

Inspired to Code

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What is the Output?

```
public class CzechPuzzle {  
    public static void main(String... args) {  
        StringBuilder sb = new StringBuilder(1<<30);  
        sb.append("Ludek");  
        sb.setCharAt(3, 'ě');  
        System.out.println(sb);  
    }  
}
```

- Ludek
- Luděk
- L u d ě k
- Something else

Inspired to Code

- **Programming a "safe" occupation**
 - Sit in comfortable chair all day
 - Worst case: a bit of tendonitis and back pain
 - "Ahh, you are working!"
- **"... Much study wearies the body" - King Solomon**
 - Brain work is more exhausting than physical labour

Stress and Chemicals

- **Programming for idiots is stressful**
 - Unrealistic deadlines, crazy customers
- **Stress releases cortisol**
 - Interferes with learning and memory
 - lowers immune function and bone density
 - Increases weight gain, blood pressure, cholesterol and heart diseases, etc.
- **Best fight against cortisol is 30 minutes of exercise per day**

Warning: Not "That" Kind of Doctor

- **Never listen to health advice from a programmer**
 - Especially a fat one like me
- **Also, puzzles in talk might not be answered ... ever**
- **Our primary purpose of this talk is to entertain, and maybe inspire**

Java's Little-Known while-while Loop

```
public class TestLoop {  
    @Test  
    public void test() throws Exception  
    {  
        int i = 0;  
        while (i < 3) {  
            i++;  
            System.out.println(i);  
            Thread.sleep(1000);  
        } while (i < 4);  
    }  
}
```


Pavlov's Programmers



Tempted Through Food

- **Free potato crisps and snack bars all day long**
- **Soft drinks whenever we want**
- **Lunch made by professional chefs**
- **Beer and wine after work hours**
- **Yes, there are companies offering these "perks"**
 - **And their employees suffer for it**

Singleton Food Experiment

2000 kcal per day of *one* food

Opt-out at any time during day - be willing to "cheat"

Drink lots of water



Day 1: Filet Steak

- 1.3 kg
- €23



Day 2: Broccoli

- 5.8 kg
- €14



Day 3: Apples

- 3.6 kg
- €9



Day 4: Chicken

- 1.8 kg
- €12.50



Day 5: Carrots

- 4.8 kg
- €8.40



Day 6: Potatoes

- 2.3 kg
- €4.40



Day 7: White Fish

- 1.8 kg
- €47



Day 8: Cheddar

- 480 g
- €12



Day 9: Yams

- 2.3 kg
- €8.40



Day 10: Almonds

- 330 g

- €5



Day 11: Banana

- 2.24 kg
- €5.40



Day 12: Brown Rice

- 2 kg (550g uncooked)
- €2.10



Day 13: Nutella

- 360 g
- €3.20



Conclusion of Singleton Food Experiment

- **Gives an appreciation of calories by volume of each food**
 - **Also explains how burger companies make profit on the 50c fries upgrade**

Java 6 is Faster Than Speed of Light

```
public class FasterThanSpeedOfLight {  
    public static void main(String... args) {  
        String s = "";  
        for (int i = 0; i < Integer.MAX_VALUE; i += 2) {  
            s += i;  
        }  
    }  
}
```


"Be Active Every Day"
Scott Adams



Streak Runners International

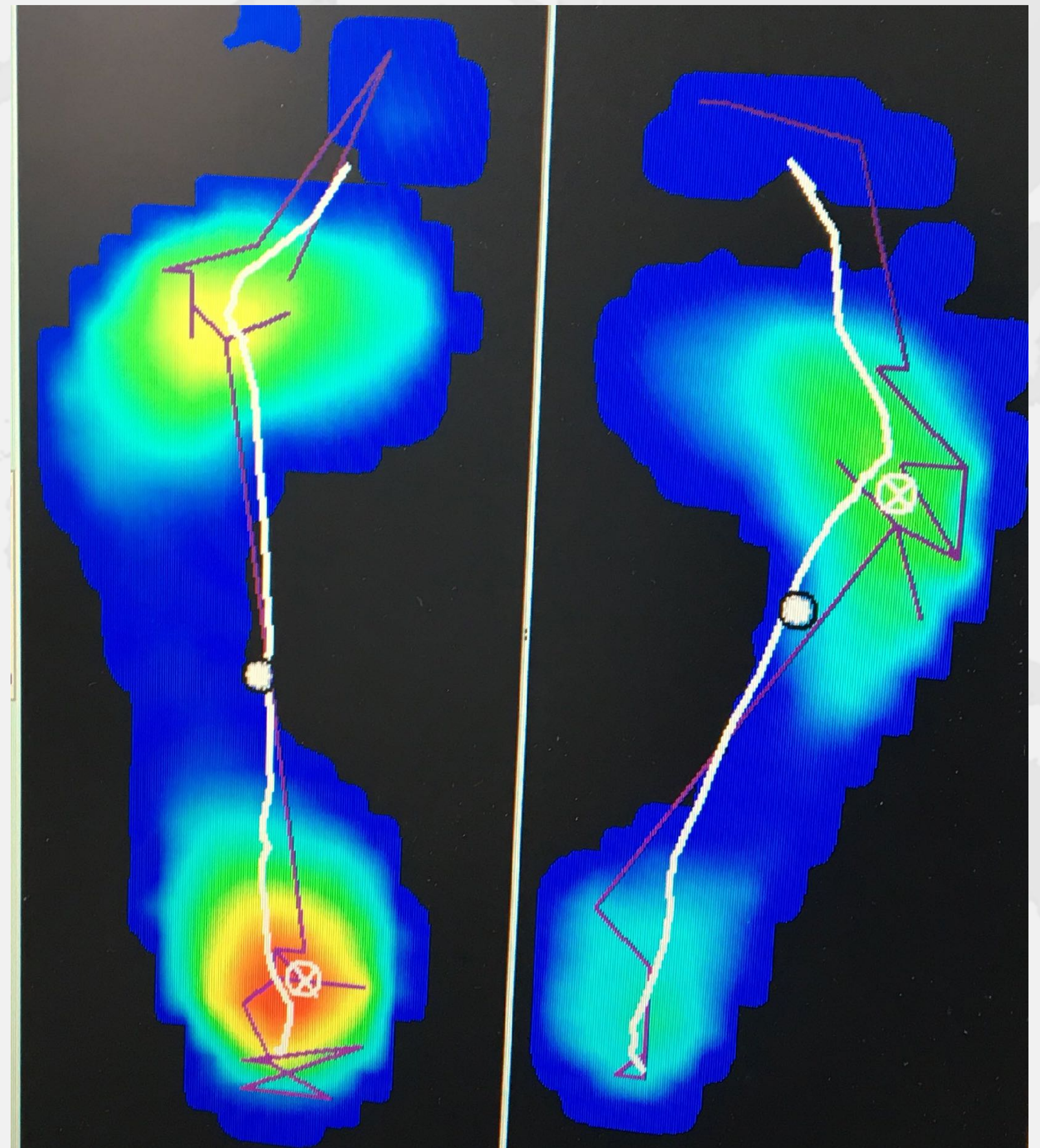
- **Streak 1:**
 - 2016-12-01 until 2018-10-03: 672 days
- **Streak 2:**
 - 2018-10-12 until today: 372 days

Effect of Daily Running

- **Better sleep**
- **Improved balance**
 - JAX stair drop
- **Lots of fantastic ideas during exercise**
- **"What if you get sick?"**
 - Daily exercise acts as a prophylactic

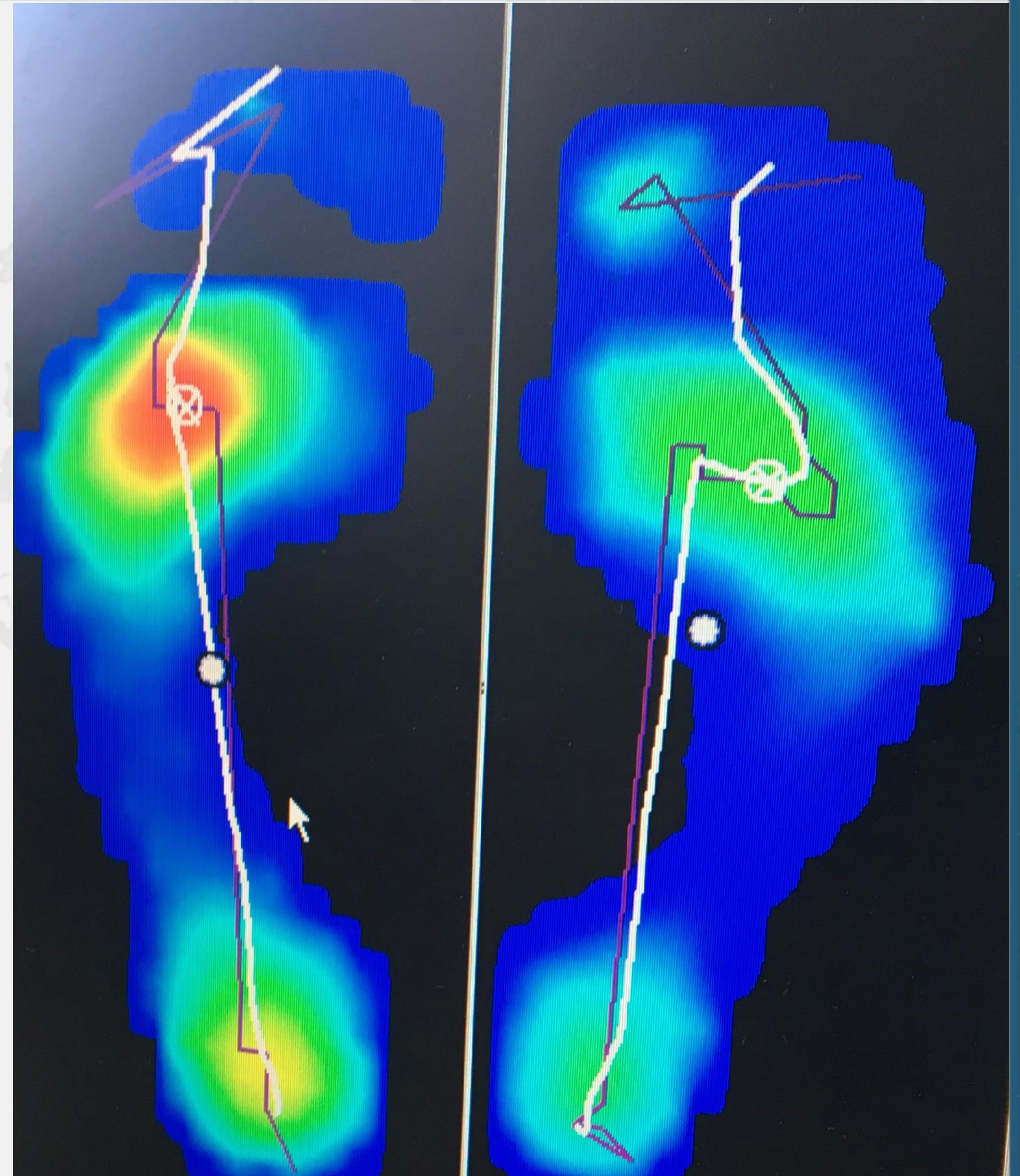
Dynamic Balance 2013

- **White & brown should coincide**
- **Right foot completely wacko**
 - Badly twisted right ankle as teenager
- **Most weight on left heel**
- **Left foot no weight on toes**



