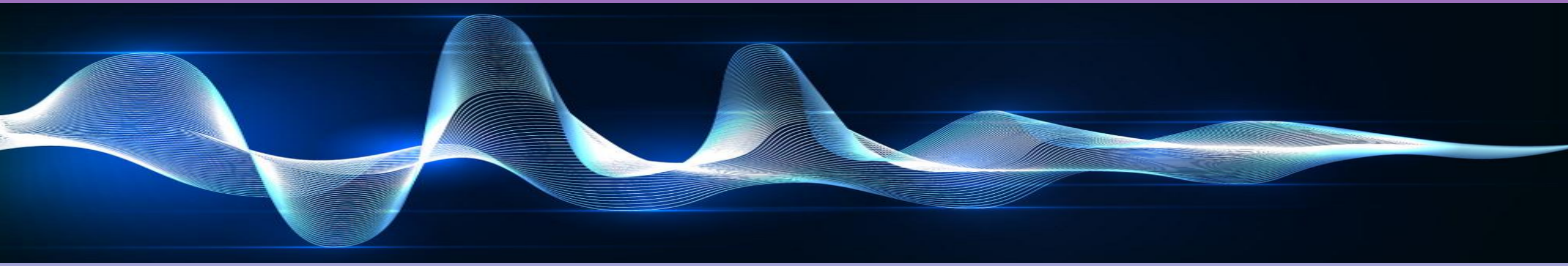
Frequency Specific Microcurrent What is it? How does it work?

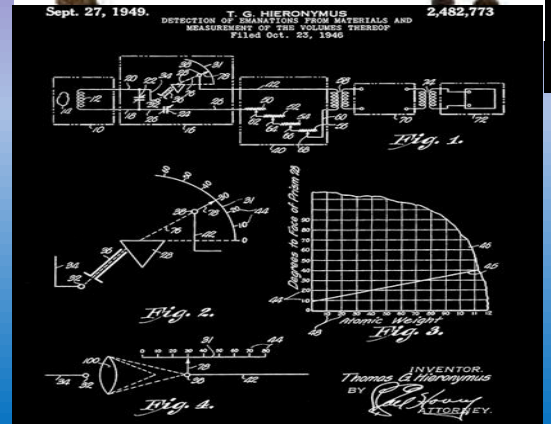


Carolyn McMakin, MA, DC

Frequency Specific Microcurrent History

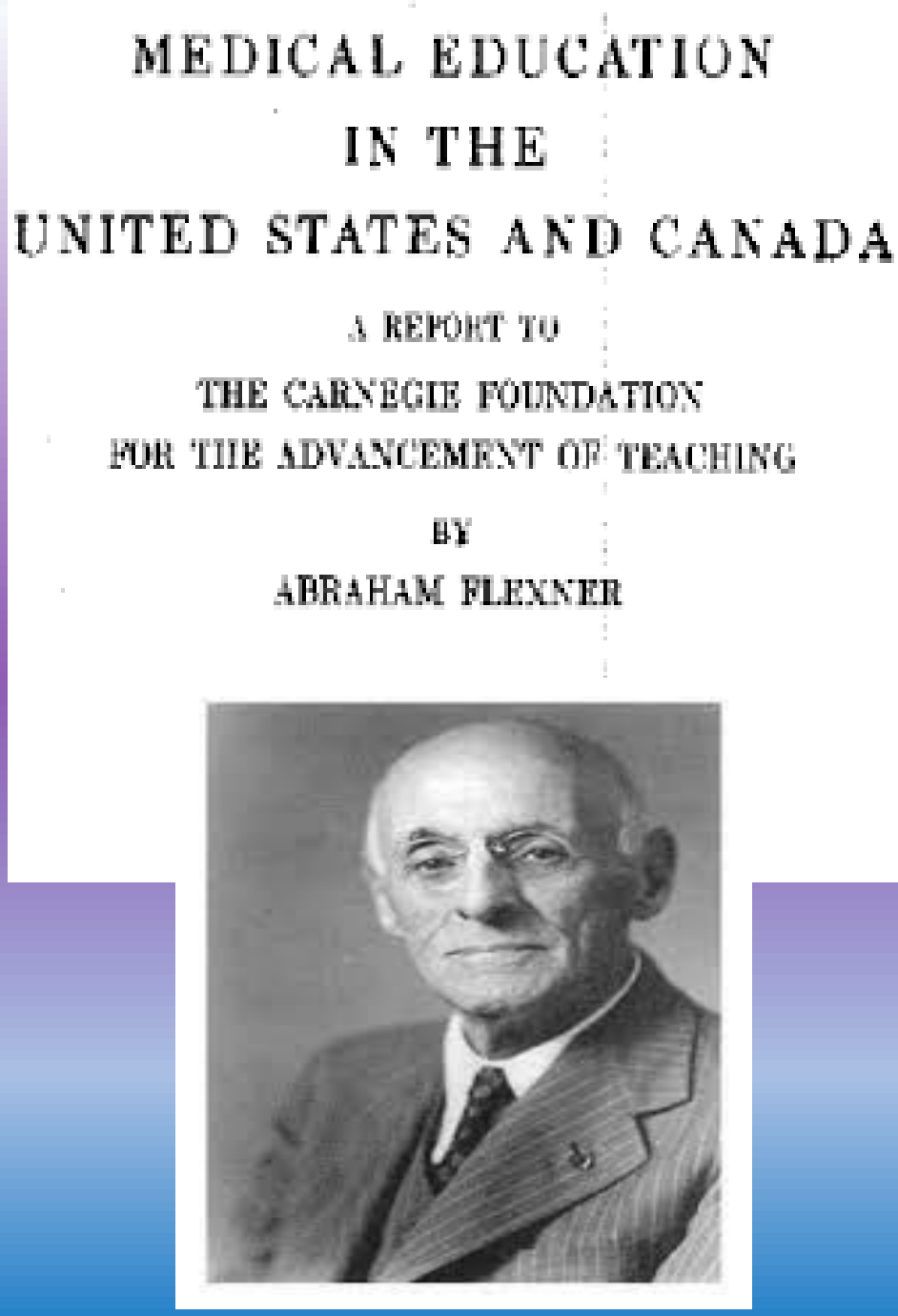
Frequency Specific therapies were developed in the early 1900's by MD's and Osteopaths in the US, UK, and Germany

Used by thousands of physicians until 1934



The Flexner Report

- In 1910, The Flexner Report stated that medicine should become standardized by
  - Establishing standard medical education
  - Reducing the number of medical schools
  - Eliminating non pharmaceutical, “unscientific” approaches
- The effects of the Flexner Report were not fully implemented until 1927


MEDICAL EDUCATION
IN THE
UNITED STATES AND CANADA
A REPORT TO
THE CARNEGIE FOUNDATION
FOR THE ADVANCEMENT OF TEACHING
BY
ABRAHAM FLEXNER

Affects of Flexner Report

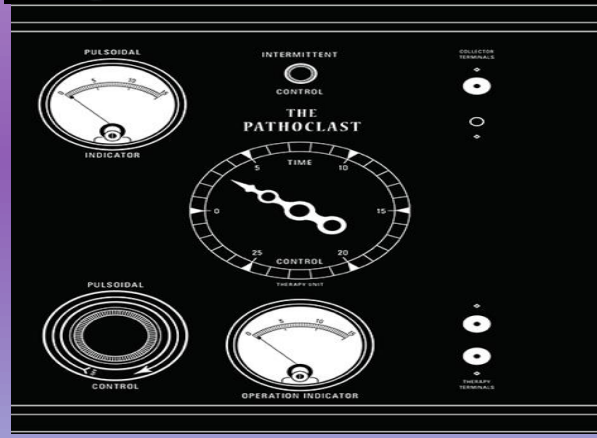
- Homeopathy, traditional osteopathy, eclectic medicine, electromagnetic therapies, and physiomedicalism (botanical therapies that had not been scientifically tested) were derided.
- Pharmaceutical medication and surgery were to be the only tools of medicine

- The Report also concluded that there were too many medical schools in the United States, and that too many doctors were being trained.
  - The *Flexner Report* caused the closure of all but two "negro" medical schools and the reversion of American universities to male-only admittance programs to accommodate a smaller admission pool.

- As a result, medicine became the realm of white males and pharmaceuticals

FSM History

- Medicine labeled electromagnetic therapies as ineffective fakes.
- Drugs and surgery were to be the only tools of medicine
- Nutrition, herbs, homeopathy and frequency therapies were outlawed



- Every health care intervention, except for prescription medication, surgery and radiation was outlawed.

FSM History

Physicians who used these tools would lose their license.

The research and history were lost when the researchers died.

Practitioners were persecuted and some were put in jail.

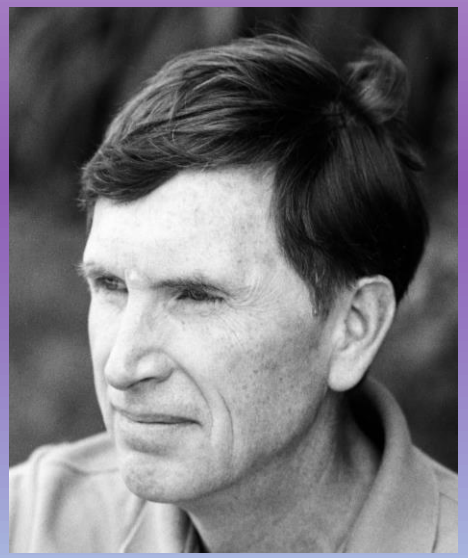
The devices went into clinic back rooms or in the trash.

FSM History

- Harry VanGelder was an Osteopath and Naturopath from Australia and the UK
- Van Gelder bought a practice in Canada in 1946, walked into a back room of the clinic and found a device under a sheet.
- That device was made in 1922
- That device came with a list of frequencies

FSM History

- In 1983, George Douglas worked with VanGelder and brought home a copy of the frequency list and put it in a drawer.



The list looked like this but it had words that described what the frequencies were for

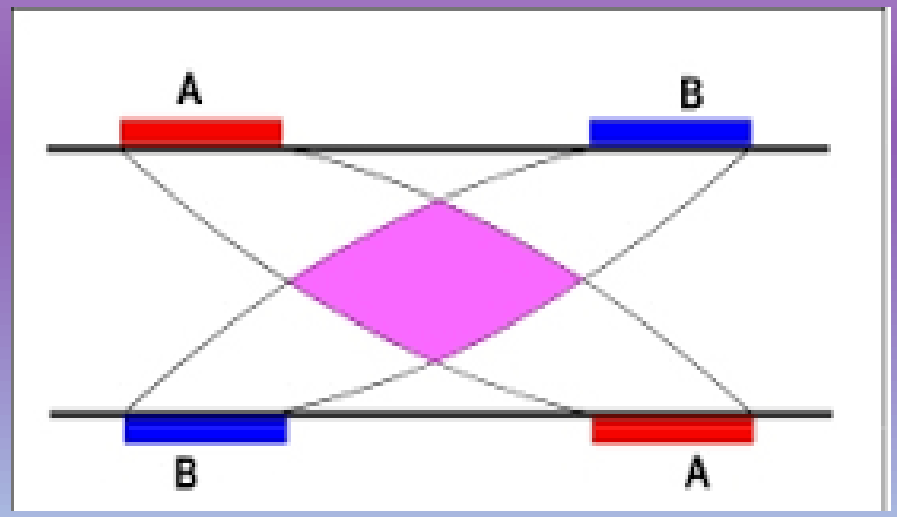
Channel A – Conditions	Channel B – Tissues
9 Hz	13 Hz
13 Hz	62 Hz
18 Hz	77 Hz
40 Hz	89 Hz
51 Hz	90 Hz
61 Hz	396 Hz
94 Hz	562 Hz
284 Hz	783 Hz

