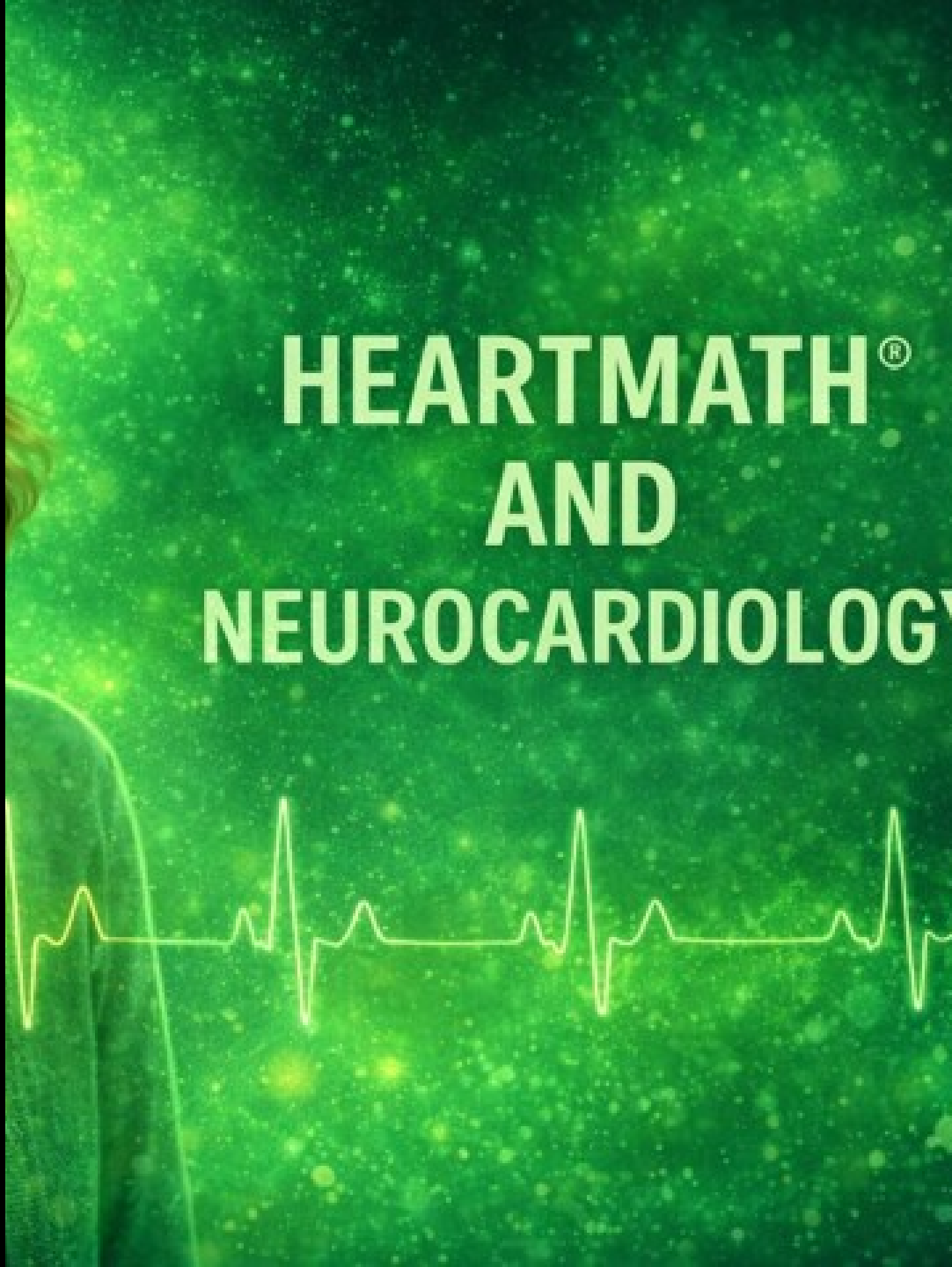


HeartFelt Living

Jeffrey E. Hansen, Ph.D.

Founder and Director, NeuroFaith® LLC



**HEARTMATH®
AND
NEUROCARDIOLOGY**



“Sometimes *the heart*
knows things that the
mind could never explain.”



— *Ranjeet*

Debate of the Ages

— *Energy vs Matter* —

Cell biologist and medical school professor, Bruce Lipton, Ph.D., brilliantly describes how early thinkers and philosophers have influenced science and the current state of medicine.

The following 10 slides are largely based on his work.

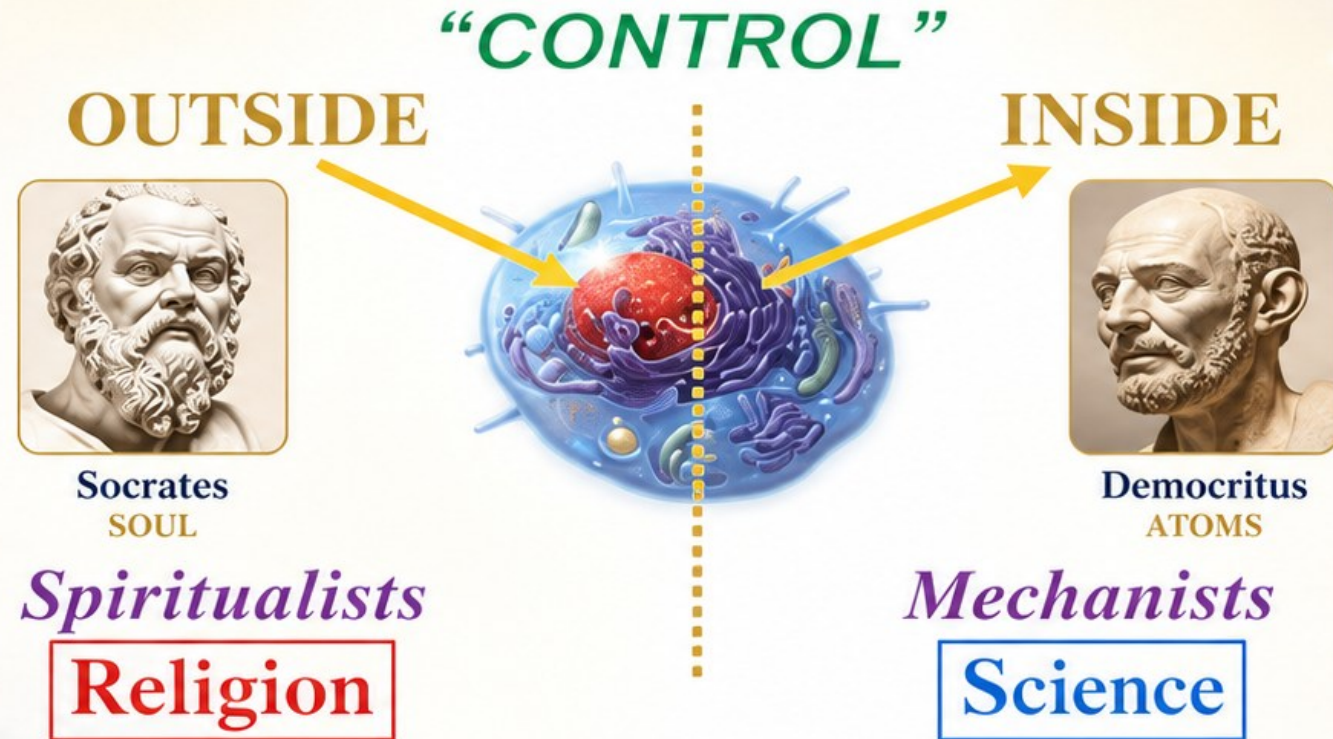


Click here for his full lecture.

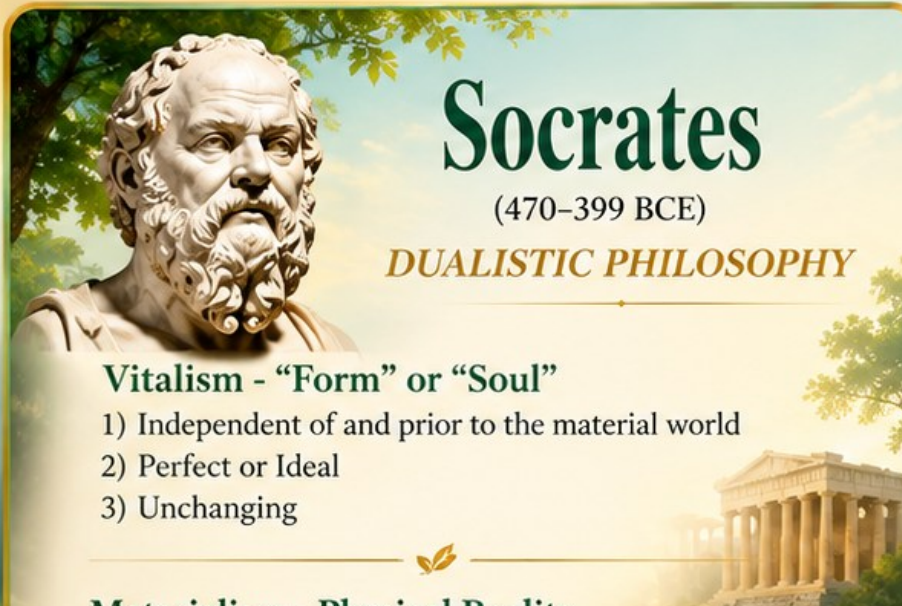
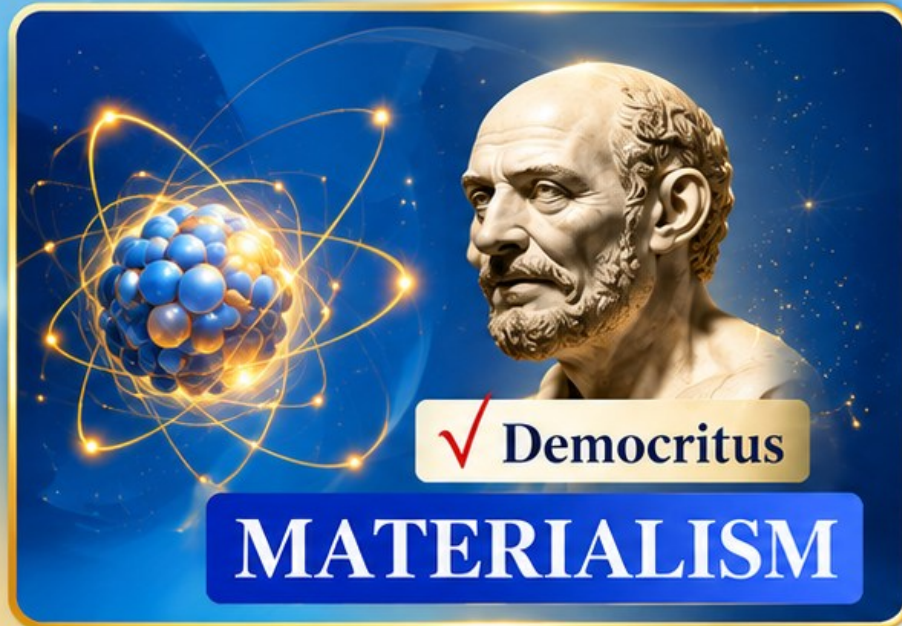
https://www.youtube.com/watch?v=82ShSNur u6c&ab_channel=vekmehelofkirr



Debate of the ages – Energy vs Matter



- Dr. Bruce Lipton highlights the long-held question of whether we are all particle or are we both particle and spiritual/energy – a debate going back as far as Socrates and Democritus. Additionally, the question of whether control is merely within or is it from without as well?



Debate of the Ages

- *Energy* vs *Matter* -

These assumptions have far-reaching consequences for how we experience life and impact on fundamental approaches to medicine and psychology



<https://www.heartmath.com/>

Isaac Newton

→ 1643-1727 ←



Newtonian Physics
(matter only)

Vital Force



Debate of the Ages - Energy vs Matter

- ▶ Centuries later, Isaac Newton, following in the footprint of Democritus developed calculus to explain the physical universe in terms of matter. Science and medicine have largely followed this model. Newton invented calculus to explain his model.

Isaac Newton

1643-1727

The Universe is a Machine

Philosophiæ naturalis principia mathematica
(The Mathematical Principles of Natural Philosophy, 1687)



Celestial Mechanics

Health

~~*Medical Model*~~
*Biomedical machine
conceived by ones*

**Conventional
Medicine**



Leading Causes of Death



1. Iatrogenic Illness

783,936



2. Cardiovascular Disease

699,697



3. Cancer

553,251

Death by Medicine, Gary Null PhD, et al. www.garynull.com

Current Medical Model



The current Newtonian-based medical model is brilliant when it comes to such things as mechanical surgeries, excising cancers, etc., but falls short on many fronts. Sadly, as reported by Dr. Bruce Lipton, cellular biologist and medical school professor and Stanford research scholar, **iatrogenic** (illness caused by medical examination or treatment) is the number one cause of death in the US, ahead of cancer and cardiovascular disease.

Debate of the Ages - Energy vs Matter

Newtonian Mechanics can only describe the behavior of matter which would be great if that that were all that there was, but science is proving that Socrates and Descartes were correct, energy must be added to the equation to describe the magnificent complexity of life. Newtonian Mechanics fails to predict, for example, the complex shapes of proteins which are the building blocks of the body, on the other hand, Quantum Mechanics does this beautifully.

