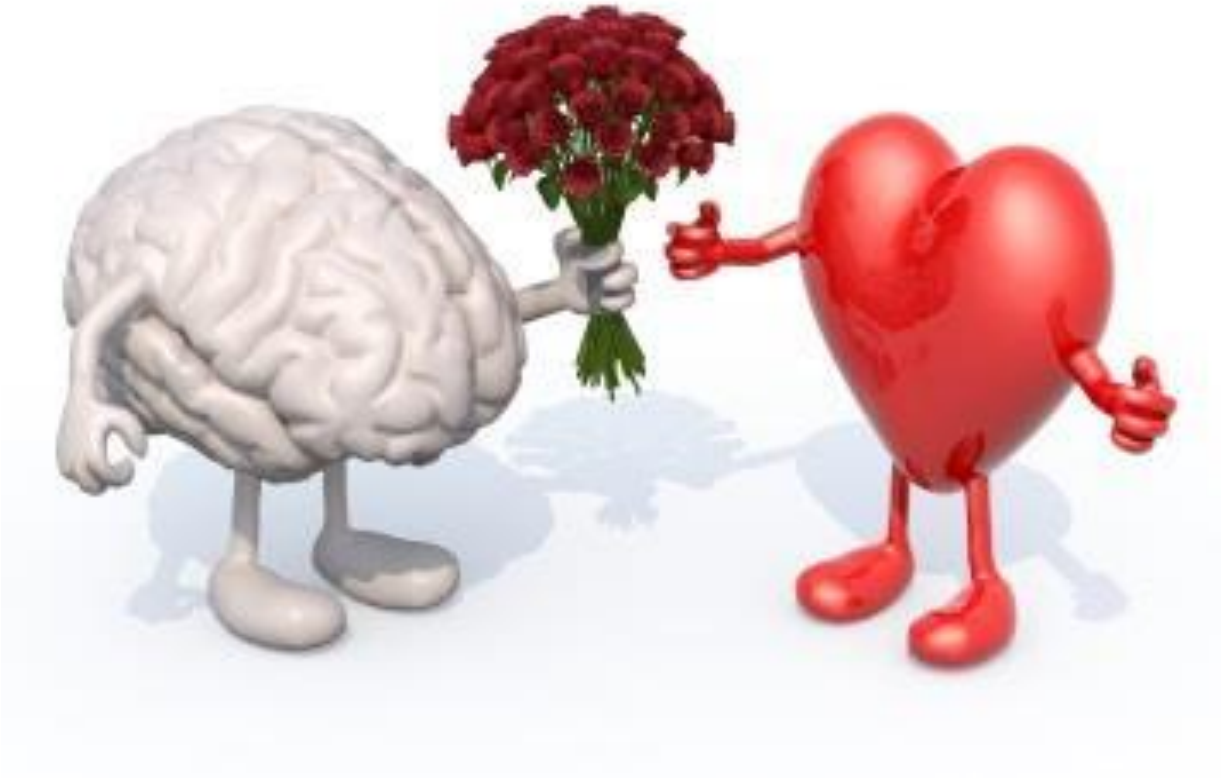
Heart Health

Taking Your Heart Beyond Diet and Exercise



A New Cardiovascular Perspective Manual Muscle Testing as Functional Neurology

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Introduction

Improved Awareness

A healthy heart is unnoticeable. It is designed to beat over and over and over again quietly in the background. But let it skip a beat here or there, accelerate for no apparent reason or pound a bit harder for a while and one's whole experience can change in an instant. What makes this happen?

Learn what it takes to keep your heart beating discretely.

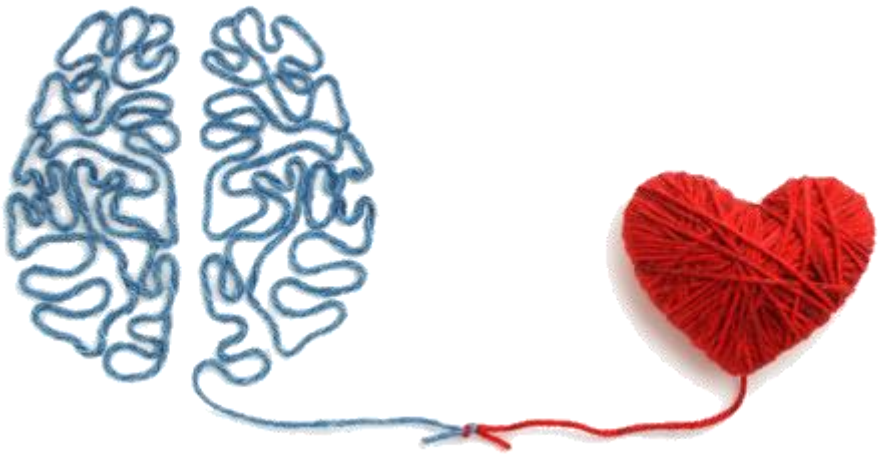
Improved Awareness

This report will help you:

- Improve heart failure awareness amongst both your patients and other healthcare professionals
- Promote heart failure research
- Ensure equity of care for all patients with heart trouble
- Support and empower patients and their caregivers.

This is what we did:

Because cardiovascular disease, including heart disease and stroke, is **the number one killer worldwide**, we screened for irregularities in heart-brain synchrony using routine manual muscle testing techniques as functional neurology to possibly reduce the incidence of cardiovascular disease and sudden cardiac death.



Improved Awareness

> *"The normalization of efferent autonomic drive (EAD) via functional neurological means may help reduce the incidence of cardiovascular disease and sudden cardiac death."*
>
> *-- Hugo Critchley; Mental stress and sudden cardiac death: asymmetric midbrain activity as a linking mechanism*

The human nervous system is receptor dependent. We used functional neurological means to influence primary afferentation, which is the stimulus that causes cortical activation and from it comes all efferent modulation from various sources.