Dynamic Balance 2019

- **Left foot almost perfect**
- **Right foot much better**







Garmin Fenix 6

- **Measures heart rate and heart rate variability**
- **Battery lasts several days**
- **For even better results, use external heart-rate belt**
 - **Swimming can store HR data until we exit water**
- **External "Tempe" sensor measures temperature**





TEMP

46.0

MIN TEMP

23.4

MAX TEMP

45.9

HR

144

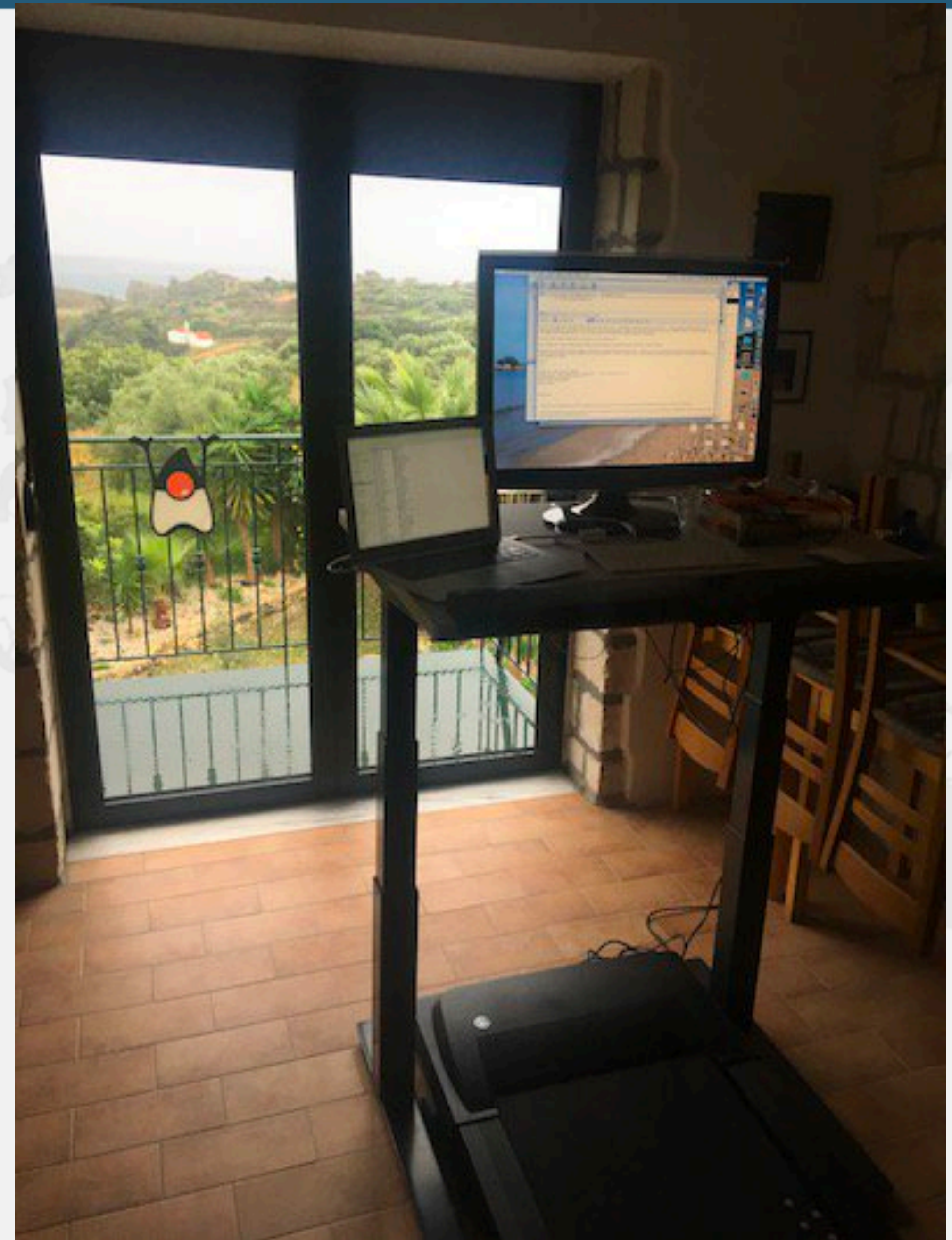
GARMIN

Do We Need Expensive Gadgets?

- **If they make us exercise more, then yes :-)**
 - **We are geeks after all ...**

Talking of Cool Gadgets

- **Lifespan treadmill desk**
 - Code and walk at the same time
 - Great for getting exercise
- **Similar things exist for bicycles**



Safety First

- **Super reflective running jacket**
- **Reactive light**
 - **Brightness adjusted automatically**
 - **Red flashing on back**
 - **Can control from the phone**
 - **Lock it whilst traveling**



Find Inspiring Working Spaces

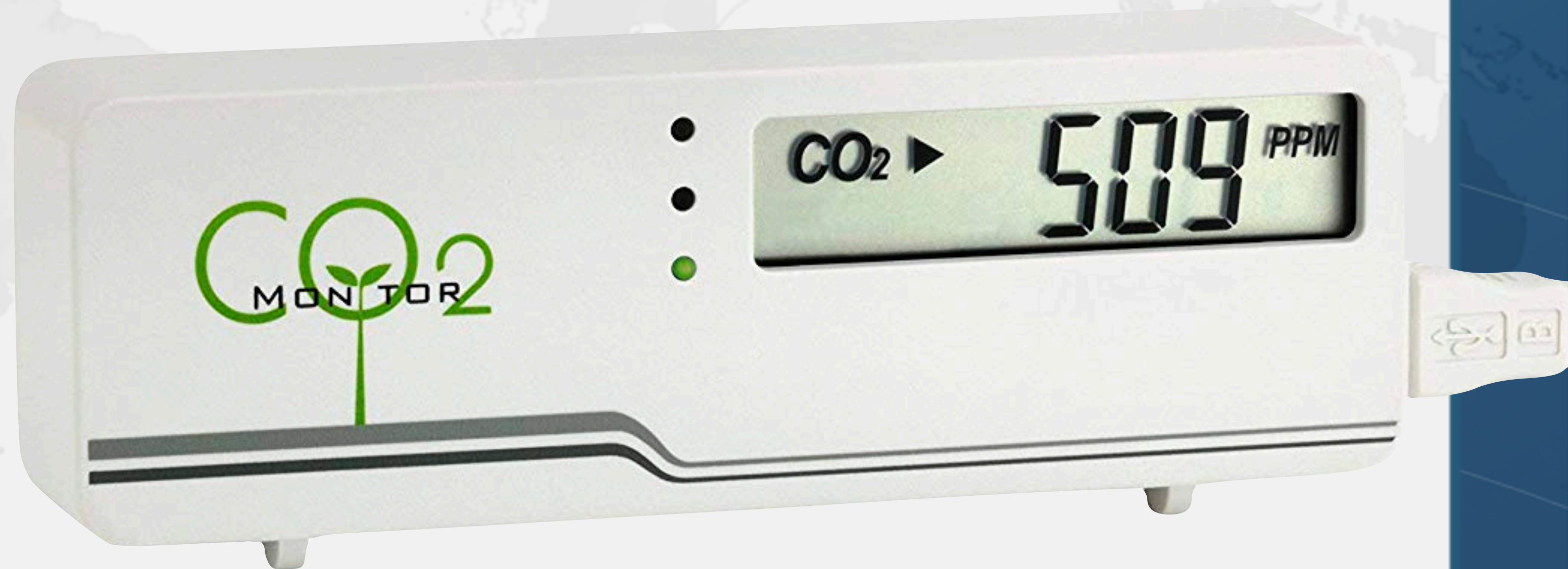


Oxygen



Measure CO2 in Our Office

- **TFA-Dostmann AirCO2ntrol Mini CO2 Monitor**
 - 500-800 ppm is good
 - 800-1200 ppm affects our concentration
 - 1200+ we need fresh air
- **Meeting rooms often go over 2000**



Value of Asking Nicely

```
public class MemoryPuzzle {
    private final static int MAX_LONGS =
        (int) (Runtime.getRuntime().maxMemory() / 8);

    public static void main(String... args) {
        {
            long[] buf = makeBuf();
        }
        long[] buf = makeBuf();
    }

    private static long[] makeBuf() {
        return new long[(int) (MAX_LONGS * .8)];
    }
}
```

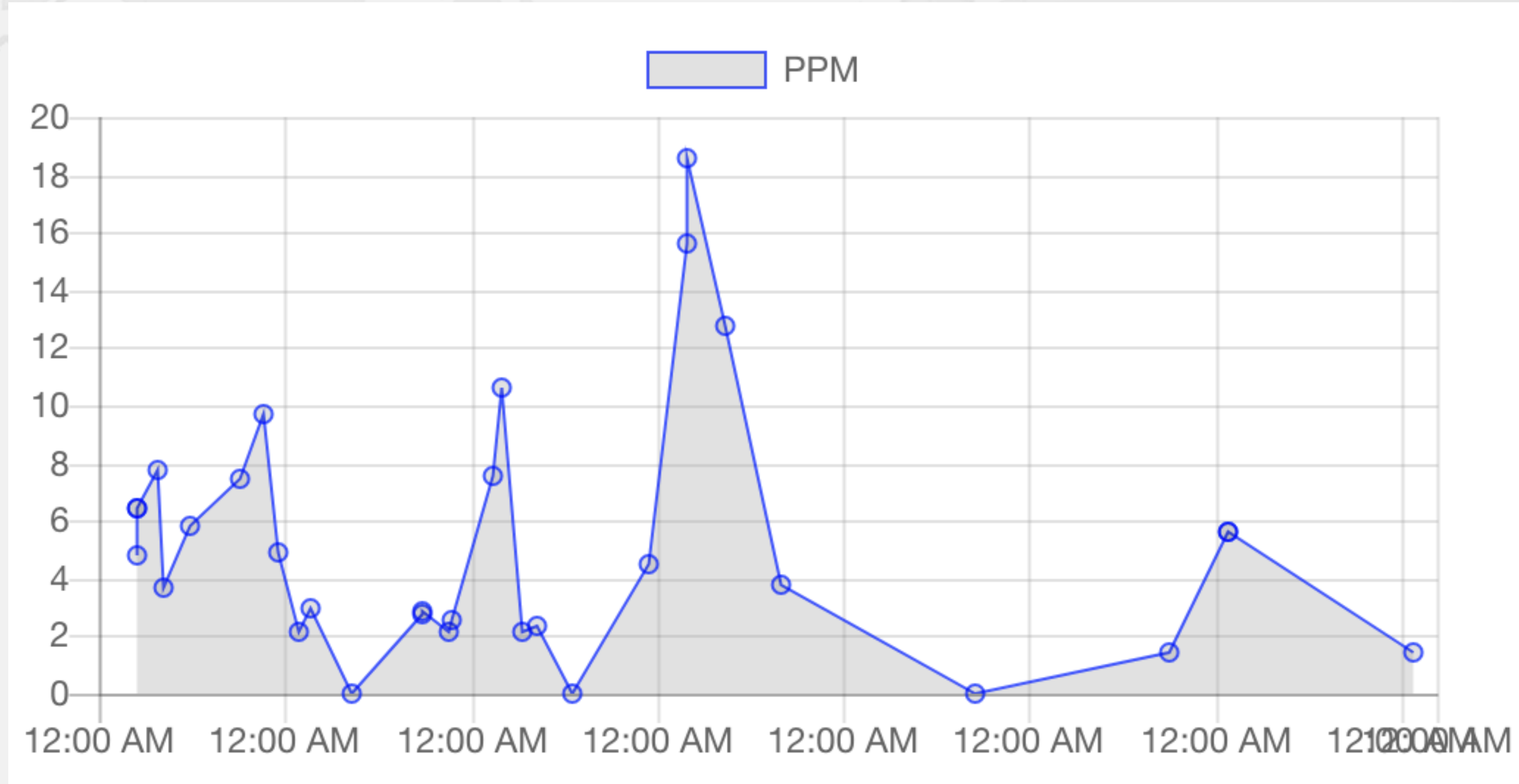

Keto



Keto - Avoid Carbohydrates

- **It works because we are surrounded by cheap carb junk food**
 - "Gives you energy"
- **We lose glycogen, which contains a lot of water**
 - Explains rapid weight loss some experience
- **Measuring effectiveness of ketosis through acetone in breath**
 - <http://ketonix.com>
- **Biohacker's Guide to Ketosis**
 - <https://landing.biohackingbook.com/ketosis>

