



A Testosterone and Diet Experiment

Can diet changes turn me into Wolverine?

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QS Europe Conference Amsterdam– May 10, 2014

It started with a winter funk



“It was a clear day, and yet there seemed an intangible pall over the face of things, a **subtle gloom** that made the day dark, and that was **due to the absence of the sun.**”

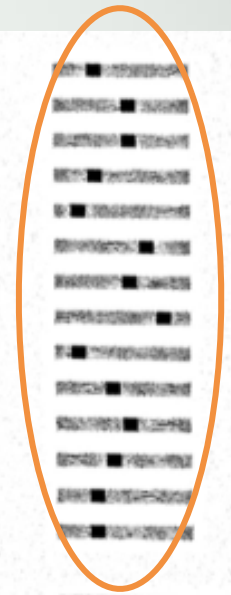
- Jack London in “How to build a fire”

My biomarkers were in the normal range...




✗ PTT	26	s	23 - 32	
✓ Natrium	143	mmol/l	134 - 150	
✓ Kalium	4.7	mmol/l	3.5 - 5.6	
✓ Calcium	2.32	mmol/l	2.16 - 2.62	
✓ Magnesium	0.76	mmol/l	0.75 - 1.00	
✓ Kreatinin	0.95	mg/dl	bis 1.30	
✗ Harnstoff	34	mg/dl	10 - 50	
✓ Harnsäure <i>Uric Acid</i>	5.5	mg/dl	bis 7.0	
✗ Alkalische Phosphatase	51	U/l	40 - 130	
✓ Gamma-GT	28	U/l	bis 60	
✓ GOT (ASAT) <i>AST</i> ASAT <i>SGOT</i>	27	U/l	bis 50	
✓ GPT (ALAT) <i>ALT</i> ALAT <i>SGPT</i>	25	U/l	bis 50	
✓ Gesamt-Eiweiss <i>Total Protein</i>	6.96	g/dl	6.20 - 8.50	
✓ Triglyceride	57	mg/dl	bis 175	
✓ Cholesterin <i>Total Cholest.</i>	249	mg/dl		

Doppelbestimmung
bis 199: Zielwert

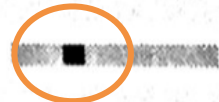


...but they were far from optimal

- Low Vitamin-D

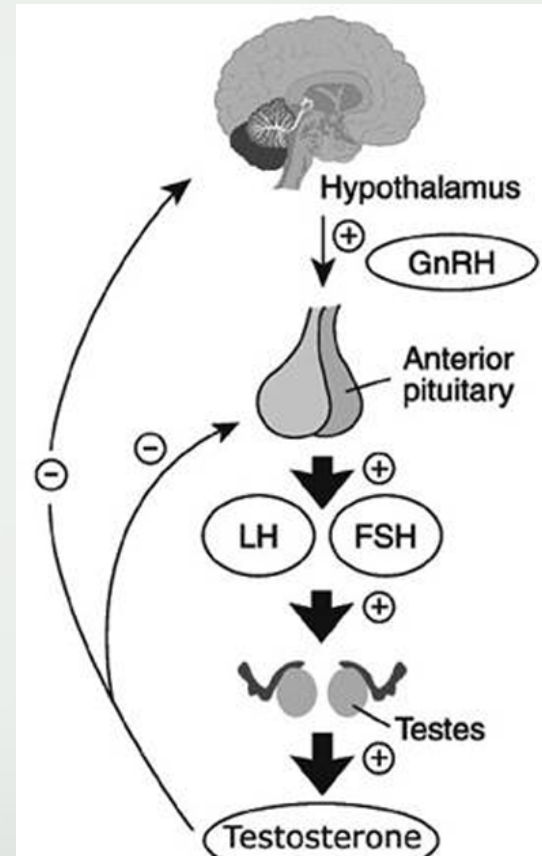
Vitamin D (25-OH-Cholec.)	29.2	ng/ml	
Ausreichende Versorgung, empfohlener Spiegel > 30			

- Low Testosterone

Freies Östriol LIA	< 0.07	ng/ml	
✓ Testosteron gesamt ECLIA	4.92	ng/ml	3.0 
✓ Testosteron frei RIA	11.7	pg/ml	

Testosterone is the primary anabolic hormone

- Present in both men and women
- Made from cholesterol
- Affects mood, lean body mass, and sexual function
- Is affected by diet and lifestyle



Hypothalamus-Pituitary-Testosterone-Axis (HPTA)

Overhyped or underrated?