Functions of Primary Afferents:

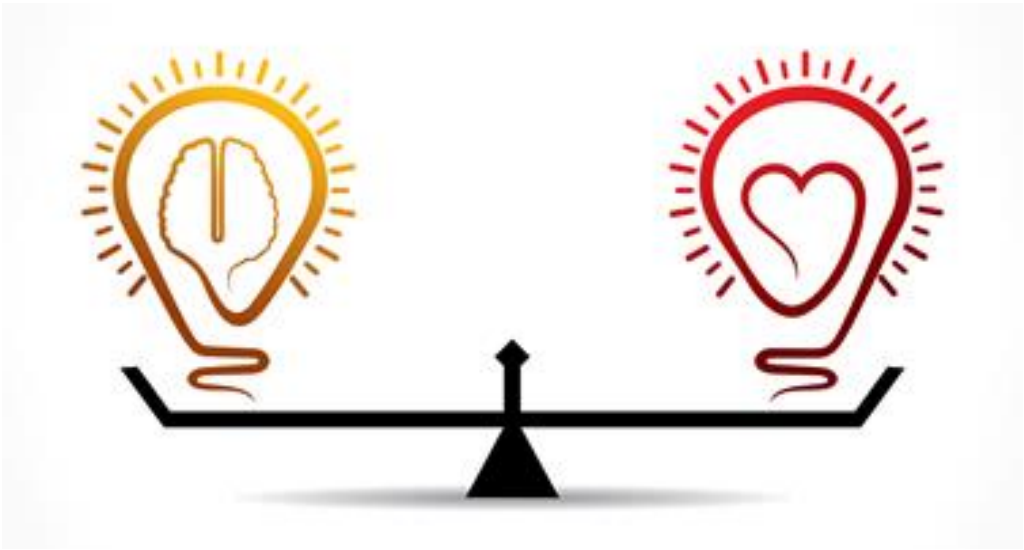
All primary afferents:

- **Are excitatory to the intermediolateral cell column.** This allows for dilation of arterioles to muscles, capillaries to skin, piloerector tissue and sweat glands
- Inhibit pain (excites inhibitory interneurons to inhibit nociception)
- Ascend to the brainstem
- Ascend to the cerebellum
- Excite alpha motor neurons of the homologous muscles, i.e., *right* upper extremity flexors
- Inhibit alpha motor neurons of antagonistic muscles, i.e., *right* upper extremity extensors
- Excite *left* upper extremity extensors
- Inhibit *left* upper extremity flexors
- Excite *right* lower extremity extensors
- Inhibit *right* lower extremity flexors
- Excite *left* lower extremity flexors
- Inhibit *left* lower extremity extensors

The Heart of the Issue

Capturing the Cause

Q: *"What can be done for patients who have cardiac symptoms but no definitive diagnosis for cardiac treatment?"*



Our Medline search gave us several brain-heart related perspectives, but none that addressed the stimulation of the primary afferents to the brain relating to functional reciprocity.

Capturing the Cause

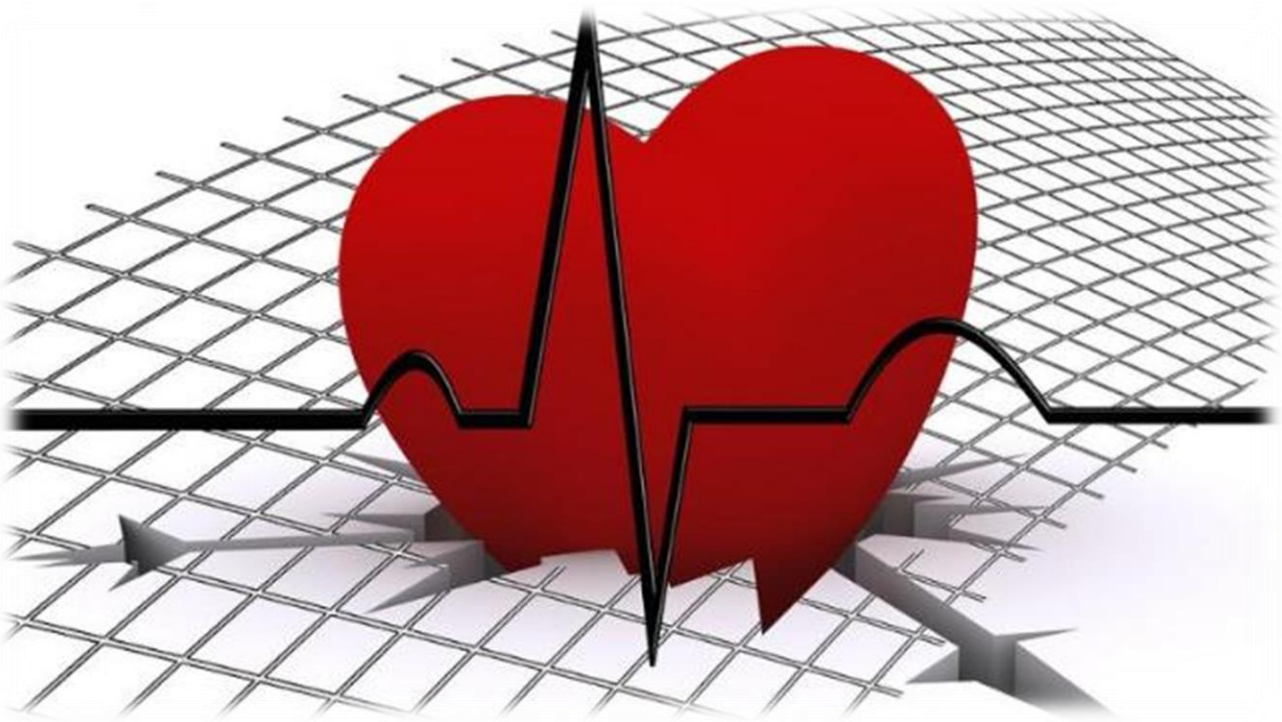
Often there is no treatment other than medication for:

