nervous system (and how fear, pain, and anxiety work in the

body), you can help minimize pain, shut down fear responses, and decrease inflammation. This understanding can decrease the load on your staff and schedule, and help your clients leave their appointments smiling. Understanding the interaction of the trigeminal nerve with the vagus nerve and their roles in either upregulation of the nervous system (fight or flight) or relaxation and pain relief (a parasympathetic state) can help you accomplish this.

The brain can say, "Hey that's interesting. Turn up the volume on this pain information that's coming in", or it can say, "Oh no – let's turn down the volume on that and pay less attention to it," says David Linden (a professor of neuroscience at Johns Hopkins University and author of the new book Touch: The Science of Hand, Heart, and Mind.) By mastering the interaction of the trigeminal and vagus nerves, you can mitigate pain, anxiety, fear, and inflammation. Let's explore the interaction and role of these two powerhouse nerves to see how this can work for you.

#### **Major Roles of the Trigeminal nerve:**

According to Gray's anatomy, the trigeminal nerve is the largest cranial nerve. It carries sensory input from the face, the greater part of the scalp, the teeth, the oral and nasal cavities and is the motor supply to the masticatory and other facial muscles. It contains proprioceptive nerve fibers from the masticatory and extraocular muscles and contains connections to the vagus nerve through the main sensory nucleus in which the vagus nerve may be influenced by masticatory reflexes. <sup>3</sup> The trigeminal nerve plays a major role in the sympathetic state of the nervous system.

It is the link between the trigeminal nerve and the vagus nerve that makes it possible to enhance either feelings of anger, fear, anxiety, pain (increasing inflammation) or the sense of well-being and peace that your patient experiences in association with their visit to your office. The complex interaction between the vagus and trigeminal nerves is becoming clearer through recent research that has noted their connections through nerve stimulating studies related to treatment of neuropsychiatric disorders. <sup>12</sup>

#### Major Roles of the Vagus nerve:

The vagus nerve is responsible for various tasks, including: heart rate, GI function, sweat, and many muscle movements in the

## A Meeting with Dr. Jones

#### A "Dead Arm"

I met Dr. Patrick Jones, founder of the HomeGrown Herbalist School of Botanical Medicine (Medicine Shop and School of Herbal Medicine HomeGrown Herbalist), veterinarian, clinical herbalist, and traditional naturopath at a preparedness convention. He was speaking about the HomeGrown Herbalist School, and I was there selling the Rezzimax Pain Tuner Pro (Rezzimax Tuner | Rezzimax). We chatted for a bit as we were setting up our booths and I told him about the Rezzimax. He seemed quite impressed and asked a lot of questions before moving on. A little bit later he returned to my booth with a friend in tow. He had known her for years and she was now suffering with a "dead arm", one that had hurt severely for a long time and then one day her body decided it was tired of it, so it turned off all the nerves, making it so it didn't hurt, but it also didn't work. She had stopped by his booth to see if there were any herbs he could recommend that might assist in reversing the problem. He brought her to see me; he wanted to see what the Rezzimax could do.

I was delighted at the chance to help this lady and after about 20 minutes of applying the Tuner to various points feeling began to return to her arm--feeling, not pain! When she left my booth she had about 70% of the mobility restored, a **Rezzimax Tuner** in her bag, and a list of instructions to follow for its daily use. A few weeks later her arm was restored to full function and the pain was gone. A few years have passed and she is happy to say her arm still works.

#### How Was the Tuner Able to Help?

When the original damage occurred to her arm the nerves got stuck in a loop, they just freaked out and wouldn't stop sending pain signals, constant pain signals. The brain eventually got tired of listening to them and essentially blocked them, refusing to take their "calls" anymore. This got rid of the pain, but it also got rid of the use of the arm. The Tuner was able to "reset the system" or "reboot it". It's like when your phone or your computer gets stuck on something and you get nothing but that stupid circle going round and round and round, the only way to get rid of it is to reboot, then everything works again (most of the time). The same thing happened here, the Tuner "rebooted" the nerve communication network between the arm and the brain, getting rid of the endless "pain loop" that wasn't productive and restoring communication.

Dr. Jones was also sold on the **Rezzimax** that day and he has been using it in his naturopathy practice, discovering that it is moves Qi through the meridians. He and I actually got together and did an Educational Webinar.





#### Tune Out Pain



Free Webinar with Doc Jones and Special Guest Sharik Peck \_\_\_\_\_







## Arms



#### Shoulder

- Frozen shoulder
- Subscapularis technique
- Pectoralis minor techniques

#### Notes about Frozen Shoulder

• RTC/Shoulder Pain

#### Elbow

• Tennis Elbow  $\rightarrow$  Scraping and compression



#### Wrist

• Carpal tunnel  $\rightarrow$  Scraping and compression

#### Hand

- Fingers  $\rightarrow$  Trigger Finger
- Fingers  $\rightarrow$  Scraping and compression





The world and all life exist in a realm of rhythms and vibrations. Lunar and solar cycles and rhythms affect the planet, plants, animals, and more. Seasonal cycles, lunar, solar cycles, sleeping and waking rhythms are just a few that affect us every moment of the day. Most of us are unaware of the rhythms that are affecting us constantly. Even at the atomic and molecular levels, vibrations are causing biochemical reactions within us. Rhythms can communicate information that makes changes in our body functions from the cellular level up. They affect our emotions, breathing rate, heartbeats, and health, all for better or worse.