Newtonian Mechanics

Universe = Matter

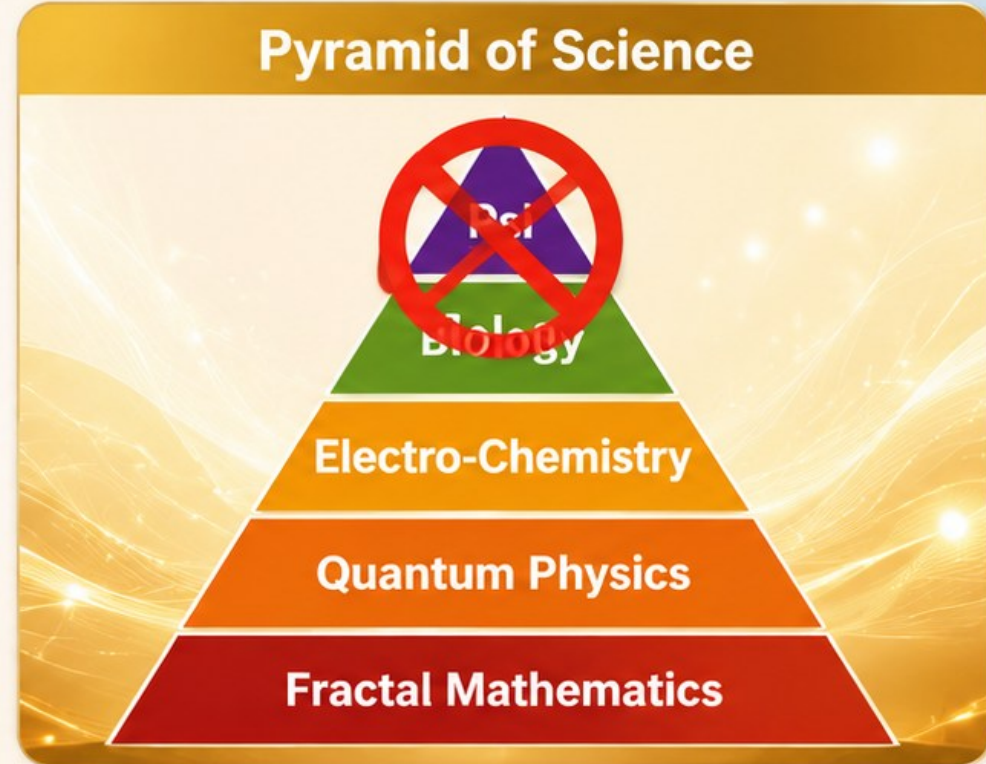
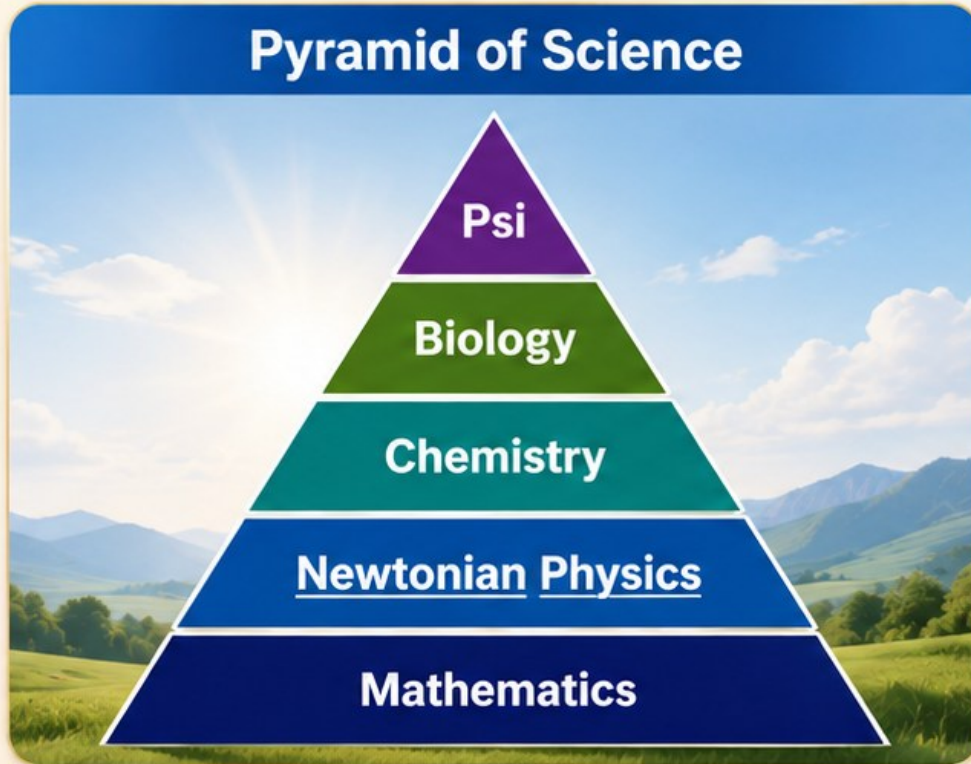
(~1700)

Quantum Mechanics

Universe = Energy

(~1925)

Debate of the Ages – Energy vs Matter



So, we see that each theory (**Newtonian** vs **Quantum**) has implications for many science disciplines. If any one step in the pyramid changes, all disciplines above it must change to accommodate the change. **Newtonian physics** on the left side has stifled disciplines above it. **Quantum physics** has brought great changes to electro-chemistry and biology and psychology are only beginning to incorporate them

Drugs companies sell chemicals they **do not** sell **energy**



TOXICITY



POLLUTION



CHRONIC
DISEASE



ENVIRONMENTAL
DAMAGE



CLEAN
ENERGY



SUSTAINABILITY



BETTER
HEALTH



A BRIGHTER
FUTURE

✦ The future is not in more chemicals.
The future is in energy. ✦

OUR **INCREDIBLE** HEART



Beats 101,000 times a day



Circulates an astonishing
1,900 gallons of blood



Through 60,000 miles of
blood vessels, arteries,
and capillaries (Braden, 2015).





Above all else, guard your heart,
for everything you do flows from it.

Proverbs 4:23



The Heart Wisdom of the Ancients

Click here to listen to the amazing Gregg Braden:

https://www.youtube.com/watch?v=3KEv-oQe0jl&ab_channel=GreggBradenOfficial

k: <https://youtu.be/Hir6I-RfOiY>

"Know Allah intervenes
between man and his heart."

The Holy Quran 8:24

Wisdom of the Heart

Across Traditions

Religious and mystery traditions often regard the heart as a path to deep wisdom.



Bible: The heart is mentioned **826** times. It represents our mind, will, and spirit. Proverbs 4:23 says, “Keep your heart with all diligence, for out of it spring the issues of life.”



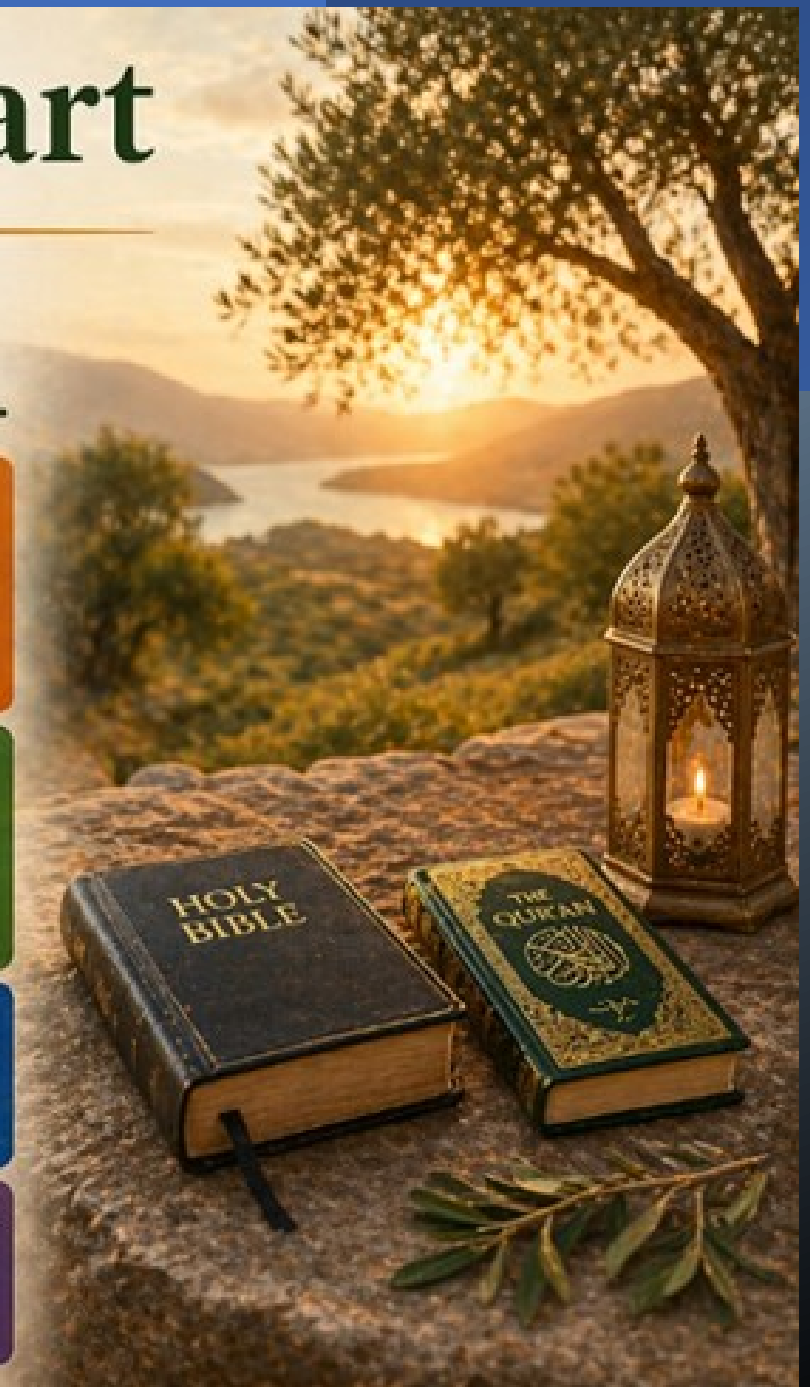
Qur'an: Mentions the heart 132 times, describing it as a center of reasoning, intentions, and decision-making. A healthy or diseased heart shapes human destiny.



Egyptians: Believed the heart, not the brain, was the seat of wisdom, memory, and the soul. It was where God's will was first heard.



Across Traditions: The heart is more than an organ—it is the gateway to truth, compassion, and higher understanding.



The Heart: The Source of Life

GOD SHAPES THE HEART, AND THE HEART SHAPES OUR LIFE.



'Above all else, guard your heart, for everything you do **flows** from it.'

PROVERBS 4:23 (NIV)



A good man brings good things out of the good stored up in his heart... For the mouth speaks what the **heart is full of**.

LUKE 6:45 (NIV)



'And I pray that **Christ** may dwell in your hearts through faith.'

EPHESIANS 3:17 (NIV)



And the **peace of God**, which transcends all understanding, will guard your hearts and your minds in Christ Jesus.'

PHILIPPIANS 4:7 (NIV)



KEY THOUGHT

*The condition of the heart shapes our **thoughts, emotions, behaviors,** and ultimately our lives.*



The Heart: Influencing Others

THE STATE OF ONE HEART CAN ENCOURAGE, STRENGTHEN,
COMFORT, AND INFLUENCE THE HEARTS OF OTHERS.



Let us consider how we
may **spur one another on**
toward love and
good deeds.



HEBREWS 10:24 (NIV)



Encourage one another
and build each
other up.



1 THESSALONIANS 5:11 (NIV)



Be **devoted to one**
another in love. Honor
one another above
yourselves.



ROMANS 12:10 (NIV)



Carry each other's
burdens, and in this way
you will fulfill the
law of Christ.

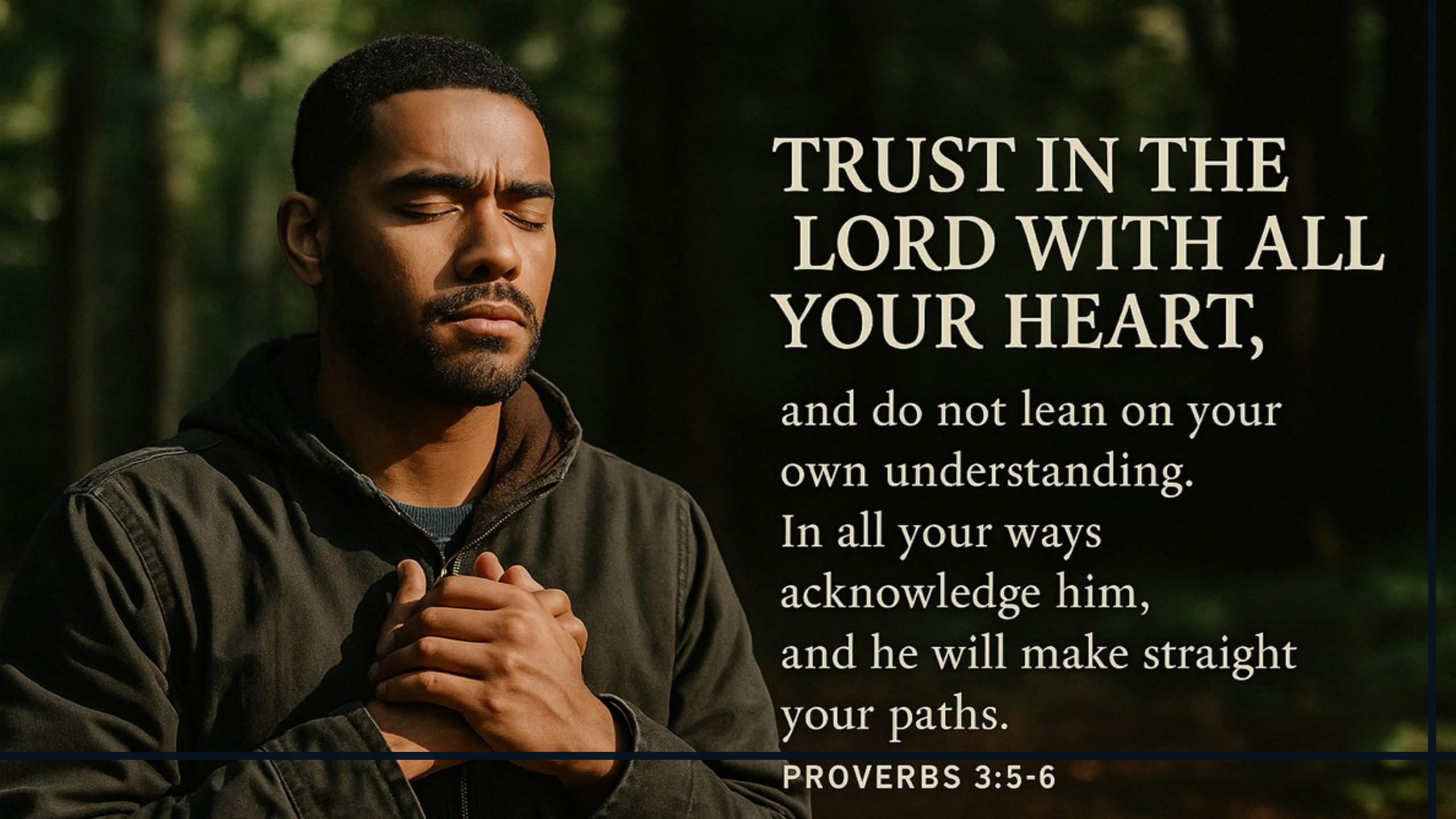


GALATIANS 6:2 (NIV)



When our hearts are aligned with **God's love**,
we become a source of light, hope, and healing
to everyone around us.





