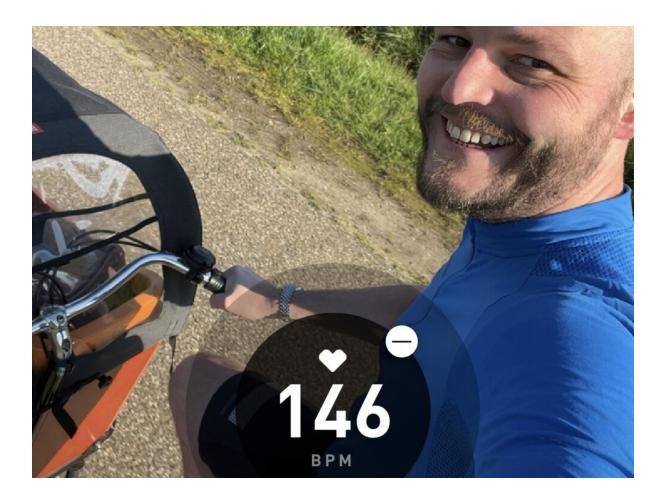
# Impact of training

Analysing WHOOP's trend data

Willem L. Middelkoop May 31, 2023



This Monday I completed 235KM on my fixed gear bike during the Fietselfstedentocht 2023. It was a nice ride with fair weather and favourable wind conditions. Yet, I took the challenge seriously and prepared myself with some proper training. In this post I'll have a look at the trend data from my WHOOP in preparation for the Elfstedentocht.

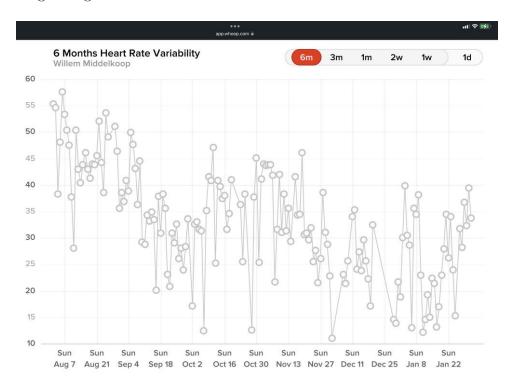
#### Fietselfstedentocht

During this single day event, about 16.000 folks ride through the Dutch province of Friesland. The goal is to collect stamps in different towns and cities. At the finish your stamp card is verified, and if all is in order, you'll get a highly collectible "Elfstedenkruisje". This medal is registered on your name. There is special attention for folks who have completed "De Tocht" multiple times, some more than 60 times!

It is a fun event, but the open (and often windy) country side of Friesland can be very challenging as an endurance ride. Last year's event was gruesome: only 9.661 people finished the ride (of the 16.000 who were eligible to start). I was one of them and last year's memories urged me to take my training serious.

#### World of difference

This year's Elfstedentocht would be my 6th time, yet everything leading up to this year's edition was different for me. As friends of this blog may know, I moved from the city to the country side of Limburg. This effectively broke my routine of commuting by bike. My daily rides to and from the office were (in hindsight) very important for my overall condition. I wear WHOOP, a biometric tracker and it clearly witnessed my body's condition regressing:



My HRV measurements going down... as result from lack of training during my family's move from the city to country side

WHOOP measures a lot of things, one of them is heart rate variability (HRV). Among other things, it is a nice proxy of how fit and relaxed you are. The higher, the better. But, beware: this metric is highly personal. My HRV tends to be on the low end - whereas other folks have measurements in the hundredths of milliseconds. If you're looking at HRV, you must look at the relative trend to make any sense of it. In my WHOOP data you can clearly see that things go down: my fitness suffered from the stress and changes related to moving with my family to a new place.



