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# Olownit LIFE BY DESIGN

By Justin Roethlingshoefer



## Hello there!

What if there was a way to understand your body from the inside out? To know how your day-to-day habits and behaviors were impacting the way you sleep, your energy levels, and your long-term health? Well, you have come to the right place. There is! It is called HRV and this document is going to help you become more familiar with the metric that can empower you to change your life.

Think about it this way. What you tolerate will dictate your outcomes, and your process will make your results inevitable. You don't rise to the level of your goals but rather fall to the level of your systems and what you will learn here will allow you to personalize your journey for potentially the first time in your life.

You use data and KPIs for your business, your real estate or financial life, and possibly even to help run your household but you have never done it for the most complex and intricate thing on this planet...your body.

So welcome to the first day of the rest of your life. It is about to change. It is about to be different. You are about to OWN IT.

Founder

OI OWN IT

Justin Roethfunghoefer

Wearable devices, or "wearables" have exploded in the last decade. It wasn't that long ago when wearable devices that only tracked how many steps you took in a day seemed like a grand invention. Those models were like the first iPhone of wearables.

Now, several years later, wearable devices like Fitbits, Oura Rings, Whoop Bands, Apple Watches, and dozens more dominate a billion-dollar industry that's rapidly growing and expanding.

These devices track everything from our heart rate to our sleep quality, to our calories burned. Really, the technology is quite remarkable, and it continues to improve every year.

But, like so much in the scientific realm, there's a huge disconnect between the *potential* of the technology and the *application* of it. That is my specialty. I see it from both sides. I've read the mountains of research and met with top scientists and developers of wearable devices, and I've worked with the clients who just said, "Justin, why does this data matter to me?"

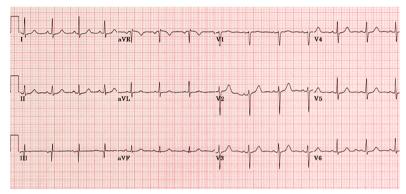
Because all the data in the world, at the end of the day, is completely useless if you don't use it for anything. And for the vast majority of people with a fancy new wearable device, that's exactly what happens. They buy it, are blown away by everything it tells them, and then... change absolutely nothing about their exercise, nutrition, or lifestyle.

The good news is, that you don't need to understand all the intricacies of your wearable device in order to make a profound positive impact on your training, stress, sleep, and more.

In fact, to master your wearable, you only need to understand one metric. That's it. The rest you can forget about (at least, until you level).

That metric is Heart Rate Variability (HRV).

#### What is HRV?



Electrocardiogram or EKG

To understand HRV, first let's look at an electrocardiogram or EKG.

Just to refresh you on what an EKG is, think of *Grey's Anatomy* (or any show where someone dies in the hospital). When you hear that \*beep\* \*beep\* sound it signals a heartbeat, and then when it flatlines, it means the heart is no longer beating, and the patient has died.

That graph gives us a reading of the electrical activity in someone's heart, and therefore, their heart rate. In a normal, healthy person's EKG, those high points on an EKG are what we call the "R wave." When you look at an EKG graph closely, you can see that there's a difference in time between these R waves, and therefore, a difference in time in between the heartbeats.

So let's say for example there were 600 milliseconds in between two heartbeats, 710 seconds between the next, and 650 between the next. To find out the HRV, we'd look at the average difference between each of those. Now, it's a bit more complicated than this mathematically and it involves square roots and other stuff you don't really need to know. But on a conceptual level, understand that when you're looking at your wearable device, your HRV score is the average of all your heartbeats taken together over the course of a given time period.



#### The HRV Your Wearable Device Measures

Now, HRV can be taken at any point in the day. Exercise physiologists, scientists, and strength coaches use HRV from different times for different purposes. On your wearable device, the daily HRV score you see is pulled while you sleep. With the HRV from sleep, your heart rate doesn't fluctuate as much as it does when you're awake and walking about. Your activity is a controlled variable. That means the changes in the heart rate, and the heart rate variability, reflect how efficiently your heart is responding to subtle changes. Looking at your wearable device, a higher HRV score signals that you're well recovered.

#### Why Does a Higher HRV Mean You're More Recovered?

This may come as breaking news to some of us, but our heart beats without us thinking about it. Crazy stuff, I know. This means that it's controlled by our *autonomic nervous system*, which is the part of our nervous system that controls functions that require no conscious attention.