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A person does not hear sound only through the ears; he hears sound through every pore of his body. It permeates the entire being, and according to its particular influence either slows or quickens the rhythm of the blood circulation; it either wakens or soothes the nervous system. It arouses a person to greater passions or it calms him by bringing him peace. According to the sound and its influence a certain effect is produced. Sound becomes visible in the form of radiance. This shows that the same energy which goes into the form of sound before being visible is absorbed by the physical body. In that way the physical body recuperates and becomes charged with new magnetism.



The Sufi musician, healer, and mystic, Hazrat Inayat Khan



#### **Rhythms Affect Us on Every Level**

Rhythms affect the way we feel day by day, they alter our moods and emotions, they affect us psychologically and physically. They transform each of us on a personalized basis. Changes in the rhythms around us can affect us on multiple levels. A little bit of rhythm can turn a chore that feels like drudgery into something fun and exciting.

Think of cleaning the house. You can clean the house with no music, you can sing whatever song moves you, or you can play your favorite dance tunes. Compare the difference between sweeping the floor to a waltz versus hip hop music. Because you added music, you will move differently while you work, and you will feel differently about the chore. Each person will react differently. It's not just an emotional difference you will feel, either. You will also find that you won't have so many aches and pains during or after sweeping the floor with the correct kind of music for your body. Why is that? Let's explore and find out.

#### Biological or Master Clocks Set the Rhythm of Our Life

Studies have shown multiple ways that vibrations and rhythms make changes in us. Our biological or master clocks help set the rhythm of our life. Our master clock works hard to create a peaceful oasis in the middle of the chaotic vibrations that surround us at every moment. The order is created by our biological clocks and shared via the central nervous system. If something happens to upset those clocks everything else gets just a little bit out of tune.

For instance, consider what happens when you stay up too late at night. The next day your sleep cycle is not in balance. Our bodies like a proper night's sleep with the correct rhythm of light and dark and wake and sleep time. However, when you have a balanced sleep cycle, you will awaken refreshed, energized, clear of mind, ready to face the new day.

If you get to bed late, the next day you may feel sluggish, have difficulties concentrating, and turn to food or drink in your search for energy. Your emotions are on edge, you are not as patient. Even your body doesn't seem right, you will be a little clumsy and working out will leave you feeling tired. All of this, and more, simply because you got to bed late. Messing up your sleep schedule one or even two days may not have lasting ill effects, but it won't take many days before there are more changes in your body, physical and emotional changes, cellular changes that take longer to reverse.



What does all this mean? Let's return to our previous example of cleaning house with music. We learned that playing music can make a difference while cleaning. Subsequently, we have also discovered that vibrations can have a negative or positive affect on cells. If you are in a bad mood, can you change it to a good one with cheerful music? Absolutely! You may even find that you start working in some dance steps or some fun wiggles. We can also conclude that if you play songs that make you cry, you will be sad. You will be tired emotionally and physically and you may even have some aches and pains. The power lies in the vibrations. Likewise, you can choose to surround yourself with vibrations that create health and happiness or pain and sadness.

#### To be Continued...

Next time we'll talk about electromagnetic fields and how our cells use vibrations...

# Main Target Areas of Thoracic and Abdomen

#### Thoracic

#### Cardiac

- Blood Flow
- Lymphatic flow



Legs, Feet, and Lymphatic System

#### Diaphragm

- Diaphragmatic training
- Diaphragm points

## An Incredible, Life-Altering, Vibrational Symphony, Part 2

Today we are exploring more of how vibrations affect life on a cellular level. We will also learn how to make changes in ourselves, emotionally and physically, using these vibrational symphonies.

#### Life is Surrounded by Electromagnetic Fields

Electromagnetic fields (EMF) surround and move through all life. These fields can cause an electrical charge to move more quickly or slowly.

Energy, like the kind that runs your computer, creates an electric field.

Moving energy creates a magnetic field. When electric and magnetic fields vibrate together, an electromagnetic wave is formed. Why do we care? Because cells communicate by sending electrical signals through water molecules. EMF can

interfere with or strengthen this process.

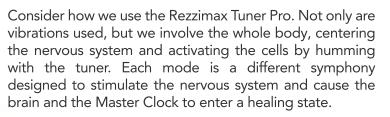
Mankind has added electromagnetic fields to the world, like radio waves, but there are also naturally occurring ones. A big EMF is the one that allows the earth to interact with space. New studies are proving that even weaker EMFs than previously supposed can cause significant changes in life forms. Even low energies can affect embryos and cell growth. Brain waves, cells, the transmission of nervous signals, and so much more are proving to be responsive to EMFs.