„Are you kidding? It's freaking awesome! I'm becoming Wolverine.“

- *Tim Ferriss in "The 4-Hour Body"*

Let's find out with a change in diet

- 70% fat and proteins
- High in healthy fats
- Foods rich in B-Vitamins, Magnesium, Vitamin E and Zinc
- Vitamin-D
- Cod liver oil



The diet only worked with carbs



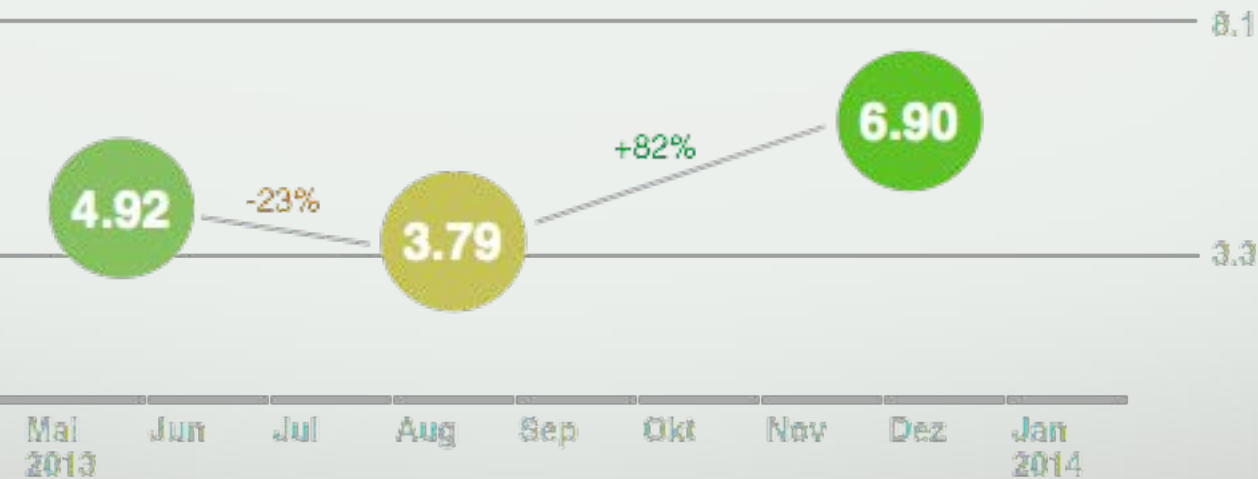
Total Testosterone (blood serum)