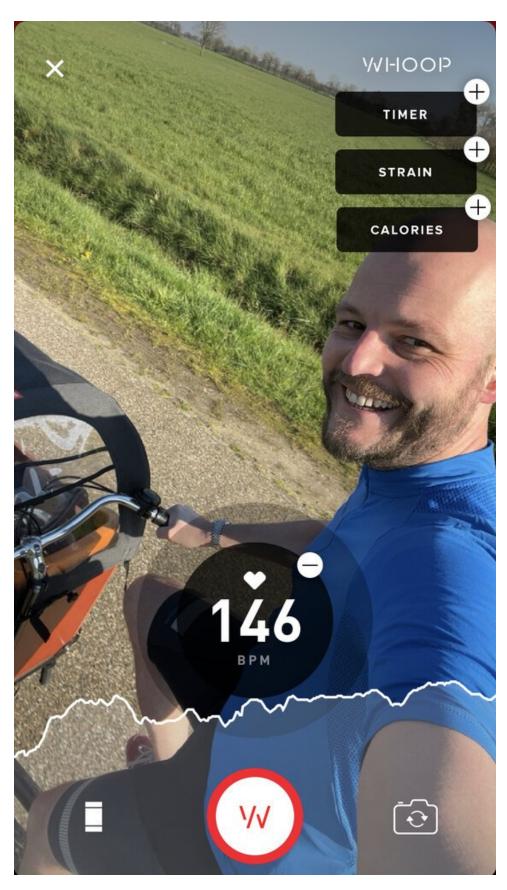
I have gained weight as I lost fitness: confirming that WHOOP is on to something: there seems to be an inverse correlation between my weight and HRV trends

## Turning it around

Although I am still settling in Limburg, I did make it a priority to pick up cycling again in order to stop the regression of fitness (and weight gaining). As my bike is equipped with decent lights, I took opportunity to go for a ride late at night (when the kids are asleep) - or during lunch time whenever I work from home. I am still figuring things out, but the main goal was to increase my hours on the bike, any bike that is.



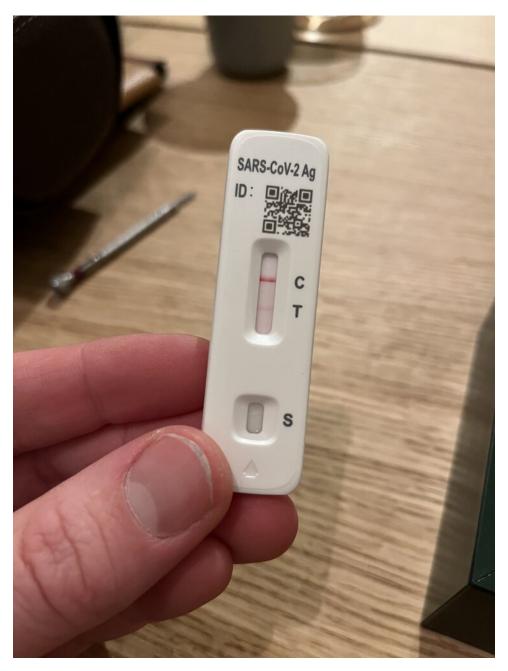
Training opportunistically: working out on a foldable bike during some days from home - you're certainly attracting some attention in full lycra on a Brompton!



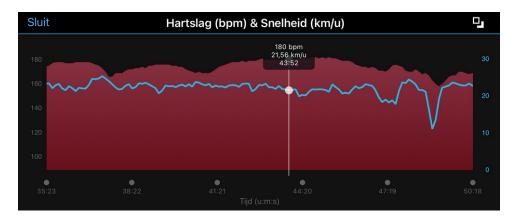
Training on a non-electric cargo bike! The kids love it! No need for fancy GARMIN head units: WHOOP can track your workouts on any vehicle.

# COVID-19

The first few weeks of training really sucked, man it was hard. To make things worse... I got some annoyingly effective COVID in February, having a mayor impact on my body. I felt miserable, even walking felt like a strenuous thing. During one of the first rides after my infection, my performance was so bad that I seriously doubted my ability to ride this year's Elfstedentocht.



Testing positive for COVID, you don't want this when picking up the training regiment...



