

Heart Rate Variability, Coherent Breathing, and The Therapeutic Zone

From **Dan Brule's *Mastering The Breath***

The concept of Heart Rate Variability (HRV) — *which we covered in a previous module* — refers to the variation in time intervals between heartbeats...

It's something I first encountered in Russia during a 1990 biofeedback lab visit...

Interestingly, back then, HRV wasn't really a topic of discussion in the West as it is now...

However, Russian scientists were already delving into how specific breathing techniques could enhance HRV...

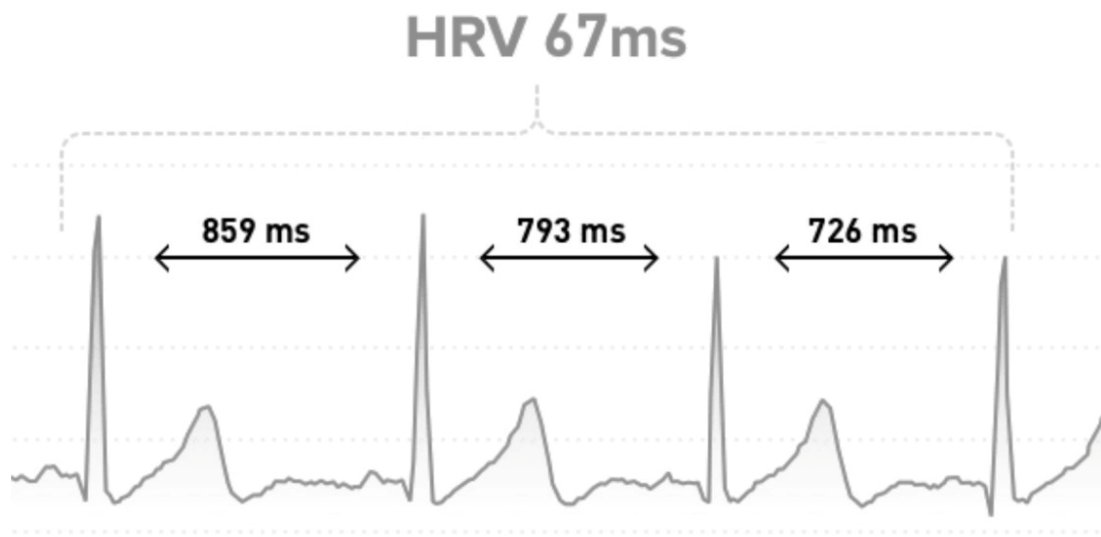
This concept was novel to me at that time & admittedly, I didn't ponder much on it after my encounter with these scientists, who seemed both impressed & perplexed by my natural HRV during the tests...

HRV is not about a rhythmic, machine-like heartbeat; it's about the natural ebb & flow of our heart's rhythm.

A healthy heart, as the researchers have studied extensively in the past decades, does *not* beat with robotic precision, but rather adjusts its pace — *faster with each inhalation & slower upon exhalation*.

This heart rate 'variability' is a good thing, it's a sign of vitality & health, *indicating that the heart is dynamically responding to our body's needs, from metabolic to neurological demands, just as it should*.

The higher the HRV, the better:



What's more, this variability in our heart rate is more than just a physiological phenomenon; it correlates with states of relaxation, creativity & resourcefulness...

High HRV is linked to feelings of pleasure & comfort, while low HRV is often associated with stress, anxiety & tension in the mind & body.

All in all, it's a profound health, wellness & wellbeing marker, revealing much about our current state of physical, mental & emotional being!

And one of the best ways to improve heart rate variability?

Breathwork, of course.

Specifically...

Coherent Breathing & The 6 Bridges

Stephen Elliott, author of "The New Science of Breath" coined the term '**coherent breathing**' in 2005.

It refers to a specific breathing method to manage our internal state & balance our autonomic nervous system...

...& consists of **a breathing rate of 5 to 6 breaths per minute.**

5-6 Seconds IN

5-6 Seconds OUT

5-6 Seconds IN

5-6 Seconds OUT

Start to breathe like this right now, counting the seconds on the inhale & the exhale & noticing how it alters how you feel even after just a few repetitions ^

In some circles, 5.5 seconds is also considered to be the sweet spot...