FSM History

- I met George Douglas, DC in 1991 and finished Chiropractic College in 1994
- George found the list in a drawer in 1995.
- He suggested we use the frequencies with a 2-channel microcurrent device because VanGelder's machine had two channels.
- Uncertain how frequencies were derived
- Uncertain of mechanism of action
- 1920's equipment was not microcurrent
- 1920's therapy was not FSM

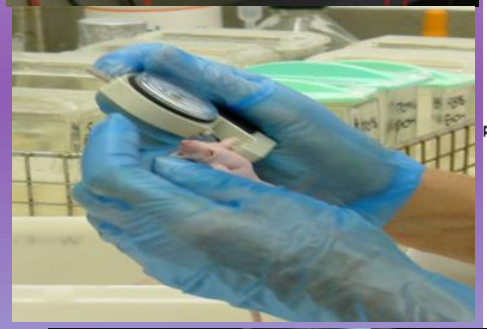
FSM Uses Two Channels - Two Frequencies

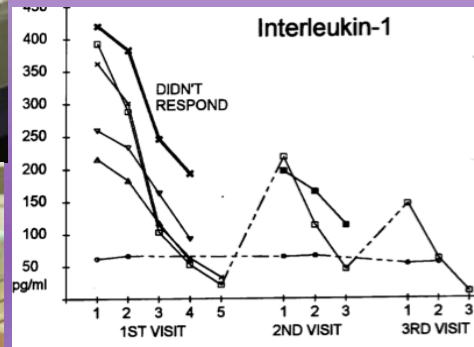
- Frequencies and current from the two channelsmust intersect when the frequencies are applied at the same time
- According to physics when the frequencies intersect it creates an interferential effect that includes the
- Channel A frequency
- Channel B frequency
- Channel A frequency + Channel B frequency
- Channel A frequency - Channel B frequency
- Not sure which portion of the field produces effects
- Both frequencies must be “correct” to create balance and harmony

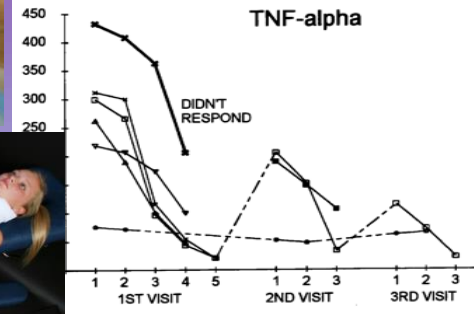


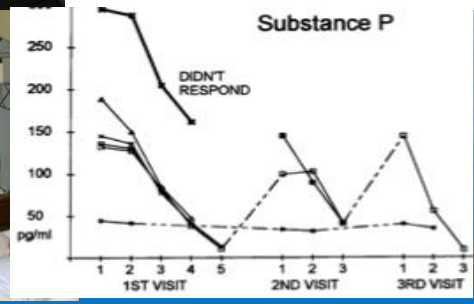
FSM History

- The frequencies were first used in 1995.
- Frequencies first taught in 1997 to find out if the effects were reproducible.
- Frequency benefits and effects are teachable and reproducible.
- Research in animals and humans and clinical results accumulated over the next 25 years.
- 20 peer reviewed papers, medical textbook and a consumer book
- There are now 5,000 FSM practitioners in 23 countries









How do frequencies work?

What is Resonance?

Resonance

Resonance is the tendency of a system or bond to oscillate at large amplitudes in response to some frequencies and not others

At the resonant frequency very small forces can produce very large amplitude vibrations

Soldiers marching in step can collapse a bridge

Resonance
Explains the Frequency Effects
Singer Breaks a Lead Crystal Glass

There is a precise frequency holding lead atoms together in a crystal matrix.

Lead-atom bonds vibrate with a singer's note, if it is precise and sustained

Lead crystal comes apart

because resonance causes the lead atoms to vibrate and destabilizes the bonds that create the crystal and the lead crystal glass shatters.

Resonance

Resonance is difficult to describe

But you all know it when you see it or feel it.

The resonance of the music moves the audience as one

When there is harmony and when it is perfectly tuned

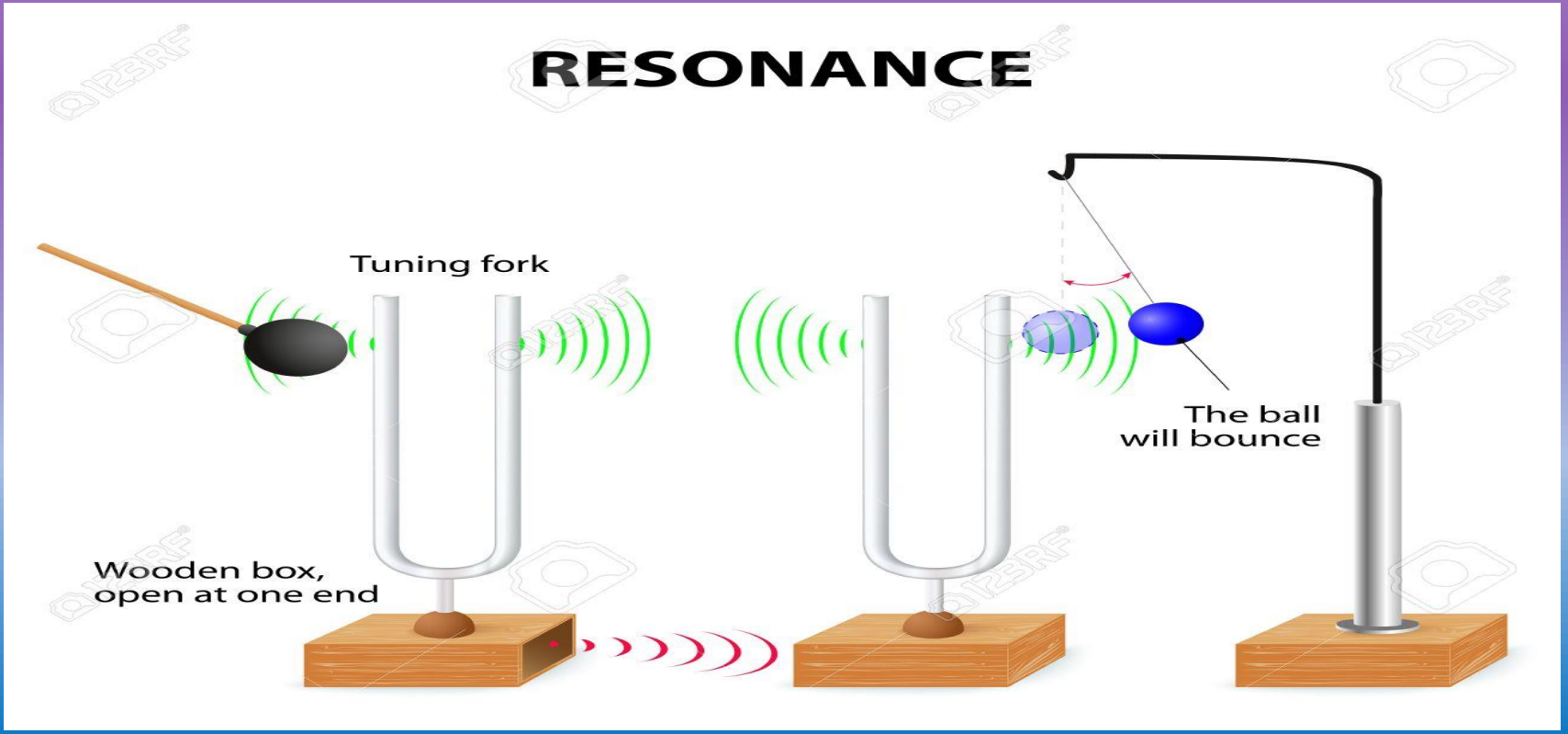
Resonance and Interference

One or two violins out of tune and the harmony disappears.

You may not know why or how but you can tell.

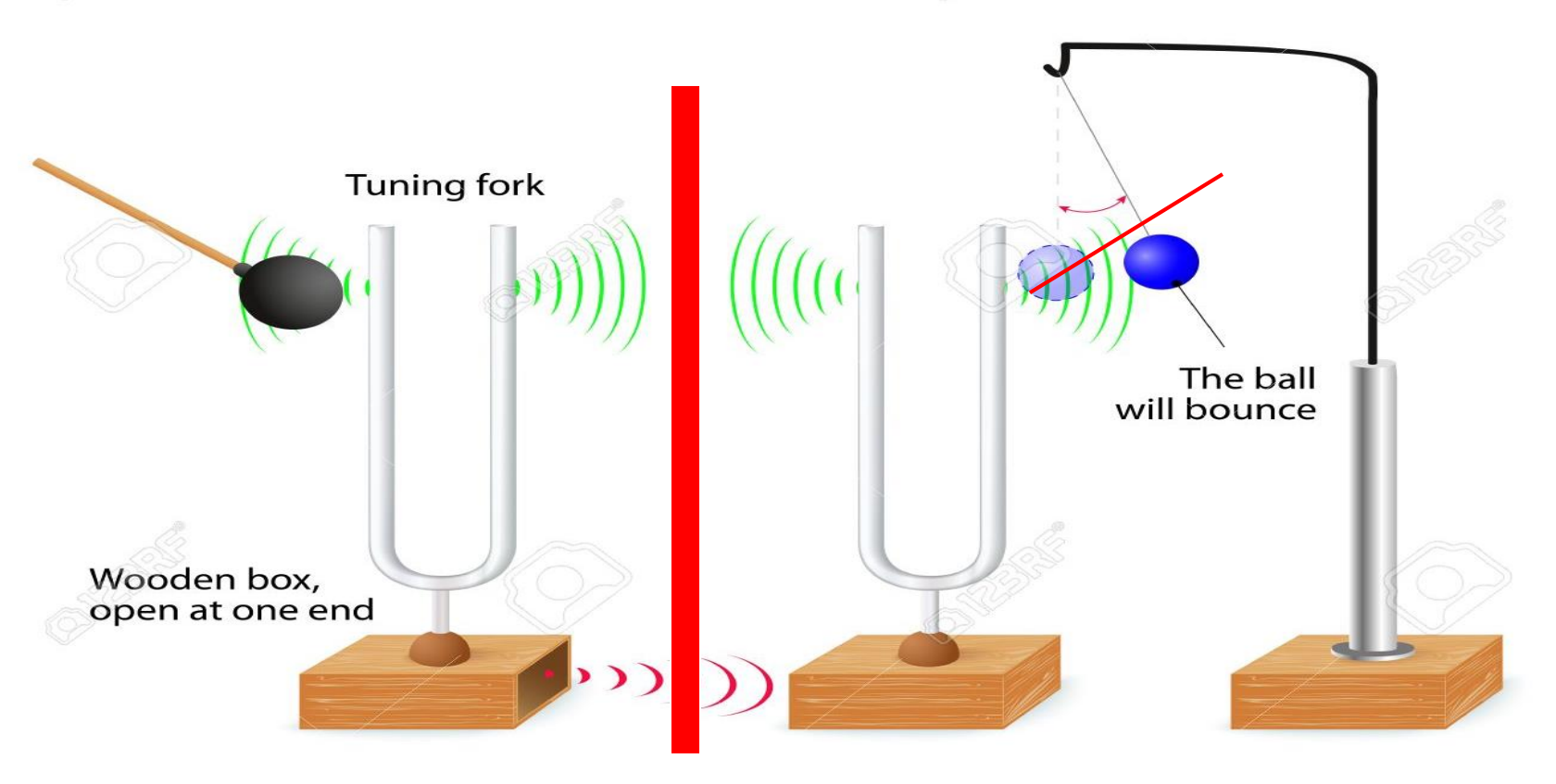
Resonance Science

- Two tuning forks tuned to the same frequency will vibrate in resonance with each other from across the room when one tuning fork is struck.