#### **Understanding The Autonomic Nervous System**

Within the autonomic nervous system, there are two branches: the sympathetic nervous system and the parasympathetic nervous system.

You might think the sympathetic must be nice, kind, and light. And parasympathetic must be the opposite. Well, you'd actually be completely wrong.

The parasympathetic nervous system is colloquially called the "rest and digest" part of the autonomic nervous system. It calms us down and slows our heartbeat.

The sympathetic nervous system is responsible for the "fight or flight" mechanisms in our body that allow our heartbeat to rapidly increase so we can get blood and oxygen to our muscles in case we get attacked by a lion (or while working out).

When our parasympathetic nervous system is more dominant, our heart rate at rest will be lower. Then, when your heart rate increases because of increased oxygen demands, the rise will be greater, and you'll have an overall higher HRV.

A higher HRV, then, signals that the parasympathetic branch is more dominant, which signals that you're well-recovered.

Now, there are exceptions to this. But for the vast majority of trainees, the exceptions might only matter after they first learn the general trends. Understanding that in most instances a higher HRV corresponds to enhanced readiness and vice versa is a simple benchmark and framework you can use and take action on.

## What Makes Looking at HRV on Your Wearable So Valuable?

Even when *you* can't detect changes in your stress and recovery, your autonomic nervous system can. One of the clearest ways this is reflected in your HRV. In other words, HRV is a very "touchy" metric.

For example, before you get sick, your HRV might take a noticeable hit. Your immune system is under attack, and that's adding stress which will ultimately show up in your HRV. If you listen to your HRV score, back off, and focus on sleep and recovery, you can halt or blunt the effects of that sickness.

This, in a nutshell, is what makes HRV so powerful.

You can get a deeper look into your body's stress and recovery beyond what we can physically feel. It's like getting to talk to the unconscious part of your brain: the autonomic nervous system.



Let's get into the foundations that can influence your HRV. By understanding these, you can evaluate which levers are out of sync and where you can make adjustments at any given time, allowing you to make productive changes to your life based on your HRV.

#### The 4 Pillars Of Ownership

At this point, you conceptually understand HRV and its simplicity. A higher score means your body is prepared and ready, a lower score means your body's less recovered than normal. This is great, but it's essential to know that there are so many different foundations that influence your HRV.

In fact, we've categorized everything into 4 Pillas with 8 Foundations:



#### The 8 Foundations

- 1) Nutrition
- 2) Sleep
- 3) Hydration
- 4) Training & Movement
- 5) Self Care
- 6) Immune Function
- 7) Environment
- 8) Mindset



Knowing those eight foundations is great, but just like your wearable, if you don't know what to make of those eight foundations, the information is worthless. So, view these foundations like a checklist.

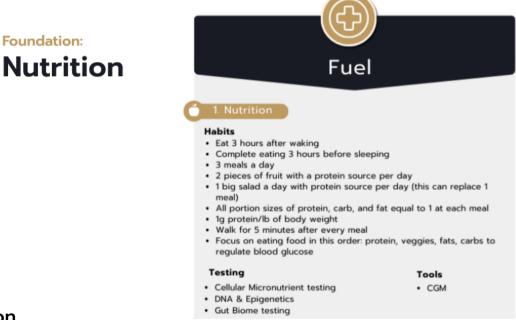
A checklist makes sure all your boxes are, well, checked, and prevents you from overlooking anything. In some sense, it's like an external memory. With regards to making lifestyle changes because of your HRV, we're going to apply the same concept. For example, let's say you notice on your HRV that your score has been going down consistently for the last 2-3 days. One day isn't cause for concern, but by the third day, that's a trend.

(Note: Anytime you're checking your HRV, never freak out over one day. It's all about the trends and the comparisons to your baseline HRV score.)

Remember, a lower HRV score signals you're not as well recovered. Sometimes, that lower HRV score can be easily identified. Maybe you started a new, more intense training program. But a lot of times, your recovery is suffering and you won't be able to pin down why.

That's when the checklist comes into play. If your HRV is trending down, signaling under-recovery (remember, HRV will be more sensitive than how you feel so you can halt problems in their tracks by addressing it), then go through this list of 8 foundations. If you examine your diet and don't recognize any changes, then move on to examining your sleep. Continue going through the different foundations until you've identified the probable cause. Then, plan to make an adjustment to it so your body can recover.