TRUST IN THE
LORD WITH ALL
YOUR HEART,

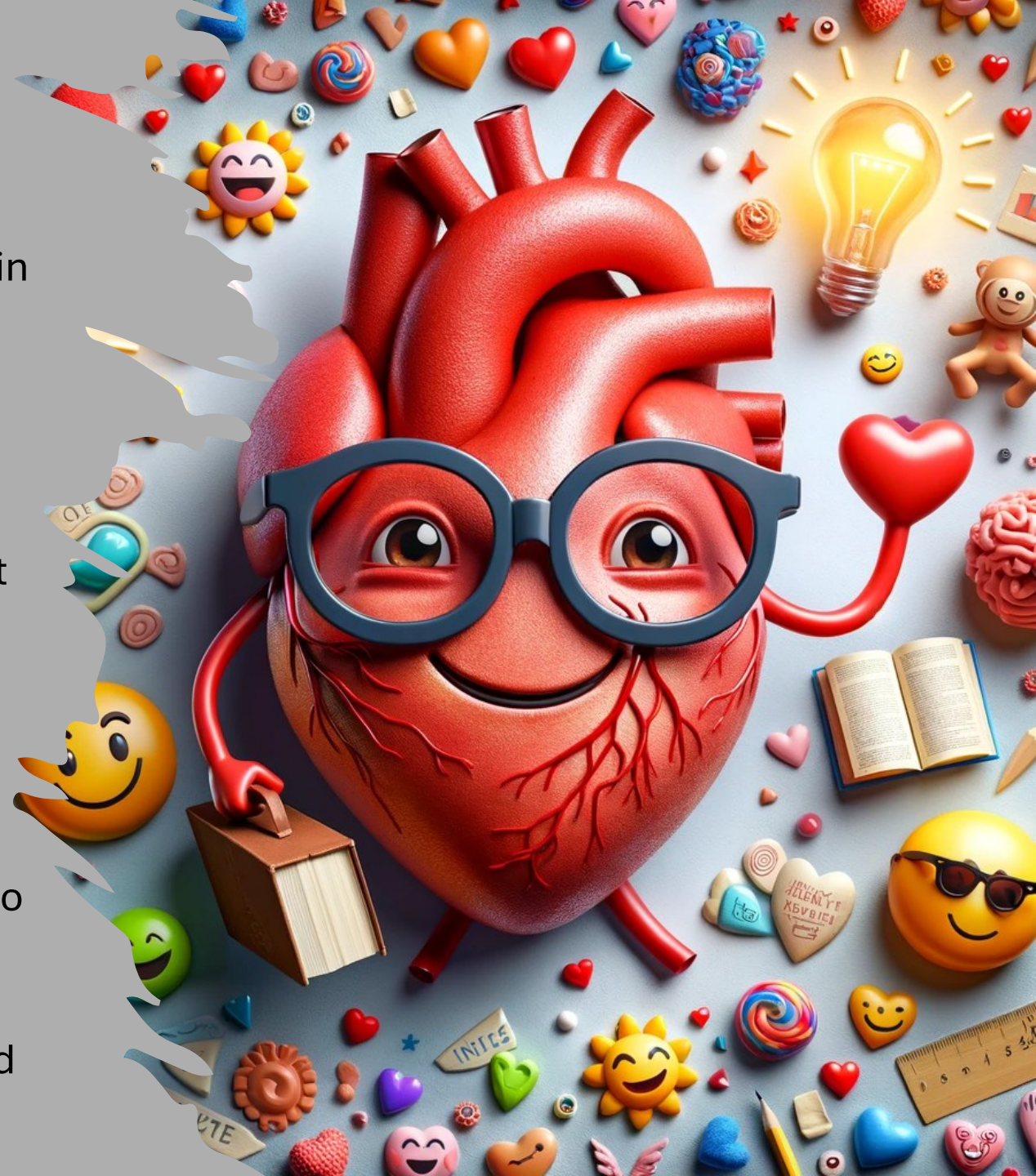
and do not lean on your
own understanding.

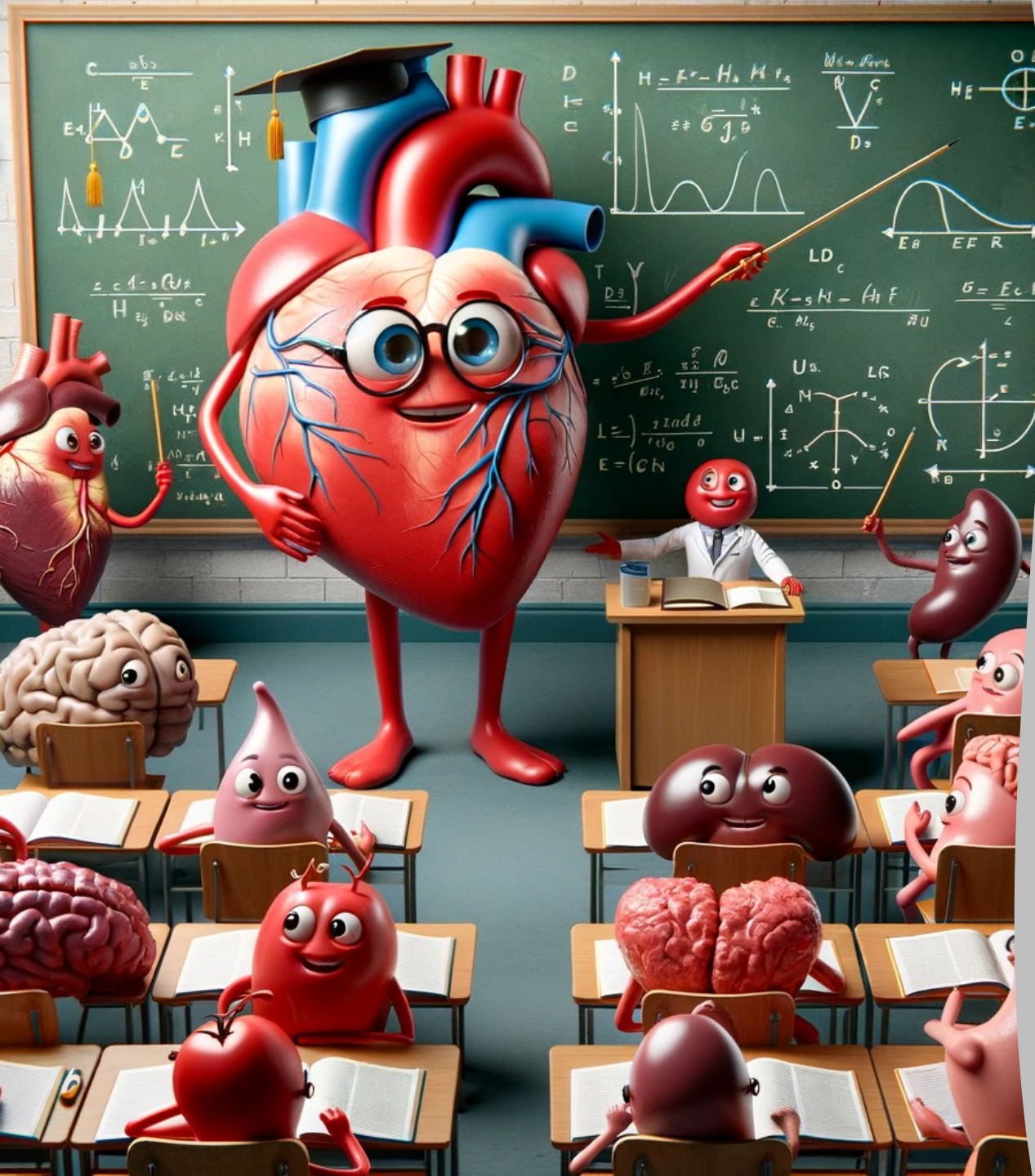
In all your ways
acknowledge him,
and he will make straight
your paths.

PROVERBS 3:5-6

What – Heart Intelligence?

- Dr. Armour, MD, PhD., at the University of Montreal in 1991, discovered that the heart has its own "little brain" or "intrinsic cardiac nervous system" (cited in Braden, 2015).
- This "heart brain" is composed of approximately 40,000 neurons, called sensory neurites that are similar to neurons in the brain, meaning that the heart has its own nervous system.
- In addition, the heart communicates with the brain in many methods: neurologically, biochemically, biophysically, and energetically.
- The vagus nerve, which is 80% afferent, carries information from the heart and other internal organs to the brain.
- Signals from the "heart brain" redirect to the medulla, hypothalamus, thalamus, and amygdala and the cerebral cortex (Braden, 2015a, 2015b).





What – Heart Intelligence?

- Braden notes that a key role of the heart brain is to detect changes in the body such as hormone levels and other chemicals and to communicate this information to the brain so it can meet our needs accordingly.
- The heart brain achieves this by converting the language of the body, chemistry, to the electrical language of the nervous system so it makes sense to the brain.
- For example, the heart's encoded messages to the brain informs it as to when we need adrenalin for danger or when we need less in times of safety so the immune system can be turned on (Braden, 2015a, 2015b).

The Heart's “LITTLE BRAIN”

Imagining the sensory neurites (in yellow)
which comprise the Little Brain of the Heart

THE HEART'S “LITTLE BRAIN” CAN:



ACT INDEPENDENTLY
of the cranial brain
to **think, learn,**
and **remember.**



ACT IN HARMONY
with the brain to give us
the benefit of a **single and**
potent network shared
by both the heart and
the brain (*Braden, 2015*).

“The heart is not just a pump—it's a center of intelligence.”



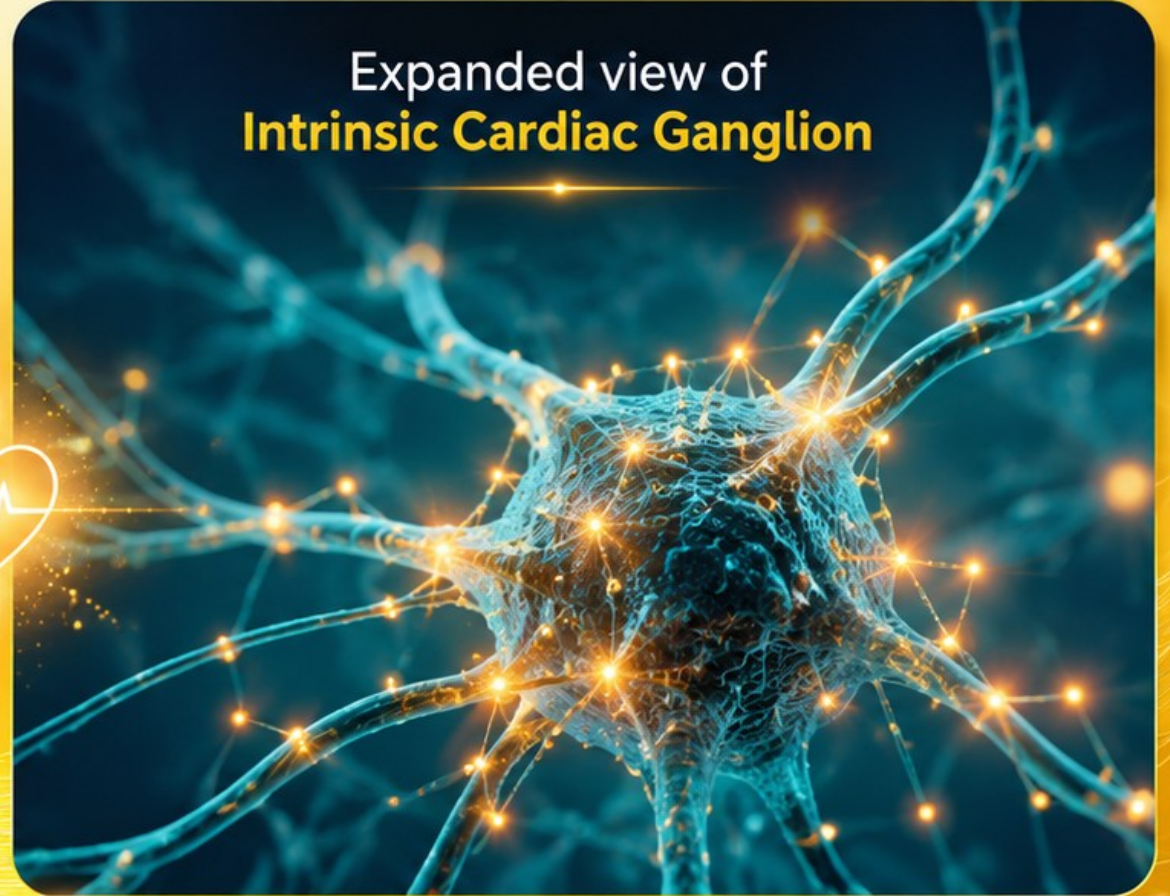
The Heart Has Its Own Brain

*Imaging showing the interconnectivity of sensory neurites
in the heart (neural networks)*

Interconnectivity between
Intrinsic Ganglia
in the Human Heart



Expanded view of
Intrinsic Cardiac Ganglion



♥ The heart is more than a pump— *it's a network of intelligence.* ♥

Heart–Brain Communication



80% of the information
flow is from
heart to brain (*afferent*)



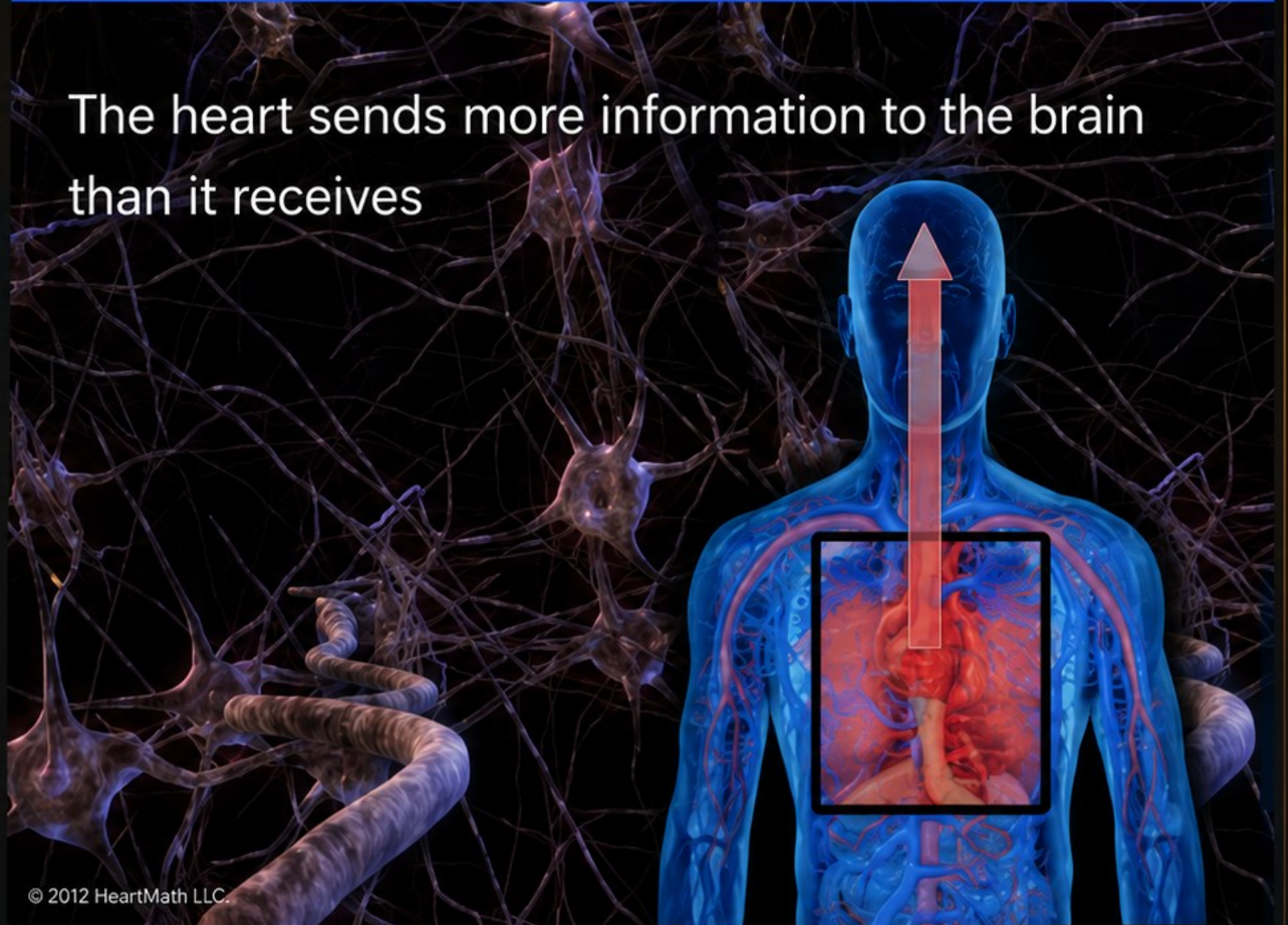
20% of the information
flow is from
brain to heart (*efferent*)



