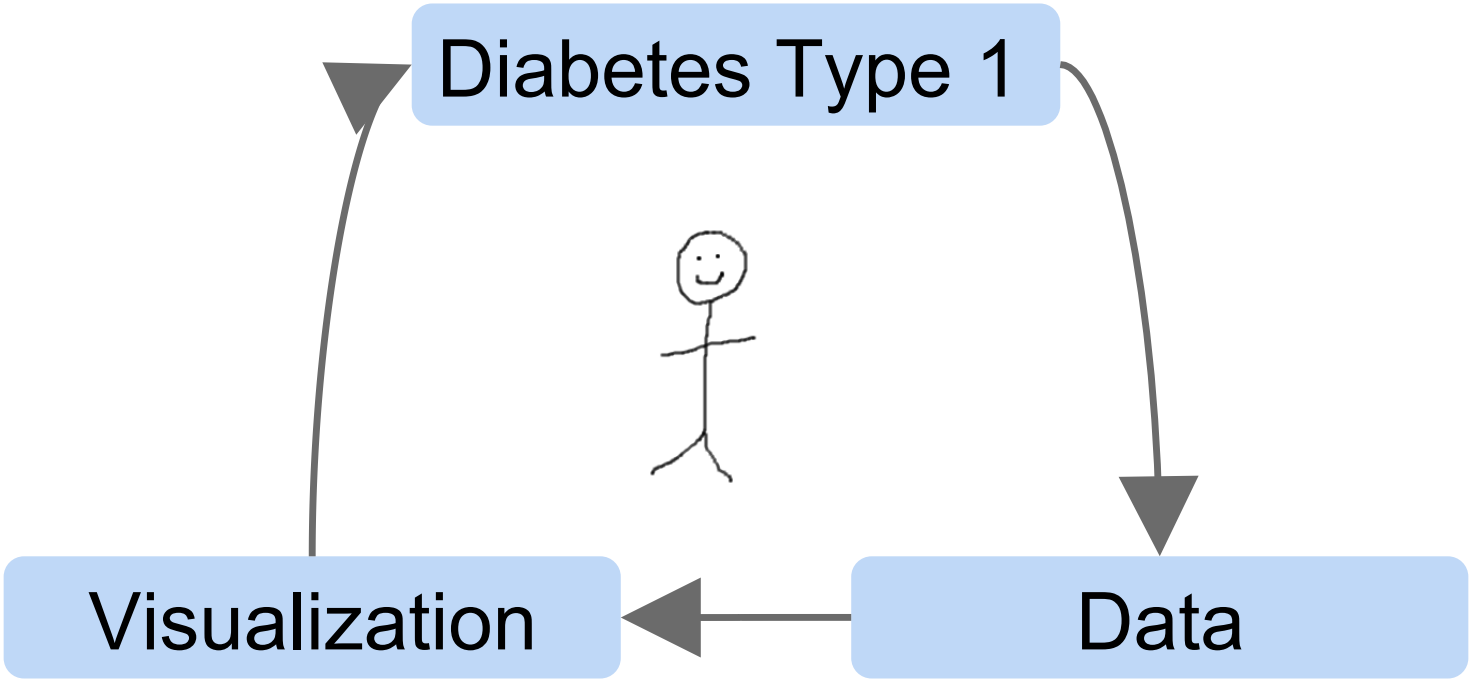