Ketonix Device



15000 Push-Ups in 5 Months

tinyurl.com/15k-pushups





Some Numbers

- **794 signed up**
 - 390 finished 1000 in October (bronze)
 - 276 finished 2000 in November (silver)
 - 189 finished 3000 in December (gold)
 - 120 finished 4000 in January (platinum)
 - 91 finished 5000 in February (diamond)
- **At least 2 364 539 push-ups**
- **14th February I did 1000 push-ups in one day to catch up**
- **Result?**

Heinz After 15000 Push-Ups



Cheap Test of Our Heart Health

- **"Association Between Push-up Exercise Capacity and Future Cardiovascular Events Among Active Adult Men"**
 - <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2724778>
- **Pushups in time with metronome set at 80 bpm**
 - **Count number of pushups until they reach 80**
 - Or if they miss 3 beats of metronome
 - Or stop due to exhaustion
 - Or have dizziness, lightheadedness, chest pain, or shortness of breath
- **Those who could do 40+ pushups had a significantly lower chance of cardiovascular disease than those doing less than 10**

Sleep



Some Tips

- **Make sleep a priority - get 7-8 hours per night**
- **Read "Why We Sleep" by Matthew Walker**
- **Wear blue-blocking glasses an hour before sleep**
- **Don't code late at night**
- **Get an Oura ring - www.ouraring.com**

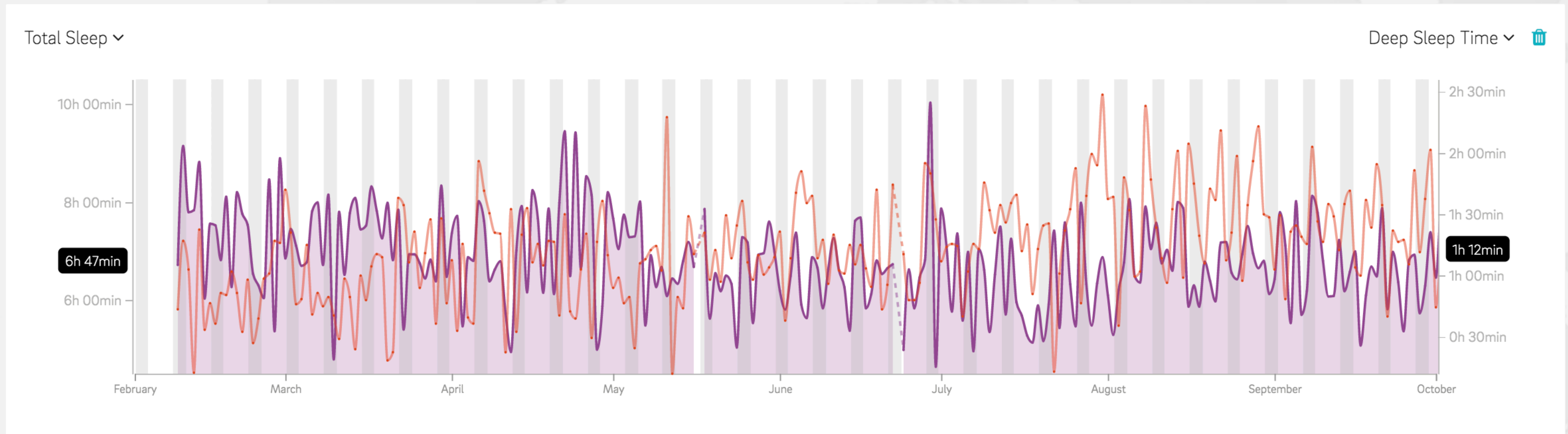
Oura Ring - Ouraring.com

- **Measures sleep quality**
 - Heart Rate Variability
 - Heart Rate
 - Temperature
 - Activity level
- **Unobtrusive**
- **Battery lasts about 4 days**



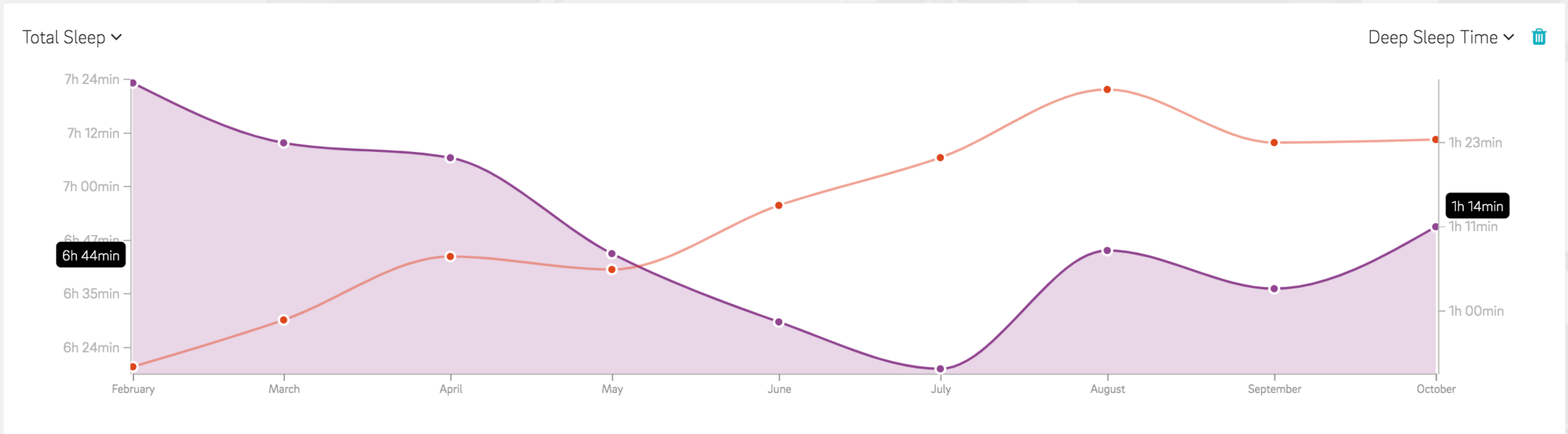
Daily Tracking of Sleep Quantity

- **Up and down, depending on many factors**
 - **Do we see a trend?**



Monthly Tracking of Sleep Quantity

- **The trend seems obvious now**
 - **We have two roosters that compete for who can be the loudest biggest cock**



Factorial With Stream Map/Reduce

```
import java.math.*;
import java.util.stream.*;

public class Factorial {
    public static BigInteger f(int n) {
        return IntStream.rangeClosed(1, n)
            .mapToObj(BigInteger::valueOf)
            // .parallel()
            .reduce(BigInteger.ONE, BigInteger::multiply);
    }
}
```


Alcohol

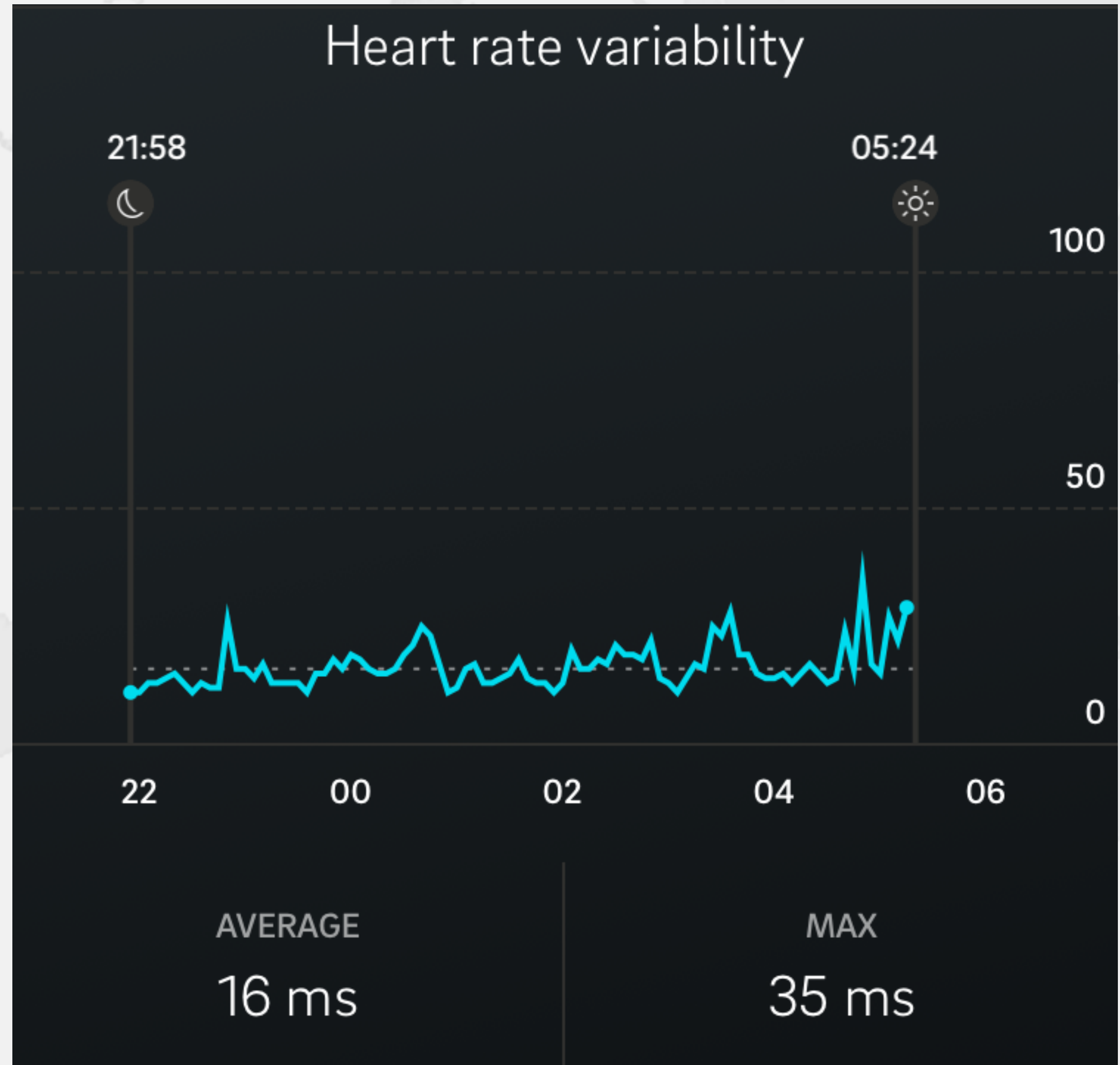


Czech Republic #1 Beer Drinking Nation in the World

- **1 liter of beer at 5% is 5 units of alcohol**
- **Body takes about 1 hour to get rid of one unit of alcohol**
- **Alcohol and late meals affect sleep**
- **Bad sleep affects our concentration and learning ability**
- **Programming is a mind occupation**