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Risk Ranges *ng/ml*

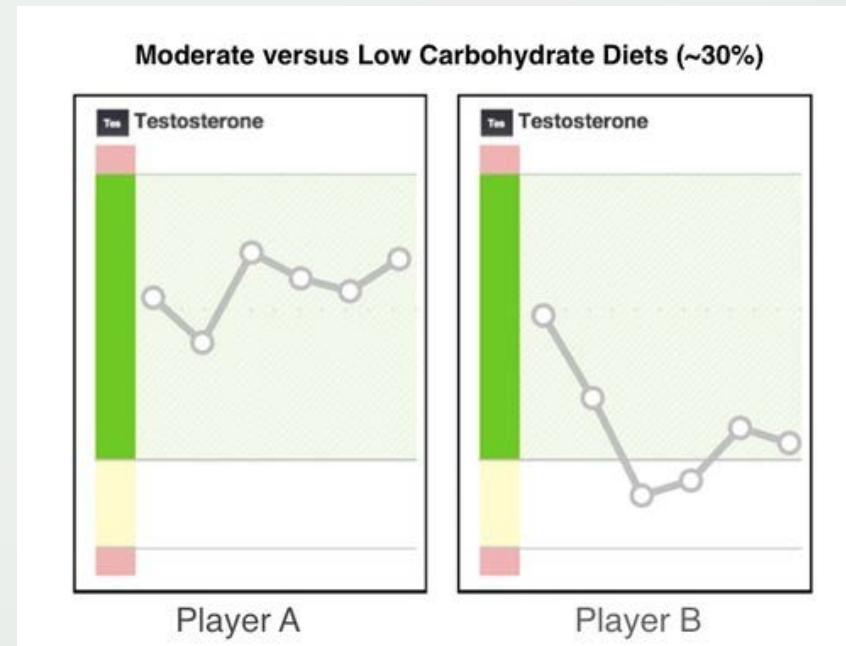
High Risk	> 8,1
Normal	3.3- 8.1
High Risk	< 3.3

Low-carb High-carb



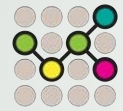
Why are carbs needed?

- Carbs help balance anabolic and catabolic processes
- Athletes need carbs to counteract fatigue and overtraining
- ***But: Carbs also increase SHBG, which binds active T***



Graph from a recent article by Gil Blander, Founder of InsideTracker

One month with frequent tests



Free Testosterone (blood serum)