## Cells Are Exquisite Detectors of Vibration

There is a network of fibers in all cells. These are kind of like the cell's skeleton and muscles. They help a cell move, communicate, and maintain its shape. It also "makes cells exquisite detectors of mechanical vibration."

How can we use this to benefit us? Could we learn how to use sound to trigger cells to do what we want, like heal damaged tissues or destroy cells that have gone rogue? That is what scientists are learning how to do!





#### None of This is New

All of this is not a new idea. Traditional Chinese Medicine and other traditional medicines have used musical tones as a preventative treatment for disease. This whole concept has been around forcenturies, we are just combining it with today's technologies.

We return to thoughts from Hazrat Inayat Khan,



This way of healing can be studied and understood by studying the music of one's own life, by studying the rhythm of the pulse, the rhythm of the beating of the heart and of the head. Physicians who are sensitive to rhythm determine the condition of the patient by examining the rhythm of the pulse, the beating of the heart, the rhythm of the circulation of the blood. And to find the real complaint a physician, with all his material knowledge, must depend upon his intuition and upon the use of his musical qualities.



The Sufi musician, healer, and mystic, Hazrat Inayat Khan

If you would like to learn more about Life Rhythm as a Symphony, this blog entry was inspired by the paper, "Life Rhythm as a Symphony of Oscillatory Patterns: Electromagnetic Energy and Sound Vibration Modulates Gene Expression for Biological Signaling and Healing" by David Muehsam, PhD, Italy;

**Carlo Ventura, MD, PhD, Italy**, published in Global Advances in Health and Medicine, March 2014.



Life Rhythm as a Symphony of Oscillatory Patterns: Electromagnetic Energy and Sound Vibration Modulates Gene Expression for Biological Signaling and Healing (nih.gov)

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ZZIMAX

#### Abdomen

#### Stomach

• Gastroparesis



#### Gastroparesis

- IBS, Crohn's, Diverticulitis
- Scars Adhesions



### **My Scars**

I look at my scars, Gruesome and dark. The ones on my knees, hands, and feet, Longer I look, uglier they get. Each time I look feelings of regret Down deep a creeping black hole. Shrieks of pain echoing in the background. Thinking about how each one was created, Inside and out, The reasons for why make me see. See my scars in a whole new light. Each and every one has their own story to tell, Troublesome nights standing alone, Others are surrounded by people. These scars map out where I've been, What I've gone through, And where I'm trying to go. They show the stories told by that man under the bridge Green bag slung over his shoulder, By the nanny on the bedside In the cinnamon scented room,



By the old woman across the street Freshly baked pie sitting in the window, And the old man just down the block With the yellow old mailbox sitting out front. The stories show that there is a better place, You can make if you don't give in To the stares and the questions. The children who ask what the adults are afraid of. One I like to ask them is, "If I were to ask you to name all the things you love, How long would it take you to name yourself?" One of my biggest fears used to be that eventually, You would all see me. The way I saw myself. Never would I wish that upon anyone, The greatest torture a human could go through. They used to say, Loyalty will get you killed, Love will get you hated, And Trust will get you hurt. In the wrong circumstances these are all true, That's how you know they're wrong. Ask yourself, Will they love my scars? Can I trust them with the stories behind my scars? Will they leave if I show? These are the key questions that Need to be asked. I love my scars, And someone out there will love them too

#### Bladder & other internal organs

- Bedwetting
- Core Strengthening





### Could Music Reboot the Autonomic Nervous System (ANS)?

I plugged "music can" into my search engine and looked at what the predictive text results were:

- Music can be
- Music can grow
- Music can heat
- Music can calm
- Music can cure
- Music can heal
- Music can inspire



It appears that music can do pretty much anything, at least in theory. I especially liked the link that led me to



"Cat Music: Music to Help Your Cat Deal with the Heat! Hot Weather Can Stress Cats, We Can Help!"

I, who am not a cat, enjoyed listening to the music while writing this article.

There seems to be a study and a theory for anything and how it is affected by music, but most of the studies concentrate on how music affects the subject's emotions. Music has been shown to affect plant, animal, insect, and human life forms. It most likely affects all life forms. However, even though physiological investigations into music have been done for over 125 years, very few studies have systematically explored the therapeutic effects of music on autonomic nervous system (ANS) dysfunctions. The ANS is responsible for all the things our body does without us thinking about it. It keeps the heart beating, the lungs moving, the digestive system working, and oversees everything that keeps us alive. When it is not working correctly, we are quickly miserable





#### The ANS is Responsive to Music

Today, scientists see an organism's functions as being based upon a complex relationship between each of the system elements. If one element ceases to act and react in a stable manner it begins to affect other elements, which affect others, and soon the whole balance is upset or in dysfunction.