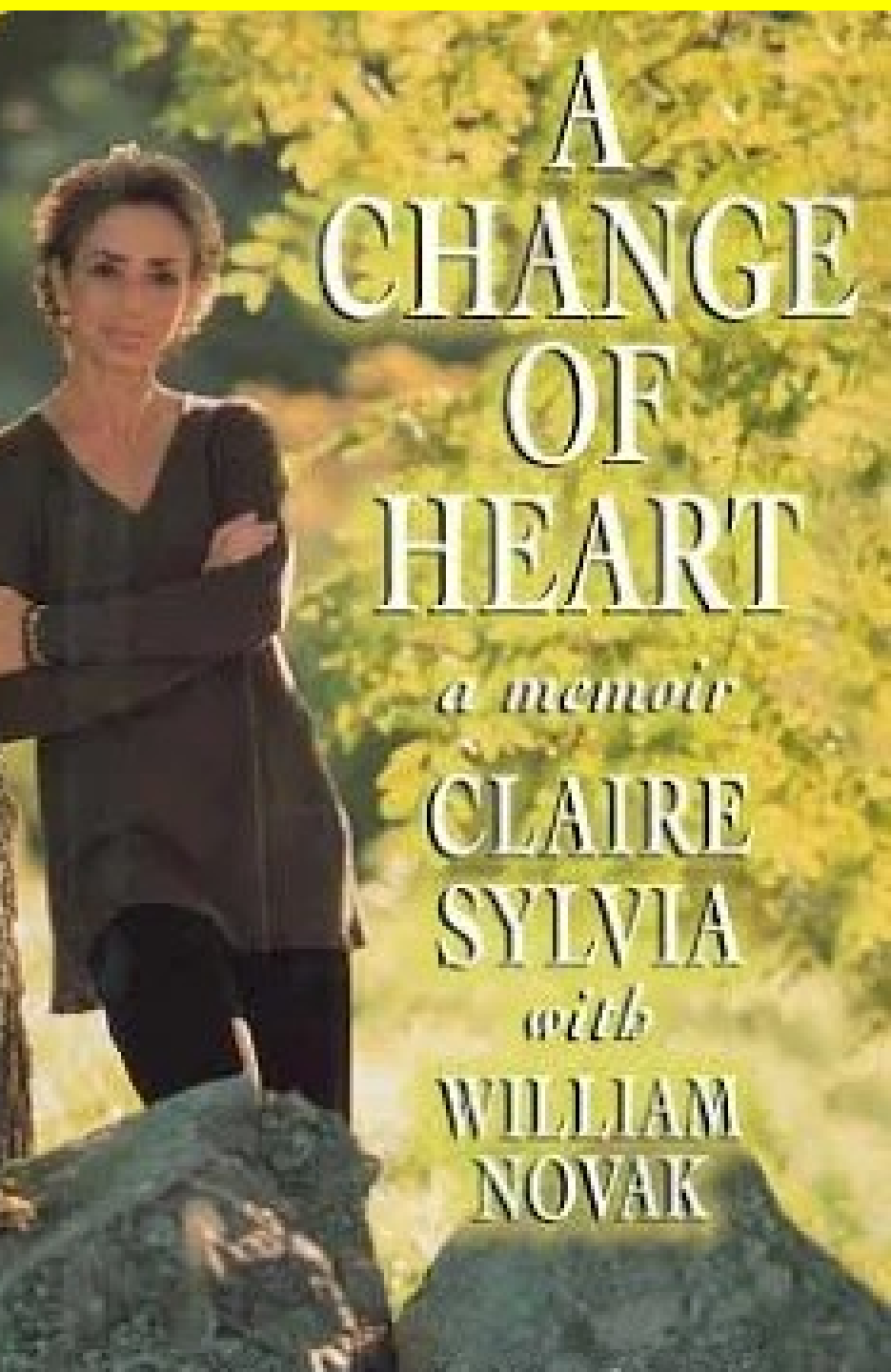
Your heart is more than a pump—
it's a **powerful messenger**.

 HeartMath®

The heart sends more information to the brain
than it receives



© 2012 HeartMath LLC.



A CHANGE OF HEART

a memoir

CLAIRE
SYLVIA

with

WILLIAM
NOVAK

Stories of the Heart:

- **Clare Sylvia**, a professional dancer, in 1998 received the heart and lungs of a young man, Tim, who died in a motorcycle accident.
- Not long after the transplant, she began to crave new foods such as **chicken nuggets and green peppers** and was specifically drawn to KFC to satisfy her cravings.
- She was able to eventually visit the parents of this young man and discovered that **Tim precisely loved the same kinds** of foods that she was now craving.
- Clare had acquired her cravings through the phenomenon of **memory transference** which has become an area of serious study and eventual acceptance.

Please click below for Dr. Braden's enticing discussion:

<https://youtu.be/Hir6I-RfOiY>

Paul Pearsall, Ph.D.

Author of the New York Times bestseller
The Pleasure Prescription

Tapping the Wisdom and Power of Our
Heart Energy

The Heart's Code



The New Findings About
Cellular Memories and
Their Role in the Mind/
Body/Spirit Connection

Stories of the Heart

- In 1999, Dr. Paul Pearsall, a neuropsychologist, in *The Heart's Code* wrote about an 8-year-old little girl who received a heart from a 10-year-old girl.
- Almost immediately after the surgery, she started having vivid nightmares of being chased, attacked, and murdered.
- Her mother arranged a consultation with a psychiatrist who after several sessions concluded that she was witnessing actual physical incidents.
- They decided to call the police who used the detailed descriptions of the murder (the time, the weapon, the place, the clothes he wore, and what the little girl he killed had said to him) given by the little girl to find and convict the man in question.

Please click below for Dr. Braden's enticing discussion:

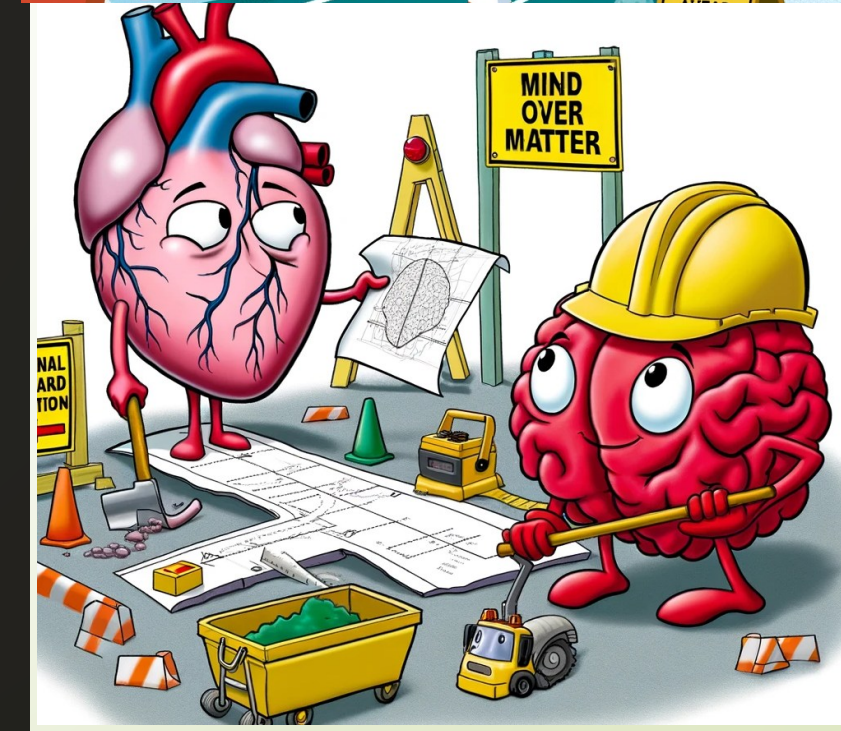
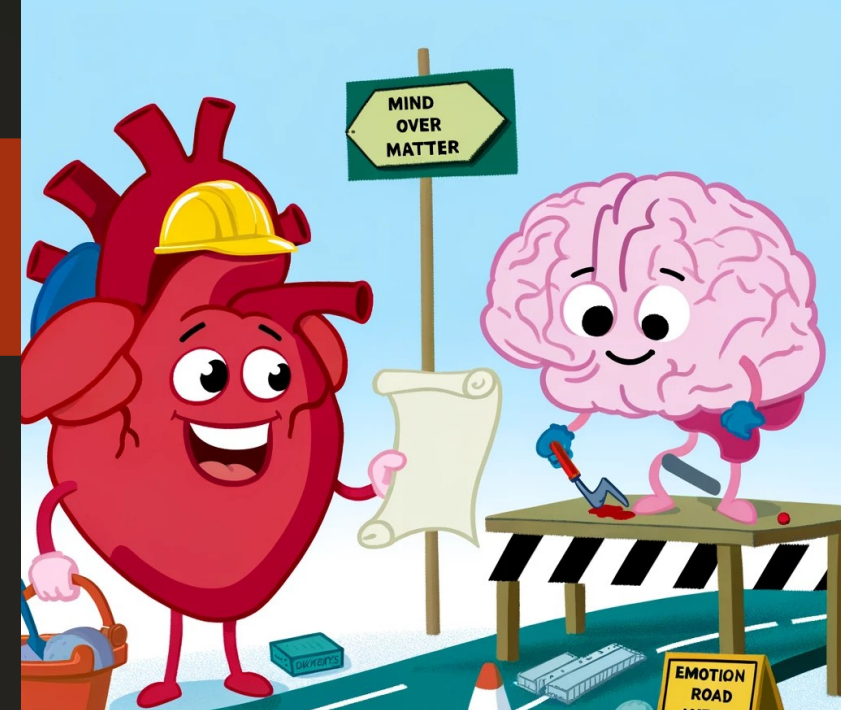
<https://youtu.be/Hir6I-RfOiY>

Brain and heart working together

Gregg Braden notes that the discovery of the “little brain” in the heart, and the now-verified evidence that the heart has a certain capacity to think and remember, has led the way to amazing possibilities regarding the hidden power of the heart and what this can mean to our lives.

For 150-plus years we were led to believe that the heart and the brain were separate in an either-or manner. Scientists and analytical thinkers believed that the brain was the key while musicians, artists, and intuitive thinkers felt that it was the heart.

The evidence now suggests that it is the heart and the brain working harmoniously together that is fundamental (Braden, 2015a, 2015b).

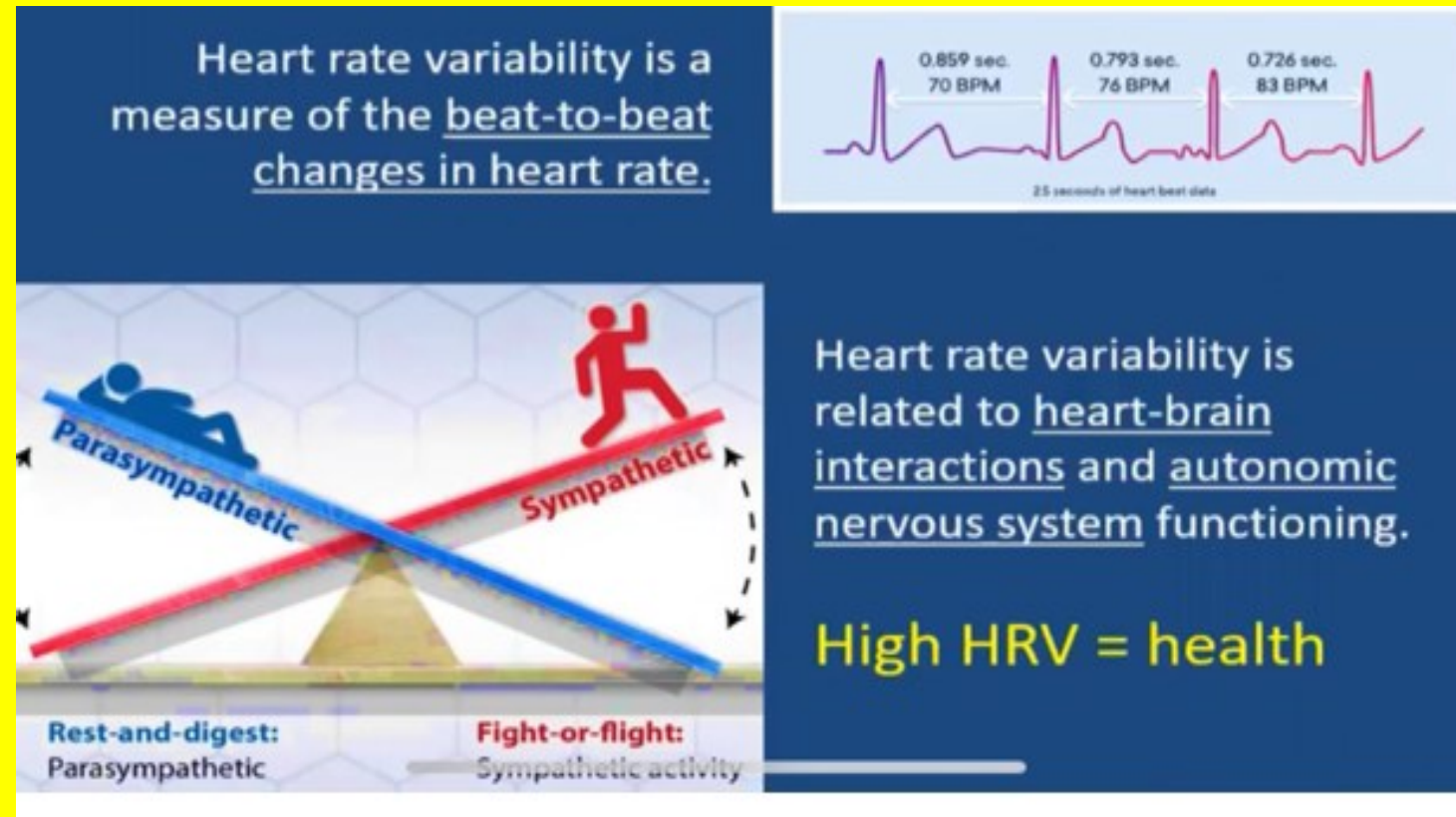


Heart Rate Variability (HRV)

Psychophysiological, **Dr. Rollin McCraty**, director of research at the HeartMath Institute, and professor at Florida Atlantic University, notes that the heart at rest was once thought to operate much like a metronome, faithfully beating out a regular, steady rhythm.

Scientists and physicians now know, however, that this is far from the case. Rather than being monotonously regular, the rhythm of a healthy heart, even under resting conditions, is surprisingly irregular, with the time interval between consecutive heartbeats constantly changing. This naturally occurring beat-to-beat variation in heart rate is called **heart rate variability (HRV)**.

Heart rate variability is a measure of the beat-to-beat changes in heart rate. Above right graph shows three heartbeats recorded on an electrocardiogram (ECG). Note that variation in the time interval between consecutive heartbeats, giving a different heart rate for each heartbeat interval.



