



## HEART RATE VARIABILITY

### What is HRV?

HRV is simply a measure of the variation in time between each heartbeat. This variation is controlled by a primitive part of the nervous system called the autonomic nervous system (ANS). It works regardless of our desire and regulates, among other things, our heart rate, blood pressure, breathing, and digestion. The ANS is subdivided into two large components, the sympathetic and the parasympathetic nervous system, also known as the fight-or-flight mechanism and the relaxation response.

The brain is constantly processing information in a region called the hypothalamus. The hypothalamus, through the ANS, sends signals to the rest of the body either to stimulate or to relax different functions. It responds not only to a poor night of sleep, or that sour interaction with your boss, but also to the exciting news that you got engaged, or to that delicious healthy meal you had for lunch. Our body handles all kinds of stimuli and life goes on. However, if we have persistent instigators such as stress, poor sleep, unhealthy diet, dysfunctional relationships, isolation or solitude, and lack of exercise, this balance may be disrupted, and your fight-or-flight response can shift into overdrive.

### Why check Heart Rate Variability?

HRV is an interesting and noninvasive way to identify these ANS imbalances. If a person's system is in more of a fight-or-flight mode, the variation between subsequent heartbeats is low. If one is in a more relaxed state, the variation between beats is high. In other words, the healthier the ANS the faster you are able to switch gears, showing more resilience and flexibility. Over the past few decades, research has shown a relationship between low HRV and worsening depression or anxiety. A low HRV is even associated with an increased risk of death and cardiovascular disease.

People who have a high HRV may have greater cardiovascular fitness and be more resilient to stress. HRV may also provide personal feedback about your lifestyle and help motivate those who are considering taking steps toward a healthier life. It is fascinating to see how HRV changes as you incorporate more mindfulness, meditation, sleep, and especially physical activity into your life. For those who love data and numbers, this can be a nice way to track how your nervous system is reacting not only to the environment, but also to your emotions, thoughts, and feelings.



More variation in heart rate intervals is indicative of better parasympathetic activity.