Robert J. Ellis and Julian F. Thayer postulated in their paper "Music and Autonomic Nervous System (Dys)function"

that because the ANS "is exquisitely linked, bidirectionally, with the central nervous system, endocrine system, and immune system. Given that the ANS is both associated with physiological health and responsive to music, the ANS may serve as one path by which music exerts its therapeutic effect."

Wouldn't it be an incredible thing if when you were experiencing an ANS Dysfunction (or treating someone who was) that you could reach for a tool that would introduce music or vibrations to their system and it would reverse that dysfunction, restoring stability and balance to the system elements?

There have been a number of studies conducted that report that listening to sedative music can affect blood pressure, breathing, and heart rates. Being able to hear the music isn't a requirement, we feel music, too. Sound is a vibration that is transmitted as an acoustic wave through a medium. Most often we associate it as traveling through air molecules, but it can also travel through gases, liquids, and even solids. What we consider to be sound is the reception of those waves by an organism that can perceive those vibrations.

We experience many sounds without hearing or consciously noticing them, but our ANS does and responds. Have you ever experienced a headache day after day at work, but it goes away almost as soon as you leave work, but then one day you go to work and don't get a headache? What changed? Maybe a faulty light fixture that was humming at an inaudible frequency was affecting you. Or perhaps it was thespeakers on your computer. There are many low and high frequency sounds going on all around us that we can't hear with our ears, but our bodies can hear them and respond.

#### Music's Effects on the Body Have Been Well Studied

Ellis and Thayer review several different ways that music's effects have been studied in conjunction with the body.

• Listening to music has been shown to affect nearly every organ in the body that has an electrical (i.e., nervous), chemical (i.e., endocrine), or volumetric (i.e., blood) signature.

• Making music can have an effect as well. William James (1884) was famous for his theory that we must first perceive something before it changes our emotion. For example, if you look at a bear in a cage at the zoo, you do not feel fear. But, if you look at a bear in the wild that is charging down the hill toward you, you will most likely feel fear.

• How many movies have you seen where the character(s) begins whistling or humming when they are afraid? Why do they do this? Because making music has been shown to calm the human body! It can reduce the heart rate, lower blood pressure, slow breathing, and more, thus affecting the ANS and reducing the fear response.

• Entrainment is the process by which two oscillating systems assume the same period when they interact. That's a fancy way of saying that two systems will start to move in tempo with one another. Our body's systems have rhythm and they "dance" together. If a system is off beat, then we see dysfunction. For example, as we breathe, our lungs process the air molecules, and we inhale oxygen and exhale carbon dioxide. If you begin breathing too fast the ratio becomes imbalanced, or out of rhythm and you experience a dysfunction called hyperventilation.

• Heart rate is affected by music. Many of us have music mixes we have put together with songs that we have noticed help us fall to sleep (relax) or be energized, or to work more effectively, or meditate.

• They conclude that humans interact with music, both consciously and unconsciously, at behavioral, emotional, and physiological levels. The ANS forms a sort of sounding-board, which every change of our consciousness, however slight, may make reverberate.

The vagus nerve is the longest nerve in the ANS and as such is one of the most important nerves in the body. It affects the heart, lungs, and digestive tract. It is composed of fibers that process both sensory and motor input. The information it processes and relays can influence how the brain makes decisions.

Part of that information is sound or vibration based.

#### **References:**

#### Music and Autonomic Nervous System (Dys)function

(nih.gov) by Robert J. Ellis (Beth Israel Deaconess Medical Center and Harvard Medical School) and Julian F. Thayer (Ohio State University)





## MAIN TARGET AREAS OF BACK



### Back

- Upper
- General Back Pain
- Mid
- Lower



### Main Target Areas of Hip

• SI Joint  $\rightarrow$  Hip Replacement



## **Music and ANS Dysfunction**

There is a ton of scientific information that proves there is a link between the Autonomic Nervous System (ANS) and health and disease. This doesn't really take that much of a scientific degree to figure out. The ANS is the system in our body that controls those things we don't think about, like heartbeat, digestion, nerve response and breathing. If one or more of these doesn't work, we're not going to feel well. Another thing that science has proven that you will not find terribly surprising is that music can affect our ANS. What? You haven't thought of that? When you hear a toe tapping rhythm that makes you want to get up and wiggle all about you don't think that your heart rate and breathing increase? Of course, it does, and you know it, you just hadn't thought about it this way before.

A healthy body is constantly changing and adapting to what is going on around it. The Central Nervous System (CNS) is in charge of discovering what is changing around us. The CNS is all those nerves that are throughout the body.