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Risk Ranges *pg/ml*

High > 27

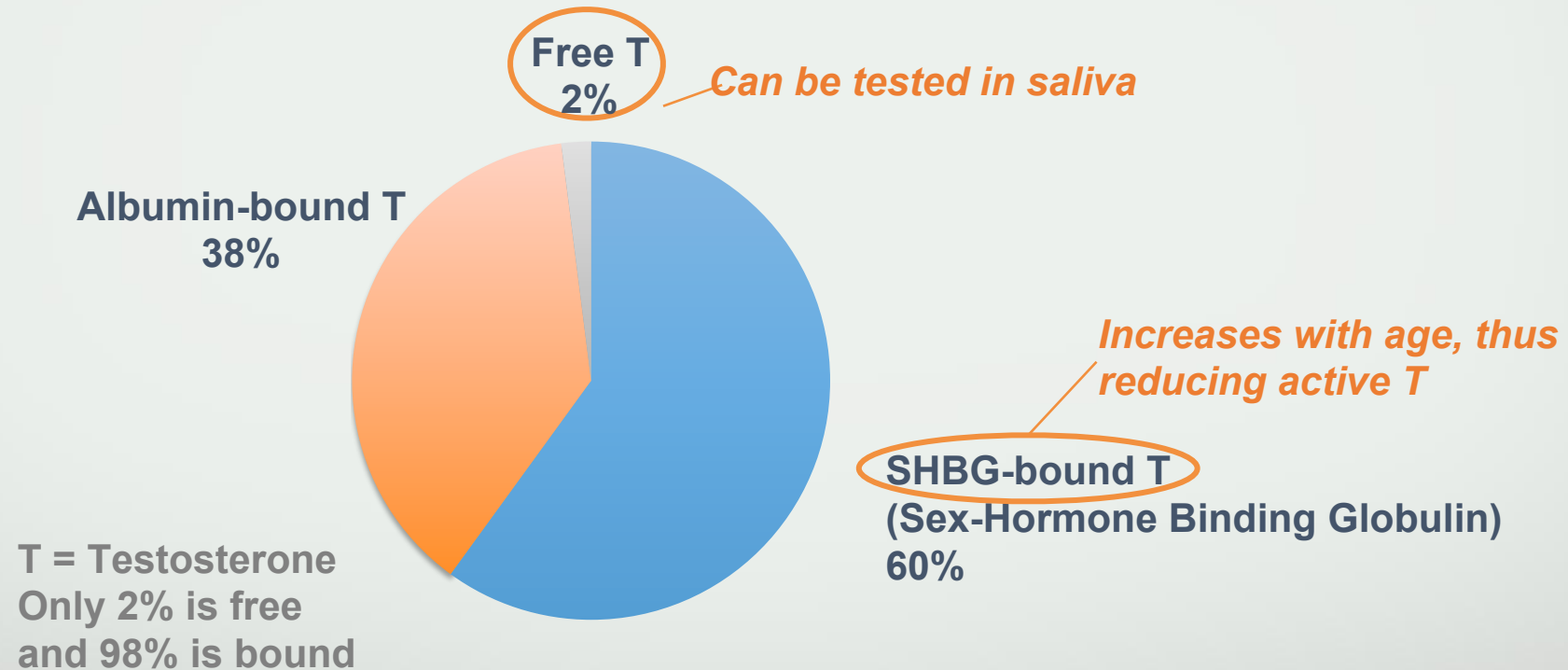
Normal 8.8 - 27

Low < 8.8



Only about 2% of Testosterone is active

Testosterone fractions in the blood of a healthy male

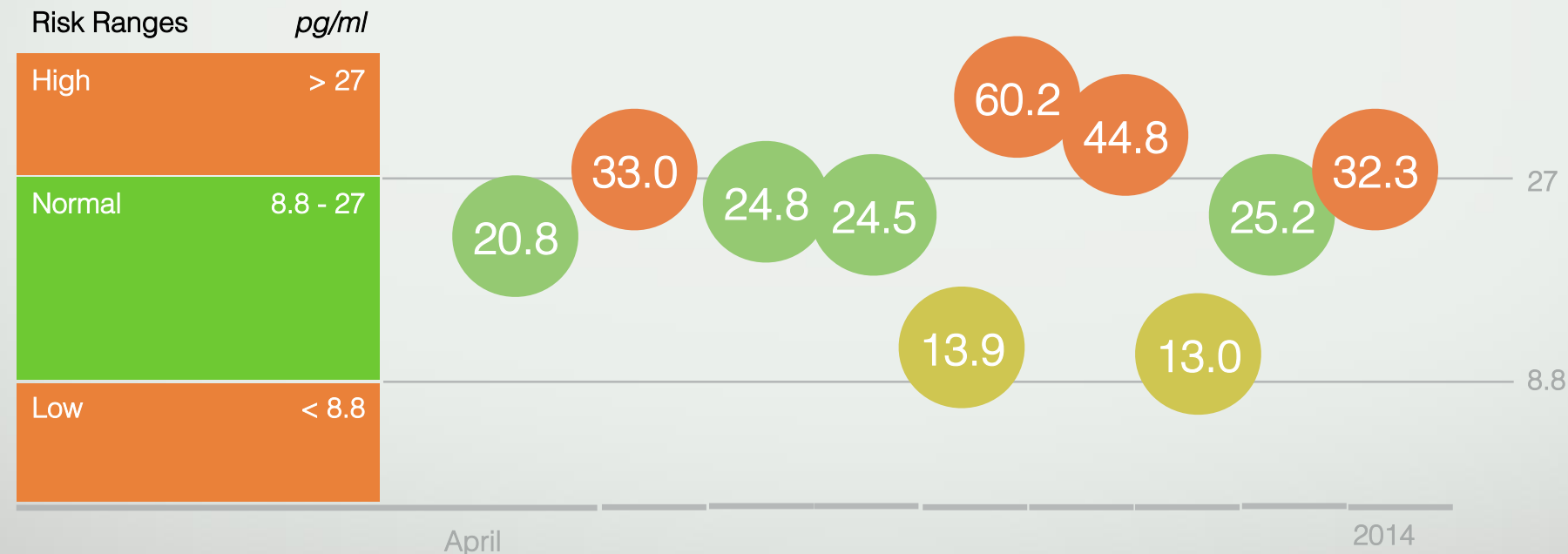


Free T fluctuated significantly

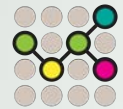


Free Testosterone (blood serum)

