

# Heart Rate Variability (HRV) Training



## What is HRV training?

The human heart, unlike a metronome, changes the frequency at which it beats from second to second. Slightly slower... slightly faster... all the time. The measurement of this variation is termed the HRV or Heart Rate Variability.

## But why would we want to look at what my heart is doing?

It's all to do with your autonomic system. This is the system that ticks away in the background without you having to think about it. The system that influences your blood pressure, your heart rate, whether you sweat, whether your pupils constrict or dilate, and generally all the functions that should just happen automatically; hence the term "autonomic".

There are two branches to the autonomic system - the fight and flight (or sympathetic system - for example, being chased by a tiger) and the rest and digest (or parasympathetic system - for example, sitting by a stream on a warm day with a gentle breeze and a great book). These two create a balance in the body that we can see with the waxing and waning of the HRV.

Measuring HRV gives us a view of what your autonomic system is up to! Often in chronic illness including head injury, it's the autonomic functions such as HRV (and to some extent respiration) which are out of balance and become part of the ongoing inability of the system to heal. The fortunate thing is that we can now train the HRV and in so doing help to heal imbalances in the autonomic system.

## What are the results?

HRV training results in:

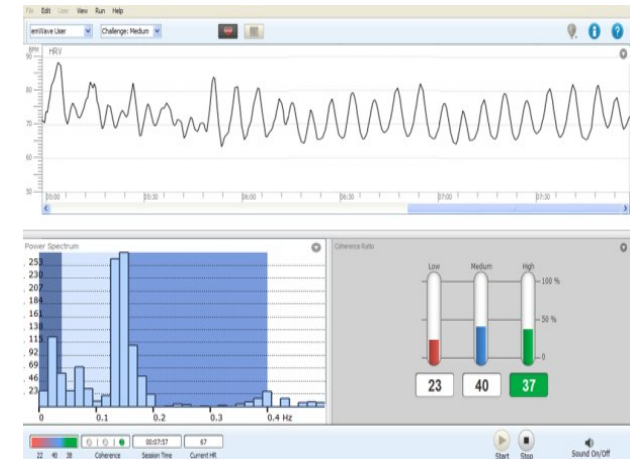
- Reduced anxiety
- Lower blood pressure
- Improved mood
- Improved memory and cognitive performance
- Better physical stability
- Improved outcomes in TBI (traumatic brain injury)

In fact, studies show similar positive effects to those of advanced meditators or yoga practitioners.

## But heart and memory seem unrelated!

So why would training the rate at which the heart beats have anything to do with improving memory?

In fact, 80-95% of the communication between the heart and the brain which runs along the Vagus nerve (the main parasympathetic nerve) actually travels from the heart to the brain (rather than the other way around). It links directly into the thalamus, which is the main timing centre for the brain, and as the brain is all about rhythms, sets the timing right - much like an excellent conductor in an orchestra.



HRV is also helpful in peak performance for CEOs and athletes as it provides an insight into whether an athlete is over training or training just right to remain calm, alert, relaxed and focused. Thus, it can allow an athlete to get into "the zone" and to optimize their training regimen. As a result, many top athletes use the HRV training as part of their overall program.

## What happens in an HRV training session?

HRV is a standard for most patients attending many neurotherapy clinics due to the fact that it augments healing and brain timing.

In our clinic, the client sits in a comfortable recliner couch with a sensor clipped to the ear. The HRV is displayed in real time on a screen visible to the trainee.

## More about Integrative Medicine

Here at the Brain Health and Biofeedback Clinic we offer you holistic care as we are an integrative medicine clinic. Integrative medicine consists of a combination of two approaches to health.

Firstly, a functional view of health in which we look at your lifestyle. While we know that diet, sleep, stress management and exercise are all critical for health, many of these areas are difficult to cover in standard care as there often just isn't the time to address lifestyle factors. One solution would be referral to a nutritionist, a psychologist or mindfulness coach and a personal trainer to separately address these areas in a patient's life. Functional practices include a lifestyle assessment and plan.

At the Brain Health and Biofeedback Clinic we provide the latest technology in stress management assessment including capnometry, galvanic skin response and heart rate variability assessments. Personalised diet, sleep and exercise support is provided.

Added to this is a systems-based approach in which we look to understand the root cause of diseases or symptoms. The person is a whole and in an integrative medicine framework, we treat the person rather than the disease. The latest advances in medical science are supporting a move towards personalized medicine. New technological developments allow us for the first time to offer individualized testing if indicated when no progress is being made with simpler approaches. Genomics (genetic testing), metabolomics (testing of individual biochemistry such as methylation capacity), autonomics assessments (the balance between the "fight and flight" and "rest and digest" systems which is often an issue in chronic disease), and microbiome studies (to identify imbalances in gut organisms which impact our health) are all now possible. Combining this with a person's envirome

(their environment including lifestyle) allows for the ability to look across systems to determine an underlying cause behind an individual person's presentation.

Integrative Medicine has gained popularity. Here at the clinic we believe that personalized medicine is without a doubt, the future model of medical care.

#### Your Practitioner



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*The Brain Health and Biofeedback Clinic is here to partner with you on your wellness journey. We do this by offering a range of innovative technology, diagnostic tools, and a holistic view to those who are looking to address the root cause of their problem and supplement their experience within the traditional health structure. We are more than a clinic; we are a community who are here to empower you to reach your complete and full human potential, in wellness, happiness and health.*