Interference

If something interferes with the resonance,
it creates imbalance, lack of harmony and loss of proper function.



Resonance is Powerful

- The Tacoma Narrows bridge was flexible and placed across a narrow straight.
- A mild rain storm brought wind and rain and caused the bridge to sway.
- When the swaying reached the resonant frequency holding the bridge together
- The bridge came apart.
- **Resonance** destroyed the bridge, not the force of the wind.

How does resonance affect the human body?

Every moving electron creates a magnetic field.

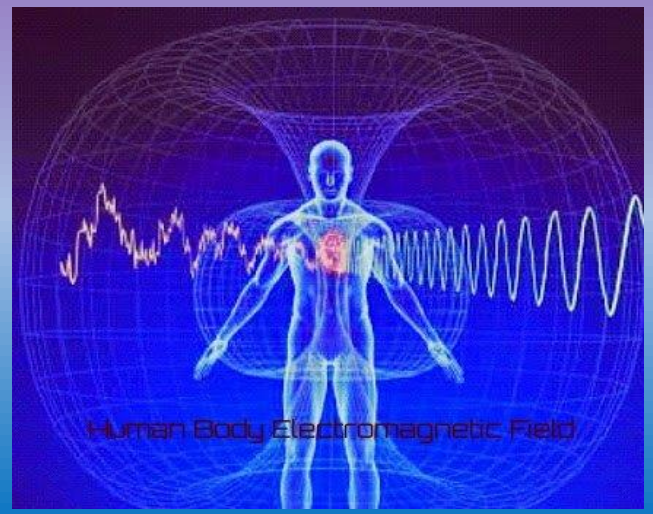
Your body is full of moving electrons,

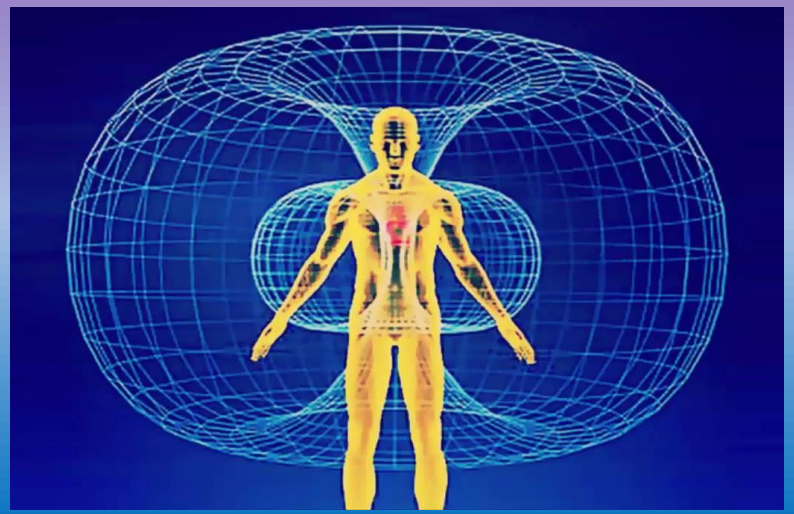
So your body has a magnetic field.

Every electromagnetic bond has a resonant frequency.

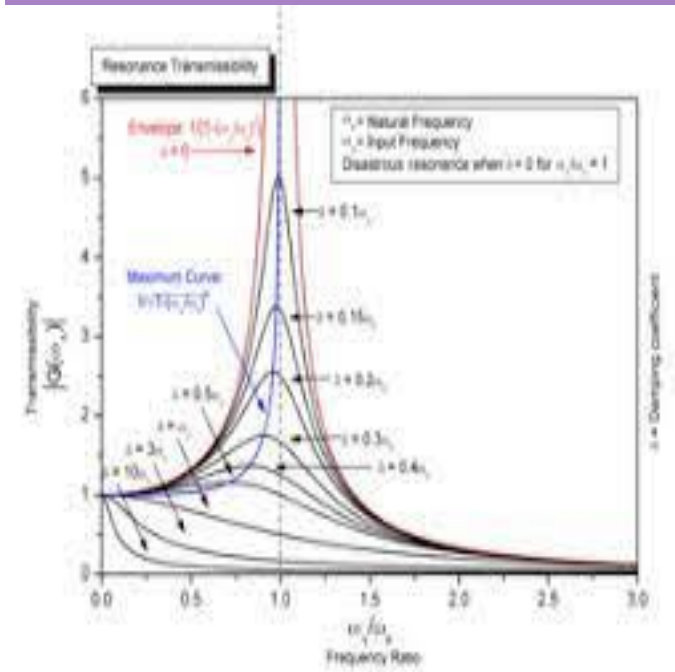
Every organ in the body is part of that magnetic field.

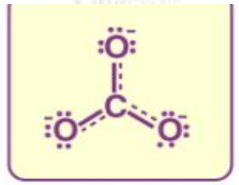
Every receptor on every cell has a frequency to which it resonates





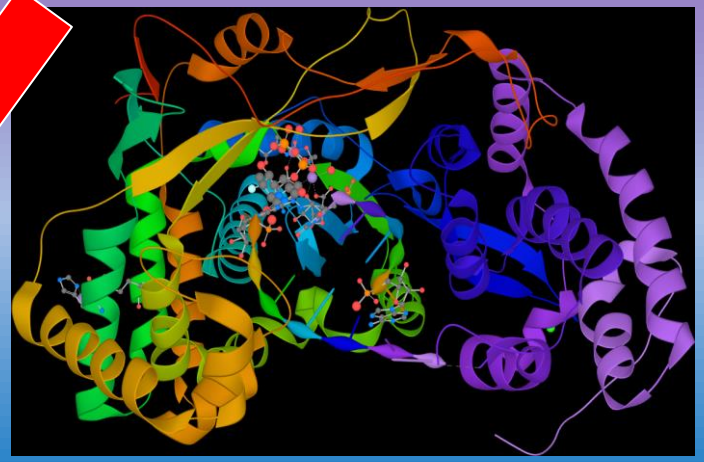
Every mechanical, chemical, and electrical bond has a frequency at which it resonates.





Resonance Science

The theory behind resonance interventions is that
Interference inhibits proper function
by creating loss of proper siganling between
cells, organs and systems, interfering with appropriate function.