(or you can count '1...2...3...4...5... AND... (EXHALE)... 1...2...3...4...5... AND...)

Or, alternatively, a 5 second inhale & then a 6 second exhale *(for a slight lean towards relaxation of the nervous system)...*

Or a 6 second inhale & 5 second exhale *(for a slight tilt towards the energizing of mind & body)*



('Coherent Breathing' is also referred to as 'Paced Breathing', as taught by HeartMath)

Additionally, it's generally practiced in conjunction with relaxing the **"6 bridges."**

The "6 bridges" refer to the regions of the body where dual control (*conscious & unconscious*) exists...

The 6 bridges are:

- the **face**

- the **tongue & throat**
- the **hands**, the **diaphragm & intercostals** (*breathing*)
- the **pelvic floor** (*anal, urethral & vaginal sphincters*)
- the **feet**

Place your attention on each of these 'bridges' as you breathe at this rate.

Sense any tension stored in any of them & start to relax them more & more.

How Breathing Helps The Heart

Stephen points out that **breathing is not only about exchanging gases, but it also fulfills a circulatory function.**

That is, **it aids the heart in circulating blood.**

With each breath we take, the lungs empty & fill not only with breath, but also with blood.

Every time you inhale, the movement of the diaphragm draws blood from the extremities into the lungs.

And every time you exhale, the movement of the diaphragm sends blood from the lungs toward the extremities.

This is called the "Valsalva wave," & it is generated by the "thoracic pump" which is how breathing helps the heart do its work.

At the peak of the inhale, not only are the lungs nearly full of air, but they are also full of blood.

And at the peak of the exhale, the lungs are nearly empty of both air & blood.

Without deep breathing, the heart must work harder to pump blood which raises blood pressure.

(That's why practices like basic diaphragmatic/belly breathing, as well as coherent breathing can lower heart rate & blood pressure).

Put simply, supported by deeper breathing, the heart stops working so hard.

It is well proven that **5 minutes of coherent breathing results in the raising of HRV (heart rate variability), the lowering of heart rate, blood pressure, & cortisol (known as the 'stress hormone').**

The Therapeutic Zone'

Most people breath 12-20 times a minute (under stress, this can be even higher).

And while it's true that you do want to deliberately raise your heart rate & doing so is a healthy thing (*e.g. while exercising, walking, running, or other practices that can fall under the category of 'good stress'*)...

...the rest of the time you want your respiratory (breathing) rate — as well as your heart rate — to be lower.

As you slow down your breathing (10 breaths per minute... 8 breaths per minute) you start to experience certain benefits...

Slow it down even more & you enter what I call the 'therapeutic zone' where your stress melts away & you get to enjoy deep relaxation.

The therapeutic zone is at 4-8 breaths per minute.

And 'Coherent Breathing' is right in the middle of this 'Therapeutic Zone' at 5-6 breaths per minute!






"The Awakened Mind"

While HRV is becoming a more & more mainstream, well-known phenomenon...

...what is not so well-known (*& another benefit of practicing coherent breathing for 10 to 12 minutes*) is what's referred to as **“the awakened mind.”**

This is a **brain state where theta waves are dominant.**

Theta brainwaves, if you're not familiar, are amongst the lowest of the brain waves at 4-7 hzs.

Gamma (<25 Hz)	
Beta (12-25 Hz)	
Alpha (8-12 Hz)	
Theta (4-7 Hz)	
Delta (1-3 Hz)	

They are associated with deep relaxation, clarity, stillness, as well as with creativity, intuition, meditation, prayer & spiritual awareness.

Do It Now: Coherent Breathing

Here is an exercise/meditation I suggest you practice to bring all these benefits alive:

Breathe at a rate of 6 breaths per minute.

That is 5 seconds in & 5 seconds out.

(you can count in your mind to help you keep pace, use a metronome/guided timer, or use the guided exercise in this section.)

Additionally, when you exhale, consciously relax your face, forehead, tongue, jaw, throat, chest, pelvis & your arms, hands, legs & feet (the '6 bridges')

As you inhale, sense or imagine blood being drawn from your extremities into your lungs.

As you exhale, sense or imagine blood being pushed from your lungs out to your extremities.

Practice this for at least 10-12 minutes so that you shift your state toward what is called the **“awakened mind.”**