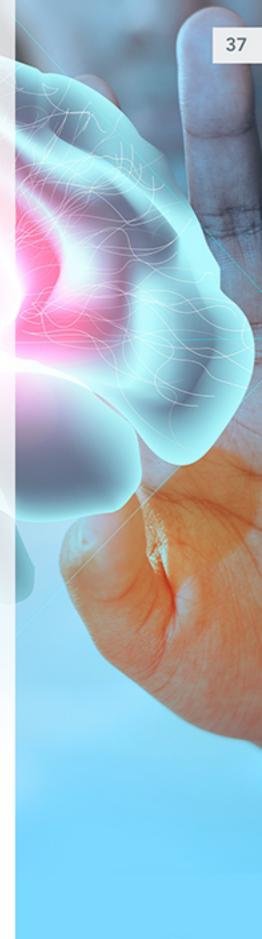
They make it so we can see, smell, hear, feel, and so much more. The CNS feeds information to the ANS which then tells our organs what to do. If one body system or organ gets arrogant and thinks it is more important than the rest and doesn't have to play nice, then we have a dysfunction. If the situation isn't quickly changed our dysfunction will turn into a disease.

### How do we stop this from happening?

While there have been lots of studies done showing how music can affect a healthy body, we are only now seeing studies that are exploring how music can affect a dysfunction or diseased body. This is really exciting because listening to music or different vibrations is something that is far more appealing to us than having major surgery.

Although there are quite a few surgeons who are listening to music while performing surgery. That is because it has been proven to make them more focused and reduce their stress levels, allowing them to perform (ha, ha, that's a pun) better. But that is a topic for another day.











Robert J. Ellis and Julian F. Thayer suggest that:

# "

...the autonomic nervous system (and activity in its targets) is exquisitely linked, bidirectionally, with the central nervous system, endocrine system, and immune system. Given that the ANS is both associated with physiological health and responsive to music, the ANS may serve as one path by which music exerts its therapeutic effect. The implications of such an association have yet to be fully explored...

## Robert J. Ellis

Beth Israel Deaconess Medical Center and Harvard Medical School

### Julian F. Thayer The Ohio State University

"Music and Autonomic Nervous System (Dys)function" April 2010

That is a neat concept, I like the idea of using music or vibrations to stimulate the ANS. Let's look at three of the ways this might work.

- Listening to music
- Entraining to music
- Making music

### Listening to music

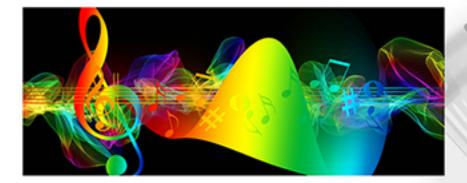
This is the easiest, we all have done this before. Even deaf people "listen" to music by feeling the vibrations it makes. Scientists have studied nearly every organ in the body and how it reacts to music.

And... (insert drumroll here) music has been shown to affect them all! This shouldn't come as a surprise, practically everyone knows that soothing music can calm

### **Entraining to music**

Entrain is a fancy word that means that you start with two things vibrating at different rates or rhythms. One is stronger than the other, so the weaker one starts to follow it until they are both vibrating at the same rate or rhythm. Once you know the definition it's easy to understand that musical tempo can affect a heartbeat.

The music is louder or stronger than a quiet heartbeat, so the heartbeat will find itself trying to follow the music's beat. Scientists have discovered that when we synchronize our breathing with sound tones (called "breathe with interactive music") it can reduce blood pressure.



#### **Entraining to music**

Singing can reduce stress, improve energy levels and mood depending upon how we see it. If we're singing in the shower it will work for most of us. But if we're singing a solo in front of a bunch of people, for many of us, it will have the opposite effect. The same goes for dancing, but you get the additional benefit of exercise which has increased health benefits.

#### Rhythm is important

When something in our bodies gets out of rhythm that is when the dysfunction occurs. If a system gets "stuck" in an offbeat it responds inappropriately. Music may be able to nudge it loose. The vagus nerve is exceptional at stimulating various points of the body. For example, it is part of the timing of the heartbeat. The vagus nerve stimulates the sinoatrial node (that's the same place where they put pacemakers in order to control the heartbeat).

The vagus nerve is easy to stimulate with a Rezzimax Pro Tuner. The Tuner can effectively reset the vagus nerve. It then encourages the vagus nerve to do the same to various systems in the body. If you have a fitness watch, you can become a scientist and "study" your own responses quite easily.



## MAIN TARGET AREAS OF LEG, KNEE AND FOOT







40

## MAIN TARGET AREAS OF LEG, KNEE AND FOOT



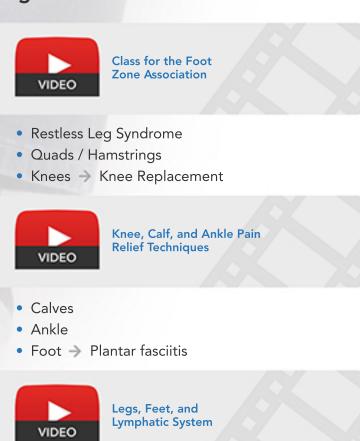








## Legs



Toes → Hammer

## General

- Balance Retraining
- Broken Bones
- Cancer Pain
- CRPS
  - → Stay away from hot spots
  - Start with lowest of the gentle levels
  - Humming is critical to entrain the brain and vagus nerve
  - If humming out loud increases the symptoms, hum inside the head
- Fascia Release
- Fibromyalgia
- Hypotonia
- Joints
  - $\rightarrow$  Adhesive Capsulitis

• Lymphatic System  $\rightarrow$  Lymphatic Drainage



- Muscle Tension
- Numbness/Tingling
- Paralysis (Paraplegia, quadriplegia)



Paralyzed – Waking Up the Nervous System

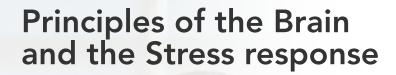
- Pre- and Post-surgical Rehab
- Sore muscles
- Sports Performance Enhancement



Paralyzed – Waking Up the Nervous System

- Swollen glands
- Tremors





The brain is wired to create "super highways" which create patterns of behavior and automatic reaction.