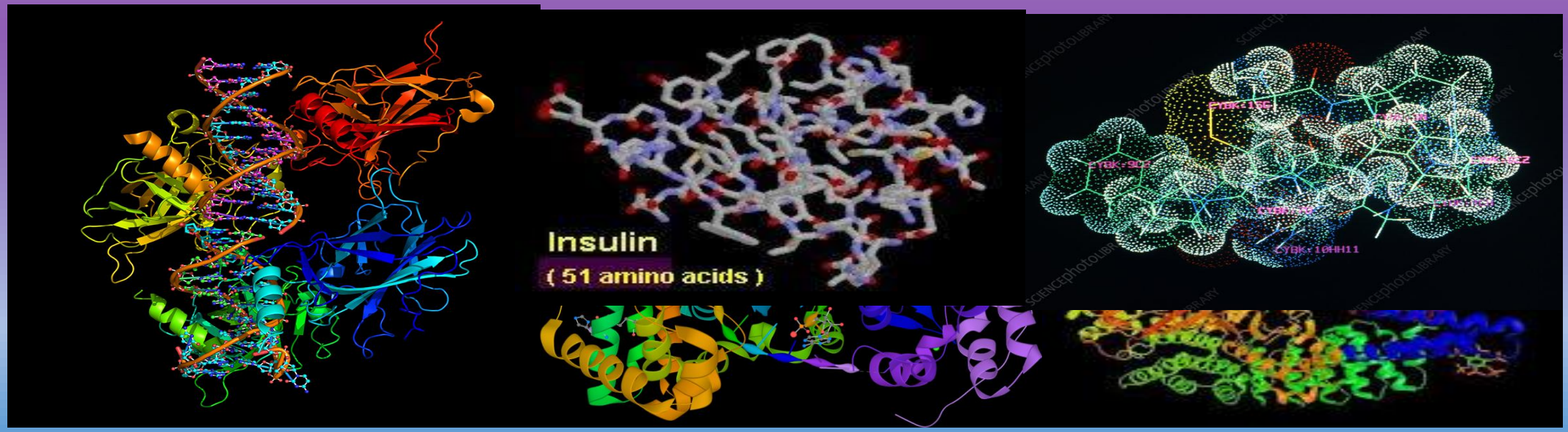


Newtonian physics describes large objects but falls apart at the molecular level

Your body is a large object made of

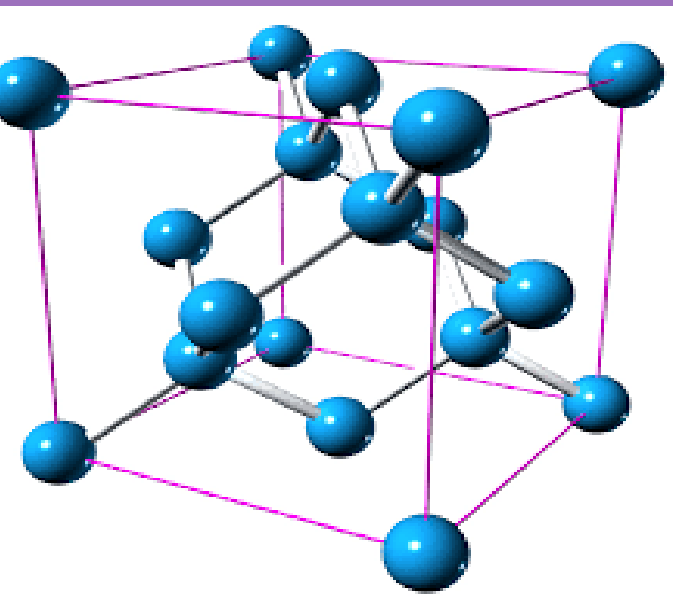
Molecules • Atoms • Subatomic Particles

Held together by electromagnetic bonds

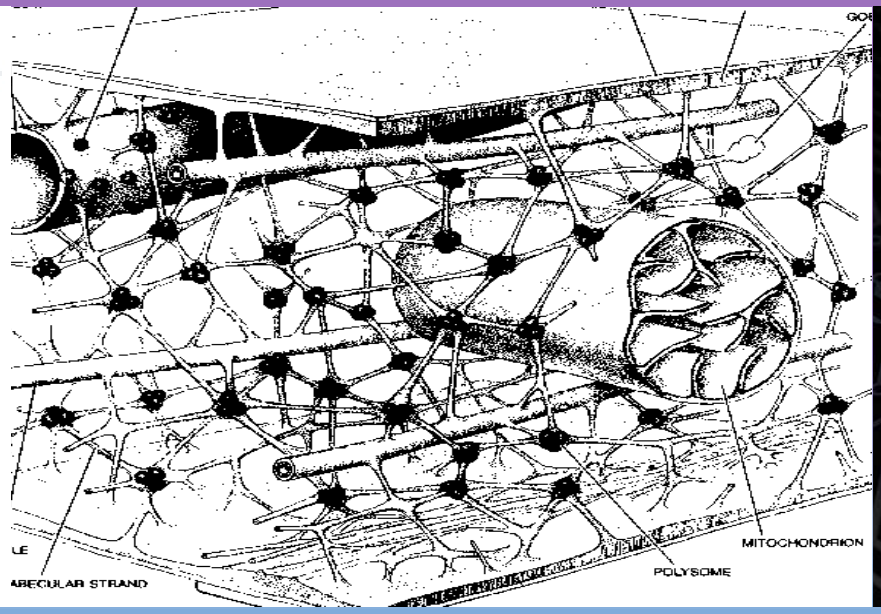


<u>Every</u> Bond has a Resonant Frequency

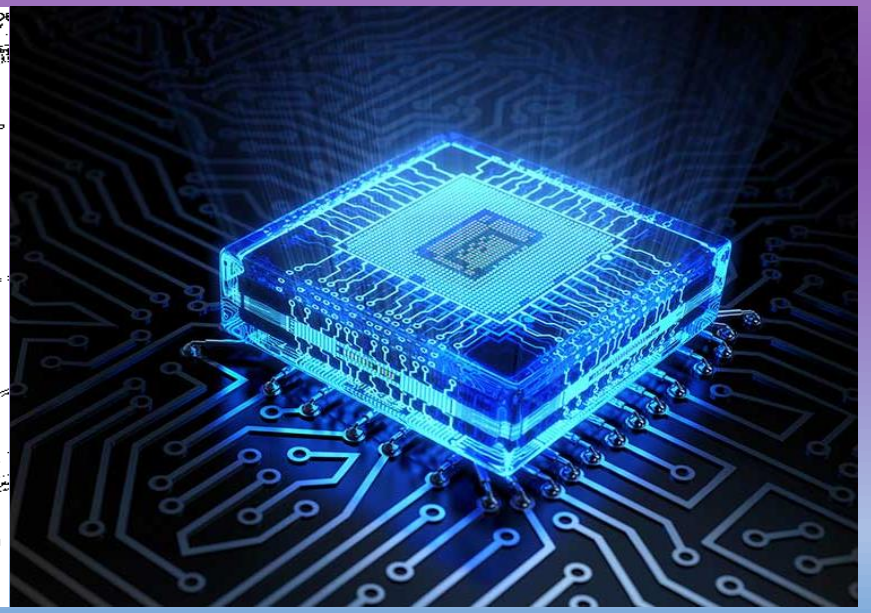
Water lines the gel inside cells and forms structures that act as a semiconductor St Gyorgi 1986



Silicon crystal

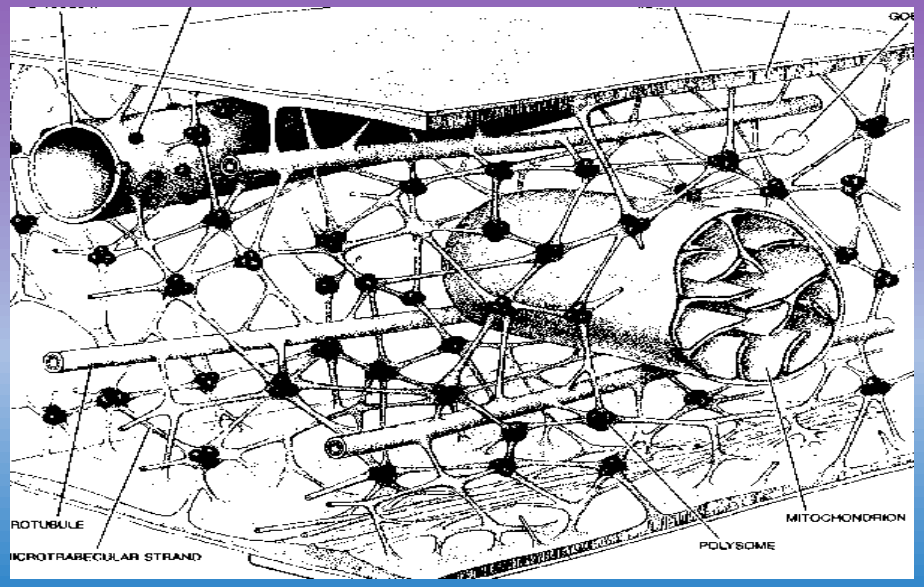


Water lines the gel matrix inside cells. Molecules vibrate and turn the cell into a semiconductor like silicon.



Semiconductor

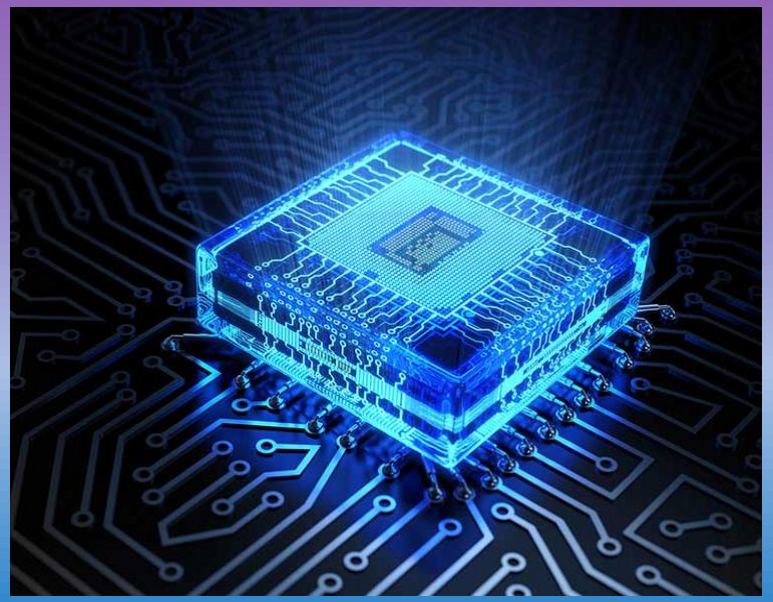
Your body is an
Electromagnetic System
that looks solid but cells function as a
Semiconductor Network



Current

Charge

Information

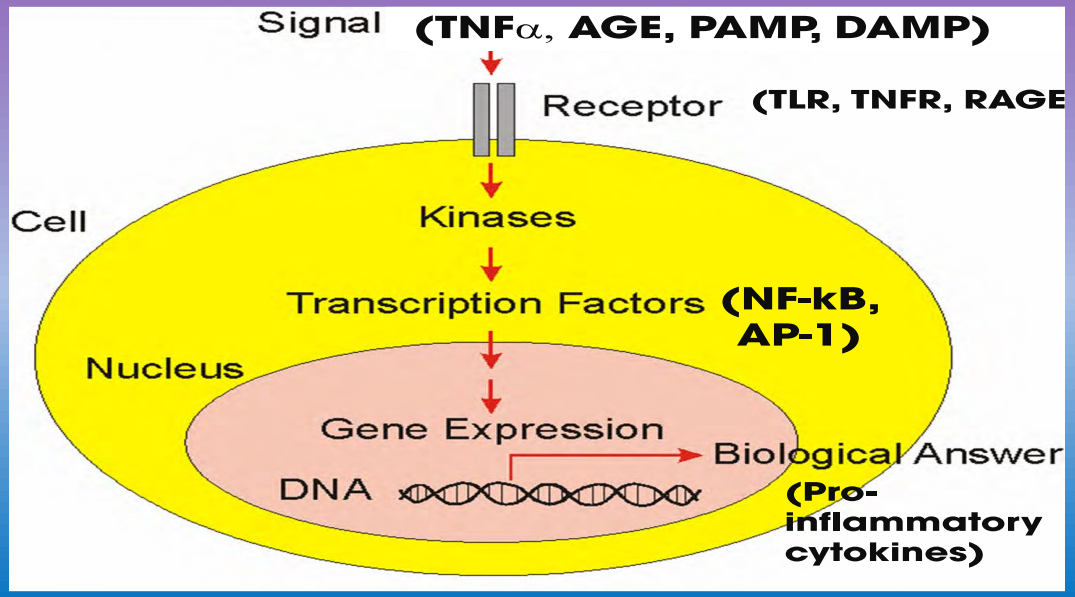


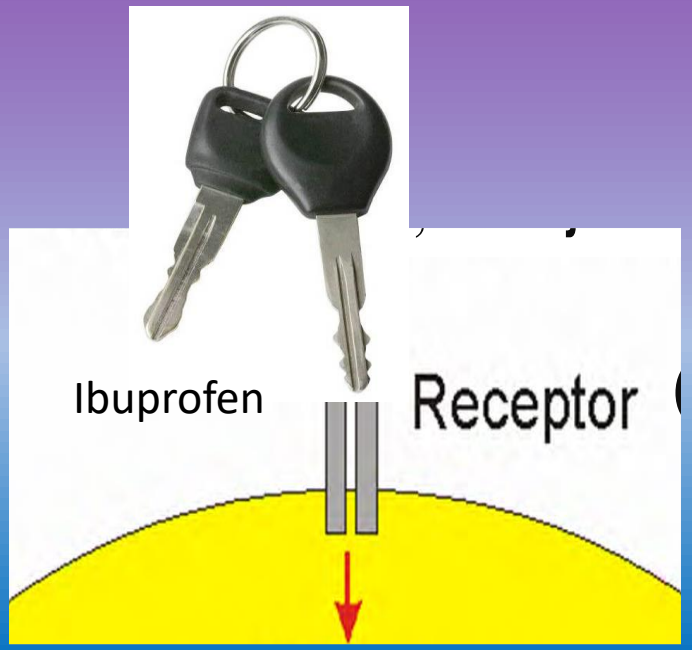
BIOLOGIC RESONANCE

Explains the Effects on Living Tissue

Pathogens, immune molecules and tissue fragments interact with cell membrane receptors.

Drugs or nutrients act like keys in a lock to change membrane receptors and change intracellular function





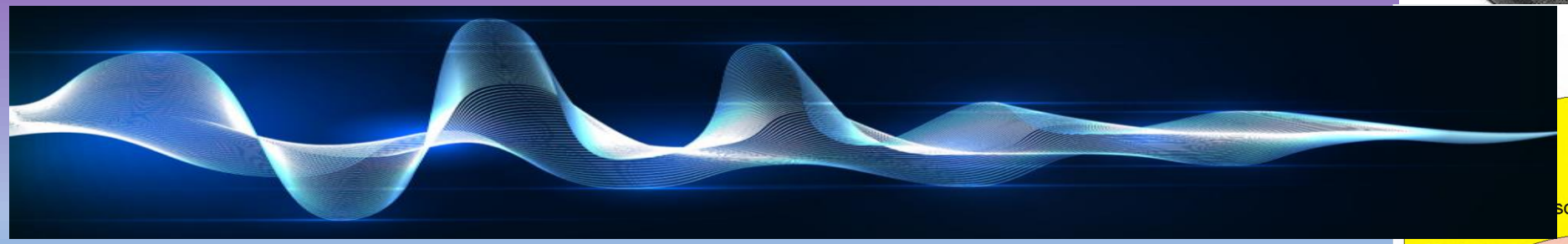
BIOLOGIC RESONANCE

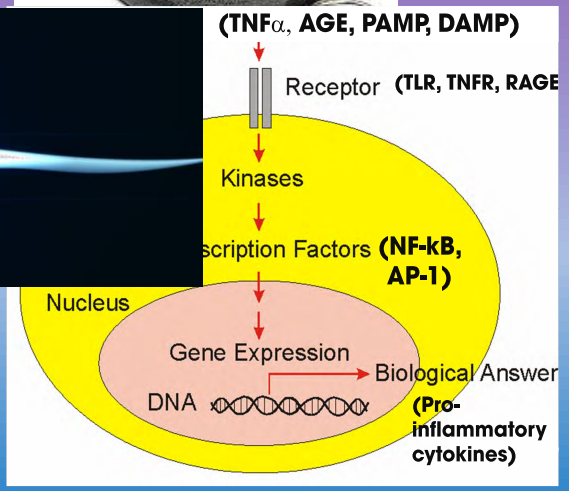
Frequencies appear to act like a key remote

opening a lock with an electromagnetic signal instead of a key

Frequencies appear to influence cell function electromagnetically

with a specific frequency signal.