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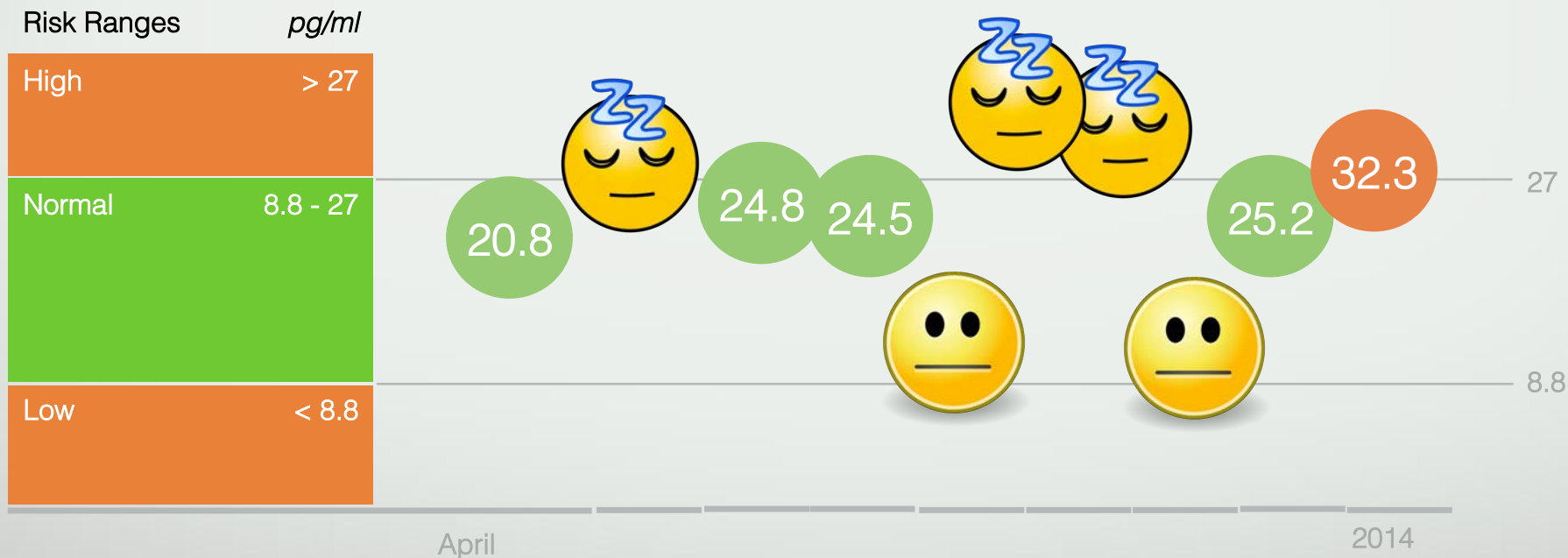