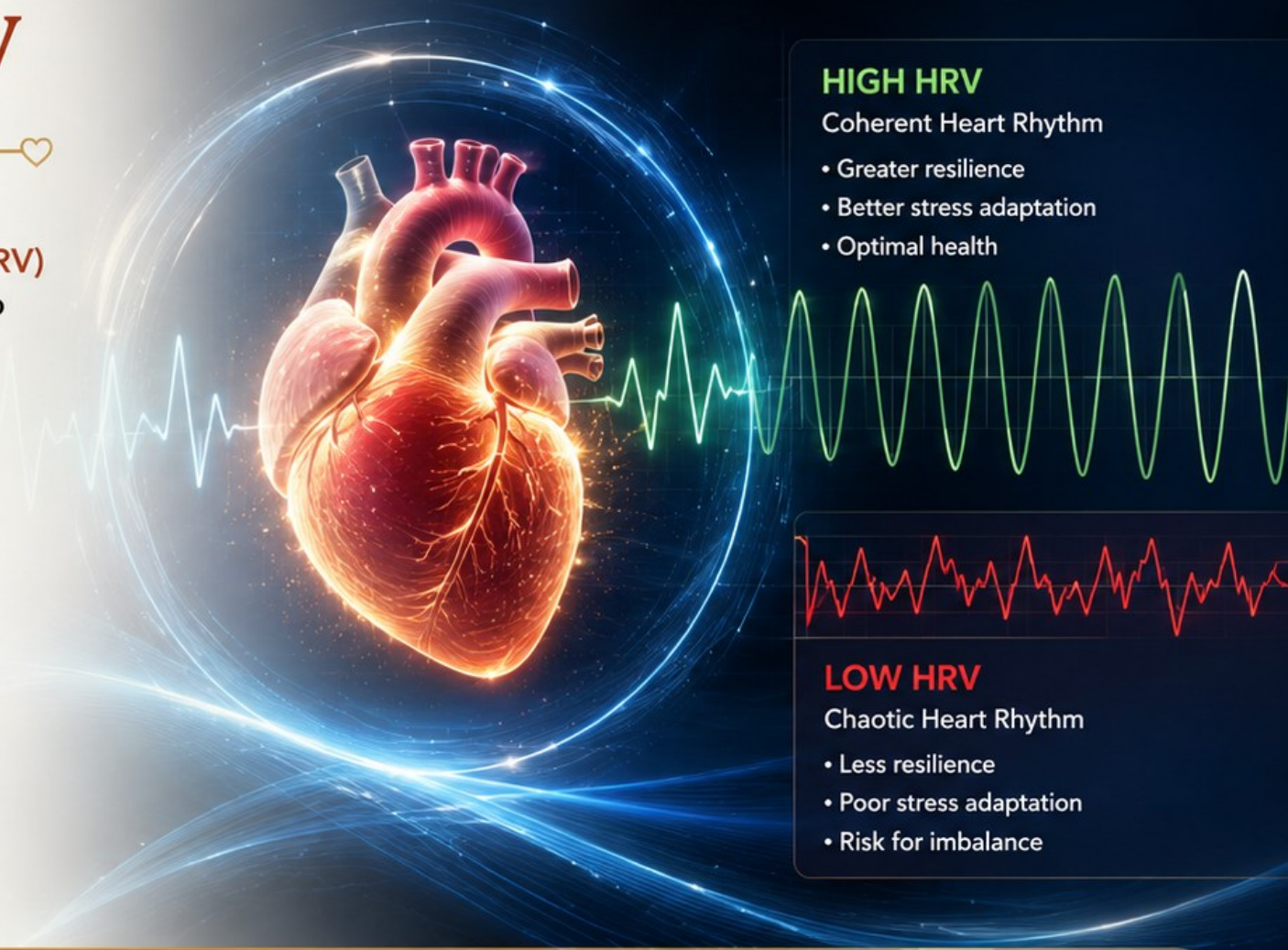
<https://www.heartmath.com/science/>

Heart Rate Variability and Your Health

- According to the HeartMath Institute, **heart rate variability (HRV)** is a key indicator of health and fitness. It reflects our ability to adapt to stress and environmental demands.
- Many factors affect the activity of the autonomic nervous system (ANS), and therefore influence HRV. These include **breathing patterns, physical exercise, and even our thoughts.**
- Research shows that one of the most powerful factors that affect our heart's changing rhythm is our feelings and emotions. When our varying heart rate is plotted over time, the overall shape of the waveform produced is called the heart rhythm pattern.



Learn more: www.heartmath.com/science/



FACTORS THAT INFLUENCE HRV



BREATHING PATTERNS
Slow, diaphragmatic breathing enhances HRV.



PHYSICAL EXERCISE
Regular activity strengthens the heart and improves HRV.



THOUGHTS & EMOTIONS
Positive emotions and mindset promote a coherent heart rhythm.



**A healthy heart
is a resilient heart.**

Heart Rate Variability and Your Health

A Window Into Nervous System Balance



Sympathetic Nervous System

Acts as the body's accelerator, increasing heart rate and preparing us for action.



Parasympathetic (Vagus) Nervous System

Acts as the body's brake, slowing heart rate and promoting recovery, restoration, and calm.

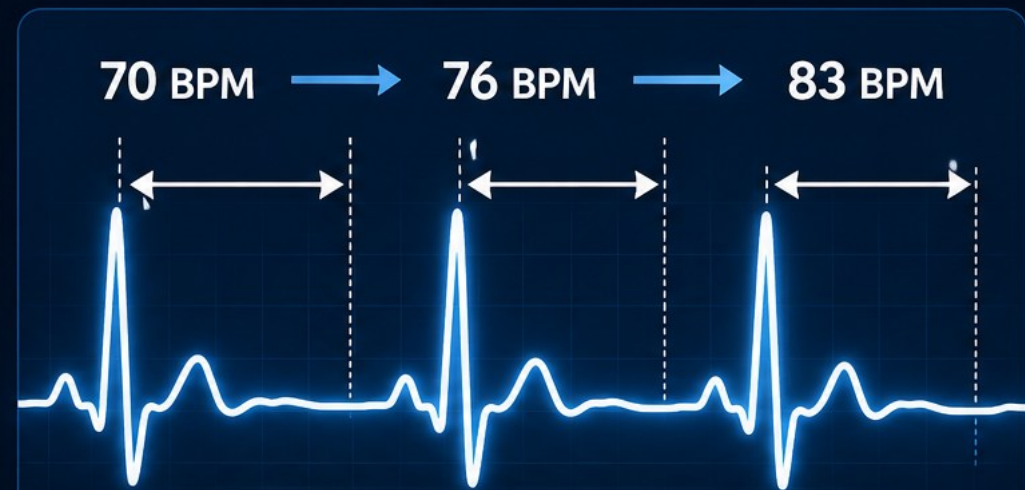


Heart Rate Variability (HRV)

Reflects the ongoing interaction between these two systems. Healthy HRV is a sign of flexibility, resilience, and adaptability.



Rather than focusing only on average heart rate, HRV reveals the moment-to-moment changes occurring between heartbeats and provides a powerful window into nervous system function.



Healthy hearts do not beat like metronomes.

Healthy hearts adapt.



Accelerator
Sympathetic



Brake
Parasympathetic
(Vagus)



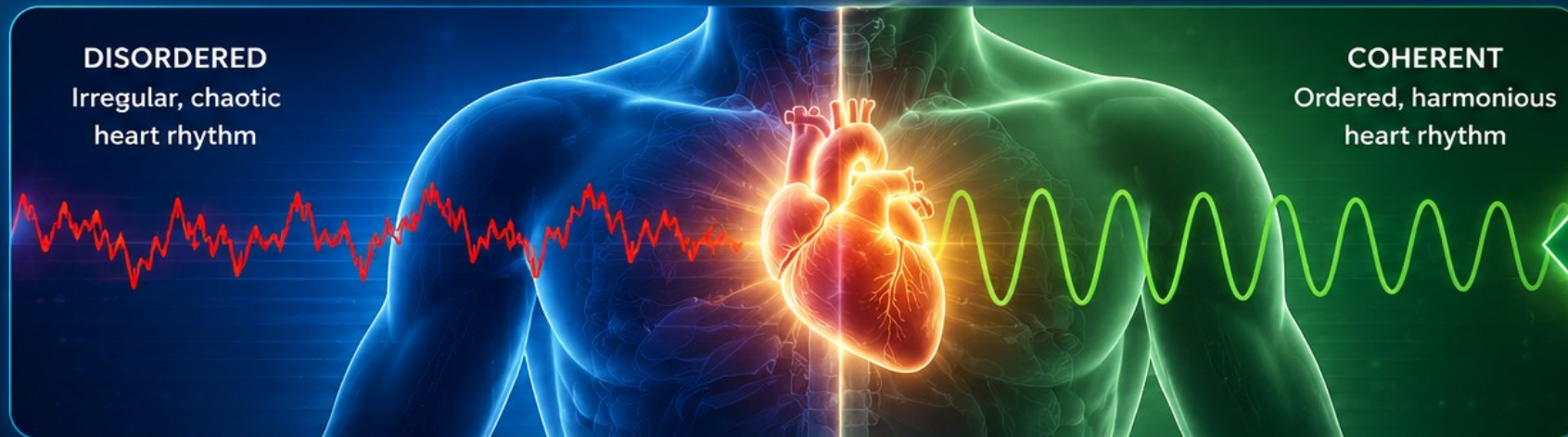
HRV measures adaptability, not perfection.

HEART COHERENCE

When heart rhythms become **ordered, harmonious, and stable**:



Sympathetic and parasympathetic nervous systems synchronize.



DISORDERED

Irregular, chaotic
heart rhythm

COHERENT

Ordered, harmonious
heart rhythm

*Coherence
is a choice.
You can
create it.*

• THE BENEFITS OF HEART COHERENCE •



Increased
ability to
remember
and learn



More
efficient use
of physical and
emotional energy



Greater
physiological
balance and
regulation



Increased
emotional
stability and
resilience



Enhanced
focus, clarity,
and mental
performance



Greater capacity
for connection,
compassion, and
overall well-being



*A **coherent** heart leads to a **coherent** life.*

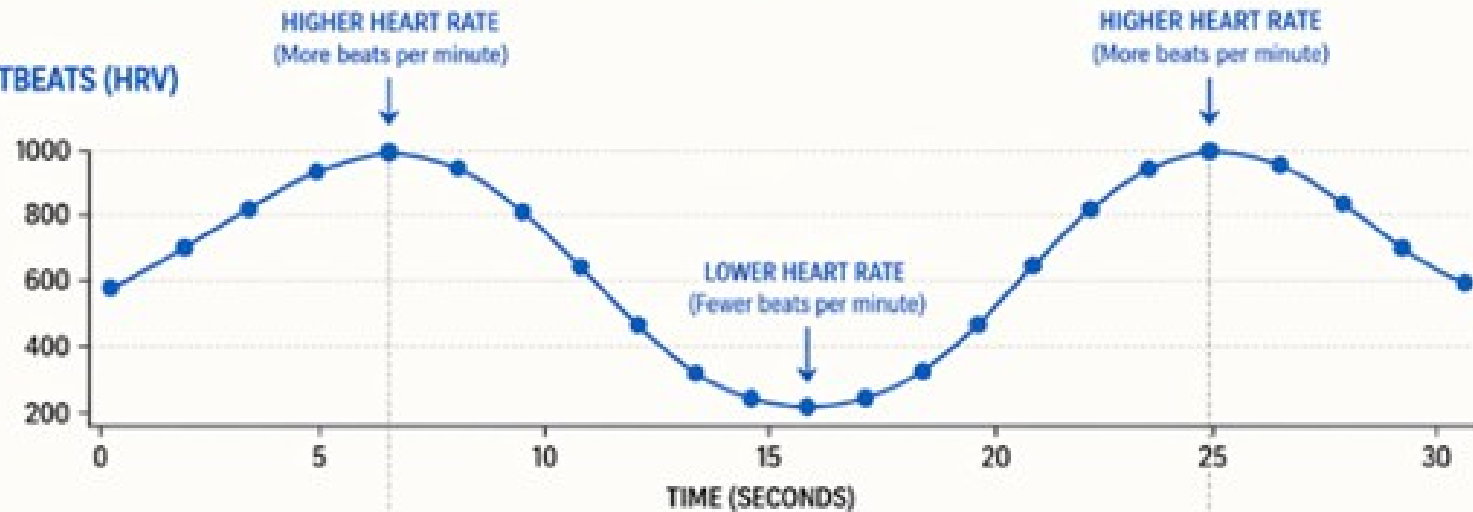


Heart Rate Variability and Health

1 TIME BETWEEN HEARTBEATS (HRV)

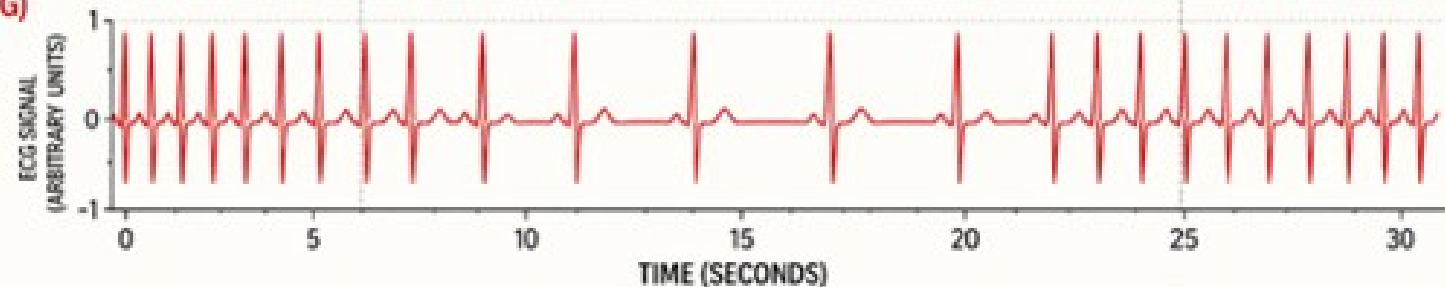
This graph shows how the time (in milliseconds) changes over time.

TIME BETWEEN HEARTBEATS (MILLISECONDS)



2 HEARTBEAT SIGNAL (ECG)

This graph shows each heartbeat as it occurs (ECG). The spacing between beats changes to match the pattern above.



Top Graph

Shows how the time between heartbeats changes over time.



Bottom Graph

Shows each heartbeat as it occurs. The spacing between beats changes to match the pattern above.



What It Means

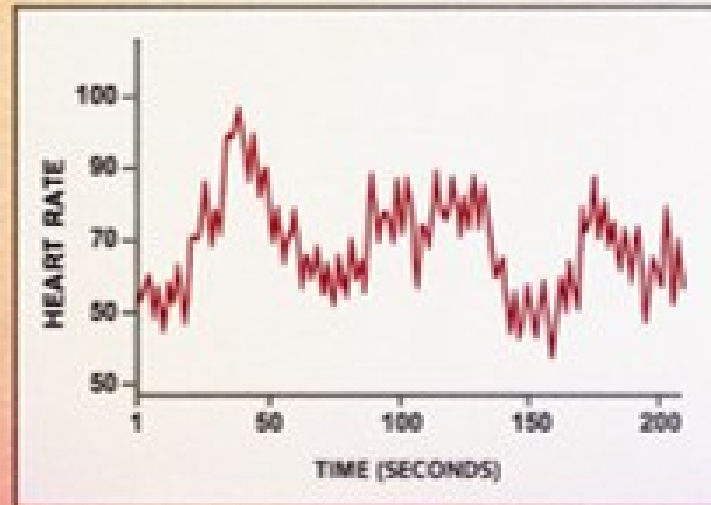
Greater variability reflects a more flexible, regulated, and resilient nervous system.