Frequencies are Very Specific

- Your key fob opens only your car even if there are 12 identical cars in a row
- Your remote opens only your car with a single frequency tuned exactly to your car
- FSM seems to work like that with specific imbalances

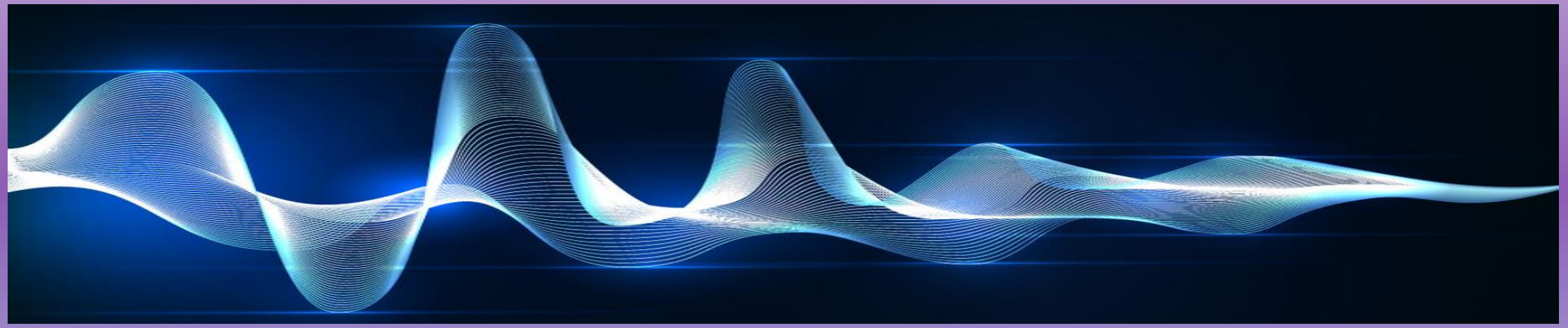
How do we know that frequencies affect imbalances?

Experience.

Research.

Reproducible Results.

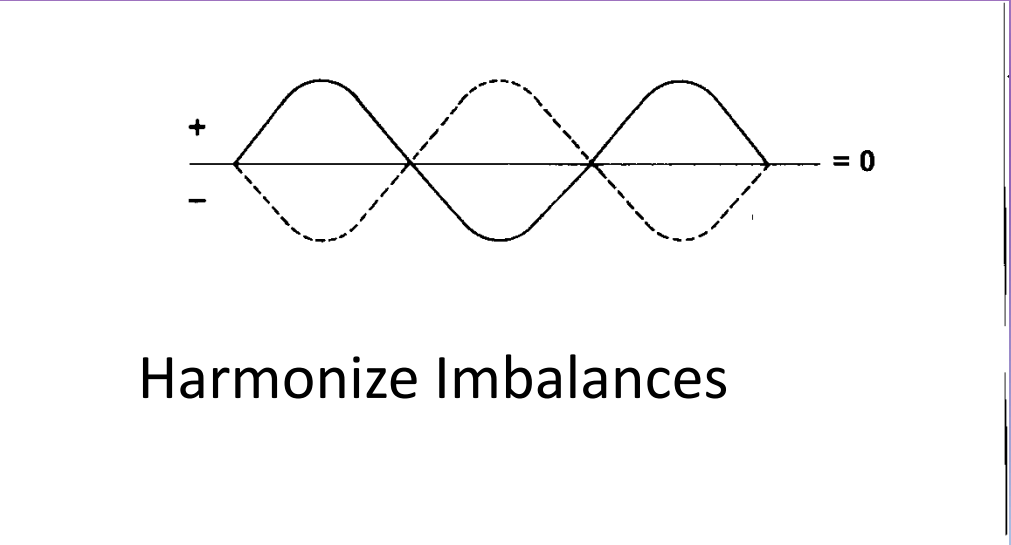
Frequency Specific Microcurrent is not about the device

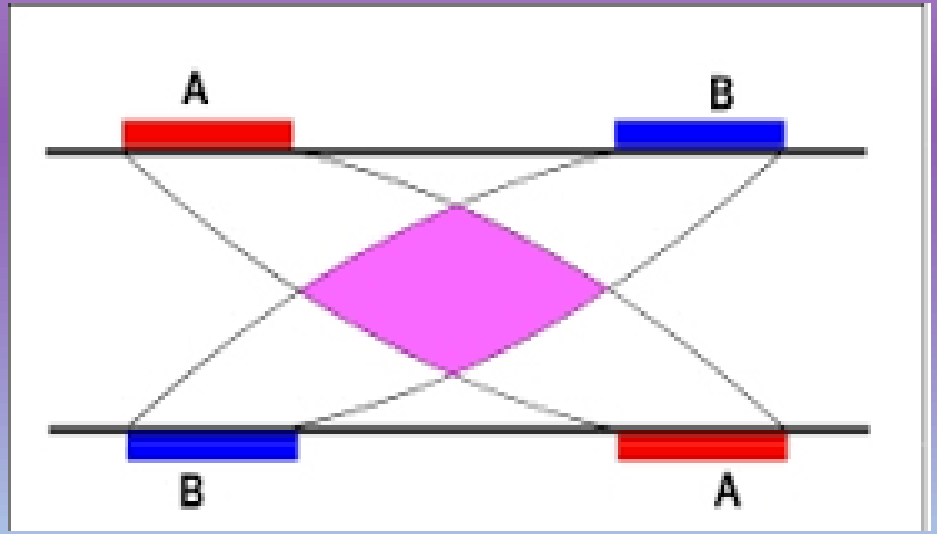


It's about the Frequency Effect

Frequency Specific Microcurrent uses
Channel A frequency: Harmonizes Imbalances
Channel B Frequency: Targets Location

- Condition frequencies are used to <u>neutralize</u> the imbalances

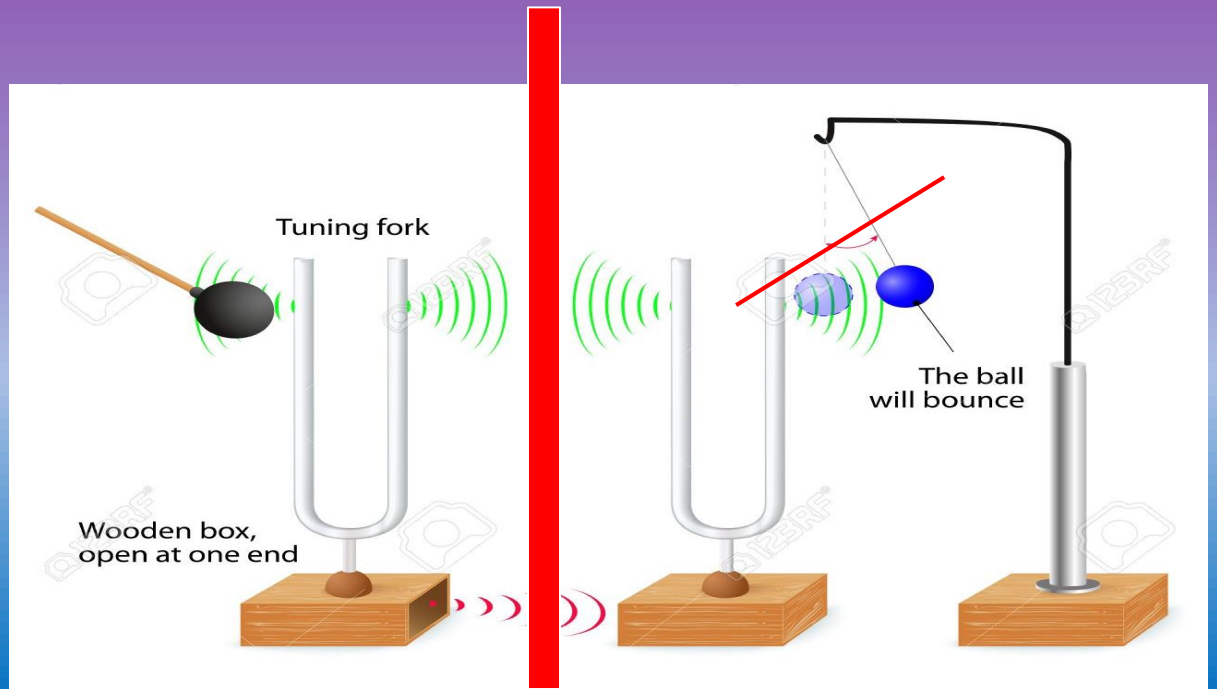


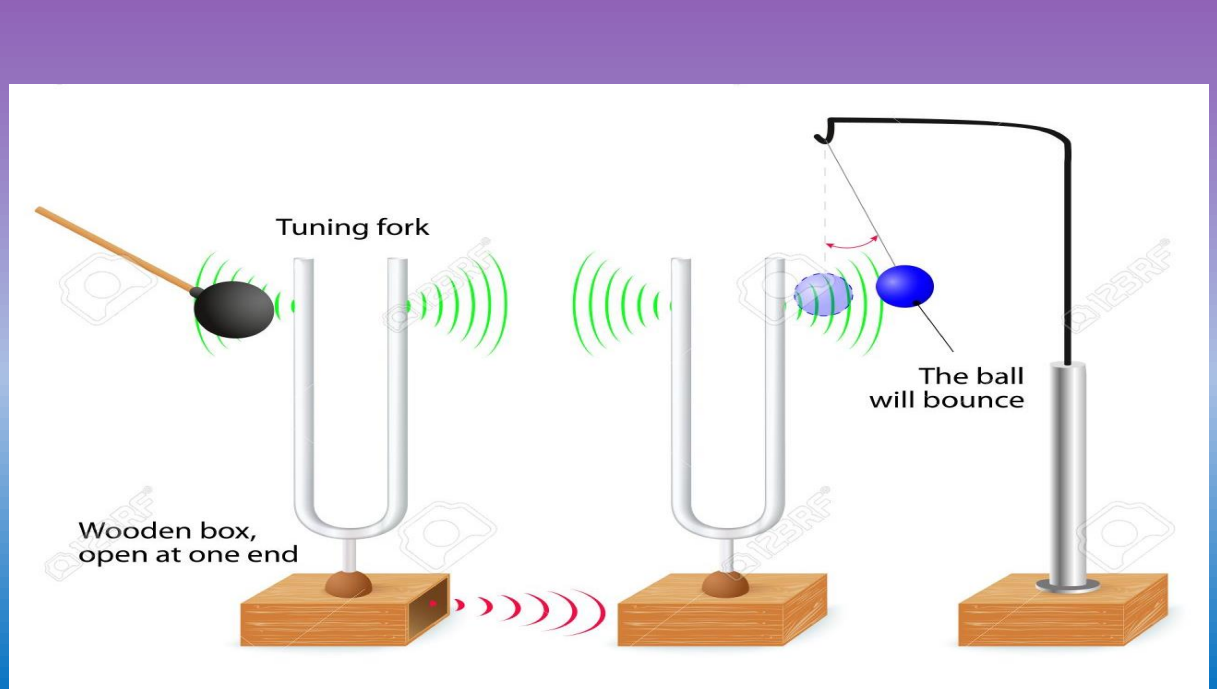


- Specific frequencies appear to resonate with specific targets

Remove Interference

If something interferes with the resonance,
it creates imbalance, lack of harmony
and loss of proper function.
Remove the Interference and function normalizes
That is physics.