- Good and bad experiences make us more efficient.
- Strong beliefs and patterns of behavior wired neural pathways are wrapped with myelin sheaths to block out interference, creating "super-highways."

Our Stress Down-Regulation program "bombs" these old super-highways, putting ruts and holes in them so it will be easier to create new and powerful neural pathways free from the intrusive trauma patterns. Examples:

- Porn addict who struggles with the chemicals and wiring in his/her brain and wants to view the porn (the old highway) needs to be able to more easily access the new highway of choosing a better activity and avoiding the old patterns of choice.
- Alcohol addict who recalls bad experiences on a regular basis that wants to alleviate the tension caused by bad memories. The brain seeking relief will find something to fill the void...
- We wonder if it is possible to create new "brain muscle memory" to heal and downregulate the nervous system.



## Preparing to undergo the Stress Down-Regulation process

- Identify what you want to work on a feeling, a memory, an experience, a fear, etc
- Journaling can help



## The Stress Down-Regulation Technique

The brain is wired to create "super highways" which create patterns of behavior and automatic reaction.

## 1. Start by thinking of a Stress or Worry of the past, present or future.

## 2. Strap the Rezzimax Tuner to the non-dominant lower extremity. Turn on an algorithm pattern

• Billions of bits of carefully calibrated information will be sent to the brain at the same time you are thinking about a Stressful event or a Worry or Fear you may have. This will help break up painful patterns. The resonance helps by sending the brain data from hundreds of thousands of sensors in joints, ligaments, muscles, and cells throughout the body. The balanced resonant vibration simply accelerates the process.

#### 3. How to do it

Place the knot in the middle of a strap or rope in the space between the door and the door frame near the hinges and shut the door tightly. Place it at the middle hinge level to anchor the strap tightly.



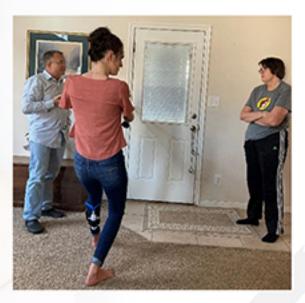
Put your dominant foot back, the non-dominant foot in front, so you are balanced, and then squat down slightly and pull firmly against the strap to engage the core muscles. Keep this tension against the strap while performing the exercise.





Turn your head to the dominant side.

Turning your head to the dominant side keeps the body from turning on the stress chemicals. (Imagine the face of someone experiencing some type of stressful event, their jaws are clenched, neck muscles are tense and tight, and they may even have bulging veins in their temples)! Turning the head to the side weakens the strength of of those neck muscles one (the sternocleidomastoid on the dominant side). Turning our heads to the dominant side weakens the physiological stress in the neck area to allow the calming chemicals to flow more easily.



#### 4. Stress Mode

Breathe normally for 20-30 seconds while thinking about all the details you can recall about a particular stressful event, and become aware of any senses you can recall, such as sights, sounds, smells, feeling, time of day and year, who you were with, etc. The goal is to briefly bring up the stress chemicals from the sympathetic nervous system caused during the particular events.

Take a big breath of air and then let the air out in 3 distinct chunks (out, hold, out, hold, out the rest of the way.) The hold is brief and then continue breathing out. This causes breakup of trauma chemicals.

• When the breath is fully out of the lungs, hold at this state for as long as you can (while pulling for all you can!)

• It is at this stage, when the breath is all out of your lungs, that you need to tell yourself to stop thinking about the stressful event and begin thinking about the things that are most important to you. Thinking about the things for which you are profoundly grateful will provide your brain with material with which it can build new connections as you break up the chemicals of prior stressful events. Think of as many "gratitude and happy thoughts" as you can until you cannot wait any longer to come up for air. When you must finally breathe in, relax completely and breathe deeply for several seconds before performing the exercise again.

• Performing this exercise creates a vacuum state in the brain where you can shut off the chemicals of the stressful event (and anxiety and depression and allergy and other sensitivities /hypersensitivities...) chemicals and turn on the growth and healing chemicals.

This heals wounds created by past experiences and future fears. You will be confusing the chemicals associated with the stressful event and breaking them up! Remember, wait until you absolutely need to, to come up for air!

• You can close your eyes during this whole process if you wish.