T increased after a good night of sleep

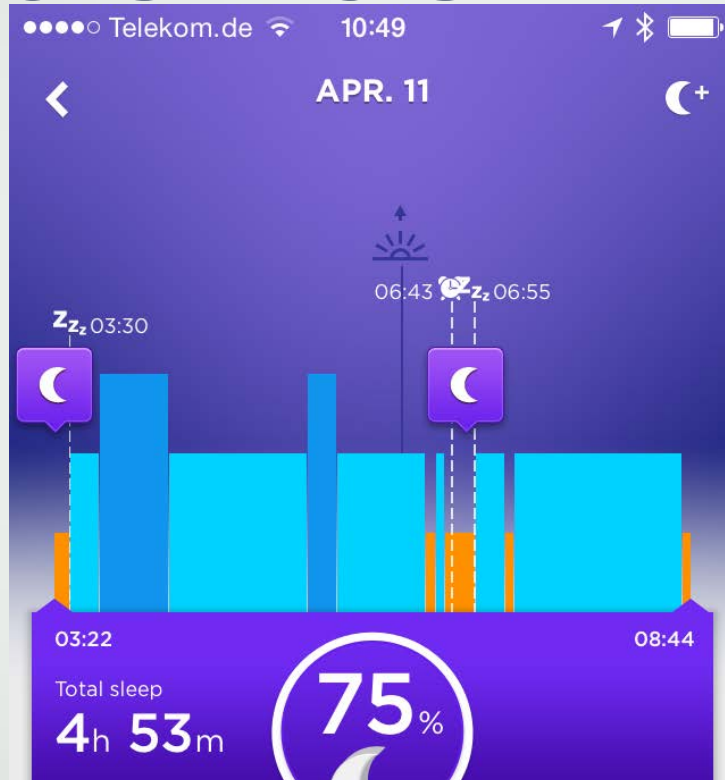


Free Testosterone (blood serum)

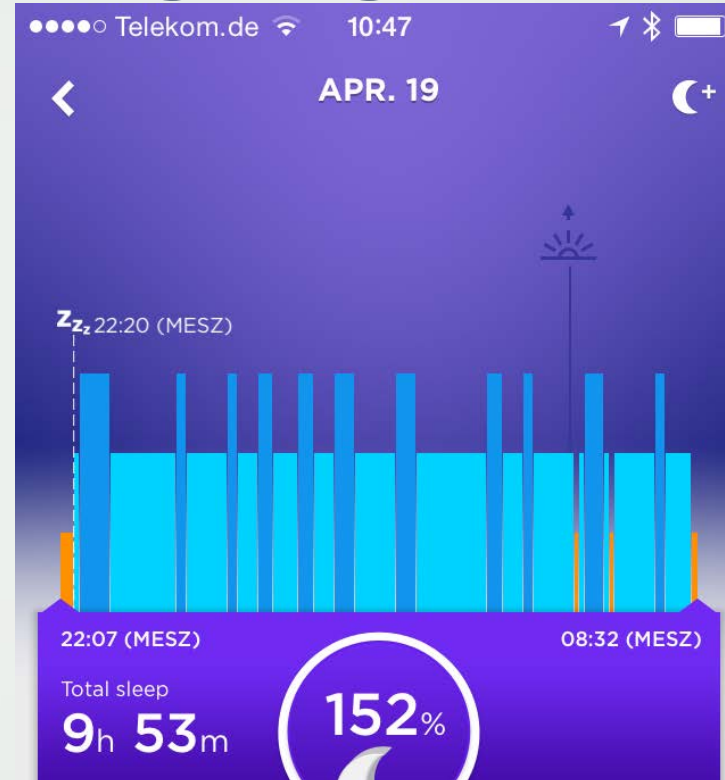
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Stress and sleep did influence my T-level



24.5 pg/ml



60.2 pg/ml

Free T fluctuated significantly



Free Testosterone (blood serum)