Source: <https://youtu.be/3vh9qEbIT0E>

Emotions and Heart Rhythms

Incoherence

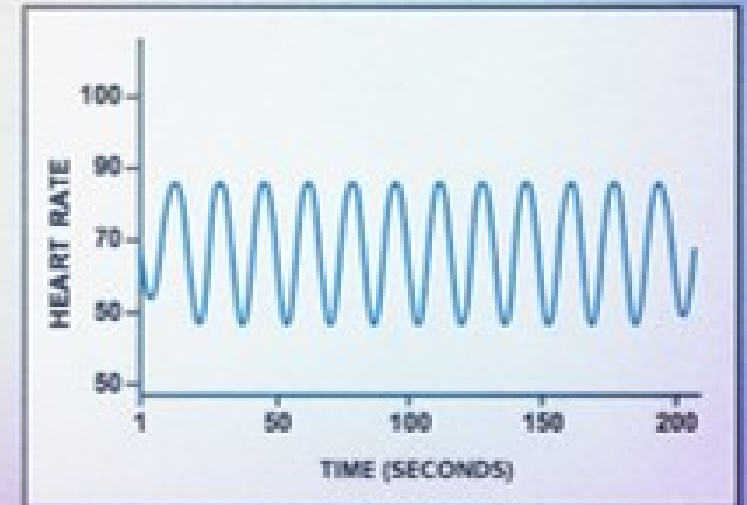
frustration, irritation, impatience,
worry



Inhibits brain function –
impairs performance

Coherence

appreciation, calm, patience, confidence



Facilitates brain function – promotes
optimal performance

HEART RATE VARIABILITY AND YOUR HEALTH

Your heart tells the story of how you feel.



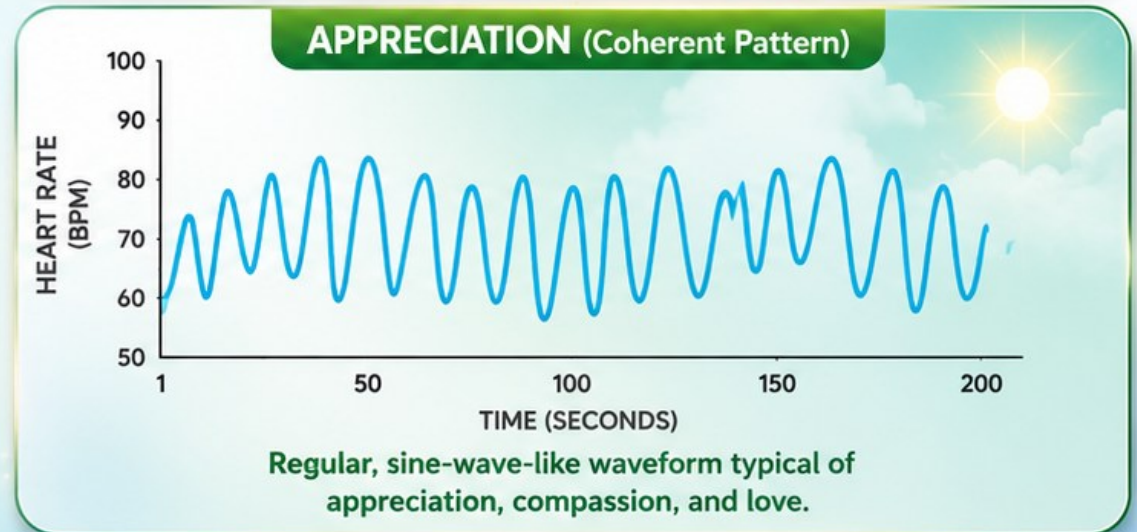
INCOHERENT HEART RHYTHM

The incoherent heart rhythm pattern shown in the **top graph** taken on a man who was asked to think about a stressful time in his life. The pattern characterized by its irregular, jagged waveform, is typical of **stress and negative emotions** such as anger, frustration, and anxiety.



COHERENT HEART RHYTHM

The **bottom graph** shows an example of the **coherent heart rhythm pattern** taken on the same man who was taught a HeartMath relaxation technique. This pattern is typically observed when an individual is experiencing a **sustained positive emotion**, such as appreciation, compassion, or love. The coherent pattern is characterized by its regular, sine-wave-like waveform. It is interesting to note that the overall amount of heart rate variability is actually the same in the two recordings; however, the patterns of the HRV waveforms are clearly different.



*When emotions change,
so does your heart.*



WATCH TO LEARN MORE

<https://youtu.be/3Vh9qEbITOE>



REDUCES
STRESS



IMPROVES
WELL-BEING



ENHANCES
FOCUS



SUPPORTS
HEART HEALTH

Heart-to-Heart Impact on Others



Coherence Appears to Be Contagious



Research by **Rollin McCraty, Ph.D.**, suggests that **coherent heart-rhythm** states can influence the physiological state of people nearby.



In one study, **three participants** were trained to enter a coherent HeartMath® state while a fourth participant was not.



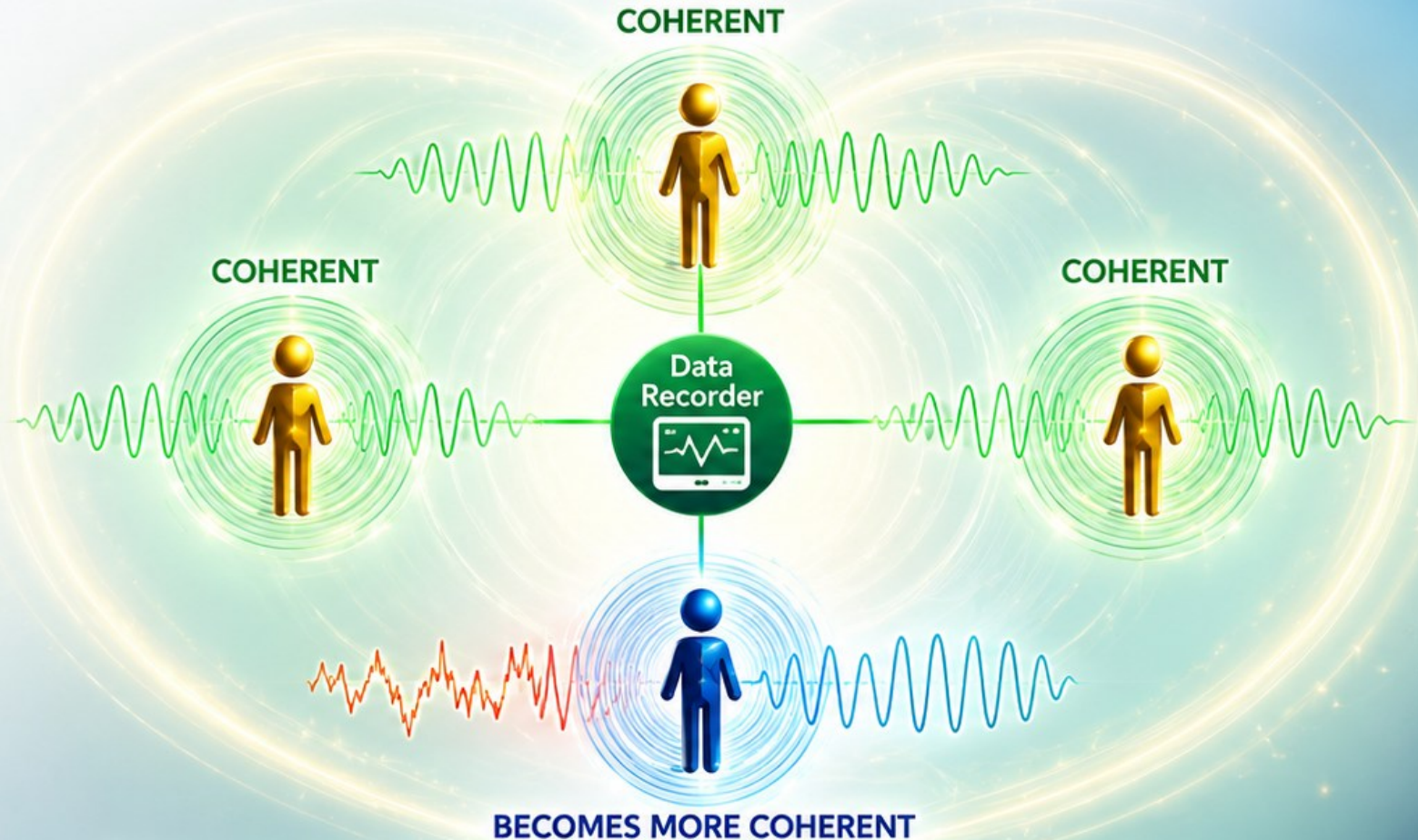
Within minutes, the **fourth participant's heart-rhythm patterns** shifted toward **coherence**, matching the group. The findings were replicated across multiple trials.



Source: Rollin McCraty, HeartMath Institute.

Video discussion available at:

<https://www.youtube.com/watch?v=M03SGkI3B-I>



*When one heart becomes coherent,
it can help others find **coherence** too.*



Science is discovering what
the heart has always known:
We are connected.



A Boy *and* his Dog



♡ When hearts connect, rhythms align. ♡



Research at HeartMath has found that a type of **heart-rhythm synchronization** can occur in interactions between people and their pets. A lot of pet lovers can appreciate the results of an experiment.



HMI Director of Research **Dr. Rollin McCraty** conducted with his then 15-year-old son, **Josh, and the boy's dog, Mabel**. He used electrocardiogram monitors to record heart-rhythm data when the pair were together and apart. The institute also has found that a type of heart-rhythm synchronization can occur in interactions between people and their pets.



Pet lovers can appreciate that we are truly connected to fido in a **"heart-felt"** way.



“ It's not just companionship...
It's a connection of hearts. ”





 Josh
and
Mabel 

♥ A BOY AND HIS DOG ♥

When love speaks, hearts respond. 



► The top of the graph shows the dog's (**Mabel**) heart rhythm shift when the boy (Josh, shown in the lower part of the graph) entered the room, sat down and proceeded to **consciously experience** feelings of **love towards Mabel**.



► When Josh consciously **felt feelings of love and care** towards his pet, his heart rhythms became **more coherent**, and this change appears to have influenced Mabel's heart rhythms, which then also became more coherent. There was **no physical contact** between the dog and boy (Childre et al., 2016).



Love is more than a feeling.
It's a rhythm that connects hearts.

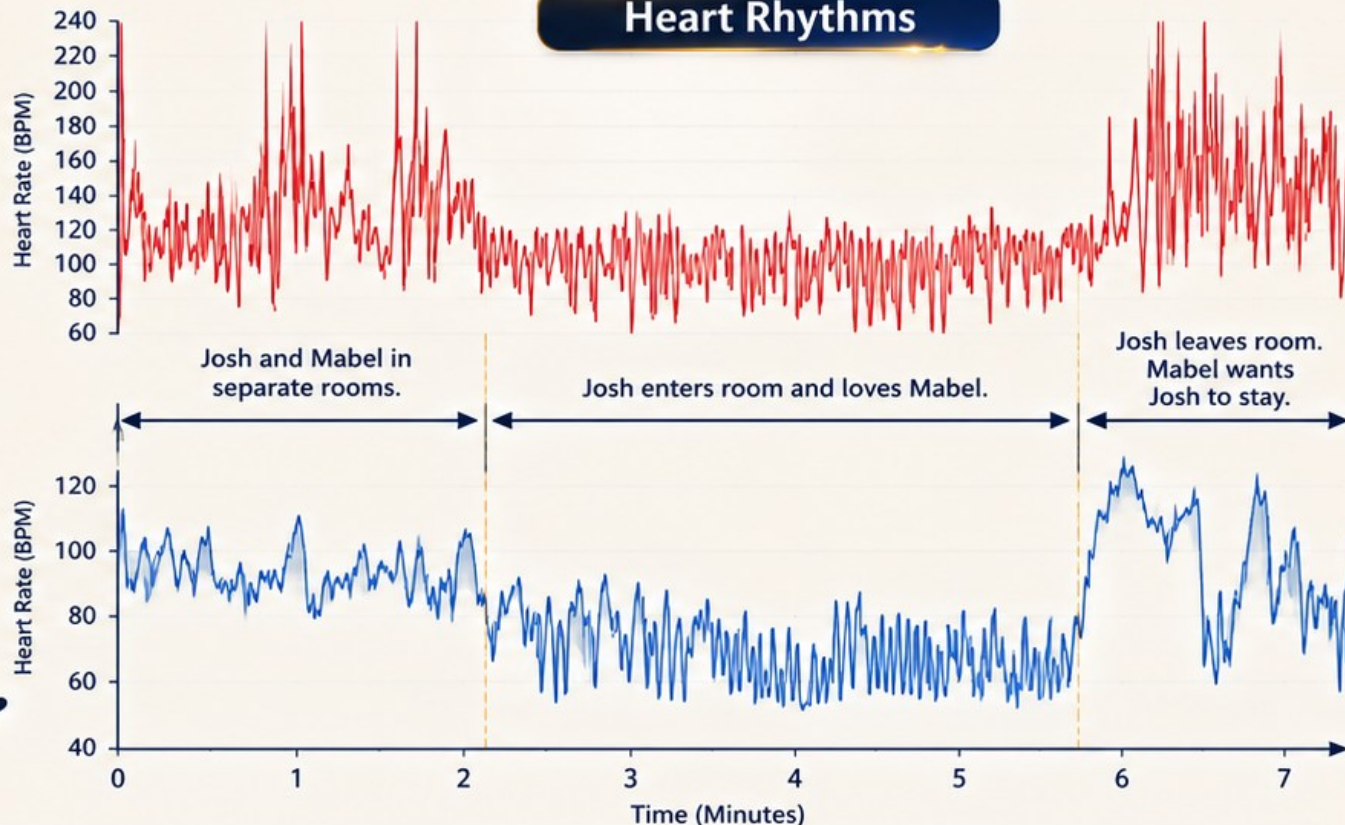
Mabel
(The Dog)



Josh
(The Boy)



Heart Rhythms



THE POWER
OF LOVE



HEARTS
CONNECT



BEYOND
WORDS



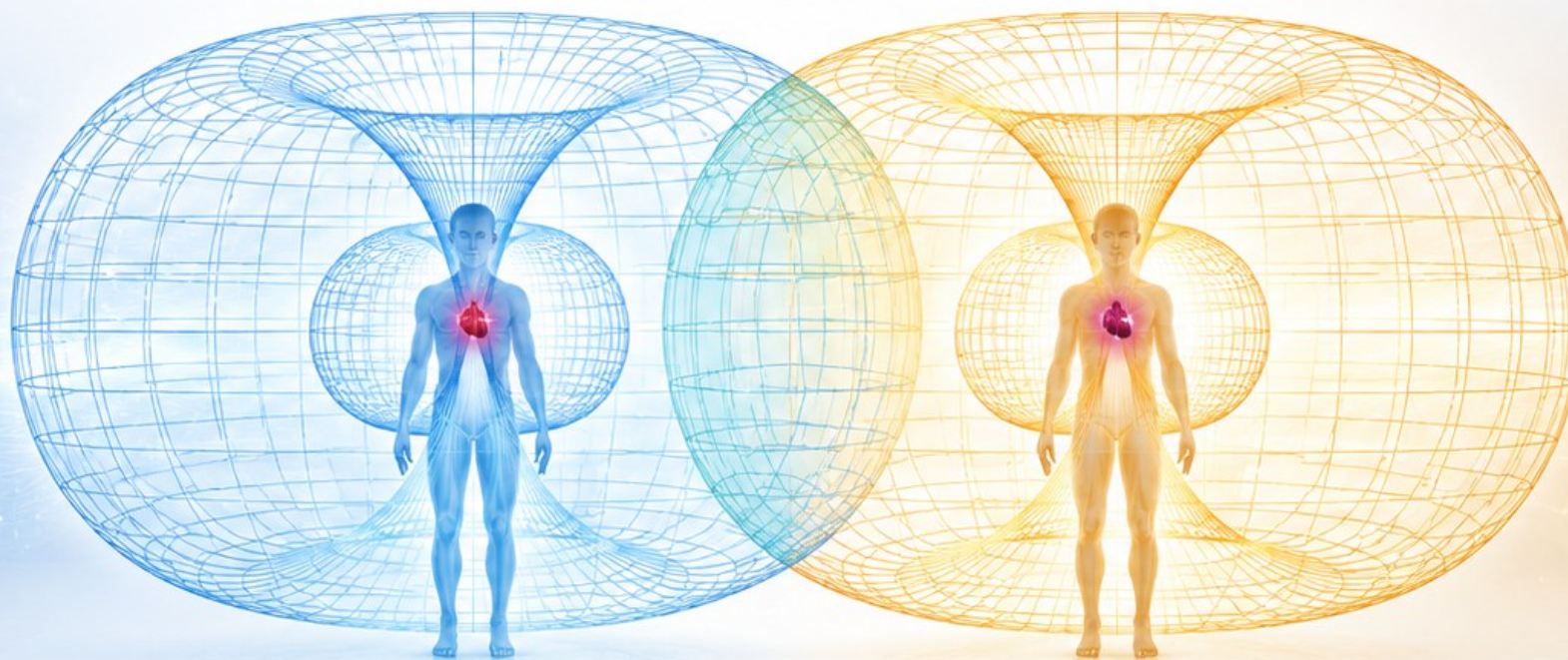
EMOTIONS
MATTER



SCIENCE
CONFIRMS

THE HEART CONNECTS US ALL

The heart radiates an **electromagnetic field** affecting **each other's moods, attitudes and feelings**—whether we are conscious of it or not.