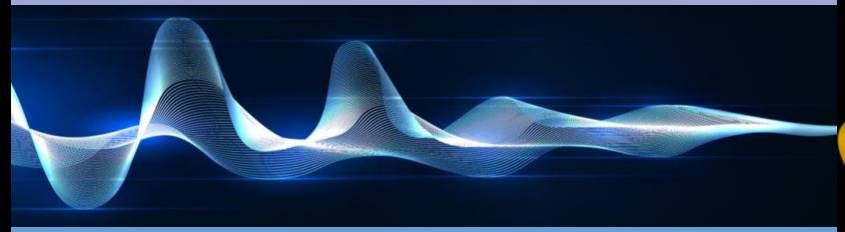


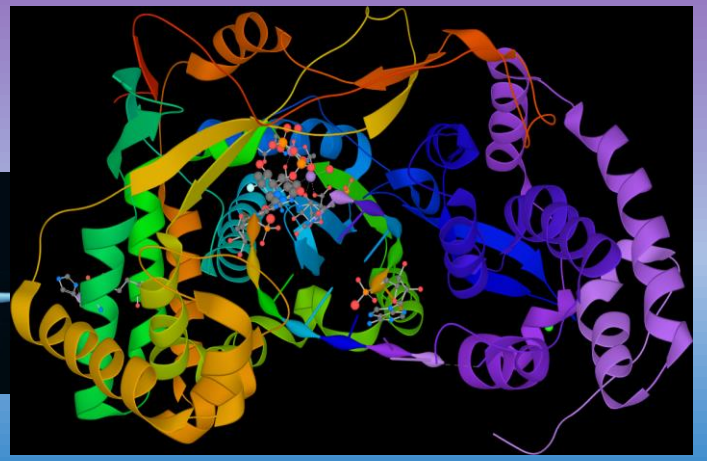
Resonance and Function

Resonance theory suggests that if interference is removed,
it appears to restore proper signaling between cells and systems
helping to normalize cell function and communication.

That's Bio-Physics

Biological Physics

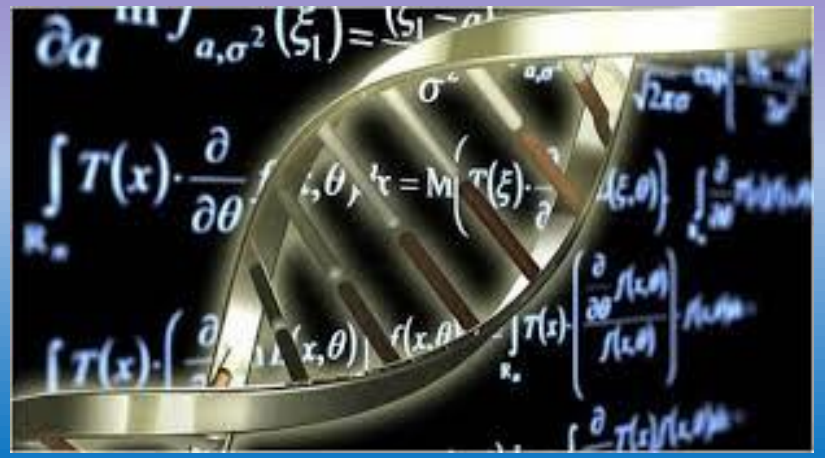




Frequency Specific Resonance is Not Magic

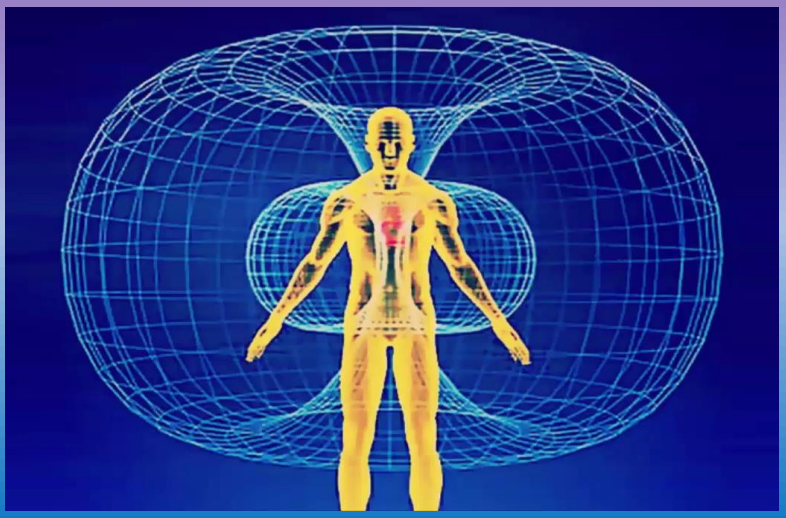
It is Applied Biophysics

- Be prudent and respectful
- If function does not improve, the user should seek proper medical evaluation and treatment



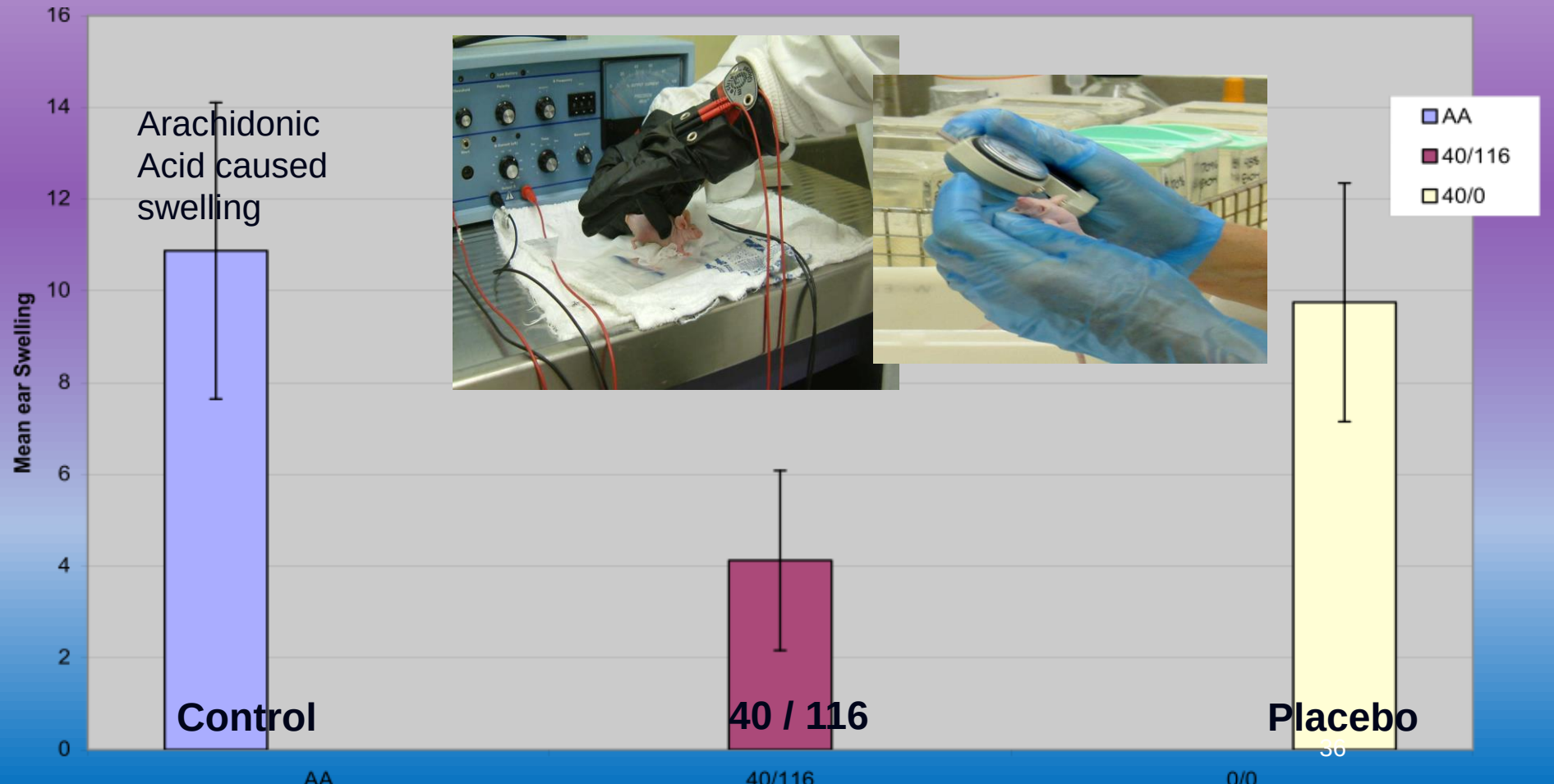
Note When Using Frequencies

- When using frequencies to improve cell function
- We cannot / do not make any claims about medical effects
- We can only say that the frequency combination does what is observed or measured in function. Such as improved range of motion, reduced or increased pulse



FSM Blinded Animal Research

62% reduction in LOX Mediated Inflammation
30% reduction in COX Mediated Inflammation
All animals responded
4 Minute time dependent response



Frequency Specific Response

No other frequency reduced inflammation

- 4 minutes of frequency 0.1/0.1

No reduction in ear swelling

- 4 minutes of frequency for “Mineral/Bone”

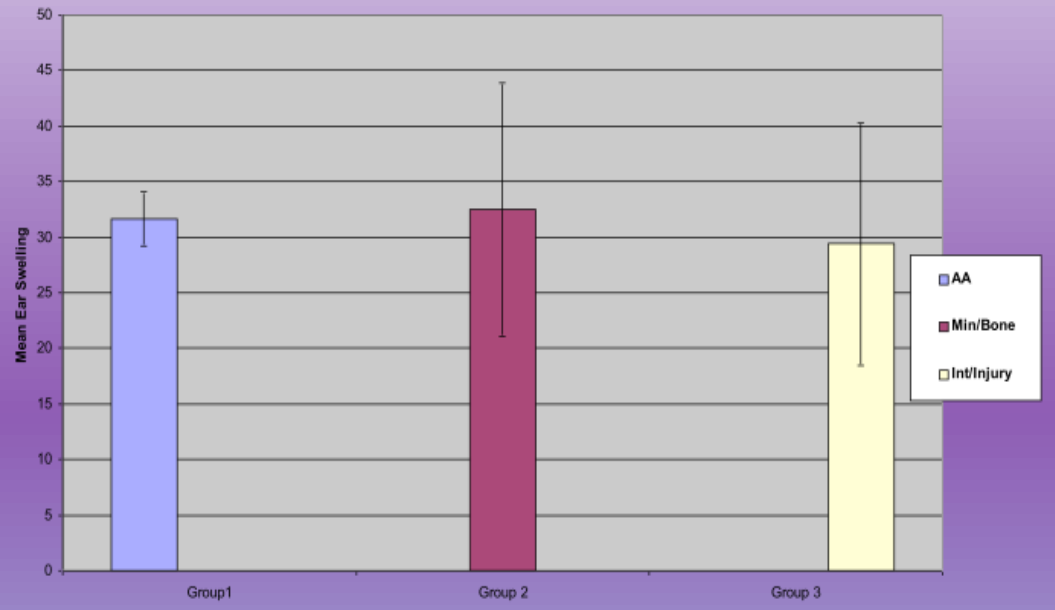
No reduction in ear swelling

- 4 minutes of “Intermediate injury” frequencies

No reduction in ear swelling

- 4 minutes of 40 / 355

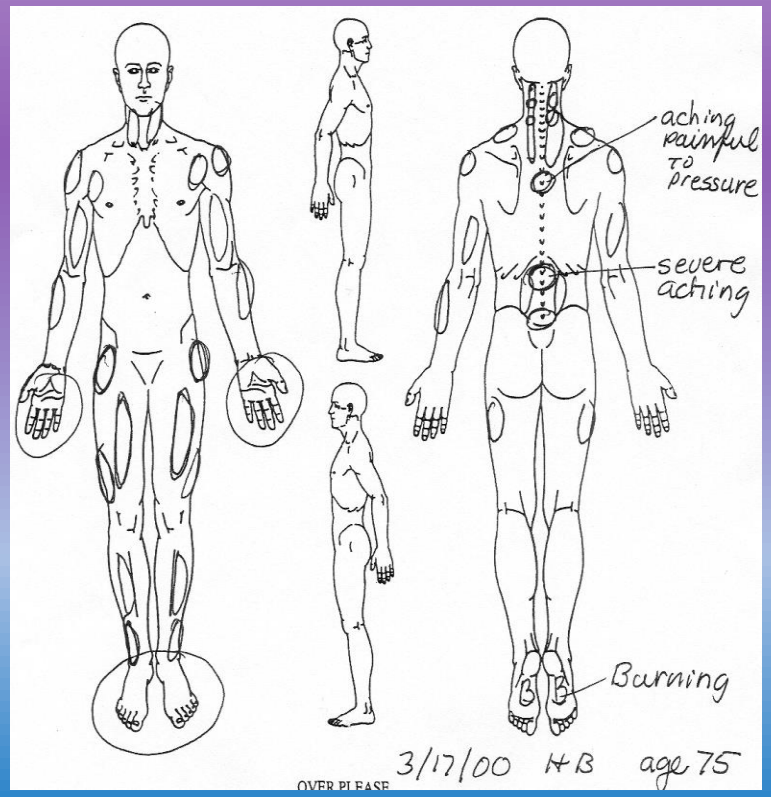
No reduction in ear swelling



Cytokine changes with microcurrent treatment of fibromyalgia associated with cervical spine trauma