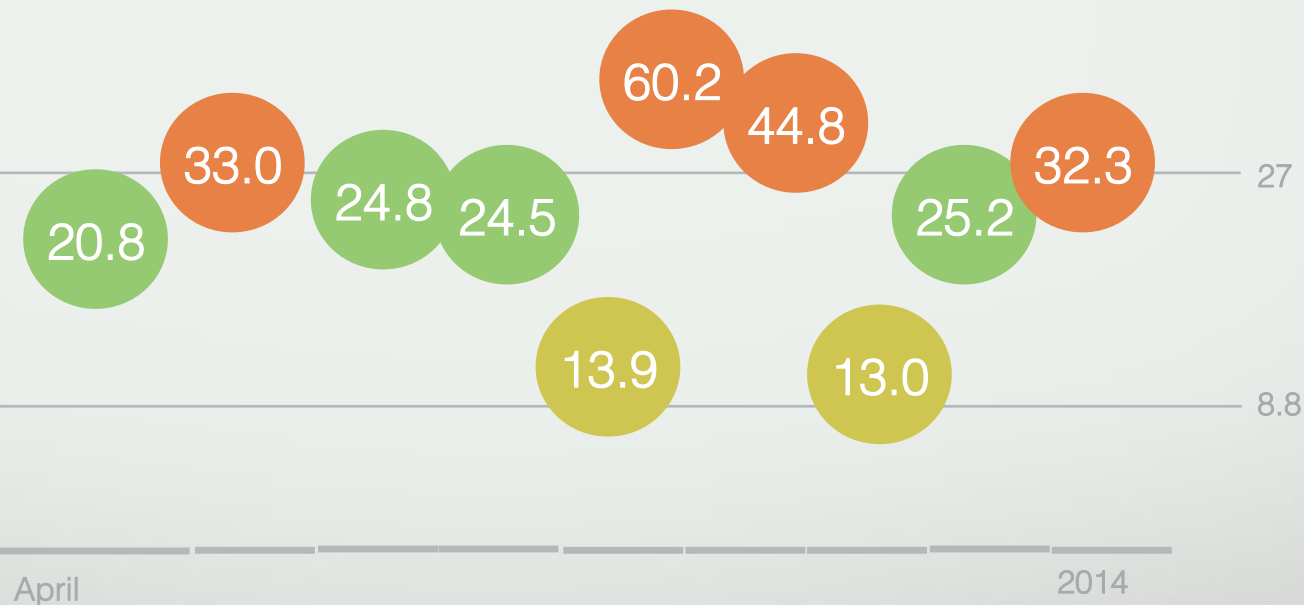
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Risk Ranges *pg/ml*

High > 27

Normal 8.8 - 27

Low < 8.8

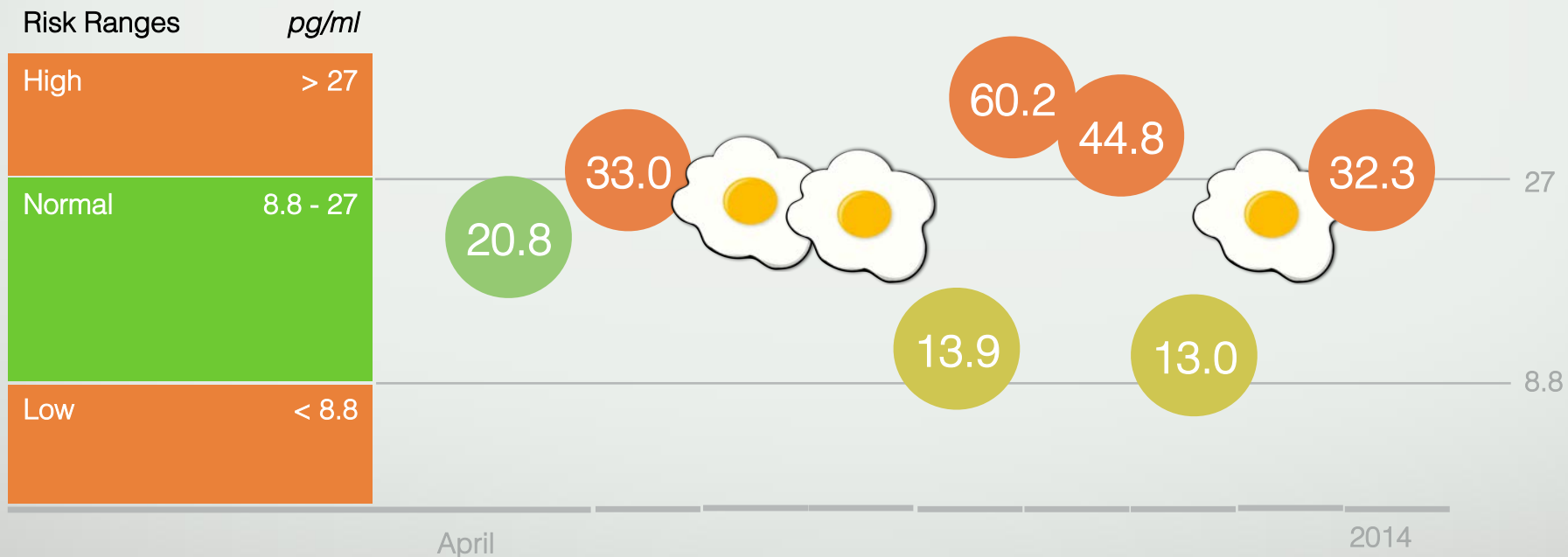


Extra cholesterol did not increase T

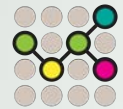


Free Testosterone (blood serum)