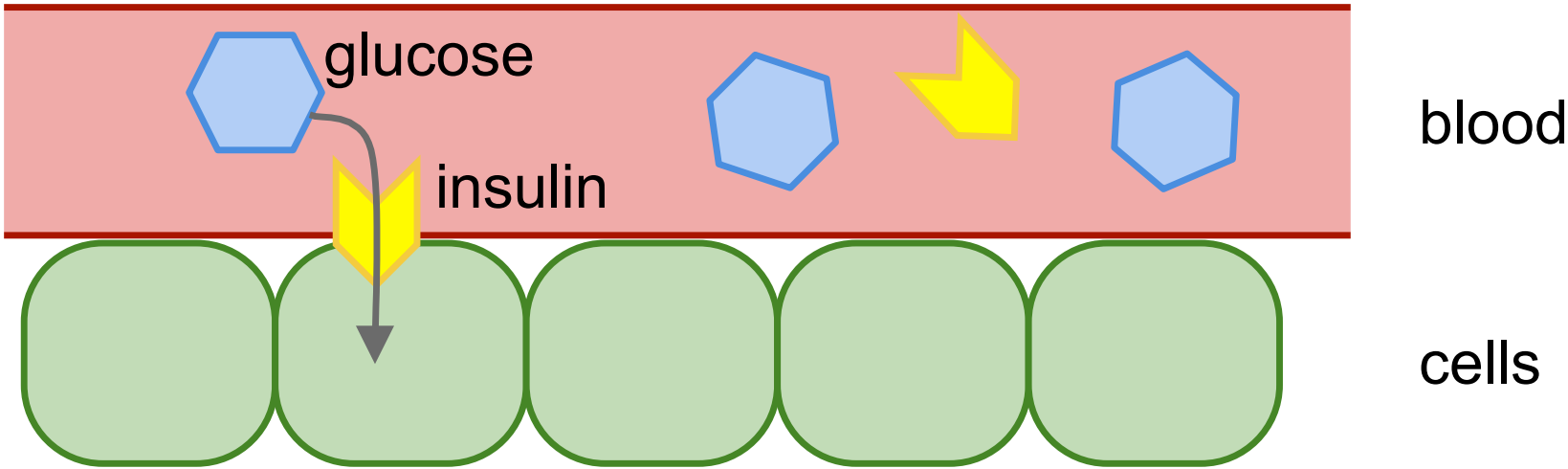