- Chest pain (angina)
- Shortness of breath (dyspnea)
- Atrial fibrillation
- Chronic cough
- Bradycardia
- Vertigo
- Aortic stenosis
- Sweating
- Abnormal vessels
- Left ventricular hypertrophy
- History of myocardial infarct
- Family history of chronic heart disease atrial stenosis
- Dysrhythmia
- Tachycardia
- Faintness (syncope)
- Extremity pain
- Valvular dysfunction
- Migraine
- Chest heaviness
- Anxiety
- Edema
- High blood pressure
- Atrial stenosis

Cardiovascular disease (CVD), including heart disease and stroke, is the number one cause of death globally – more people die annually from CVDs than from any other cause. According to the CDC, an estimated 17.9 million people died from CVDs (2019), representing 31% of all global deaths. Of these deaths, 85% are due to heart attack and stroke, and these statistics remain high despite myriad medical treatments.

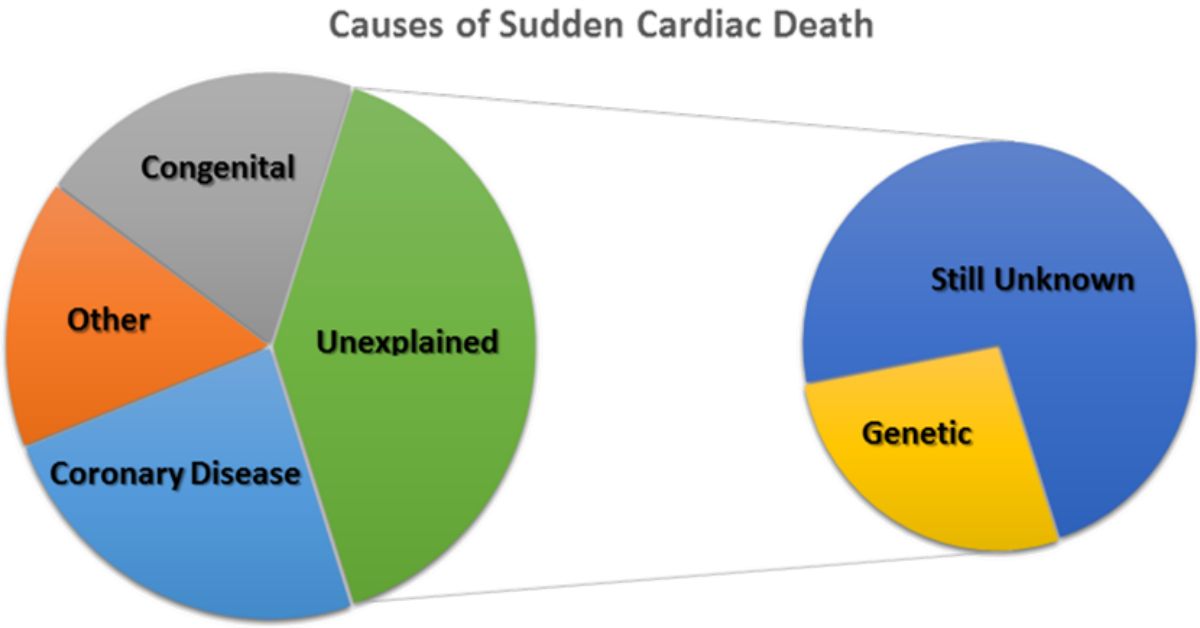
Capturing the Cause

The normalization of efferent autonomic drive (EAD) via functional neurological means may help reduce the incidence of CVD and sudden cardiac death (SCD). Sudden death from cardiac arrest – a demise resulting from an abrupt loss of heart function – is a major health problem, yet it has received much less publicity than heart attack.