Sunday Night

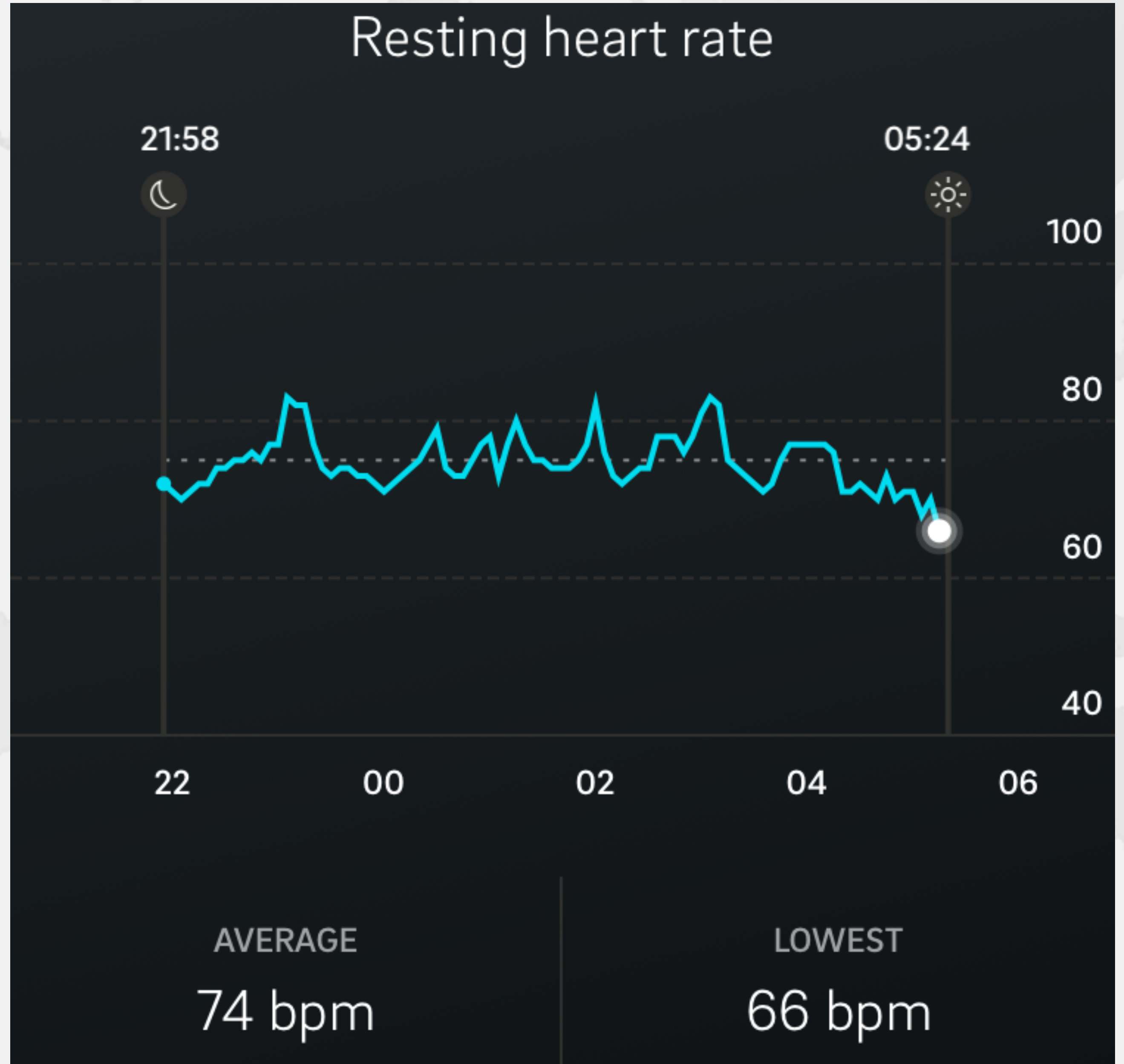
- **Big heavy dinner**
- **1.5 liters Oktoberfest beer**
 - 6.3% VOL - strong beer
 - $1.5 \times 6.3 = 9.4$ units alcohol