#### 5. Repeat the Process 7 Times; perform daily for 6 weeks for best results

#### 6. Triggering the Healing Chemicals in a trained brain

Alternative technique #1: Exercise ball and kneel on the floor Alternative technique #2: Sitting in a chair – pillows or press into knees Don't let the fear of past, present or future stressful events, anxiety, stress, or allergies keep you from being who you need to be!



**References:** 

1. Wolff J. The law of transformation of bone. Kirschwald: 1892. in German.

2. Sievanen H. Immobilization and bone structure in humans.
 Arch Biochem Biophys. 2010;503:146–152. PubMed, Google Scholar

3. Chan ME, Uzer G, Rubin CT. The potential benefits and inherent risks of vibration as a nondrug therapy for the prevention and treatment of osteoporosis.
 Curr Osteoporos Rep. 2013;11:36–44. PubMed, Google Scholar

4. Judex S, Lei X, Han D, Rubin C. Low-magnitude mechanical signals that stimulate bone formation in the ovariectomized rat are dependent on the applied frequency but not on the strain magnitude. J Biomech. 2007;40:1333–1339.
PubMed, Google Scholar

**5. Thompson WR, Rubin CT, Rubin J. Mechanical regulation of signaling pathways in bone.** Gene. 2012;503:179–193. *PMC free article, PubMed, Google Scholar* 

6. Pre D, Ceccarelli G, Gastaldi G, et al. The differentiation of human adipose-derived stem cells (hASCs) into osteoblasts is promoted by low amplitude, high frequency vibration treatment. Bone. 2011;49:295–303. PubMed, Google Scholar

7. Sen B, Xie Z, Case N, et al. Mechanical signal influence on mesenchymal stem cell fate is enhanced by incorporation of refractory periods into the loading regimen.
 J Biomech. 2011;44:593–599. 2 PMC free article, PubMed, Google Scholar

**8.** Lau E, Al-Dujaili S, Guenther A, et al. Effect of low-magnitude, high-frequency vibration on osteocytes in the regulation of osteoclasts. Bone. 2010;46:1508–1515. *PMC* free article, PubMed, Google Scholar

9. Xiong J, Onal M, Jilka RL, et al. Matrix-embedded cells control osteoclast formation.
 Nat Med. 2011;17:1235–1241. PMC free article, PubMed, Google Scholar

10. Uzer G, Pongkitwitoon S, Ian C, et al. Gap junctional communication in osteocytes is amplified by low intensity vibrations in vitro. PLoS One. 2014;9:e90840.
This is the first study demonstrating regulation of gap junctional communication by low-intensity vibration in bone cells. PMC free article, PubMed, Google Scholar

11. Kulkarni RN, Voglewede PA, Liu D. Mechanical vibration inhibits osteoclast formation by reducing DC-STAMP receptor expression in osteoclast precursor cells.
 Bone. 2013;57:493–498. PMC free article, PubMed, Google Scholar

12. Xie L, Rubin C, Judex S. Enhancement of the adolescent murine musculoskeletal system using low-level mechanical vibrations.

J Appl Physiol. 2008;104:1056–1062. *PMC free article, PubMed, Google Scholar* 



13. Rubin CT, Capilla E, Luu YK, et al. Adipogenesis is inhibited by brief, daily exposure to highfrequency, extremely low-magnitude mechanical signals.
Proc Natl Acad Sci U S A. 2007;104:17879–17884. German.
PMC free article, PubMed, Google Scholar

14. Uzer G, Pongkitwitoon S, Ete Chan M, Judex S. Vibration induced osteogenic commitment of mesenchymal stem cells is enhanced by cytoskeletal remodeling but not fluid shear. Biomech. 2013;46:2296–2302.

PMC free article, PubMed, Google Scholar

15. Ward K, Alsop C, Caulton J, et al. Low magnitude mechanical loading is osteogenic in children with disabling conditions. J Bone Miner Res. 2004;19:360–369.
 PubMed, Google Scholar

16. Garman R, Gaudette G, Donahue LR, et al. Low-level accelerations applied in the absence of weight bearing can enhance trabecular bone formation.
 J Orthop Res. 2007;25:732–740. *PubMed*, Google Scholar

17. Forlino A, Cabral WA, Barnes AM, Marini JC. New perspectives on osteogenesis imperfecta. Nat Rev Endocrinol. 2011;7:540–557.
 PMC free article, PubMed, Google Scholar

18. Vanleene M, Shefelbine SJ. Therapeutic impact of low amplitude high frequency whole body vibrations on the osteogenesis imperfecta mouse bone. Bone. 2013;53:507–514. This is the first study demonstrating the anabolic effects of vibration therapy in a mouse model of osteogenesis imperfecta, providing critical information to design mechanistic studies capable of elucidating the effects vibration on this debilitating genetic condition. 2011;7:540–557. PMC free article, PubMed, Google Scholar

19. Roschger P, Paschalis EP, Fratzl P, Klaushofer K. Bone mineralization density distribution in health and disease. B. Bone. 2008;42:456–466.
 PubMed, Google Scholar