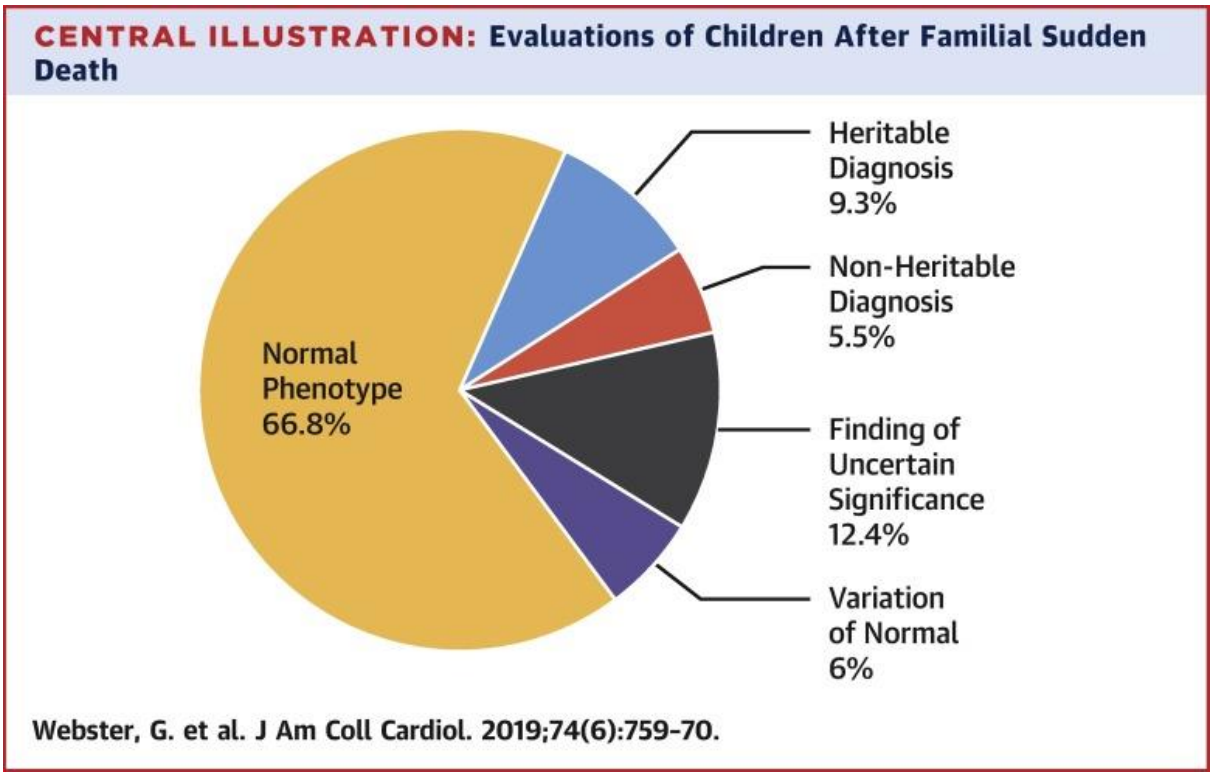
Capturing the Cause

Sudden cardiac death is the leading cause of natural death in the United States, often being the first expression of CAD and is responsible for approximately 50% of deaths from CAD. **SCD accounts for half of all heart disease deaths each year** representing an incidence of 0.1-0.2% per year in the adult population; a large portion (as high as 40%) going unwitnessed. The time and mode of death are unexpected and occurs within minutes after symptoms appear.



Capturing the Cause

Sudden cardiac death is very rare in children. The reported incidence of SCD in children and young adults ranges from 0.5 to 2.5 per 100,000 person-years. In the United States, the Centers for Disease Control and Prevention estimates that approximately 1500 people under 25 years of age die each year of SCD. (Webster, G., Olson,R., Schoppen, ZJ., *et al*. Cardiac Evaluation of Children With a Family History of Sudden Death; *J Am Col of Card*, Volume 74, Issue 6,13 August 2019, Pages 759-770)

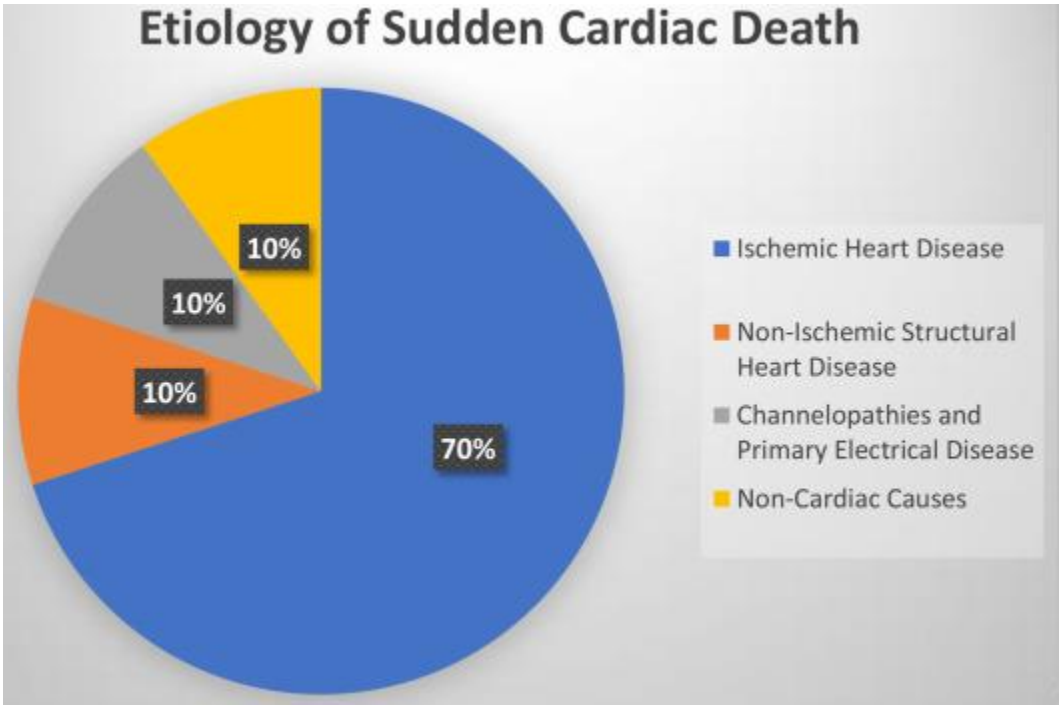


Evaluations of Children After Familial Sudden Death

Pie chart categorizing the cardiac evaluations of children referred for evaluation after a sudden death in the family. One-quarter of children evaluated for a family history of sudden death had a cardiac disease or a finding of uncertain significance, but only 9% were found to have a heritable disease.

Capturing the Cause

Sudden cardiac death occurs most frequently in adults in their mid-30s to mid-40s and affects men twice as often as it does women. Out-of-hospital SCD is the cause of more than 60% of all deaths from cardiovascular disease, which is the leading cause of death worldwide and only an estimated 20% of these patients survive to hospital discharge.