JBMT, July 2005, 9 169-176

- 54 fibromyalgia patients with history of trauma
  - 9.5yrs (1-50 years) Chronicity
- Blood sample data from NIH
  - Control = myofascial trigger points



- Characteristic Pain Pattern
- Hyperactive patellar reflexes
- Dermatomal hyperesthesia

Cervical Trauma Fibromyalgia Treatment Protocol

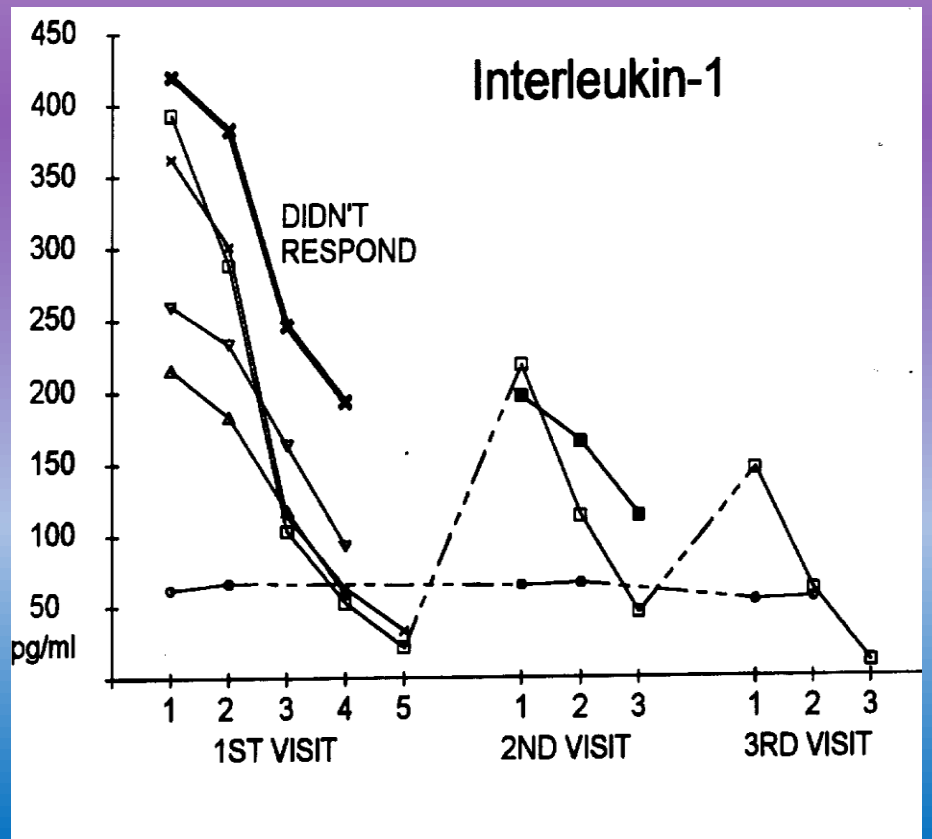
- Only one frequency combination reduced pain – 40hz / 10hz
- Polarized + current – contacts at neck and feet – 60 minutes
- P = 7.4/10 reduced to 1.3/10 in 60 min
  - Lasts two hours to two weeks
- All patients had pain relief
- 58% Recovered within 4 months
- Recovery Individualized
  - Keep pain below 4/10
  - FSM in office, FSM home unit, PT, reconditioning, Supplements
- 13 / 54 patients discontinued treatment
  - For reasons not related to treatment side effects