Here are the eight foundations, what they mean, and simple action steps you can take to improve them.



#### **Nutrition**

If you've switched to junk food in the last few days, that will put stress on your system. Did you have to grab a gas station meal at your lunch break yesterday? If so, make the shift back to a healthy diet with whole foods and lots of vegetables.

Look back at what you've eaten the last few days and see how that's different from what you normally consume. Of course, having some delicious, perhaps unhealthy food, is fine from time to time, but understand that this does affect your system and your recovery.

More concretely, if, at the end of the day, you've checked off these boxes for nutrition, you shouldn't have a ton to worry about, pending other obvious foundations like excessive alcohol intake or a massive cheat meal.

Simple Nutrition 3-2-1 Habits Checklist (yes, checklists within checklists.)

- 3 meals
- 2 pieces of fruit
- 1 salad

If you had to skip lunch for a work meeting, had a bag of chips for a snack instead of an apple or banana, and didn't eat a single serving of vegetables, don't be surprised when that's reflected in your energy, performance, and HRV.

## Foundation: Sleep



#### Sleep

Sleep is the number one indicator of creativity, positive mental health, longevity, and more. You've all heard that you need sleep. However, I'm not going to be one of those people who tells you that you need 8 hours every single night. If you can get 8 hours, that's great. But what the data really shows is that over the course of a week, we should get in 35 sleep cycles. A sleep cycle is 90 minutes, so averaging 5 per night (7.5 hours) adds up to 35. If you only get 3 cycles one night (4.5 hours of sleep), don't sweat it.

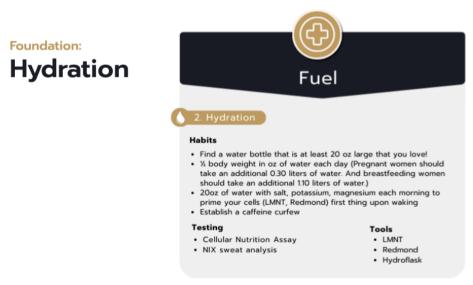
You can make that up with a few long naps throughout the week or a few days of sleeping in a bit more. If you see your HRV dropping, go back and add up your 7-day average for total sleep cycles (you can easily do this with your wearable device). Have you hit 35? If not, you're likely sleep-deprived which would explain a drop in HRV. But there are other strategies surrounding your sleep hygiene that can help you get higher *quality* sleep, even if you lack the quantity.

You see, the 35 sleep cycles per week rule assumes that in 90 minutes of sleep, you're actually going through a full cycle. In a proper, 90-minute sleep cycle, the body goes through all four stages of sleep: light sleep, slow-wave sleep, rapid-eye-movement (REM) sleep, and periods of wakefulness. However, there are some variables that can disrupt this. We call this "sleep hygiene." To assess your sleep hygiene, ask yourself these questions:



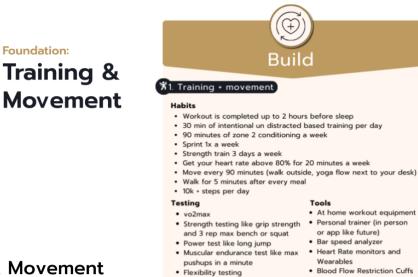
- Have I been going to bed at a consistent time?
- Has my room been almost completely dark and at the right temperature?
- Have I been away from screens for the last few hours before bed?
- Did I wrap up my training earlier in the day?

If you had to answer "no" to any of these, then your sleep *quality* is suboptimal, even if you're laying your head on the pillow for an average of 7.5 hours per night.



#### Hydration

Not much needs to be said here. Our body needs water for just about everything, and lacking it will cause a myriad of problems. As a simple benchmark, ask yourself: Have you been drinking half your bodyweight in ounces per day?



#### Training & Movement

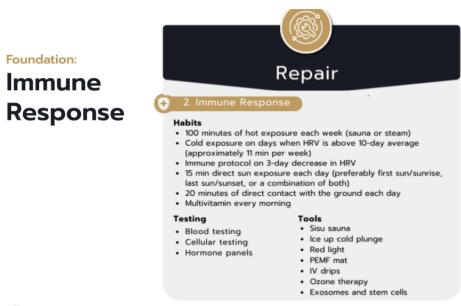
With training, lots of variables can cause new stress. Have you started a new program? Have you increased your exercise volume? Intensity? Density? Frequency? Did you try new exercises you're not used to? All of this will hinder your readiness.