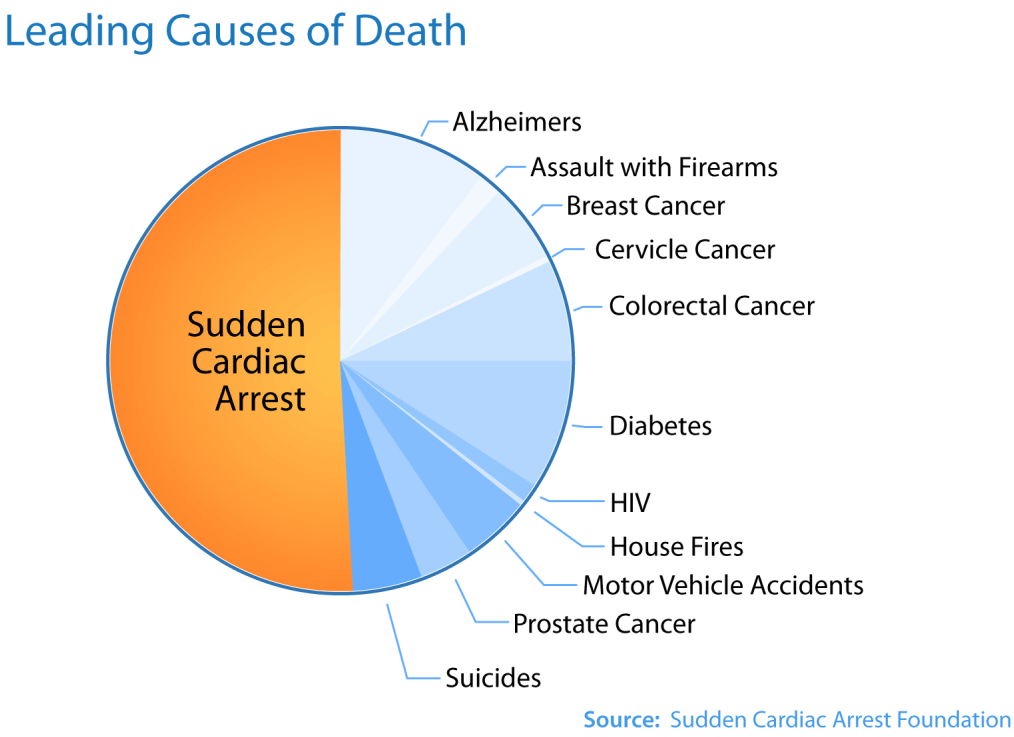


Adapted from Kuriachan, V. P., Sumner, G. L. and Mitchell, L. B. (2015). Sudden cardiac death. *Current Problems in Cardiology* 40, 133–200.

Capturing the Cause

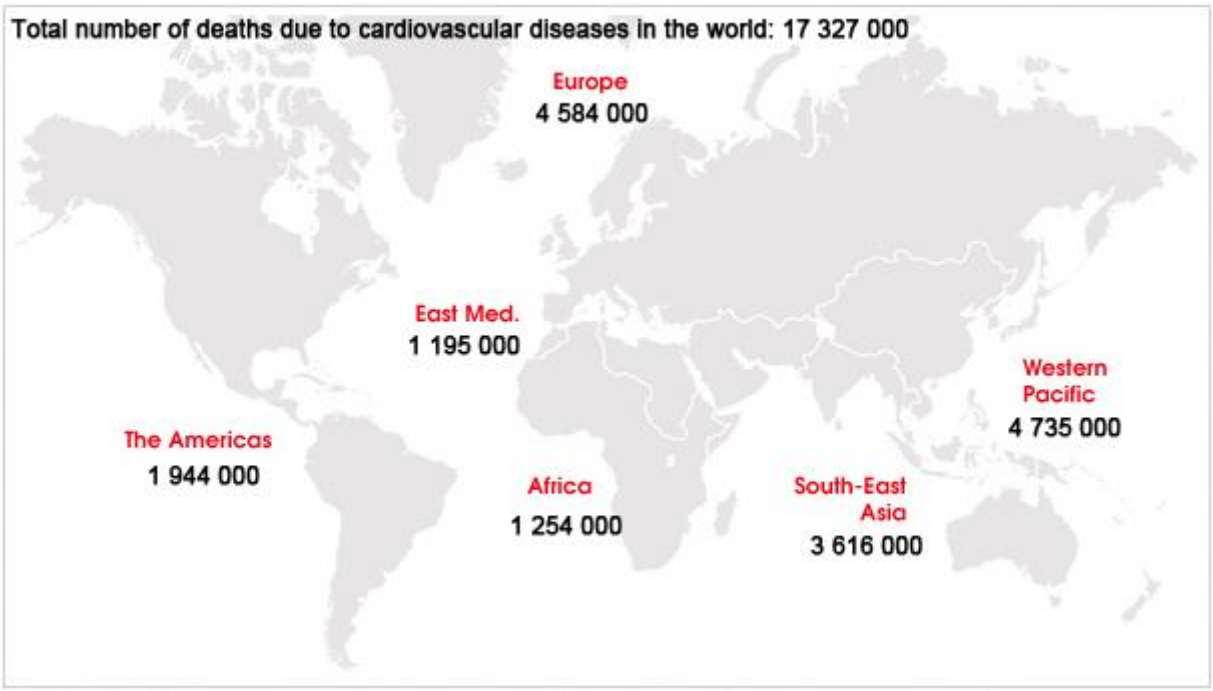
More deaths are attributable to SCD than to lung cancer, breast cancer, or AIDS. The American Heart Association (AHA) supports implementing an early recognition of the potential for an event with a specific survival protocol to rescue people who suffer a cardiac arrest in the community.

The means behind this report suggest that there is a way to implement the AHA's early recognition and treatment protocol.



Capturing the Cause

The causes of cardiovascular disease are generally the same in every region and race, and **stress seems to play a more important role in its production**. The frequency of SCD in Western industrialized nations is like that in the United States. The incidence of SCD in other countries varies as a reflection of the prevalence of CAD or other high-frequency cardiomyopathies in those populations. The trend toward increasing SCD events in developing nations of the world is thought to reflect a change in dietary and lifestyle habits in these nations. Sudden cardiac death (SCD) and arrhythmia represent a major worldwide public health problem, accounting for 15-20 % of all deaths. It has been estimated that SCD claims more than 7,000,000 lives per year worldwide.