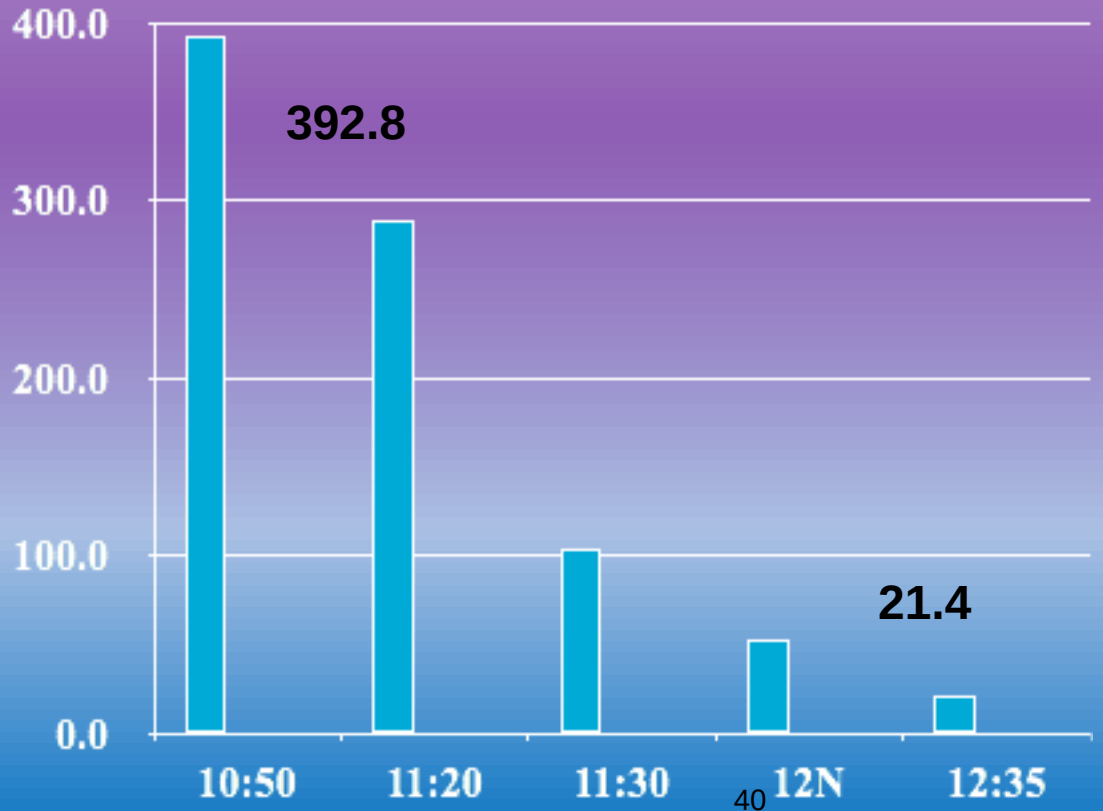
IL-1 normal= 0-25pg/ml

Blood sample data from NIH

330 ± 39 reduced to 80 ± 31pg/ml **P=0.004**

Linear regression on time points **P=0.0001**



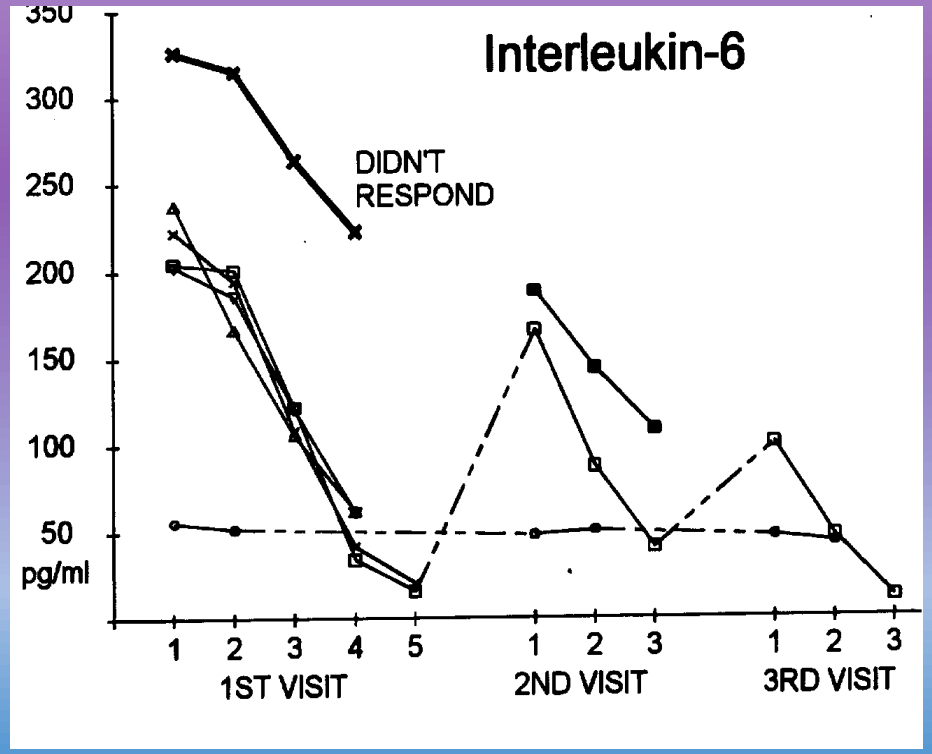


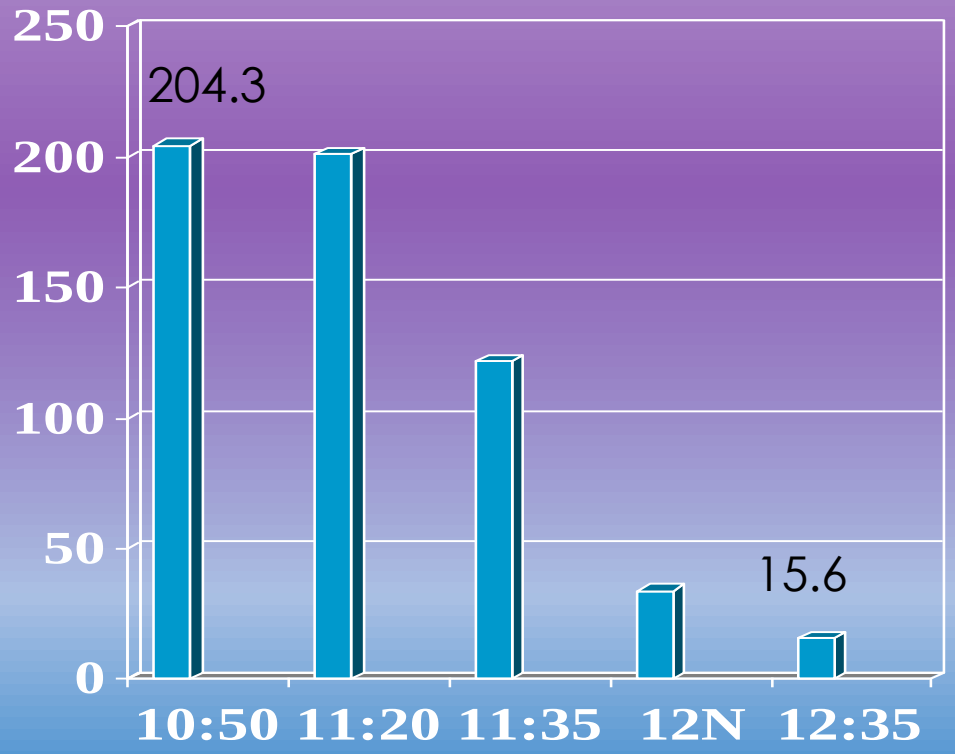
IL-6

normal=0-25pg/ml

Blood sample data from NIH

239 ± 23 reduced to 76 ± 38 pg/ml P=0.008

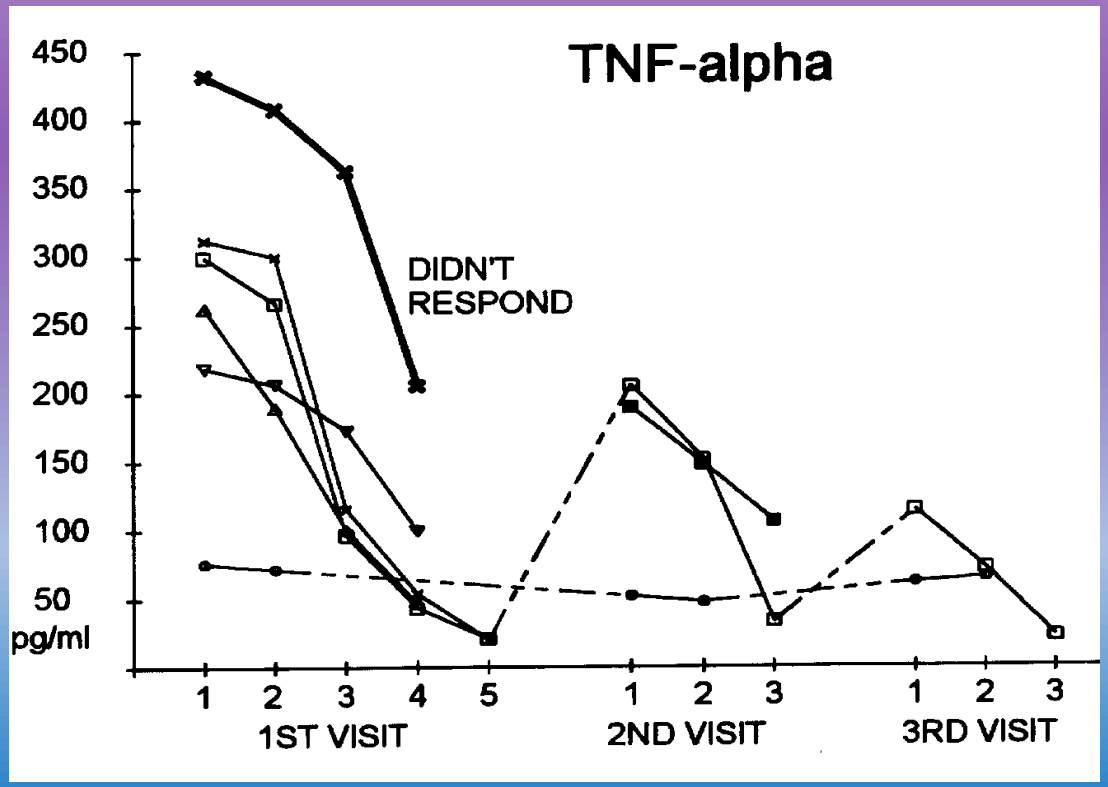


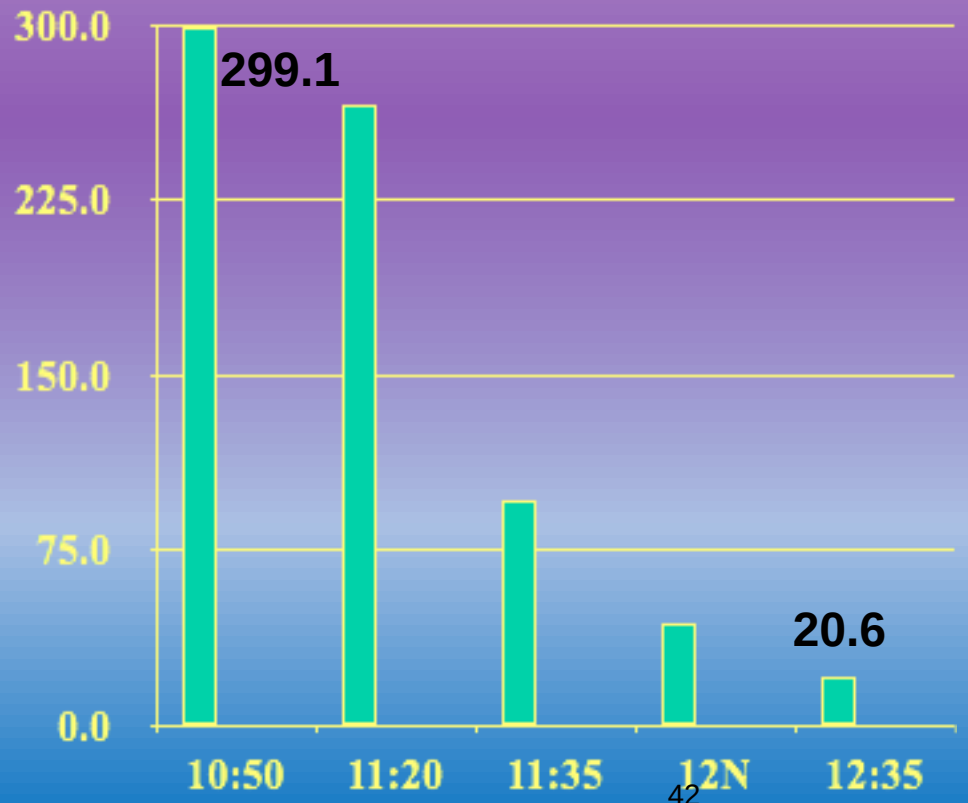


TNF-alpha normal=0-25pg/ml

Blood sample data from NIH

305 ± 36 reduced to 78 ± 35 pg/ml **P=0.002, t-test**





Calcitonin Gene Related Peptide-CGRP

normal = 0-20 pg/ml

Neurogenic inflammation, vasodilator

#1 CGRP = 100.8

40/10

#2 CGRP = 97.6

40/390

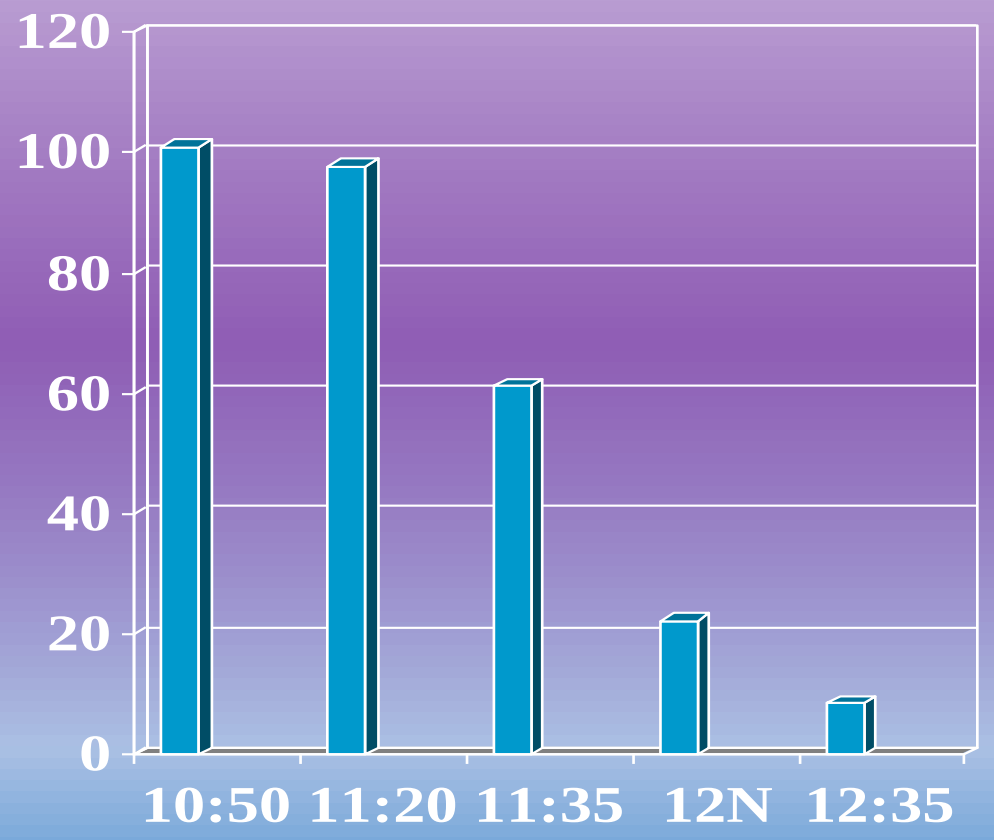
#3 CGRP = 61.3

40, 120/ discs, C5

#4 CGRP = 22.4

970/ series

#5 CGRP = 8.6



Use of Frequency Specific Resonance for 25 years has been Low Risk

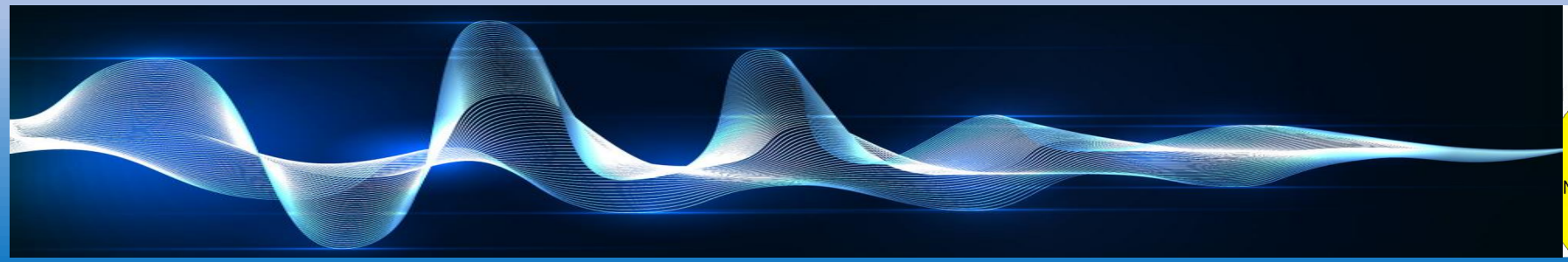
The frequencies either

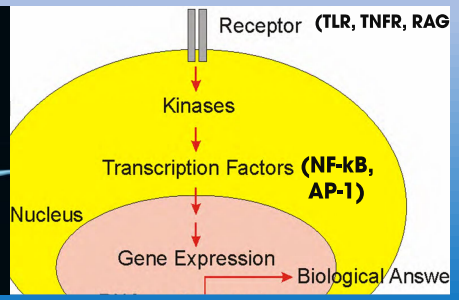
WORK or

DON'T WORK

If they don't work, they just have no effect.

Any side effects have been transient.





Medicine is Pragmatic

Efficacy First
Mechanisms Later

Willow Bark and Aspirin

Used for hundreds of years

Prostaglandin chemistry understood later

Note

It is worth noting that over 80% of the medications in use today have a mechanism of action that is not known, well understood or proven.