Diabetes Type 1
Data
Visualization

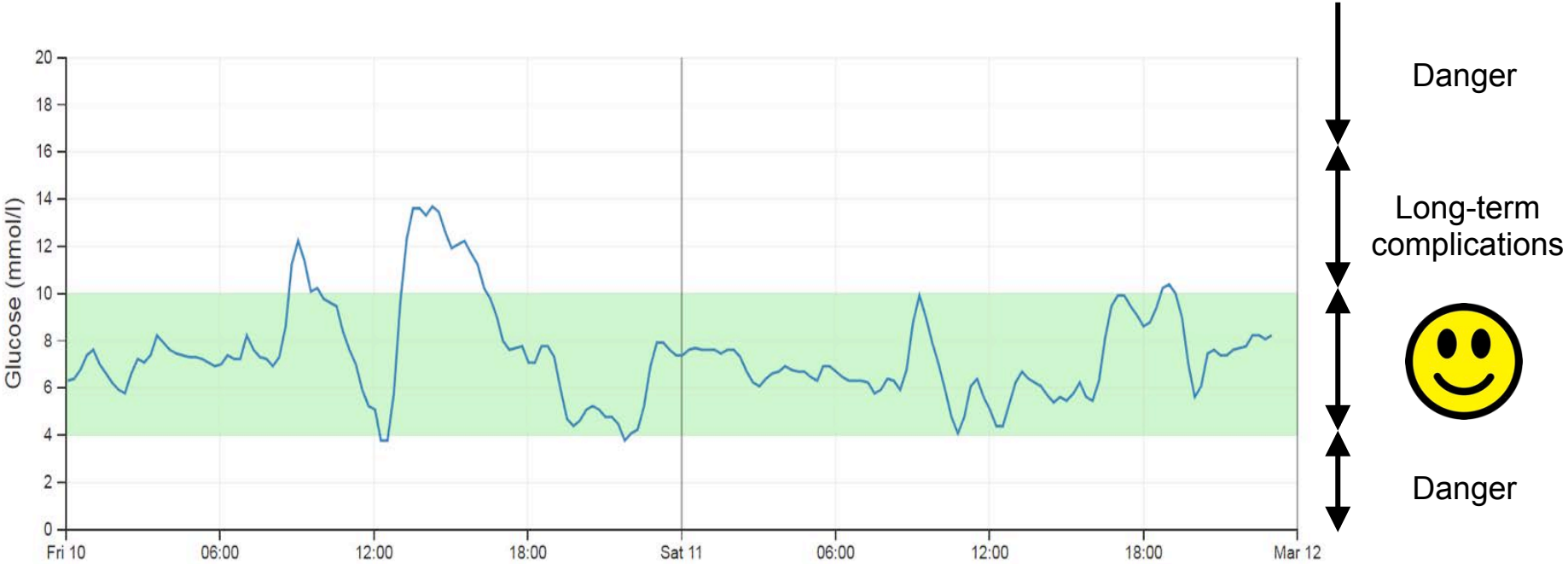

glucose
insulin
blood
cells

Self-management

Insulin by injection or pump

Measuring glucose levels

A careful balance



Factors affecting glucose levels

Current glucose level

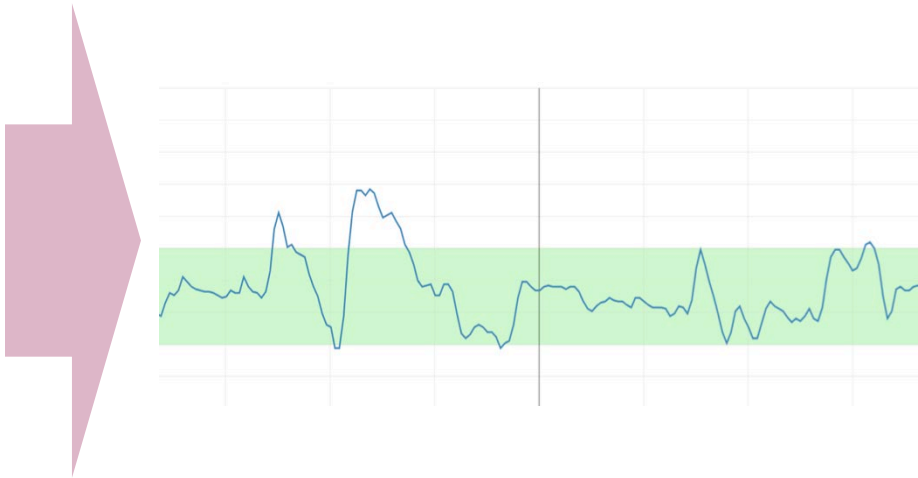
Available insulin, which is influenced by

- Amount injected
- Location and state of injection location
- Environment temperature
- Contingencies (air bubbles, leakage, etc.)