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Mood was better on days with high T



Free Testosterone (blood serum)

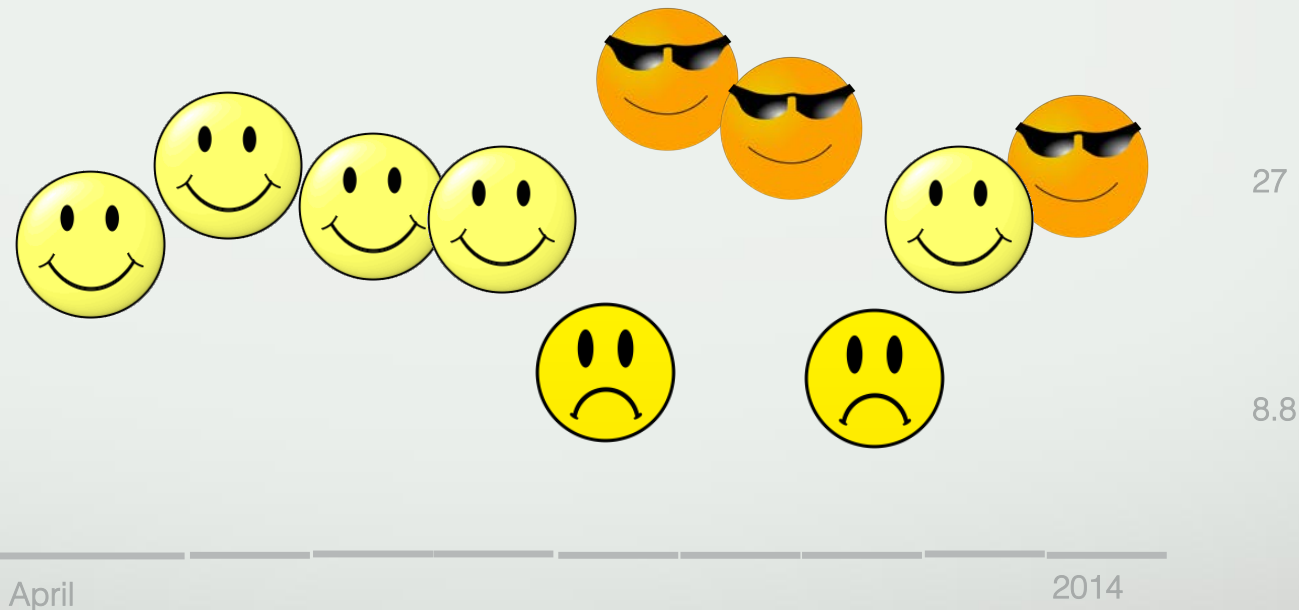
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Risk Ranges *pg/ml*

High > 27

Normal 8.8 - 27

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For me, testosterone is...

*...a very good indicator and
important ingredient for a good
day...*

*...but it didn't turn me into
Wolverine.*

Wanna improve upon your biomarkers?



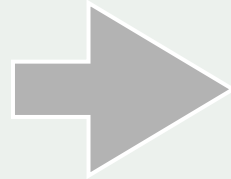
Health upgrades with biomarker analytics

www.biotraker.com

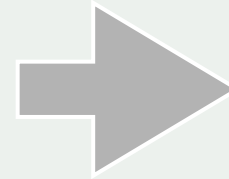
How it works



Easy Dry Spot Test at home



Analysis and visualization on your Biotraker profile



Personalized recommendations and cutting-edge health advice

Thank you

Reach out!

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...and come to my office
hour at 3PM :)