Sunday Night

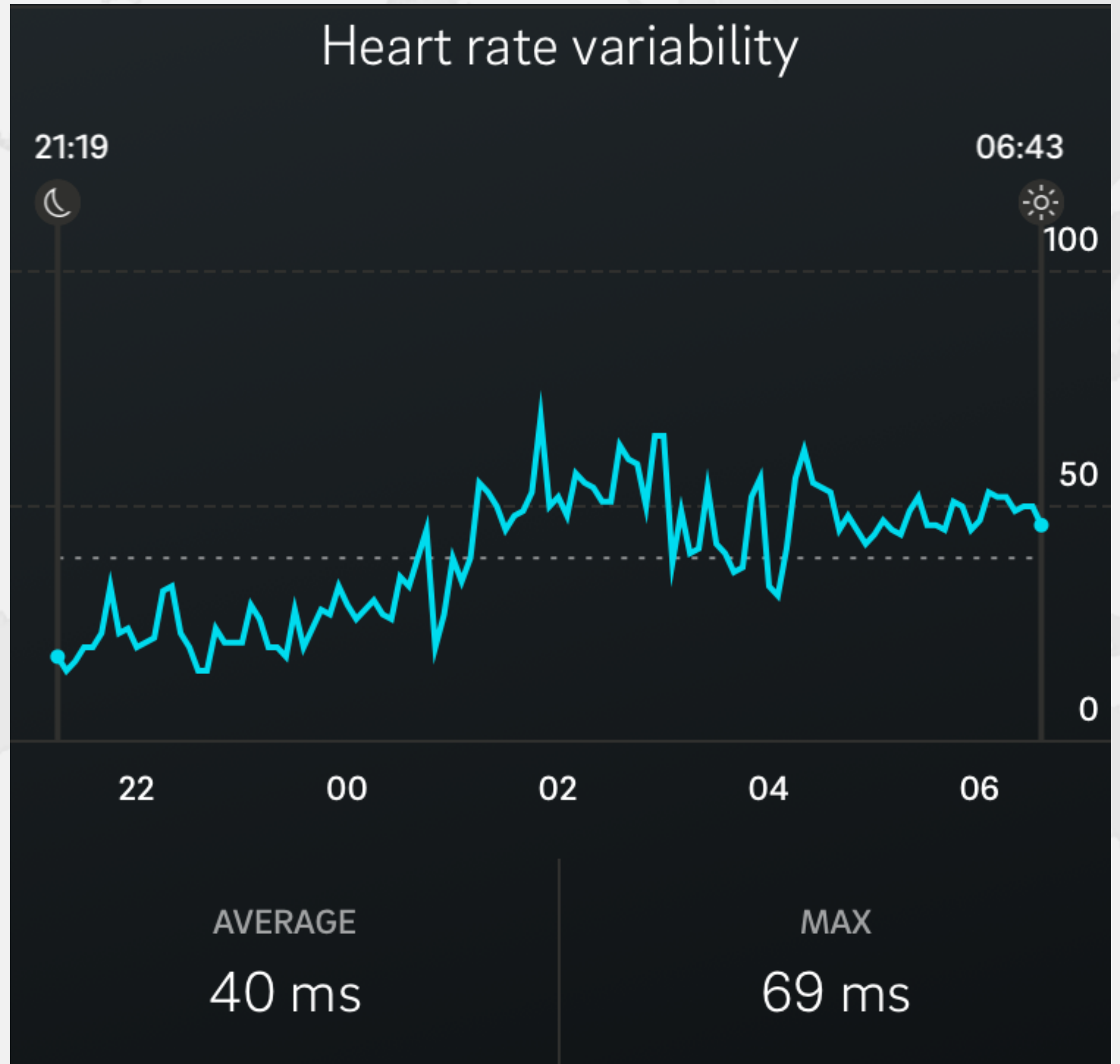
- **Sleep score 85**

- 6h52m
- 92% Efficiency
- Average HR 74 bpm
- Resting HR 66 bpm



Monday Night

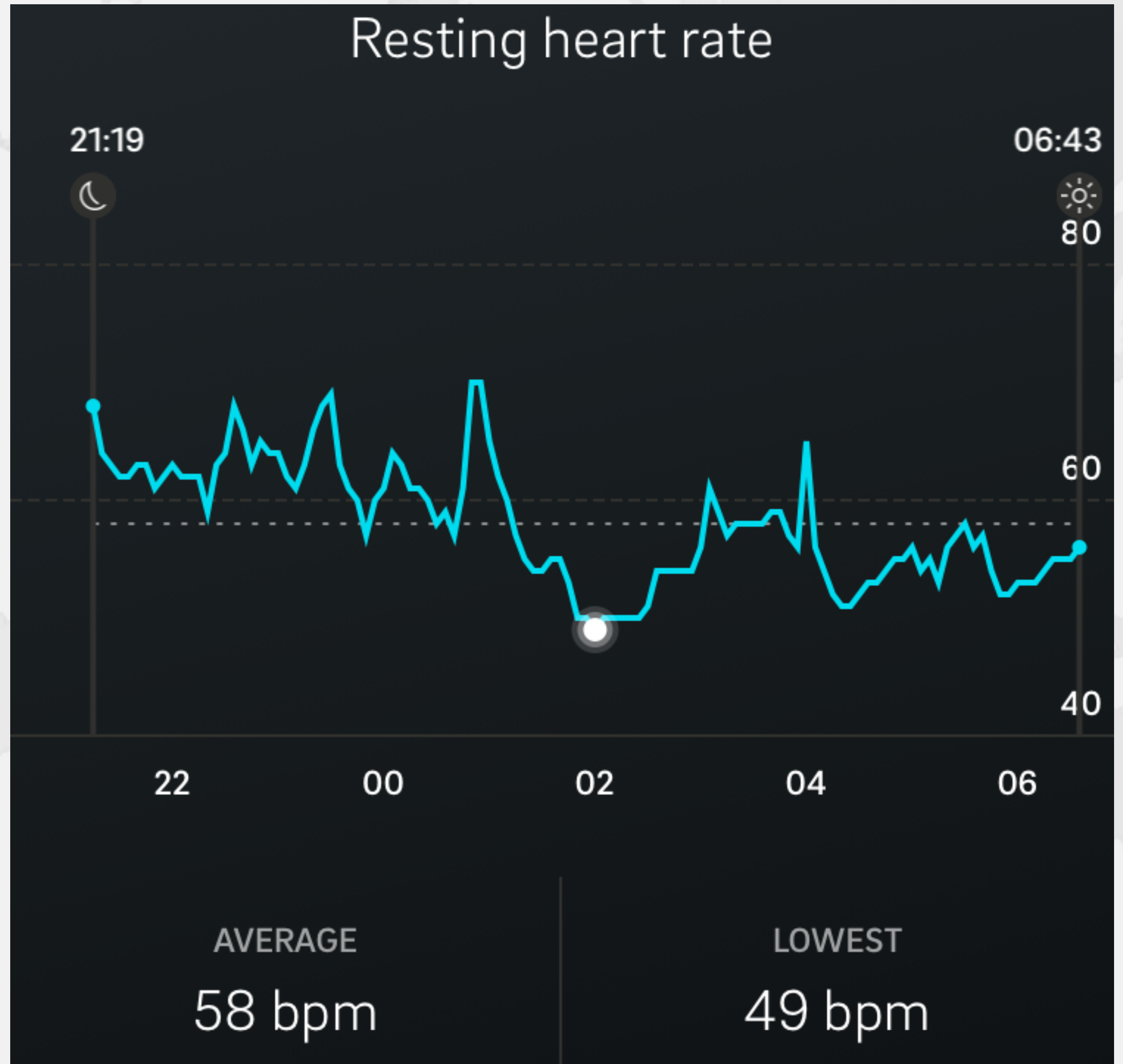
- Light dinner
- Lots of water



Monday Night

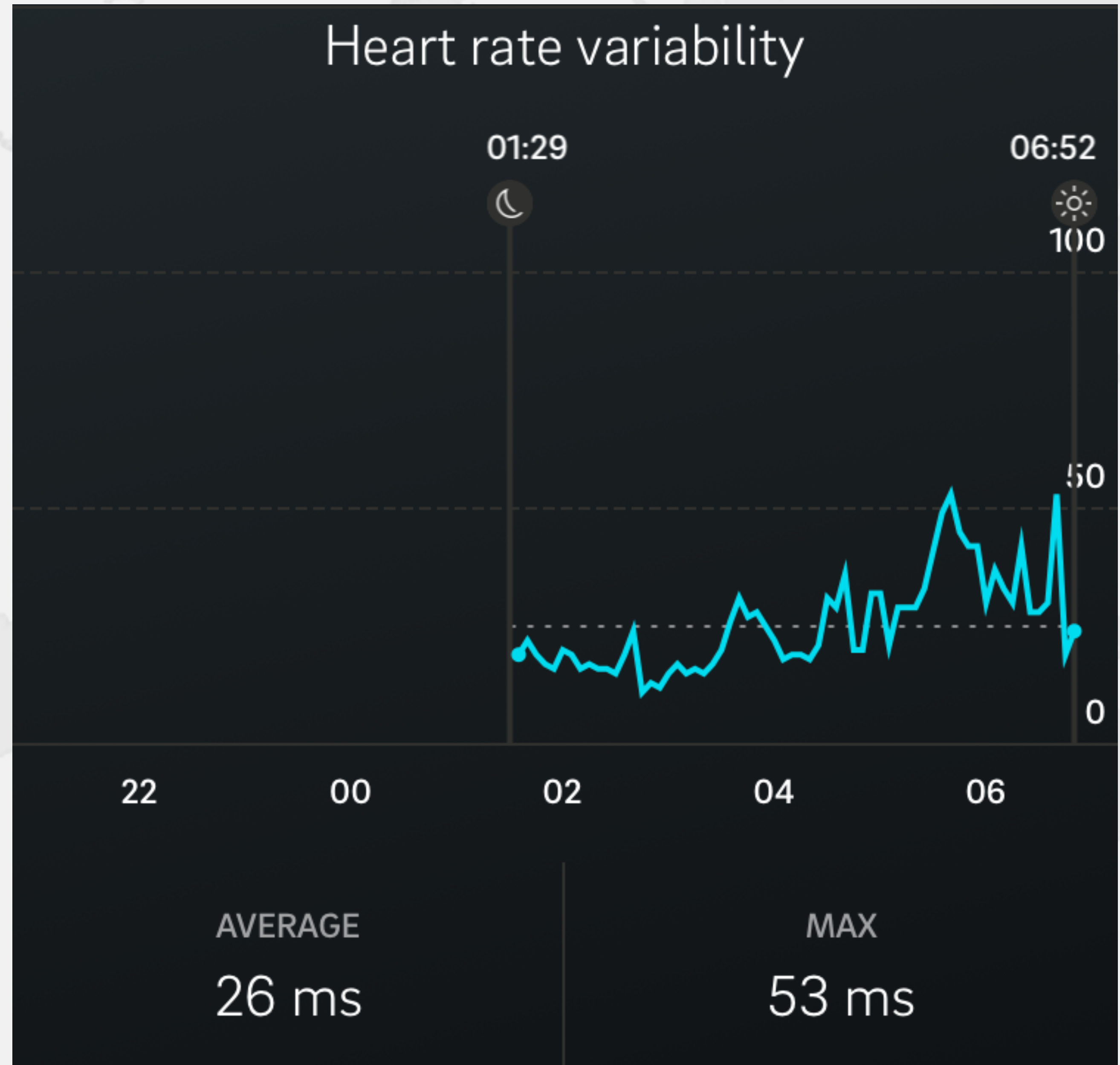
- **Sleep score 94**

- 8h32m
- 91% Efficiency
- Average HR 58 bpm
- Resting HR 49 bpm



Tuesday Night

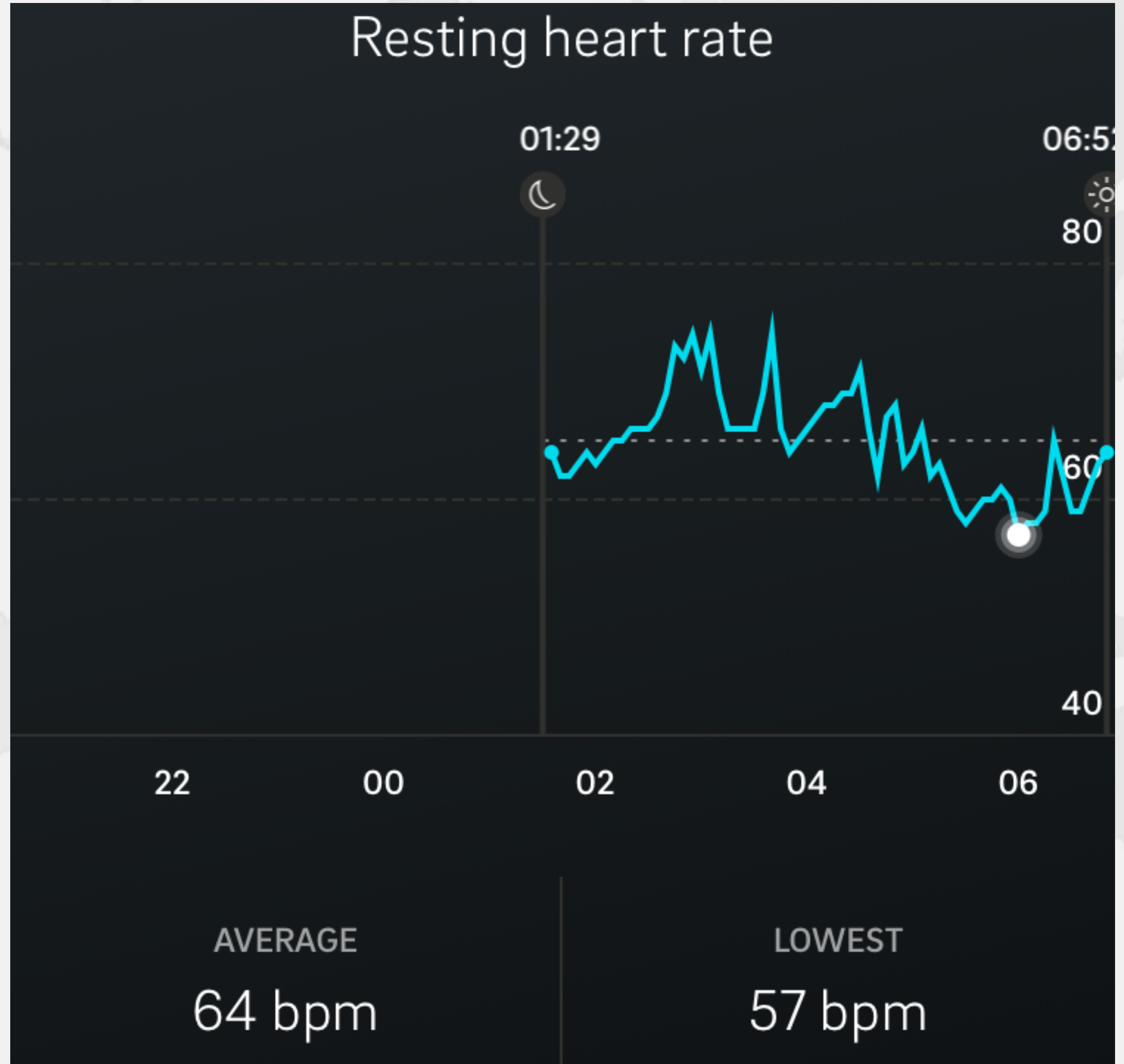
- **Dinner with colleagues**
 - Steak and fresh spinach
- **1 liters Berliner Pilsener**
 - 5% VOL
 - 1 x 5 = 5 units alcohol
- **Bookkeeping until 1:30am**