IT RADIATES

The heart's energy field extends several feet in all directions.



IT INFLUENCES

Our heart field can influence and be influenced by others.



IT CONNECTS

This invisible exchange affects our emotions, attitudes and well-being.



IT UNITES

Our hearts are constantly communicating, uniting us all.

Science is beginning to catch up with what the heart has always known.

Heart-to-Heart

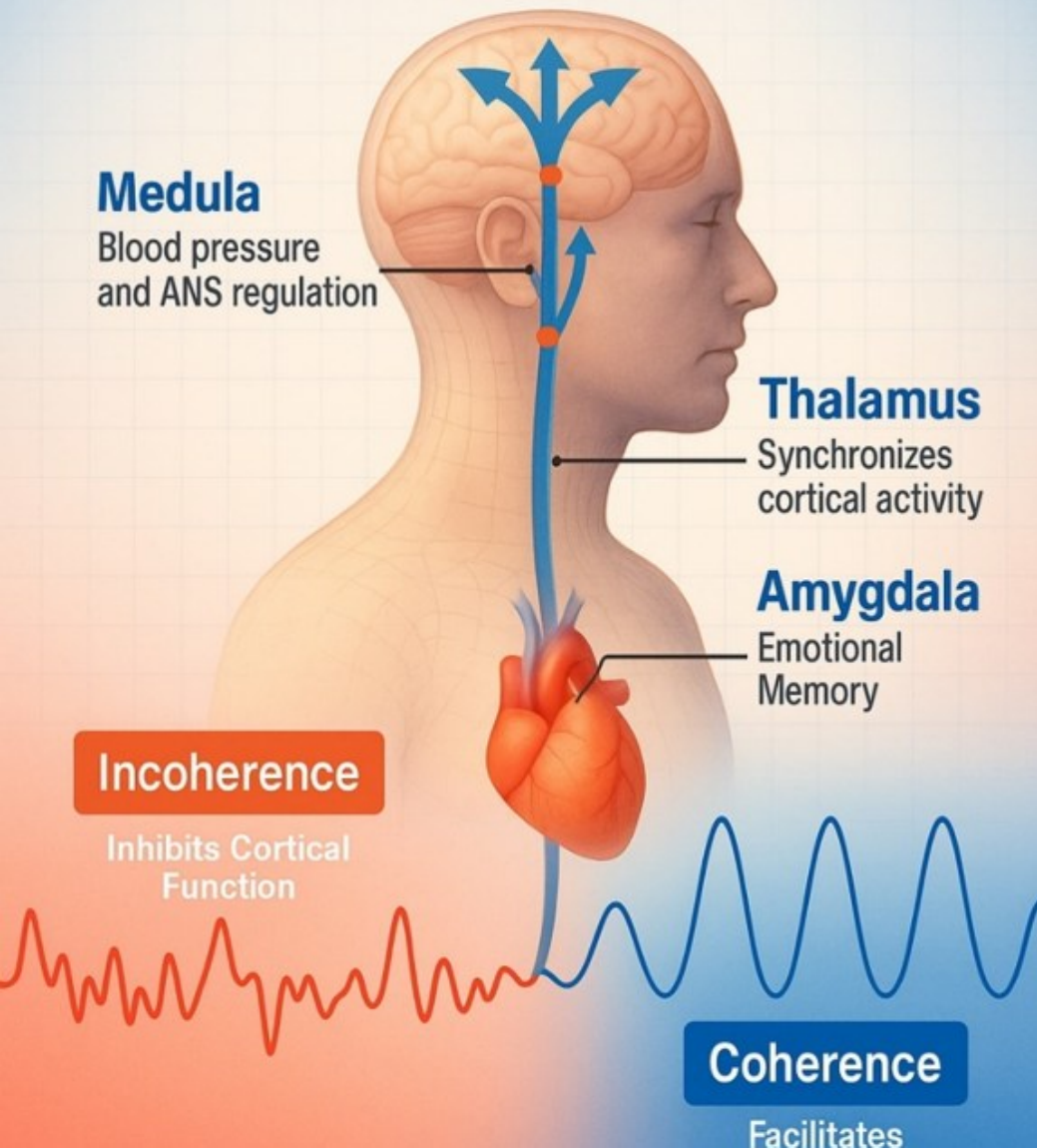


HeartMath asserts that our heart states can **impact on others** and most important, **those we love.**



Our hearts are constantly communicating.
What we feel can be felt by those we love.

Ascending Heart Signals



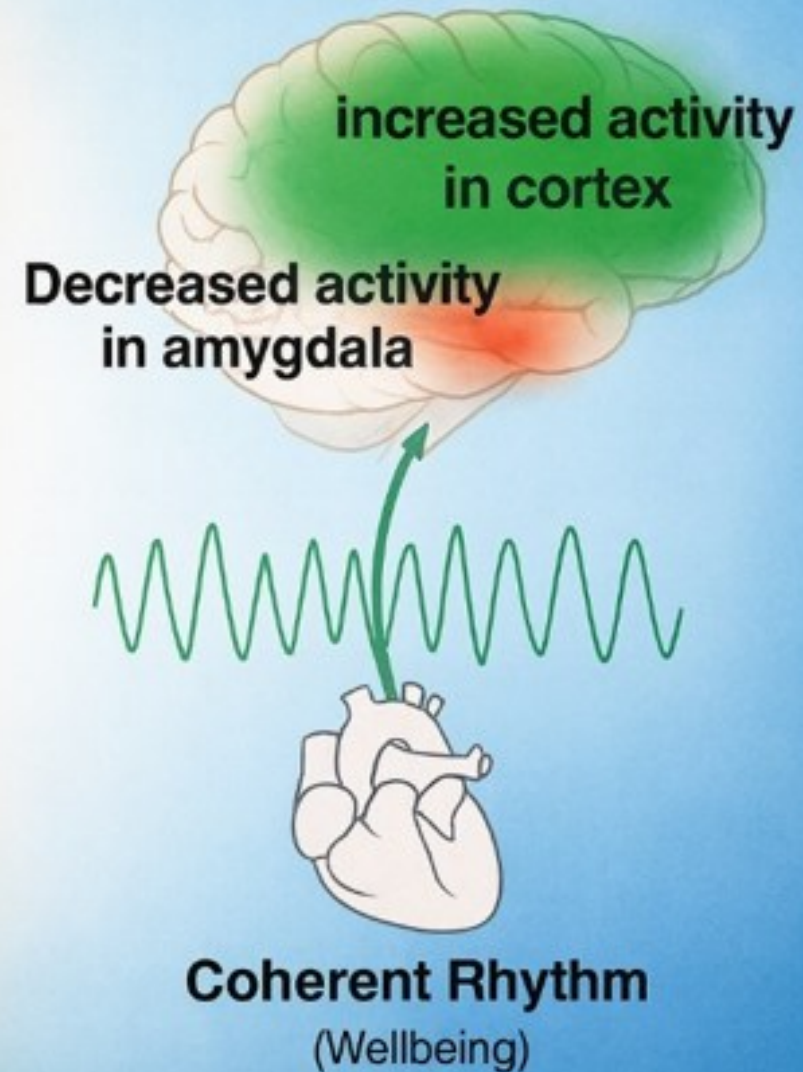
When the heart is coherent, it sends messages to the brain that, likewise, promote brain coherence which allow the brain to be more integrated and efficient and, to the contrary, an incoherent heart inhibits cortical function.

Dr. McCraty notes that the heart communicates to the brain in four main ways: (1) nerves connecting the heart to the brain, particularly the vagus nerve, (2) hormones, (3) blood pressure shifts, and (4) electromagnetic waves.

Cortical Inhibition



Cortical Facilitation



STUDIES SHOWING BENEFITS OF

COHERENCE

on Brain Function



A coherent heart.
A sharper mind.
A brighter future.



Coherence today.

Better brain function for life.



Increased ability to **self-regulate** (Bradley, 2010; Bedell 2010)



40% improvement in long-term memory (Lloyd, 2010)



24% improvement in short-term memory (Lloyd, 2010)



Increased ability to **focus** (Lloyd, 2010; Ginsberg, 2010)



Increased ability to **process information** (Ginsberg, 2010)



Faster reaction times (McCraty, 2010)



Higher test scores (Bradley, 2010)



Improved ability to **learn** (Bradley, 2010)

Liabilities of **Low** Heart Rate Variability **(HRV)**



FATIGUE & EMOTIONAL DISTRESS

Lower energy levels
Greater stress and anxiety
Increased risk for depression



REDUCED ADAPTABILITY

Less flexibility under stress
More rigid emotional responses
Difficulty adjusting to life's challenges



INCREASED HEALTH RISKS

Higher physiological stress burden
Poorer recovery from illness
Greater cardiovascular risk



POOR SLEEP & RECOVERY

Less restorative sleep
Slower physical healing
Chronic exhaustion and burnout



Low HRV often reflects a nervous system that has lost **flexibility, resilience, and adaptive capacity.**

HEART COHERENCE

Benefits



When your heart
is in **harmony**,
your life **transforms**.

When one is in a **coherent state**, it reflects:



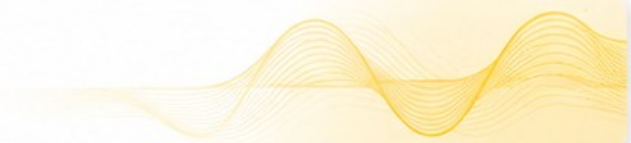
Increased **synchronization** in higher-level brain systems and capacity to self-regulate behaviors.



Increased **parasympathetic** activity (vagal activity).



Entrainment between physiological rhythms.



Coordinated activity in the two branches of the ANS.



Increased **heart-brain** synchronization.



Cardiovascular system resonance.



A coherent heart. A balanced mind. **A healthier you.**



McCraty, 2009

Heart COHERENCE

♥ BENEFITS ♥ ON BRAIN NETWORKS

A coherent
heart.
A balanced
mind.
A healthier
you.



The science is clear.
The benefits are powerful.



BETTER EMOTIONAL WELL-BEING

Individuals with higher rate variability tend to have **better emotional well-being** than those with low heart-rate variability (including for example, lower levels of worry and rumination).



STRONGER BRAIN CONNECTIONS

One theory is that high amplitude oscillations in heart rate, **enhance the functional connectivity** of brain networks associated with emotional regulation.



BUILDING RESILIENCE

Regular HRV biofeedback training can facilitate this positive change in HRV amplitude which in turn **promotes resilience**.



– Mather and Thayer. How Heart Rate Variability Affects Emotional Regulation Networks. *Current Opinion in Behavioral Sciences*. 2018. Volume 19, pp 98-104



Feel better.



Think clearer.



Live stronger.



Thrive every day.

STUDIES SHOWING BENEFITS OF

COHERENCE

on Brain Function



A coherent heart.
A sharper mind.
A brighter future.



Coherence today.

Better brain function for life.



Increased ability to **self-regulate** (Bradley, 2010; Bedell 2010)



40% improvement in long-term memory (Lloyd, 2010)



24% improvement in short-term memory (Lloyd, 2010)



Increased ability to **focus** (Lloyd, 2010; Ginsberg, 2010)



Increased ability to **process information** (Ginsberg, 2010)



Faster reaction times (McCraty, 2010)



Higher test scores (Bradley, 2010)



Improved ability to **learn** (Bradley, 2010)

STUDIES SHOWING BENEFITS

OF HEART COHERENCE

on Health 



*A coherent heart.
A healthier you.*

Backed by science. Proven by results.



STUDY RESULTS



Blood Pressure in Hypertensive Employees (Hewlett-Packard)

20% reduction in diastolic and systolic blood pressure.

(McCraty, 2005)



Reduced Health Care Costs (Reformed Church in America)

Annual cost savings = **\$585** per participant.

(Bedell, 2010)



Diabetes (LifeScan)

30% increase in quality of life metrics; **1.1% reduction** in HbA1c.

(McCraty, 2005)



Congestive Heart Failure (Stanford Hospital)

Increased functional capacity, reduced stress and depression.

(Luskin, 2000)



Heart Arrhythmias (Kaiser Permanente)

75% of the patients had significantly fewer episodes of atrial fibrillation and **20%** were able to stop medication altogether.

(unpublished data)



Asthma (Robert Wood Johnson Medical School)

Over 50% of patients experienced a decrease in airway impedance, symptom severity and medication consumption.

(Lehrer, 2006)



Heart coherence makes a measurable difference.

For your heart. For your health. For your life. 

THE HIDDEN COST OF LOW HRV AND MENTAL HEALTH

Low heart rate variability is associated with poorer mental and emotional well-being and a higher risk for various conditions.



Low HRV can impact both mind and body—don't ignore the warning signs.



Associated with lower self-regulatory capacity.

Segerstrom & Nes, Psychol Sci, 2007. 18(3): p. 275-81; Reynard, et al., Appl Psychophysiol Biofeedback, 2011. 36(3): p. 209-15.



Low prefrontal cortical performance and ability to inhibit unwanted memories and intrusive thoughts.

Thayer, et al., Ann Behav Med, 2009. 37(2): p. 141-53.



Difficulties in emotion regulation.

Williams, et al., Front Psychol, 2015. 6: p. 261.



Emotion regulation and impulse control.

Koenig, et al., Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2015.



Anxiety disorders.

Chalmers, et al., Front Psychiatry, 2014.



Depression.

Agelink, et al., Psychiatry Res, 2002. 113(1-2): p. 139-49.



Poor social engagement, emotion regulation and anger management.

Geisler, et al., Biol Psychol, 2013. 93(2): p. 279-86.



PTSD.

Shah, et al., Biol Psychiatry, 2013. 73(11): p. 1103-10.



Appears to also be associated with early childhood trauma.