Food intake

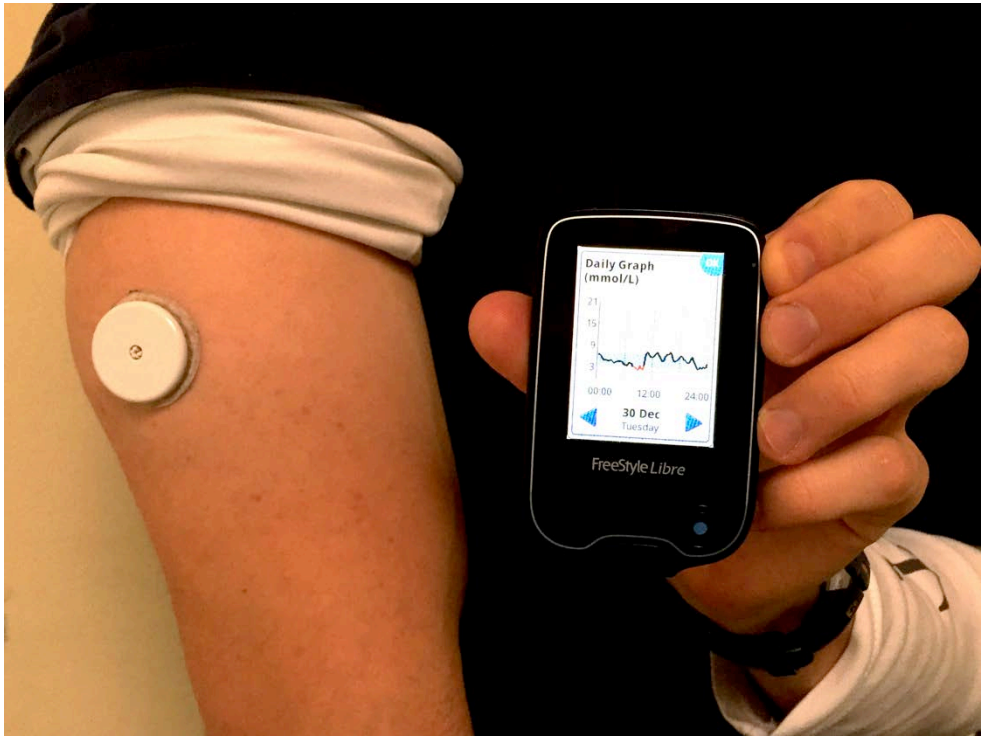
- Carbohydrates
- Food composition

Exercise (Short & long-term effect)



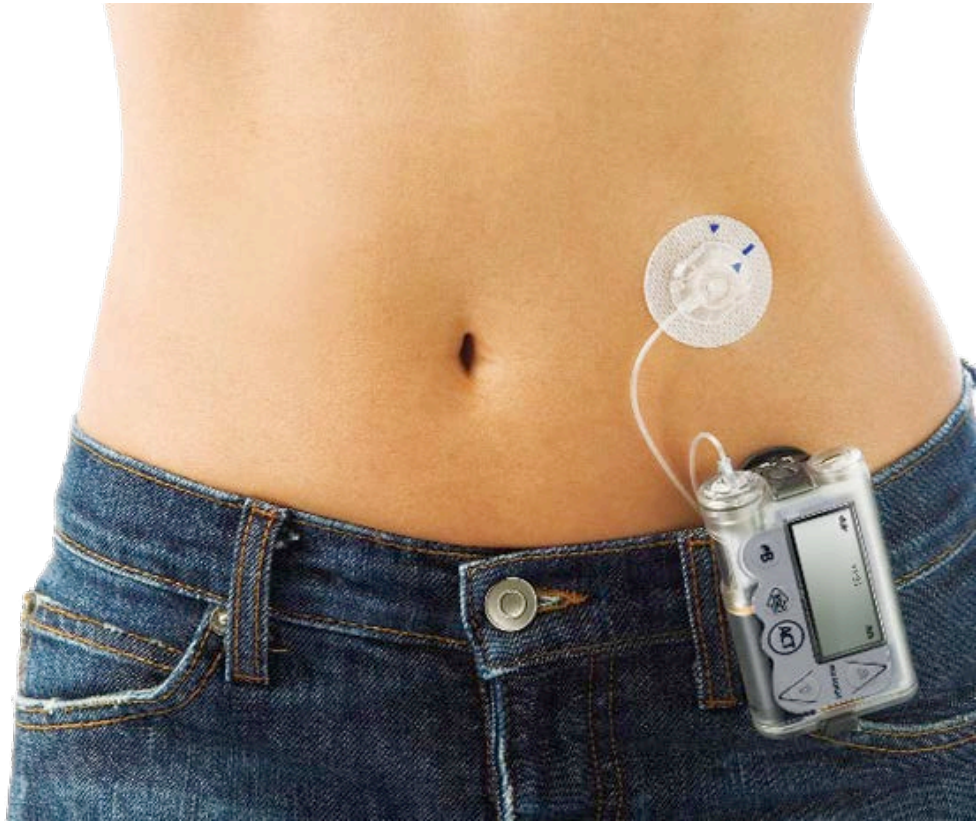
Glucose sensor

Freestyle Libre (Abbott)