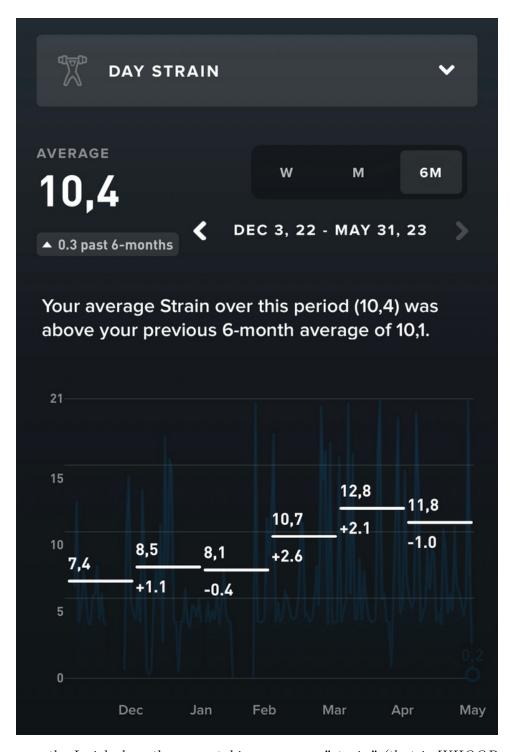
... as a trained cyclist this ride data is not good: heart rate of 180BPM at an average speed of 22KM/h - this is 'the COVID effect' on my body - MISERABLE DELUXE

## Turning it around

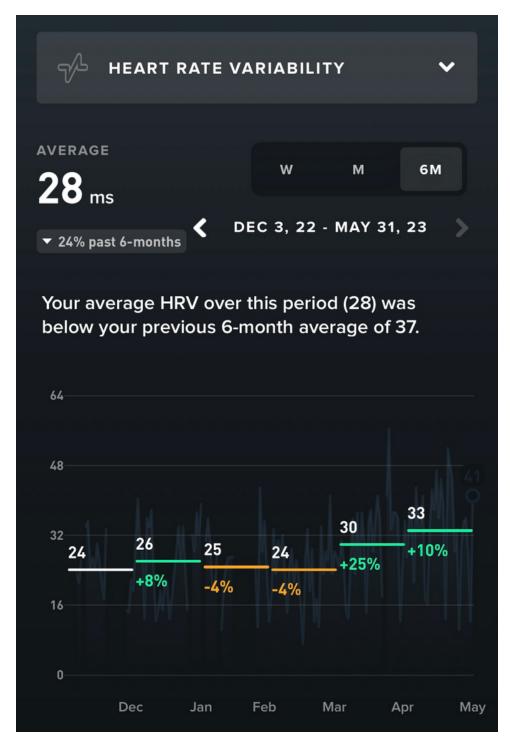
I convinced myself that with some determination I could still turn things around, picking up the pace and beating COVID out of my body. There were still months to go before the Elfstedentocht, plenty of time to get some serious milage done. It wasn't easy, but it worked! I felt better and better, I gained the confidence needed to ride the grand fondo on my fixed gear bike.



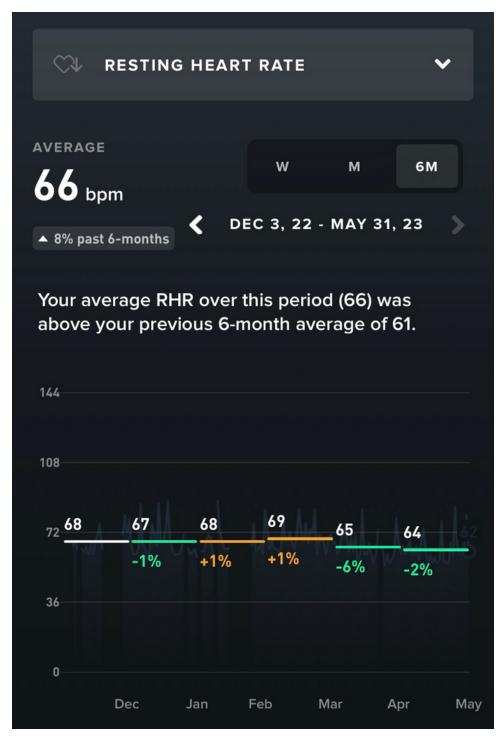
 $Smile\ and\ keep\ on\ cycling!\ Eventually\ things\ DO\ get\ BETTER.$ 



Last few months I picked up the pace, taking on more "strain" (that is WHOOP-parlance for 'training effort')



Training has its effects: my average HRV is trending upwards again!



My (early morning) resting heart rate is going down, too! It inversely correlates with my HRV going up. Some nights dip into the low 50's, high 40's - I am getting back into shape!