Shonkoff, Boyce and McEwen. JAMA. 2009. 301(21): pp2252-9



APPLICATIONS

Putting HeartMath Breakthroughs to Work in Your Life



HeartMath has developed simple and practical ways to benefit from the breakthroughs in understanding the neuroscience of **Heart Rate Variability** as it relates to sound mental and physical health.



The following slides offer five of the main techniques. The value of these techniques is that they are **relatively simple** and do not take inordinate amounts of time to begin benefiting from them.



Additionally, HeartMath has developed training devices for facilitating **learning and application** in our daily lives.



Simple Tools. Powerful Science. **Real Results.**



Understand

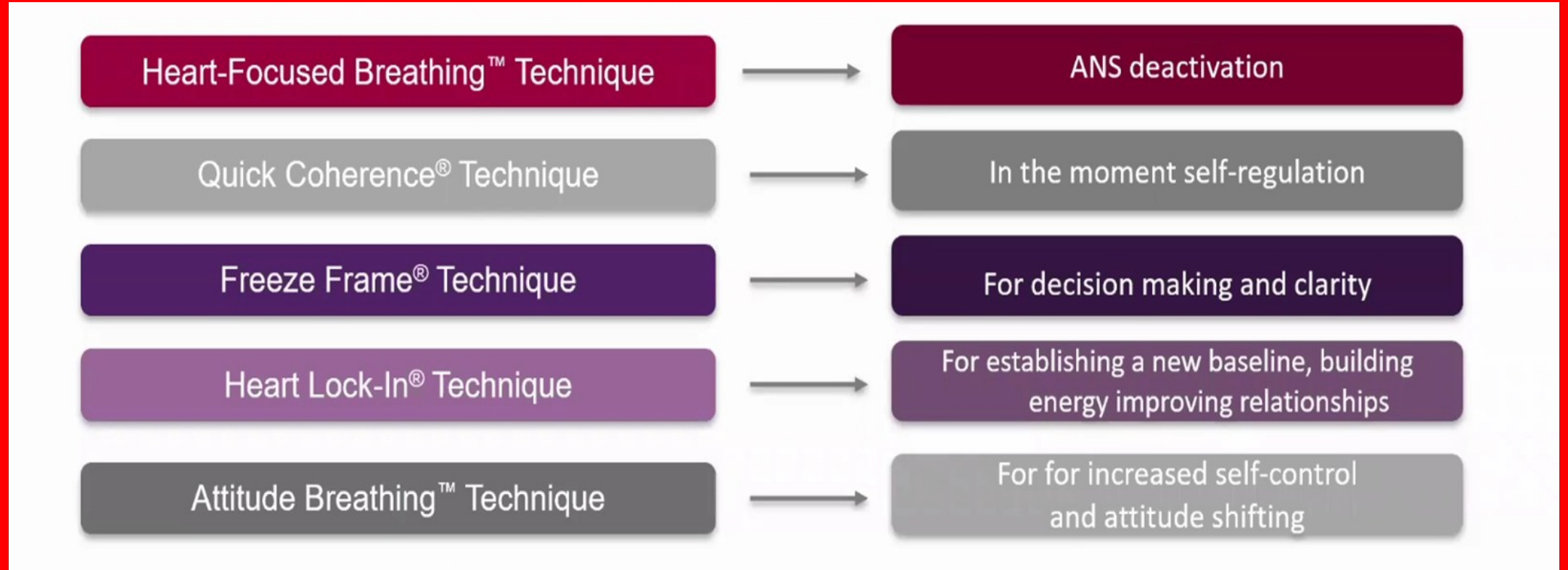


Practice



Transform

HeartMath Self-Regulation Techniques



➤ Researchers at HeartMath have developed five main self-regulation strategies each with its own purpose. These techniques build on one another so it is best to master the top ones before going onto the next.

HeartMath Self-Regulation Techniques

Powerful tools to shift from stress to coherence and create positive change.



Heart-Focused Breathing™ Technique



ANS deactivation



Quick Coherence® Technique



In the moment self-regulation



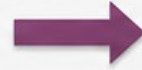
Freeze Frame® Technique



For decision making and clarity



Heart Lock-In® Technique



For establishing a new baseline,
building energy improving relationships



Attitude Breathing™ Technique



For for increased self-control
and attitude shifting



Researchers at HeartMath have developed five main self-regulation strategies each with its own purpose. These techniques build on one another so it is best to **master the top ones before going onto the next.**

Heart-Focused Breathing Technique

for Autonomic Nervous System Deactivation / Establishing Calmness



What it does:



Creates **coherence** – balances your ANS, activates prefrontal cortex.



Reduces stress reaction
(including Adrenaline and Cortisol).



Shifts you from unpleasant emotions into a **more neutral emotional space**.



Reduces allostasis, promotes **homeostasis**.



How to do it (eyes open, in the moment, any situation):

1

Focus your attention in the **area of your heart**.

2

Imagine your breath is flowing **into and out** of your heart or chest area, breathing a little slower and deeper than usual.



Inhale 5 seconds | Exhale 7 seconds

Longer exhalation activates relaxation.



Suggestion: Breathing in for 5 seconds and a longer exhalation of about 7 seconds accentuates relaxation. But whatever pace you like is okay. Everyone has their unique pace.



Click here for a demonstration video:

https://www.youtube.com/watch?v=JxNiw3bcfVo&ab_channel=TheWholeMD

QUICK COHERENCE TECHNIQUE

— for in the moment self-regulation —



1

FOCUS YOUR ATTENTION in the area of the heart.



Imagine your breath is flowing in and out of your heart or chest area, breathing a little slower and deeper than usual.



2

MAKE A SINCERE ATTEMPT to experience a regenerative feeling.



Experience feelings such as appreciation or care for someone or something in your life.

Suggestion: Try to re-experience the feeling you have for someone you love, a pet, a special place, an accomplishment, etc. or focus on a feeling of calm or ease.



SUGGESTION:

Breathing in for 5 seconds and a longer exhalation of about 7 seconds accentuates relaxation. But whatever pace you like is okay. Everyone has their unique pace.

INHALE

5

SECONDS



EXHALE

7

SECONDS



Click here for an excellent how-to video by Dr. Deborah Rozman: https://www.youtube.com/watch?v=sKmIXKCdnJ4U&ab_channel=HeartMath

Freeze-Frame Technique

- for clarity and decision-making

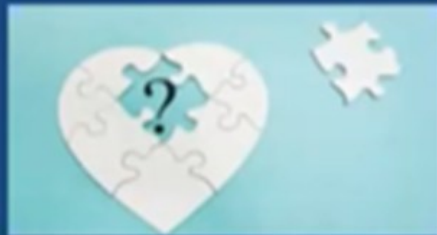
➡ It is a one-minute technique that allows a major shift in perception. More than positive thinking, it creates a definitive, heartfelt shift in how we view a situation, an individual or ourselves. Very helpful for establishing **clarity** and promoting **decision-making**.



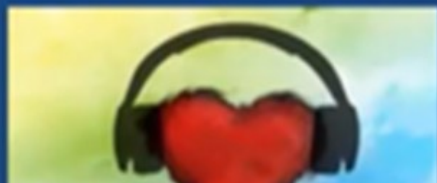
1. Shift out of your head and focus your attention on your heart for at least 10 seconds. Breathe normally.



2. Recall a positive time or feeling you had in your life, and attempt to reexperience it and feel it fully.



3. Ask your heart:
"What can I do in this situation to make it different?"
"What can I do to minimize stress?"



4. Listen to what your heart has to say in response to your question.

FREEZE-FRAME TECHNIQUE

for clarity and decision-making



A ONE-MINUTE TECHNIQUE

that allows a major shift in perception. More than positive thinking, it creates a definitive, heartfelt shift in how we view a situation, an individual or ourselves. Very helpful for **establishing clarity** and **promoting decision-making**.



1

SHIFT OUT OF YOUR HEAD

and focus your attention on your heart for at least 10 seconds. Breathe normally.



2

RECALL A POSITIVE TIME

or feeling you had in your life, and attempt to reexperience it and feel it fully.



3

ASK YOUR HEART:

"What can I do in this situation to make it different?"
"What can I do to minimize stress?"



4

LISTEN TO WHAT YOUR HEART

has to say in response to your question.



CLICK HERE for an excellent how-to video by Dr. Deborah Rozman:
https://www.youtube.com/watch?v=sKmIXKCdnJ4U&ab_channel=HeartMath





HEART LOCK-IN TECHNIQUE

for establishing a new baseline, build energy, and/or improve relationships



1

FOCUS YOUR ATTENTION IN THE AREA OF THE HEART.

Imagine your breath is flowing in and out of your heart or chest area, breathing a little slower and deeper than usual.



2

ACTIVATE AND SUSTAIN A REGENERATIVE FEELING

such as love, appreciation, care or compassion.



3

RADIATE THAT RENEWING FEELING

to yourself and others.



WATCH DR. GREGG BRADEN'S EXCELLENT MEDITATION:
<https://www.youtube.com/watch?v=SLTlg0B-LsQ>



Scan the QR code
to watch now

Gregg Braden's Excellent Heart Lock-in Technique Meditation:

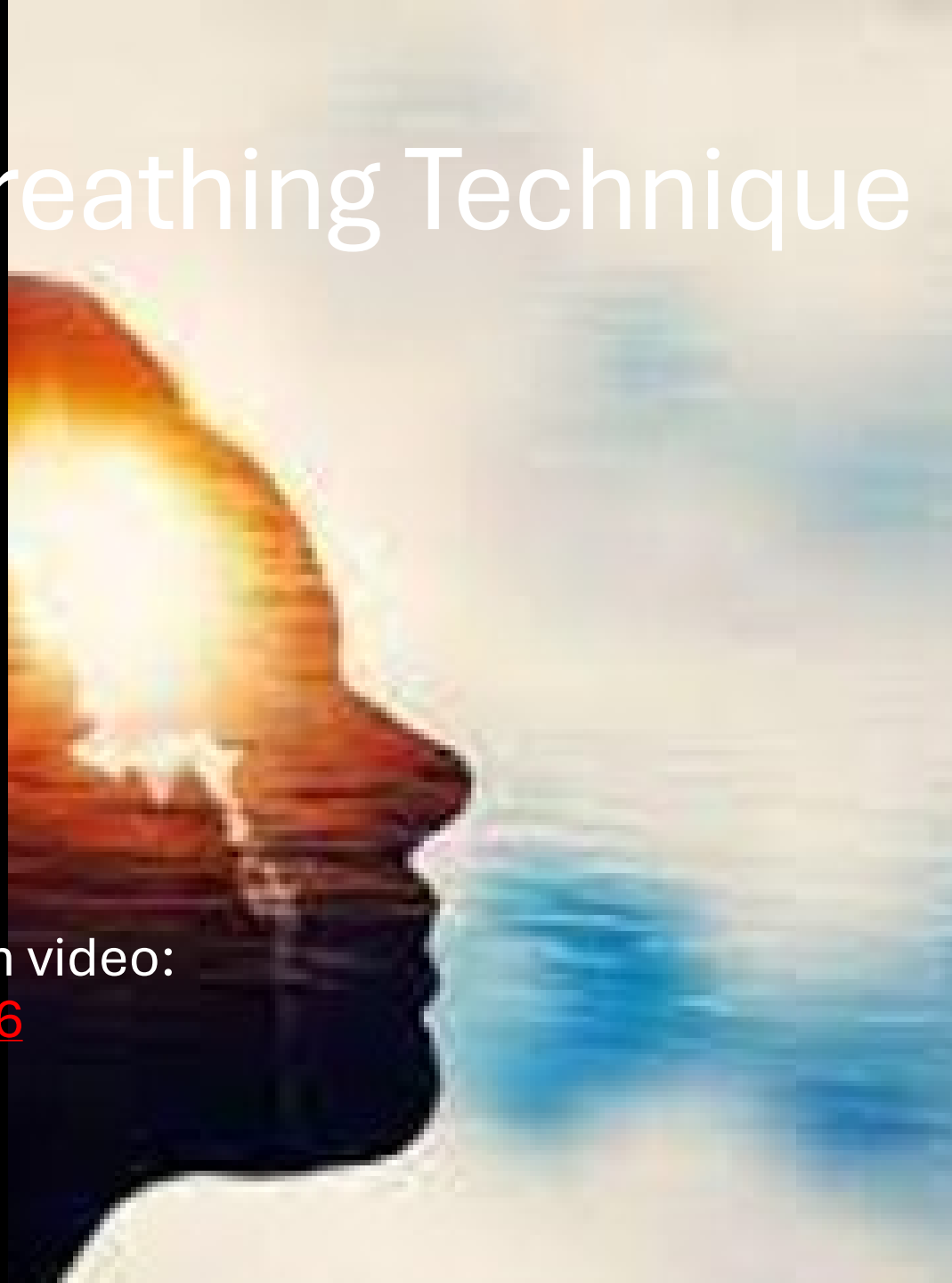
<https://www.youtube.com/watch?v=SLTlg0B-LsQ>



Attitude Breathing Technique

Click here for a demonstration video:

<https://vimeo.com/241211966>





Attitude Breathing Technique



for increased self-control and attitude shifting

1 STEP 1

Recognize a feeling or attitude that you want to change.



2 STEP 2

Identify a replacement attitude, then breathe the feeling of the new attitude slowly and casually through your heart area.

Do this for a while to anchor the new feeling.



UNWANTED FEELINGS & ATTITUDES



Stressed



Anxious



Overwhelmed



Bored



Judgmental



Fogged/Confused



Angry/Upset



Fatigued



Shame/Guilt



Financial Worries



Isolated/Lonely



Rebellious



Self-pity



REPLACEMENT FEELINGS & ATTITUDES



Breathe Neutral



Breathe Calm



Breathe Ease and Peace



Breathe Responsibility



Breathe Tolerance



Breathe Neutral for Clarity



Breathe Neutral to Cool Down



Breathe Increased Energy



Breathe Self Acceptance & Forgiveness



Breathe Abundance



Breathe Being Connected & Appreciated



Breathe Respect

Breathe a Feeling of Dignity & Maturity



Click here for a demonstration video:
<https://vimeo.com/241211966>



HeartMath HRV Training Devices



HeartMath has developed easy to use and relatively inexpensive biofeedback devices to assist in the application of the neuroscience of HeartMath principles into our daily lives.



Please visit their **website** for more information on how you might obtain the best device for your needs:

<https://www.heartmath.com/tech/>



Science is beginning to catch up with what the **heart** has always known.



☰ +♥ HeartMath.

emWave Pro®



emWavePro for professionals.
USB module with pulse ear sensor
and multi-user software for
Mac/Windows

☰ +♥ HeartMath.

Handheld and
Desktop Solutions



Prefer to practice off your
Smartphone?



emWave2® standalone handheld device
with wired ear sensor and software
for Mac/Windows

CONCLUSION



*A coherent heart.
A balanced mind.
A healthier you.
A better life.*



Heart coherence is powerful.

It strengthens the connection between heart and brain, improving both mental and physical well-being.



The benefits are wide-reaching.

Better emotional health, sharper thinking, stronger resilience, and improved overall health—all backed by science.



Simple practices create lasting change.

Techniques like focused breathing, positive emotions, and HRV training can transform your daily life.



You have the tools.

With awareness, practice, and the right support, you can build coherence and thrive.



It starts with you.

A coherent heart leads to a balanced mind, healthier relationships, and a better world.



Your journey matters.

Every breath, every choice, every moment is an opportunity to align, grow, and live your best life.



Coherence today. A better tomorrow.

FOR YOUR **HEART**. FOR YOUR **HEALTH**. FOR YOUR **LIFE**.