Capturing the Cause

Normal Heatbeat

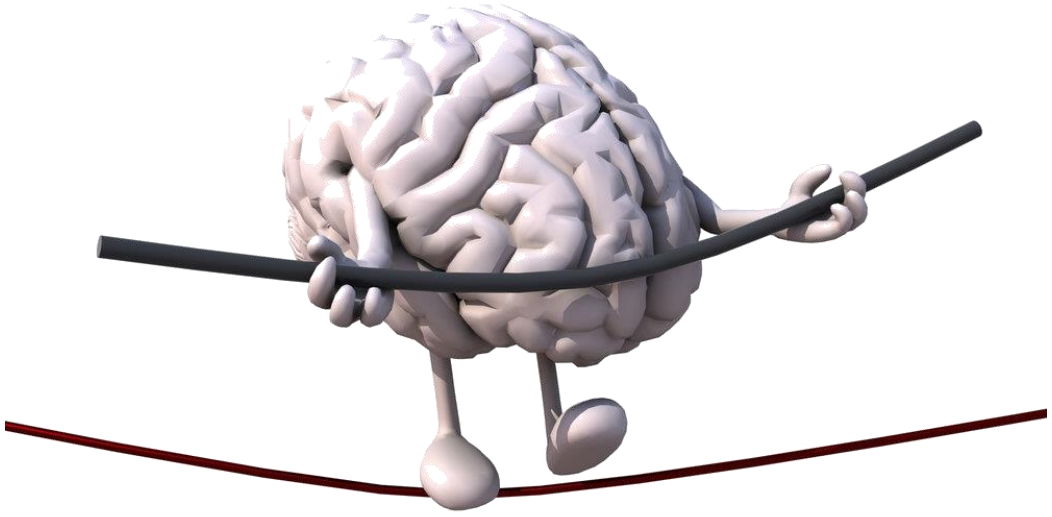
Irregular Heartbeat

Heart diseases can naturally lead to cardiac arrest and SCD. The cardiac arrests that lead to SCD are most often the result of either ventricular tachycardia or ventricular fibrillation, or both. **Cardiac arrhythmia can cause arrest.** Some cardiac arrests are due to extreme bradycardia.
In 90% of adult victims of SCD, two or more major coronary arteries are narrowed by fatty buildups. Scarring from a prior heart attack is found in two-thirds of victims. When sudden death occurs in young adults, other heart abnormalities are more likely causes.

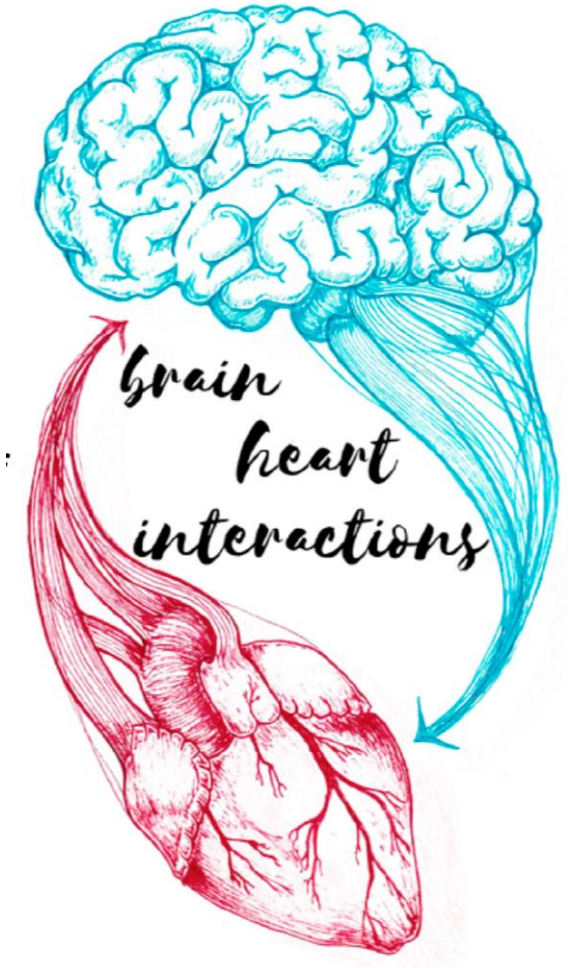
A Proven Solution

Balancing Cortical Hemisphericity

The treatment goal is to match cardiovascular needs to neurological individuality. Given their history and unique pattern of skeletal muscle involvement, each of the patients in our study was examined with recognized functional neurological tests and treated according to their unique cortical hemisphericity, in order to normalize or correct any functional postural distortions (i.e., possible soft pyramidal signs) that modulate EAD.