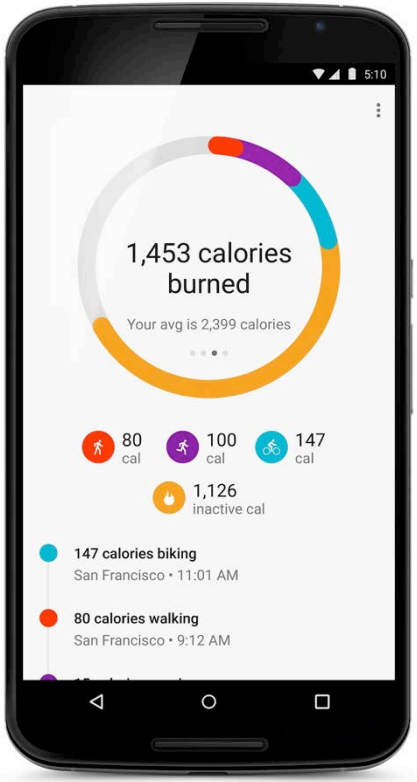
Insulin pump

Minimed Veo (Medtronic)



Activity tracker

Google Fit



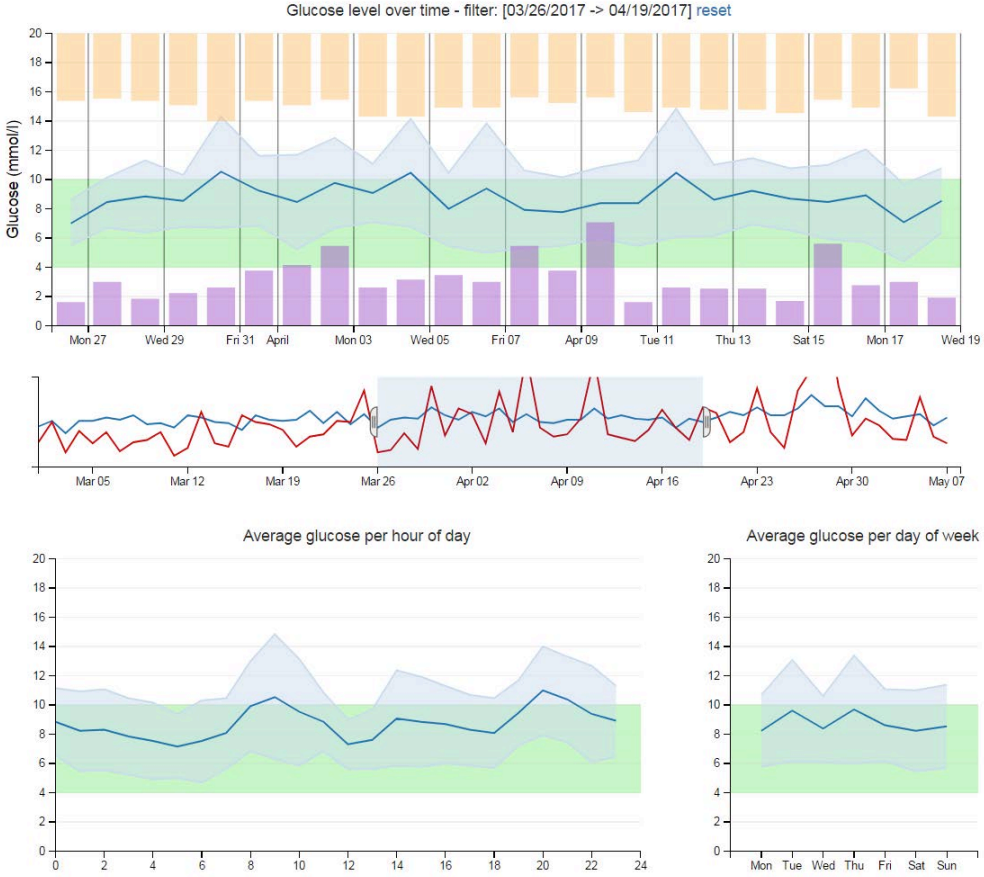
Custom web “app”