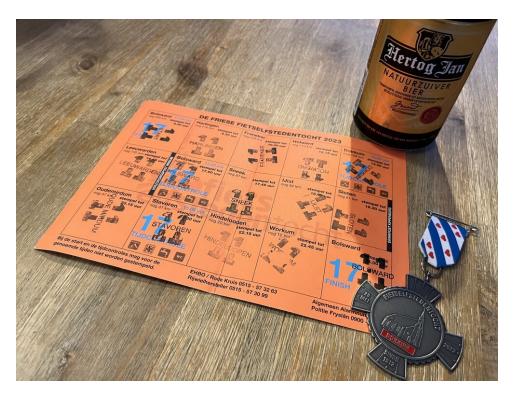
Even my average heart rate during the day, including all my tasks as modern dad, is going down as my heart (and cardiovascular system) is regaining efficiency

#### De Elfstedentocht

So, last Monday (May 29th, 2023) it was time for this year's Elfstedentocht. It was a very nice ride! The weather was fair and wind conditions were favourable on large segments of the 235KM route. Together with my brother Kevin and brother in law Rob we finished the route and gained our Elfstedenkruisje!



 $Through\ the\ Frisian\ country\ side\ during\ the\ Fietselfsteden to cht\ 2023$ 



 $Collecting \ all \ stamps \ to \ earn \ a \ "Elfstedenkruisje" \ medal$ 



Kevin (brother), me and Rob (brother in law) at the finish!

During the day I used both my WHOOP and Garmin to collect data. You can clearly see that the effort during the day varies, with the heart rate going up and down for periods of time.



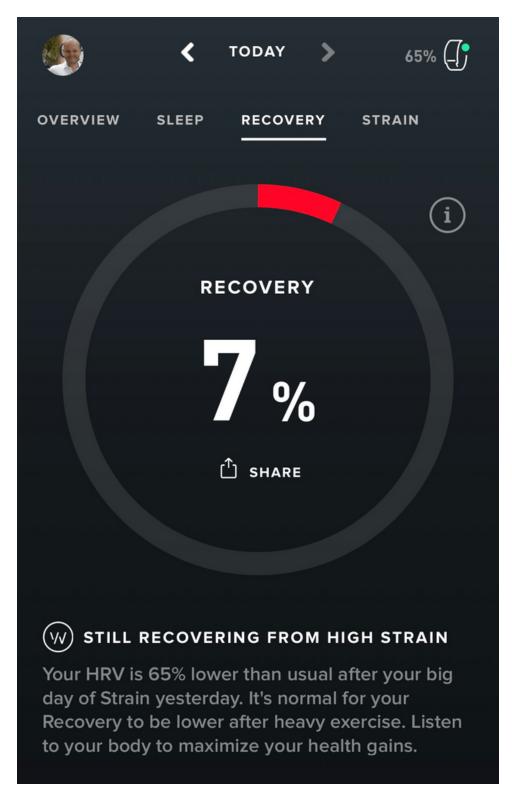
Garmin's highly detailed data from the Edge 1030 Plus includes: heart rate, power, location, respiratory rate, pedal balance, cadence, temperature and distance

If you're into details, you can have a look at the actual data from my bike's Garmin Edge 1030 Plus head unit, including all the raw sensor data. Find it on Garmin Connect.



WHOOP's data during the entire day of the Fietselfstedentocht

In comparison to Garmin, WHOOP provides a wider data-set including pre and post event data. Here you can see that my heart rate is substantially higher after the big event compared to the night before: the body needs time to recover.



The morning after WHOOP calculates the readiness of my body to take on (new) training strain - you can clearly see my body didn't recover overnight: just a 7% recovery score!

After a good night's sleep my body was still recovering from the big event. WHOOP calculated a 7% recovery score - a metric derived from modelling my normal biometric values on any given day. Pro athletes excel in recovering faster from strenuous days. Here is room for improvement!

## Conclusion

In a year where everything changed for me, it felt as a major achievement to do exactly the same as a year before: completing the Elfstedentocht! Like Alice in Wonderland: "Now, here, you see, it takes all the running you can do, to keep in the same place." I am looking forward for the next year of "Willem in Wonderland"!

### Collect data yourself: get a WHOOP for free today!

The best time to start collecting biometric data was 10 years ago.... the second best time? Today! Build yourself a reference dataset NOW, enabling you to track long term effects on your well being. Even if you're not working out or training today - it can still be useful for later. You can get a free WHOOP strap and your first month free through this link: https://join.whoop.com/willem