Balancing Cortical Hemisphericity

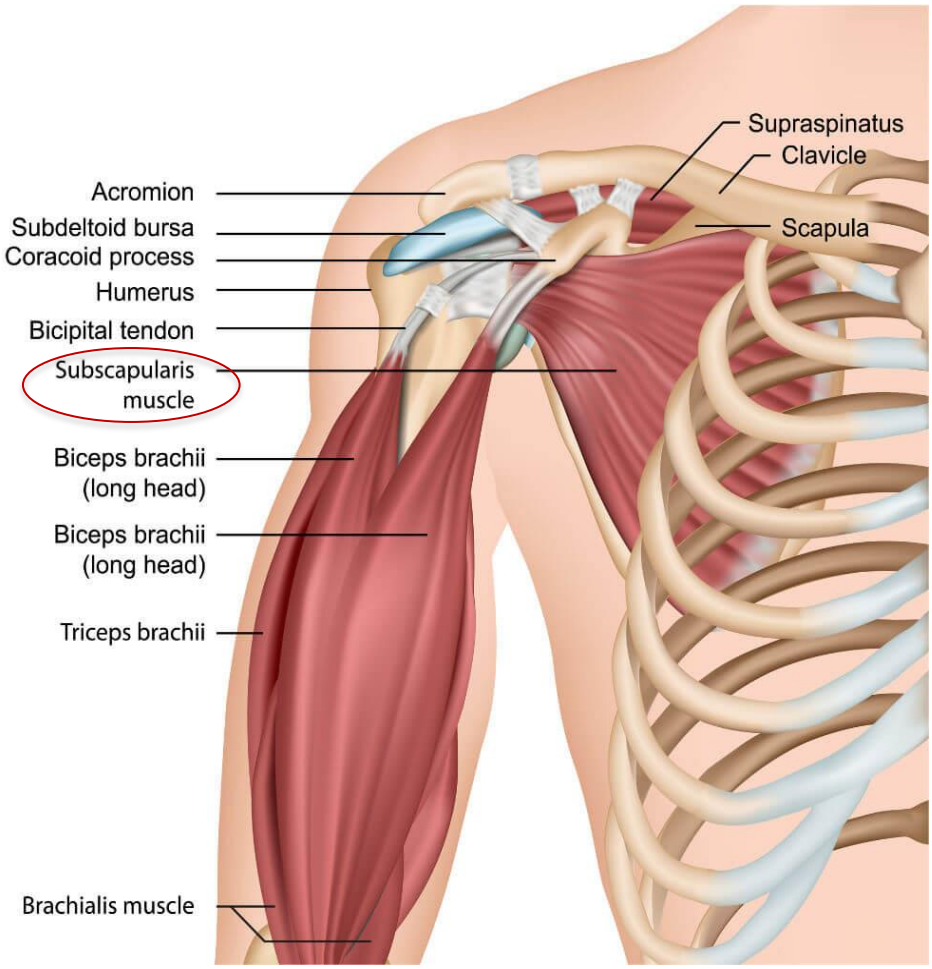


Our hypothesis – **heart function outcomes can be influenced by changing its EAD** – led to a Medline search to answer the question, ***"What can be done for patients who have cardiac symptoms but no definitive diagnosis for cardiac treatment?"*** This search yielded several perspectives related to brain-heart involvement but none that relate to the stimulation of the primary afferents.

Balancing Cortical Hemisphericity

Although the neurogenic mechanisms are poorly understood, **stress may precipitate cardiac arrhythmia and sudden cardiac death in vulnerable patients, presumably via centrally driven autonomic nervous system responses.** Critchley *et al*, suggests that SCD is most probable during an induced proarrhythmic state caused by a dysfunctional EAD. The nominal EAD is the effect of globally and appropriately facilitated cortical centers that result from a functionally reciprocal afferent system arising in joint mechanoreceptors of skeletal muscle both axially and peripherally.

Balancing Cortical Hemisphericity



We measured the effect of mental stress on heart function using generally recognized manual muscle testing. We chose the subscapularis muscle on the assumption that it is heart-related, yet unreported in the literature.

Balancing Cortical Hemisphericity

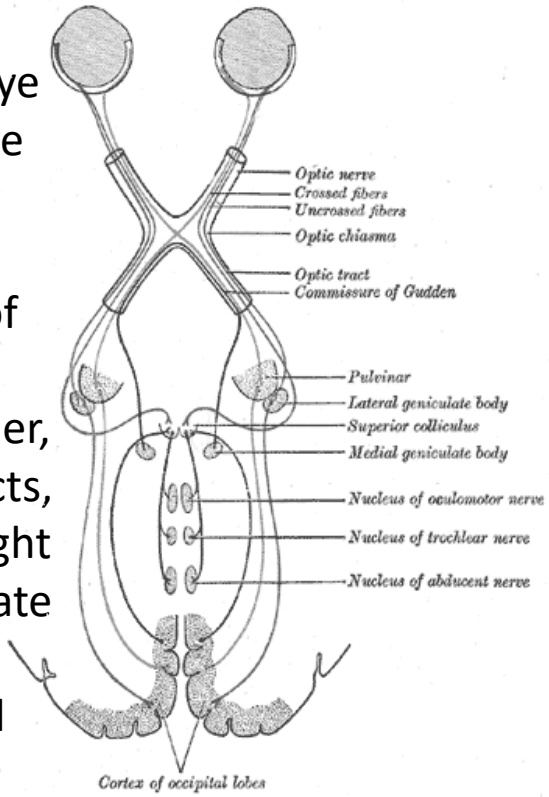
Our group consisted of 31 patients, almost equally divided between genders – 52% female and 48% male, with an average age of 57.6 years.

TABLE 1: REVIEW OF COMPLAINTS				
Complaint	**Symptoms**	**Male (%)**	**Female (%)**	**# Symptoms % Total**
Palpitations	16	5 (31)	11 (69)	19
Chest pain (Angina)	14	5 (36)	9 (64)	16
Dysrhythmia	10	6 (60)	4 (40)	12
Shortness of breath (Dyspnea)	10	4 (40)	6 (60)	12
Tachycardia	6	5 (83)	1 (17)	7
Family history CHD	5	2 (40)	3 (60)	6
Atrial fibrillation	4	3 (75)	1 (25)	5
Faintness (Syncope)	3	---	3 (100)	3
Chronic cough	2	1 (50)	1 (50)	2
Extremity pain	2	1 (50)	1 (50)	2
Other (one each: bradycardia, valvular dysfunction, vertigo, migraine, aortic stenosis, chest heaviness, sweating, anxiety, abnormal vessels, edema, left ventricular hypertrophy, high blood pressure, atrial stenosis, history MI)	14 (Total) 88	11 (79%)	3 (21%)	84 100%