Tuesday Night

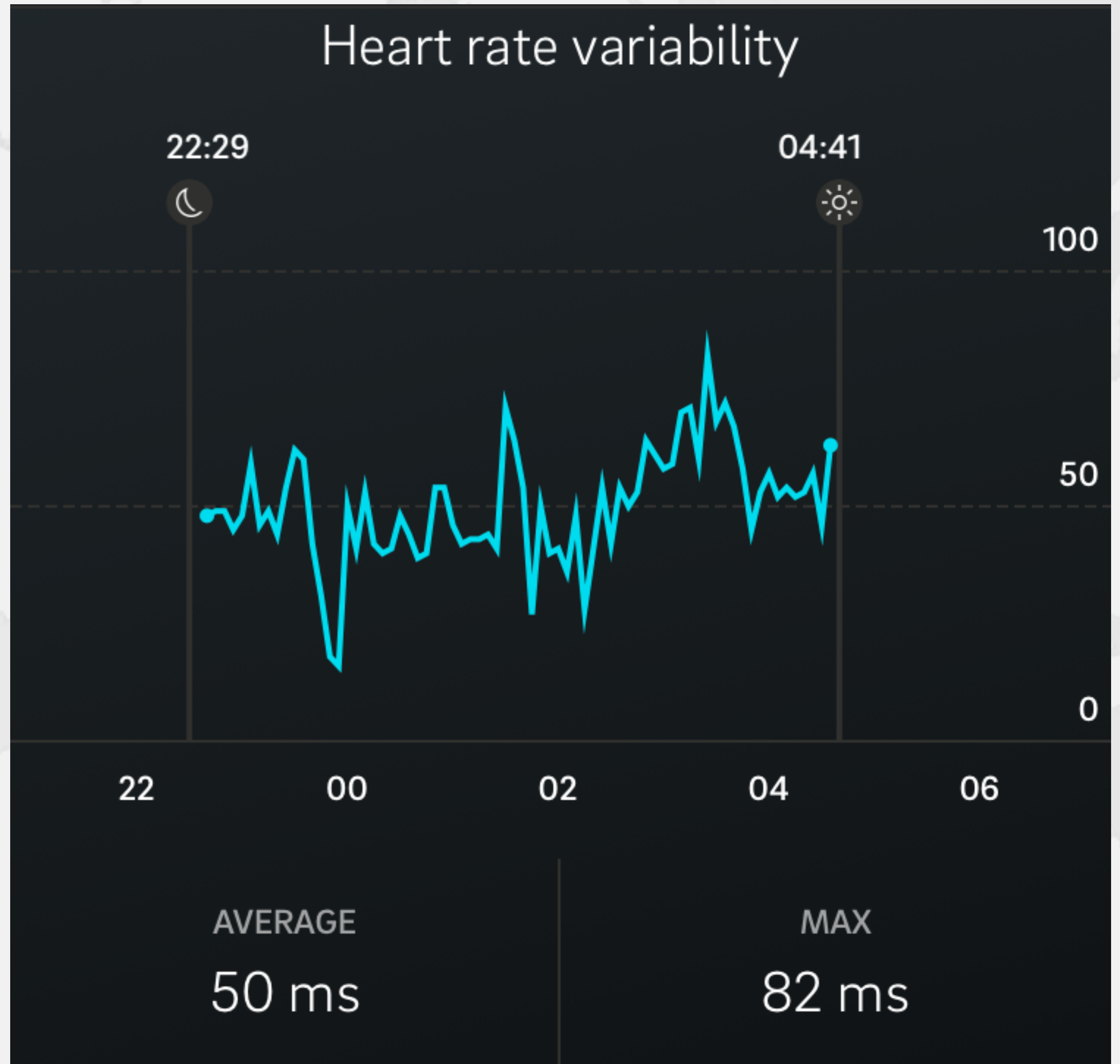
- **Sleep score 69**

- 4h59m
- 93% Efficiency
- Average HR 64 bpm
- Resting HR 57 bpm



Wednesday Night

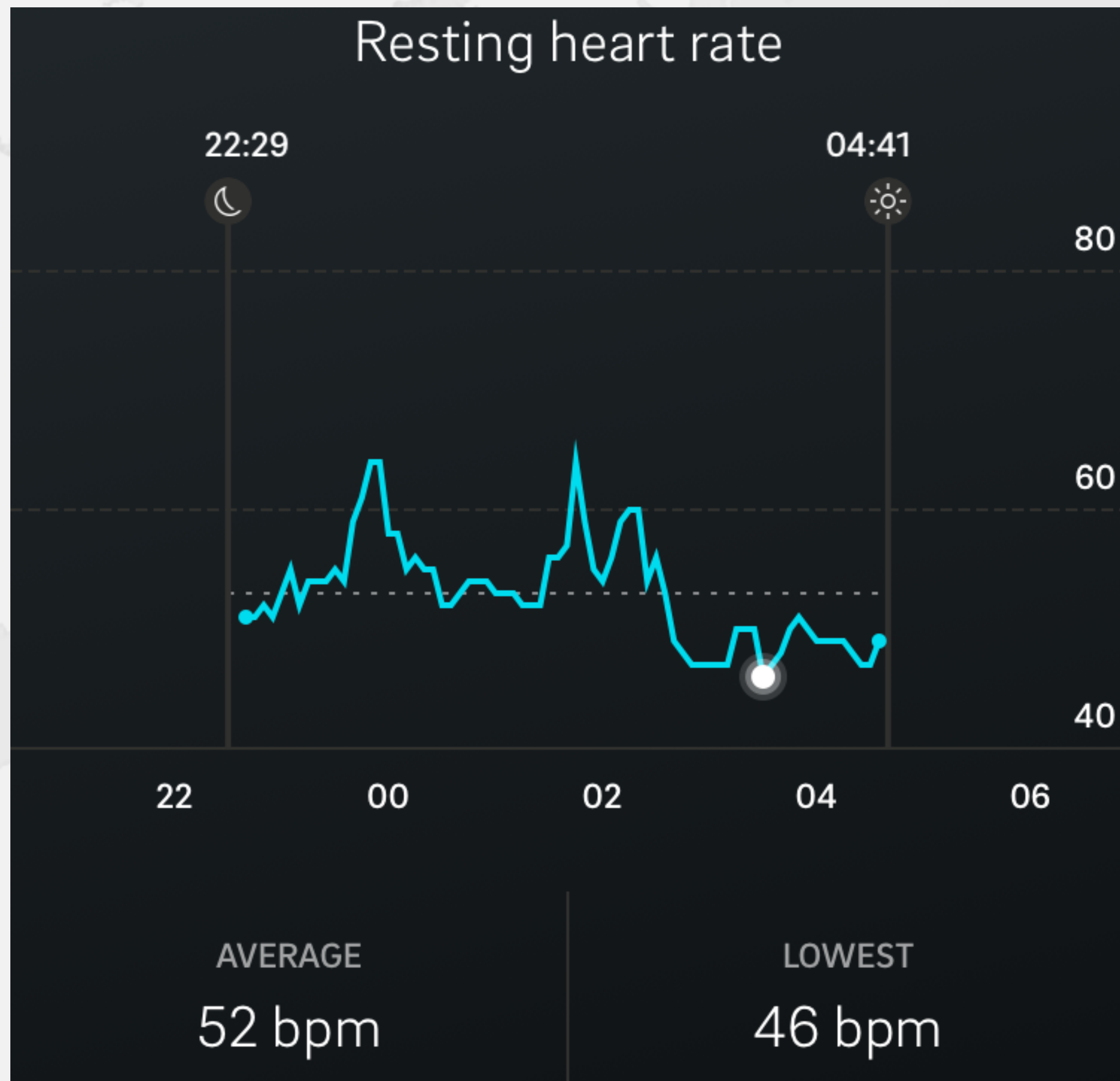
- Light dinner
- Lots of water



Wednesday Night

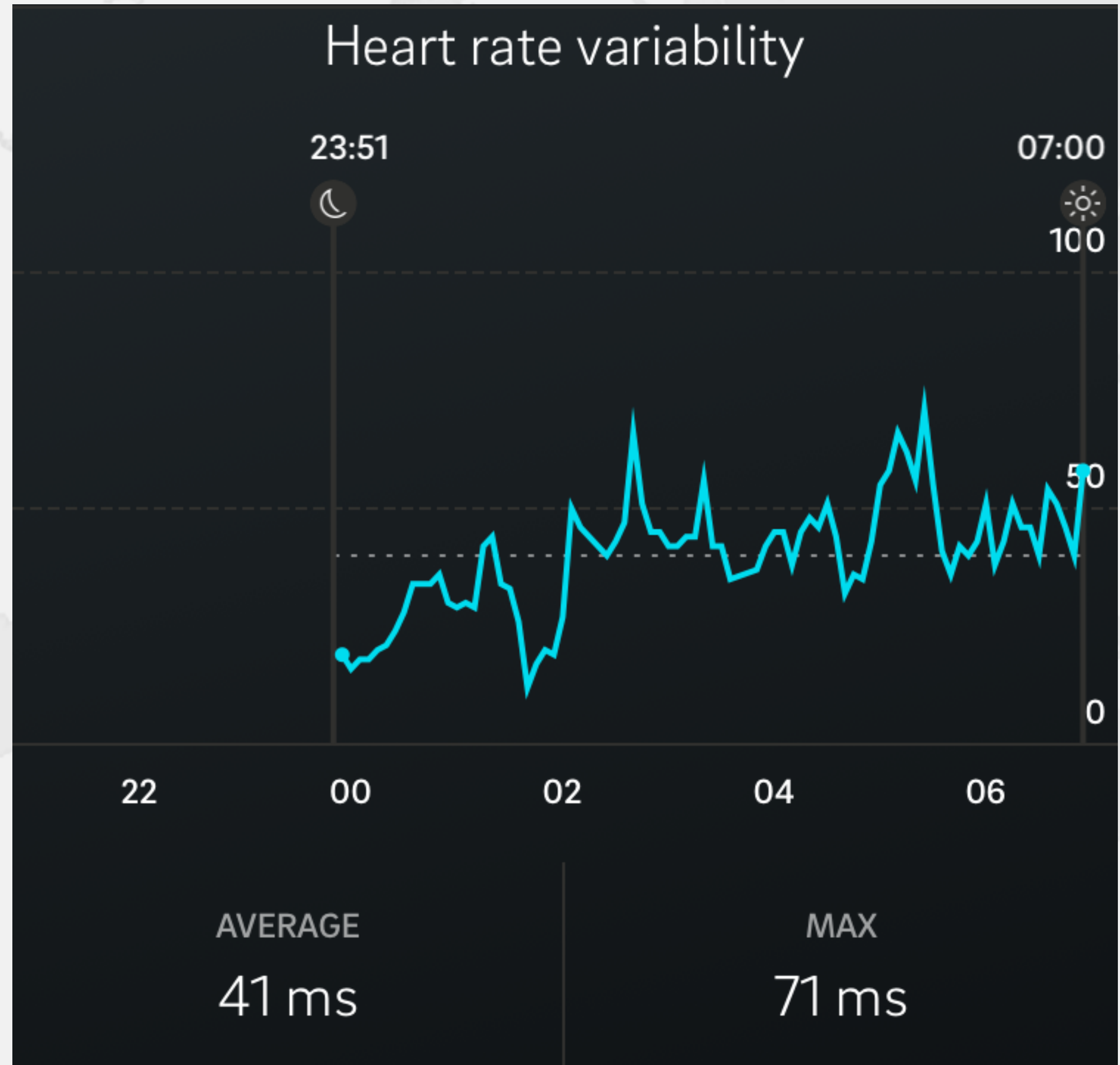
- **Sleep score 81**

- 5h53m
- 95% Efficiency
- Average HR 52 bpm
- Resting HR 46 bpm



Thursday Night

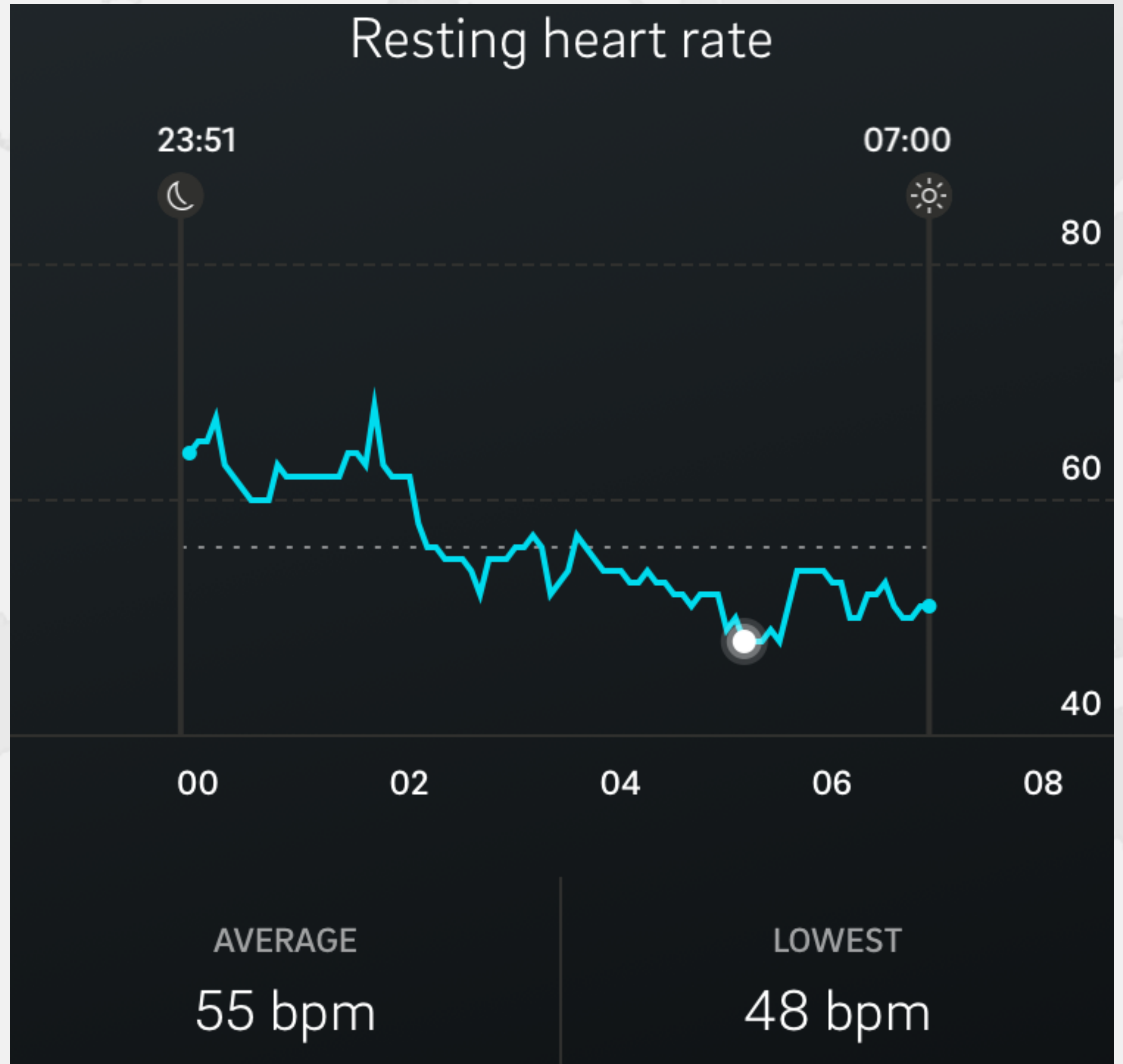
- **Dinner with colleague**
 - Schnitzel and lettuce
- **1 liters Berliner Pilsener**
 - 5% VOL
 - 1 x 5 = 5 units alcohol