20. Stuermer EK, Komrakova M, Sehmisch S, et al. Whole body vibration during fracture healing intensifies the effects of estradiol and raloxifene in estrogen-deficient rats. Bone. 2014;64:187–194. *PubMed*, Google Scholar

21. Rauch F, Sievanen H, Boonen S, et al. Reporting whole-body vibration intervention studies: recommendations of the International Society of Musculoskeletal and Neuronal Interactions. J Musculoskelet Neuronal Interact. 2010;10:193–198.
 PubMed, Google Scholar

**22.** Cardinale, M, Bosco, C. The use of vibration as an exercise intervention. Exerc Sport Sci Rev 31: 3-7, 2003.

23. Eljamel, S. Problem based neurosurgery: World Scientific Publishing Company; 2011



24. H, G. Gray's anatomy. In. London: Churchill Livingston; 1989

25. Hara, ES, Witzel, AL, de Luca, CE, Ballester, RY, Kuboki, T, Bolzan, MC. A novel vibratory stimulation-based occlusal splint for alleviation of TMD painful symptoms: pilot study. J Oral Rehabil 40: 179-184, 2013.

**26.** Hollins, M, McDermott, K, Harper, D. How does vibration reduce pain? Perception 43: 70 84, 2014.

27. Johansson, A, Unell, L, Carlsson, GE, Soderfeldt, B, Halling, A. Gender difference in 49 symptoms related to temporomandibular disorders in a population of 50-year-old subjects. J Orofac Pain 17: 29-35, 2003.

28. Kim, SA, Lee, BH, Bae, JH, Kim, KJ, Steffensen, SC, Ryu, YH, Leem, JW, Yang, CH, Kim, HY. Peripheral afferent mechanisms underlying acupuncture inhibition of cocaine behavioral effects in rats. PLoS One 8: e81018, 2013.

**29. Navratil, L, Navratil, V, Hajkova, S, Hlinakova, P, Dostalova, T, Vranova, J. Comprehensive treatment of temporomandibular joint disorders.** Cranio 32: 24-30, 2014.

**30.** Pedersen, C, Miller, M, Xu, KT, Carrasco, L, Smith, C, Richman, PB. Use of a Dental Vibration Tool to Reduce Pain From Digital Blocks: A Randomized Controlled Trial. Reg Anesth Pain Med 42: 458-461, 2017.

**31. Ritzmann, R, Kramer, A, Gollhofer, A, Taube, W. The effect of whole body vibration on the H-reflex, the stretch reflex, and the short-latency response during hopping.** Scand J Med Sci Sports 23: 331-339, 2013.

**32.** Sharma, P, Czyz, CN, Wulc, AE. Investigating the efficacy of vibration anesthesia to reduce pain from cosmetic botulinum toxin injections. Aesthet Surg J 31: 966-971, 2011.

33. Shiozawa, P, Silva, ME, Carvalho, TC, Cordeiro, Q, Brunoni, AR, Fregni, F. Transcutaneous vagus and trigeminal nerve stimulation for neuropsychiatric disorders: a systematic review. Arq Neuropsiquiatr 72: 542-547, 2014.

34. Takashima, M, Arai, Y, Kawamura, A, Hayashi, T, Takagi, R. Quantitative evaluation of masseter muscle stiffness in patients with temporomandibular disorders using shear wave elastography. J Prosthodont Res 61: 432-438, 2017.

35. David Muehsam, PhD and Carlo Ventura, MD, PhD Life Rhythm as a Symphony of Oscillatory Patterns: Electromagnetic Energy and Sound Vibration Modulates Gene Expression for Biological Signaling and Healing. Glob Adv Health Med 2014 Mar; 3(2): 40–55. Attps://www.ncbi.nlm.nih.gov/pmc/articles/PMC4010966/

36. Robert J. Ellis, PhD and Julian F. Thayer, PhD Music and Autonomic Nervous
 System (Dys)function Music Percept. 2010 Apr; 27(4): 317–326
 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4010966/



37. M.K. Taneja Modified Bhramari Pranayama in Covid 19 Infection Indian J
Otolaryngol Head Neck Surg. 2020 Sep; 72(3): 395–397.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7239502/

38. Maheshkumar Kuppusamy, Dilara Kamaldeen, Ravishankar Pitani, Julius Amaldas
 Immediate Effects of Bhramari Pranayama on Resting Cardiovascular Parameters in
 50 Healthy Adolescents

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4948385/

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4458848/#R11

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3939523/

### Rezzimax, Our first research:

https://www.oralhealthgroup.com/features/understandingtrigeminal-vagus-nerverelationship-can-help-one-tune-pain-fear-part-1-changing-facepain/#comment-153 582

Rezzimax YouTube Channel

\* Khan I. Mysticisms of Sound and Music. Pilgrims Publishing. June 2002.

\*\* Wolf CB, Mohammad RK. Mechano-transduction and its role in stem cell biology. Baharvand H, "Trends in stem cell biology and technology". Totowa, NJ: Humana Press, 2009: 289-403