The five most common of the 84 total complaints in our study were palpitations (19%), chest pain (16%), dysrhythmia and dyspnea (12% each), and tachycardia (6%). These five accounted for 65% of all complaints. The term dysrhythmia encompasses many different rhythm problems, palpitations, dysrhythmia, tachycardia, bradycardia, and atrial fibrillation, accounting for 49% of all our patient's complaints. The eleven categories of complaint appear to have been evenly divided between male and female with 43 symptoms each. However, there appear to have been more complaints made by the women than men – 5 (45%) categories of complaint for the women and 4 (36%) categories of complaint for the men – while 2 (18%) categories of complaint appeared to be equally divided. (See Table 1)

Balancing Cortical Hemisphericity

The main intervention involved the use any one or a combination of various neurological devices and when appropriate, structural manipulation. Twenty-three patients required special eye therapy (74%), 13 required a different eye therapy (42%), 7 required both types (23%), and each one of the patients received coupled manual manipulation of the spine and spinal-related structures relative to their individual findings. Further, by virtue of the postsynaptic retinal effects, the specific use of either eye therapy might indicate that the pulvinar, lateral geniculate and superior colliculus required address relative to only the lateral geniculate and superior colliculus, respectively.



Visual Pathways from Wikimedia Commons. This image of the optic pathways is from the original Gray's anatomy and is in the public domain because its copyright has expired.

As a result of the treatments rendered, eight patients (26%) reported that their symptoms were completely resolved with no residuals. The remainder received some symptom reduction that improved their affect and activities of daily living.

Balancing Cortical Hemisphericity

Two other patients were subsequently treated according to these techniques; one was not included in the original study. A 63-year-old woman was previously diagnosed with congestive heart failure (CHF) and atrial fibrillation by her cardiologist. Her ejection fraction was originally determined to be 35%. After six treatments over a two-month period, her cardiologist told her that her CHF was healed, and her ejection fraction was 65 per cent. She was unmedicated.

The second patient – a 68-year-old male – passed away in early 2012 from a myocardial infarct.

Conclusion

Reciprocity and Heart-Brain Synchrony

Reciprocity is one of the hallmarks of normal human movement allowing for precise and balanced motion that synchronizes cord, midbrain, and cortical integrity and normalizes the EAD; its breakdown is termed “dysrecipria.” Re-establishing functional reciprocity facilitates cortical integrity to create appropriate EAD that re-establishes heart-brain synchrony.

Reciprocity and Heart-Brain Synchrony

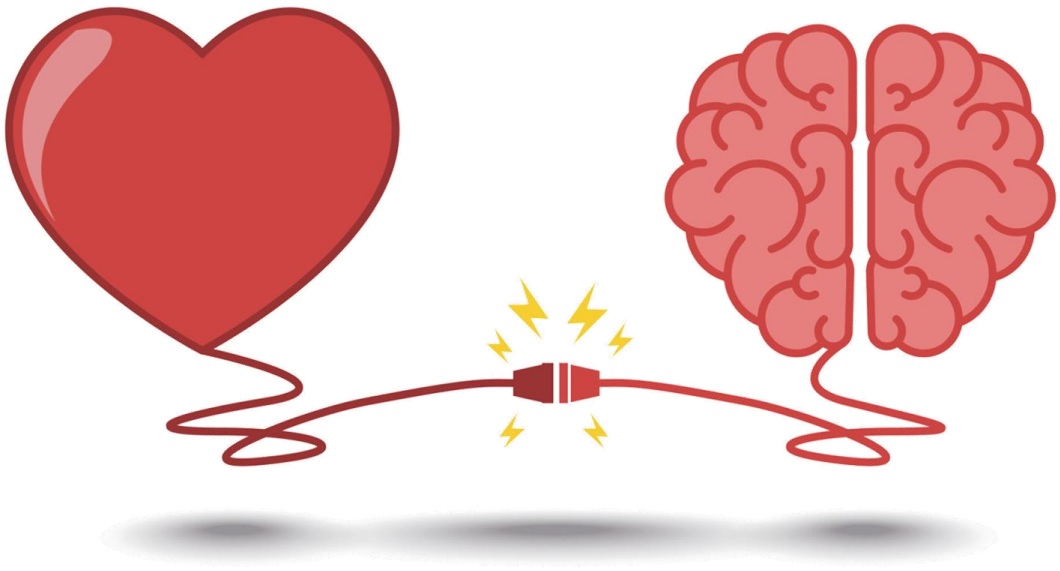
The universal trend in Western and developing nations is to treat CAD issues with medications, surgeries, and dietary and lifestyle changes. However, while each of these may be important factors involved with cardiovascular disease, this case series suggests that resolving issues of functional reciprocity may yield a satisfactory resolution of these complaints where none existed before.

The findings of this paper indicate that there is much that can be done for patients who have cardiac symptoms but no treatable cardiac diagnosis, and when it is done properly this treatment does not necessarily require drugs or surgery.

Reciprocity and Heart-Brain Synchrony

The data in this case series suggested that re-establishing functional central and peripheral reciprocity facilitates cortical integrity to create appropriate EAD that restores heart-brain synchrony.

Many people have cardiac complaints and signs of dysfunctional EAD with no symptoms of cardiac involvement. Therefore, if applied properly, the procedure described in this report could enhance the survivability for any patient, but especially those who have overcome a previous cardiac involvement due to a compromised EAD.



Reciprocity and Heart-Brain Synchrony

This #1 killer must be brought down.

Want to learn how you can participate in this global attack on heart disease? Contact Dr. Michael Allen for more information at neuronaut@cox.net.

HealthBuilderS® Professional Coaching is leading the way to rehabilitating the efferent autonomic drive that modulates cardiac performance with the application of manual muscle testing as functional neurology.

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