Thursday Night

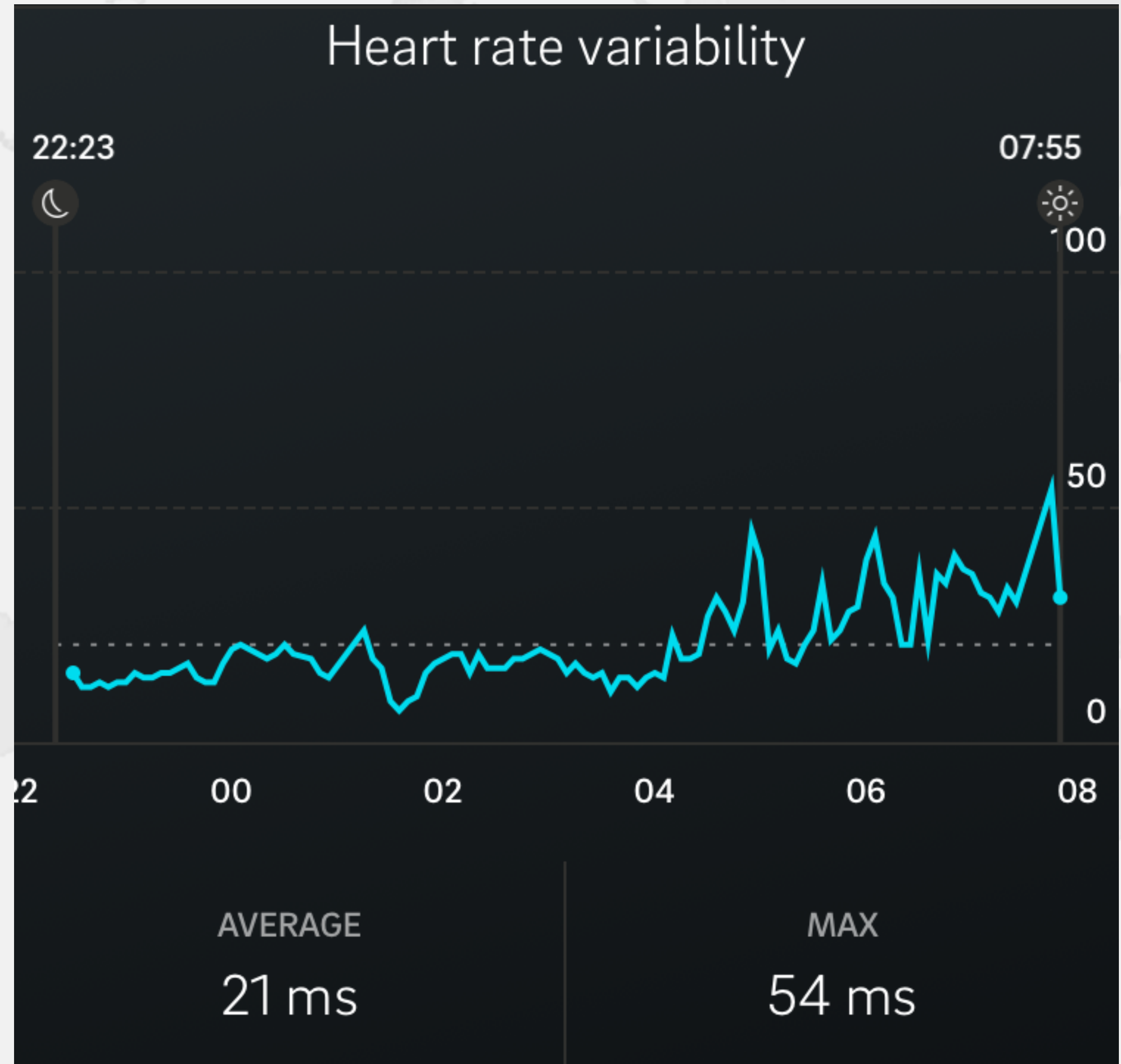
- **Sleep score 84**

- 6h27m
- 90% Efficiency
- Average HR 55 bpm
- Resting HR 48 bpm



Friday Night

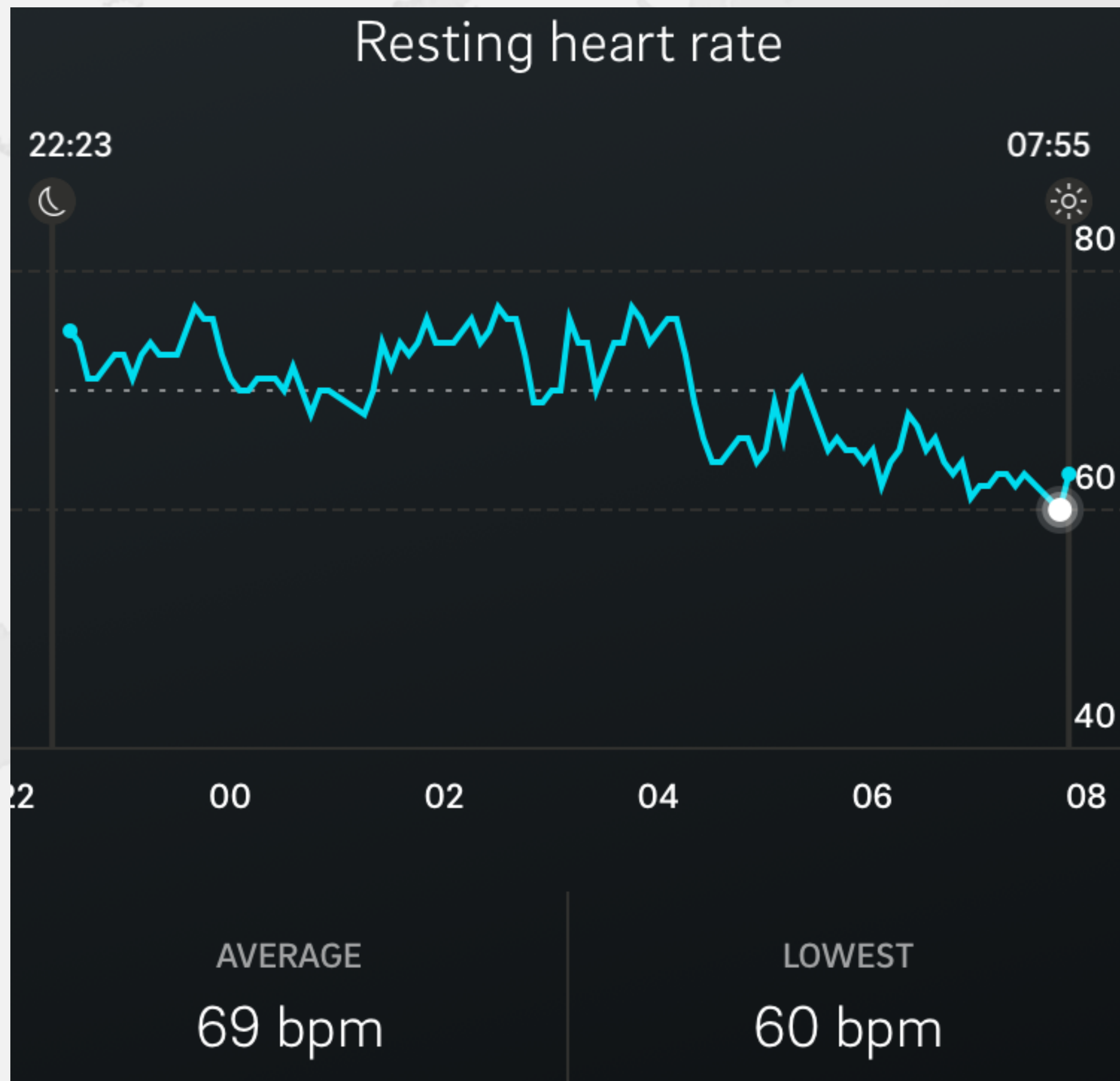
- **Big heavy dinner**
- **2.5 liters Berliner Pilsener**
 - 5% VOL
 - $2.5 \times 5 = 12.5$ units alcohol