Bring together data sources

Explore data

Discover patterns

Make decisions based on data



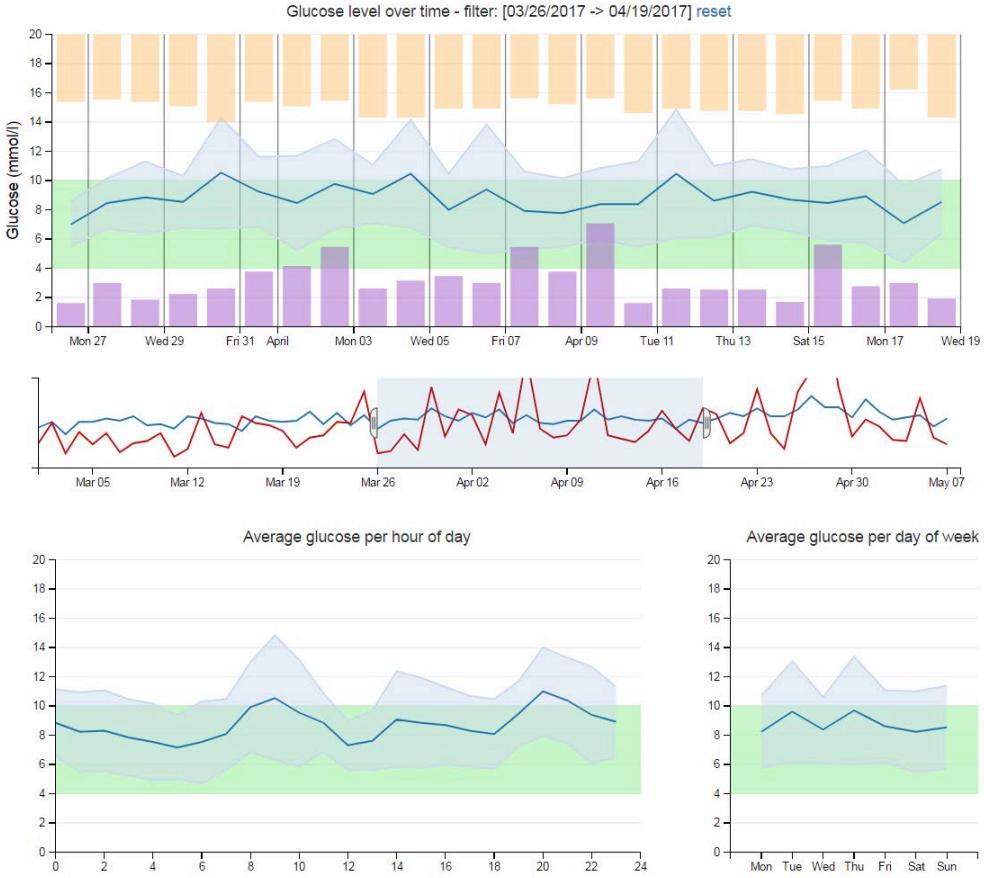
Demo (Chrome & Firefox):
http://www.sharkwing.com/gc

Custom web “app”