#### Self Care

With self-care, we're managing that extra stress that comes from work, our relationships, and the general hecticness of the world around us. If any of that has increased for you, then you have to ask deeper questions such as:

- How are my relationships in my personal life?
- Is my work adding or draining my energy?
- What steps can I take to manage my stress?
- This will require some work on your end. But taking the steps to subdue the stress in
- your life will have huge long-term benefits.



#### Immune Response

Immune function is a bit more interesting because it's not something you can really "change" the same way you can make immediate changes to the other foundations thus far. But this is where the checklist concept comes in. Because, once you've gone through the first five foundations, and determined that none of them is the issue causing your HRV to drop, then your immune system could be under attack.

Getting sick is a lot like getting a small injury. Nobody wants to stretch when they feel good, but once they pull their hip flexor, you'll see them on the foam roller all day. When really, if they just regularly stretched their hip flexors when they felt good, they wouldn't have gotten injured in the first place.

That's what many illnesses are like too. Except, with the wearable, you now have data to know when you need to prioritize recovery and take extra good care of your body. If you see your HRV decreasing and you can't identify why from the other steps, that's when you should treat your body like it's under attack.

Increase your vitamin C and D consumption, consider taking zinc or a good greens supplement, and get extra sleep, even if your sleep is already on point. Try to grab a nap during the day, or get to bed earlier than normal. Be proactive about the illness so you can halt the pathogen in its tracks.



#### **Environment**

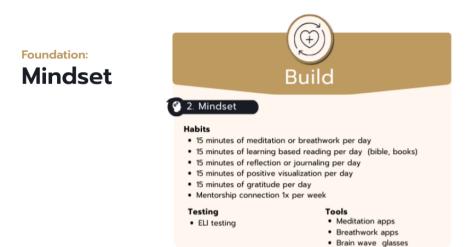
Those six foundations make up the foundation of what affects your HRV. But, there are two more that are worth mentioning. These are "meta-foundations," in that they affect the six core influences on your HRV that we talked about, rather than being independent foundations. Because they affect everything else, though, they are in some ways the most important.

The first one is your environment. And to illustrate the importance of this, think bout your living space. Do you feel at peace when you're in your home? Or, do you feel anxious? Perhaps you deal with "noise pollution," the sound of taxi cars beneath our apartment. Or, maybe the people you live with cause you all kinds of stress at exactly the time you should be relaxing.

Another way of thinking about this is to determine what environment you place yourself in for each part of your life. If you have work in the same room where you sleep, your brain will have a harder time disassociating from work time and relaxation time. "Environment" is an intentionally vague term. It's not just about your workspace or living space, it's also about the people in those spaces. It even represents the access you have to certain foods (if you have trouble binging on ice cream, get it out of your freezer).

It could mean you don't have a good alarm clock, so you rely on your phone to wake you up, and often skip the gym because it's not always reliable.

A suboptimal "environment" can lead to problems with all six main foundations.



#### **Mindset**

At OWN IT we talk about the 7 levels of inner energy, and it's something we go deep on with our 1-on-1 coaching clients.

Of the seven levels of inner energy, the first 2 we classify as *catabolic* and the latter 5 as *anabolic*. When your mind is feeling anxious, stressed, or in a state of conflict, you're in a catabolic energy level. This mindset will activate the sympathetic branch of your nervous system, which, as we've talked about it, is synonymous with stress and will decrease your HRV.

When you're in one of the five anabolic levels of inner energy, your body will shift to a parasympathetic state, which will aid your recovery and improve your HRV.

Depending on your current energy level and mindset, that's going to influence everything else.

Some days you're optimistic, caring about others, and seeing everything like you have your "life is empowering" glasses on. On other days, you may have the mindset that life is a dark storm cloud that follows you around. Regardless of everything in your external environment and all the other foundations, your mindset and energy level remain responsible for the lens through which you view everything else.

From sleep and nutrition to training, without dialing in your mindset, you're bound to make suboptimal choices (which will ultimately show up in your HRV). That's why your *mindset* must be a priority for you, and why we focus on coaching people through understanding the seven levels of energy, even if all they want is to improve their workout performance.

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