Friday Night

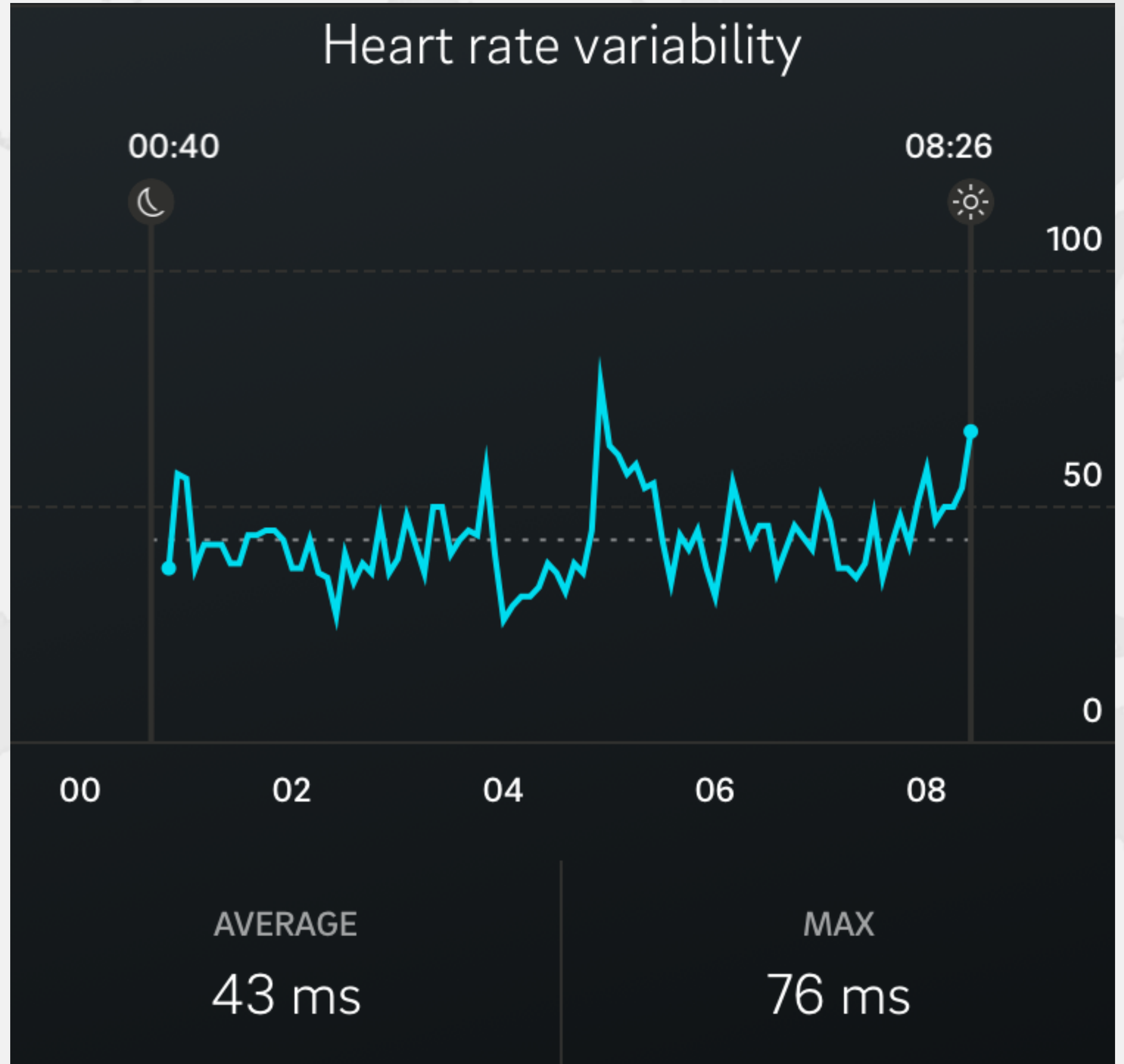
- **Sleep score 95**

- 8h26m
- 88% Efficiency
- Average HR 69 bpm
- Resting HR 60 bpm



Saturday Night

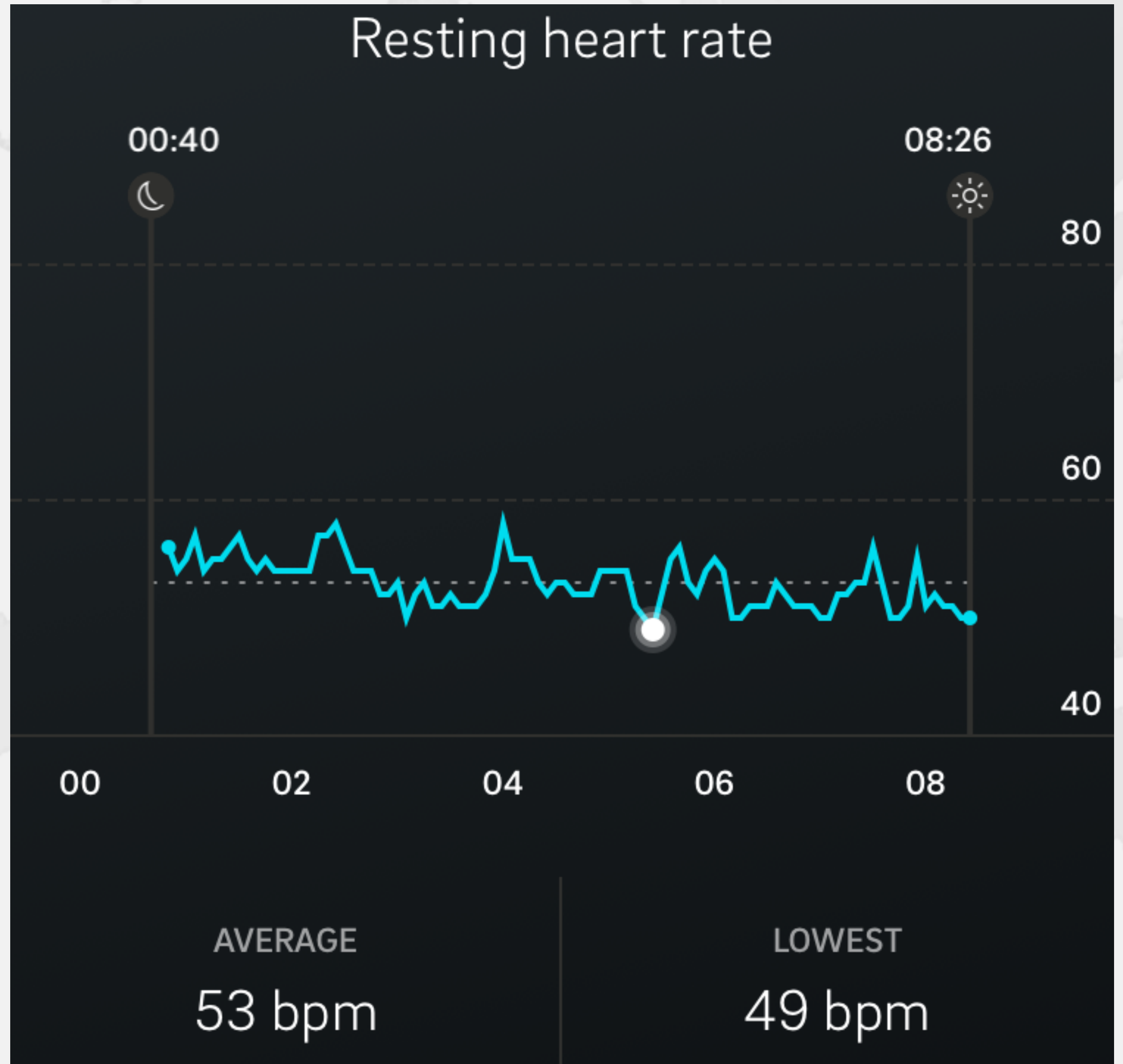
- Light dinner
- Lots of water
- Late night due to flight



Saturday Night

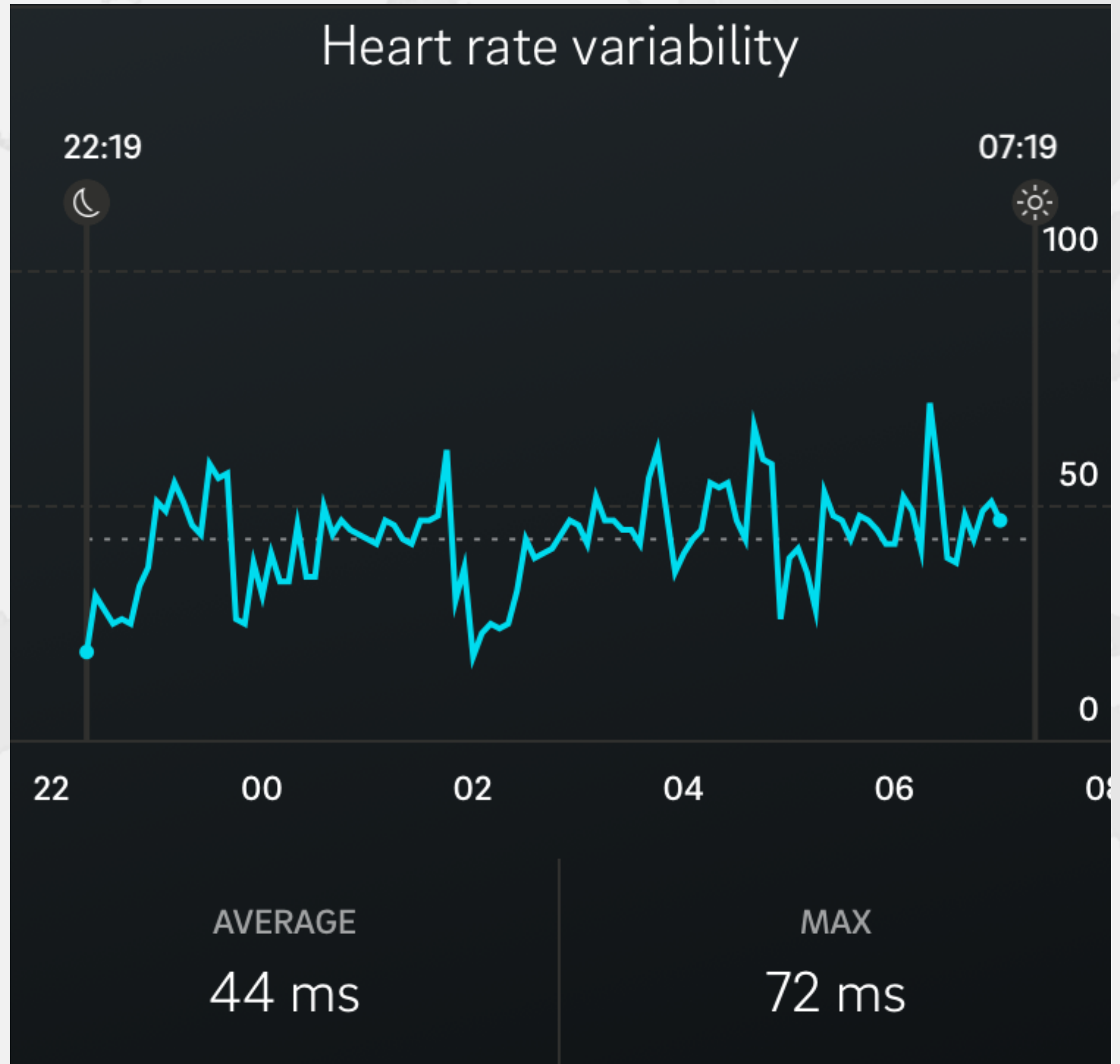
- **Sleep score 83**

- 7h10m
- 92% Efficiency
- Average HR 53 bpm
- Resting HR 49 bpm



Sunday Night

- Light dinner
- Lots of water



Sunday Night

- **Sleep score 90**

- 7h31m
- 84% Efficiency
- Average HR 53 bpm
- Resting HR 47 bpm



Sleep Tracker

- **All this information from the magic ring - ouraring.com**
 - **More unobtrusive to wear than a smart watch**

40 Days Running Outside



Rules

- **40 Days of daily running**
- **At least one mile per day (1.61km)**
- **GPS tracked**
- **Those who completed got a free Design Patterns Course**

Some Numbers

- **6952 km tracked**
- **578 072 kcal burned**
- **81 runners started**
- **39 finished challenge**
- **Featured in STREAK RUNNERS INTERNATIONAL**
 - <https://www.runeveryday.com/news/archive/newsletterV18N4.pdf> - pg 9-11

Alexius Diakogiannis 120+kg

- **Accepted 40-day challenge in 2018**
 - 1 mile a day run? How hard can that be?
- **Realized just how badly in shape he was!**
- **Congenital heart disease**
 - Tetralogy of Fallot



Race to Health

- **Started dieting with professional help**
- **And also running regularly**
- **His first race at 88kg**
 - **He's not fast, will probably never be**
 - **But who cares? He's still getting endorphins**



Alexius 2019 @80kg

javaspecialists.eu



My Challenge to YOU

- **Prioritize physical exercise**
 - At least 30 minutes of aerobic exercise per day
- **Prioritize sleep**
 - 7 to 8 hours per night
- **Prioritize good food**
 - Say "no" to junk food and empty carbs
- **Take time to think**

tinyurl.com/geecon-cz-keynote

(And a surprise gift ... expires at 18:15)



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Questions