Plain javascript

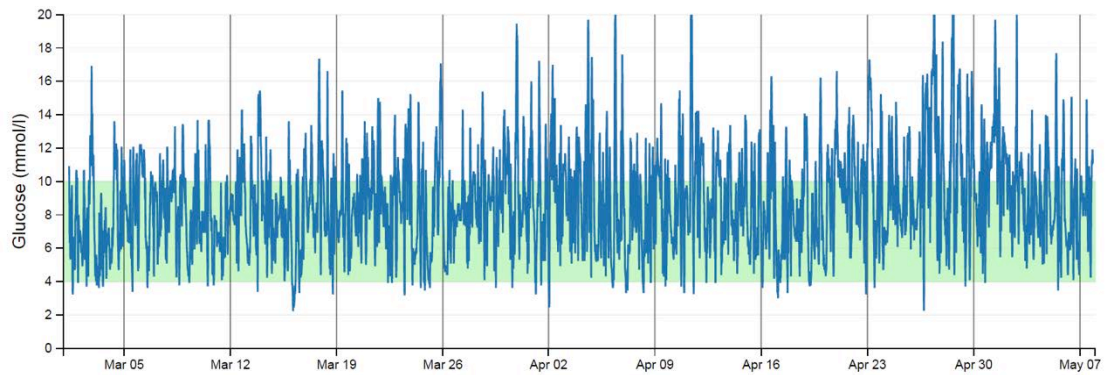
Runs in browser
(currently Chrome & Firefox)

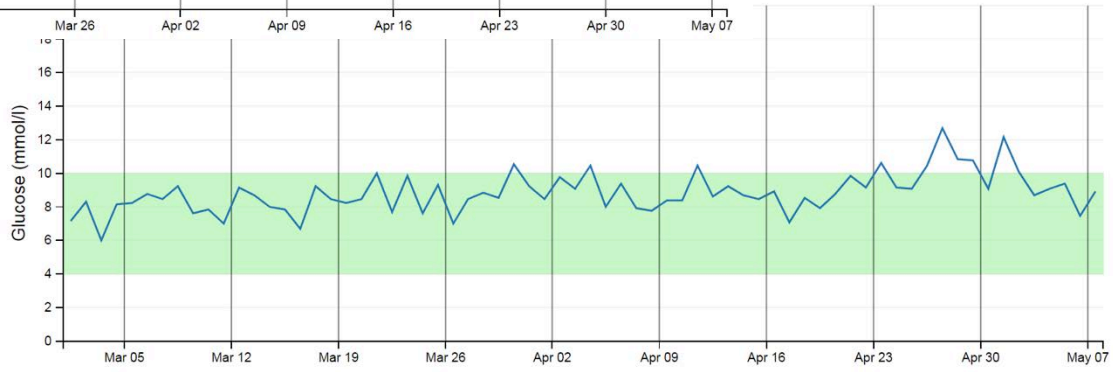
Using dc.js (d3 + crossfilter)

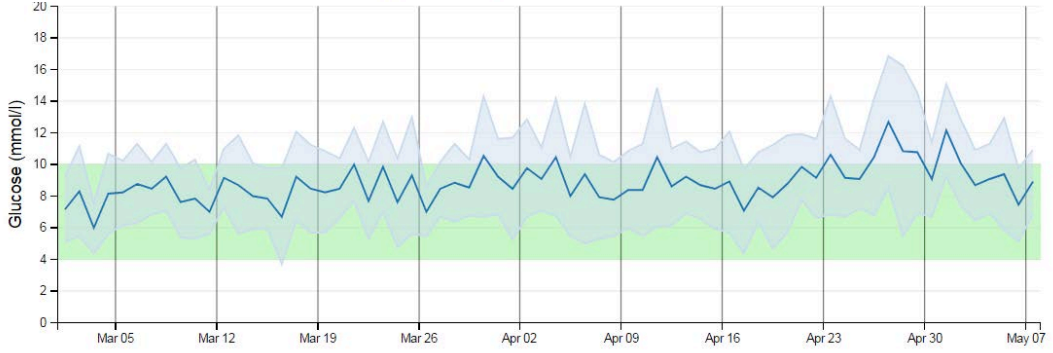


Demo (Chrome & Firefox):
http://www.sharkwing.com/gc

Aggregation

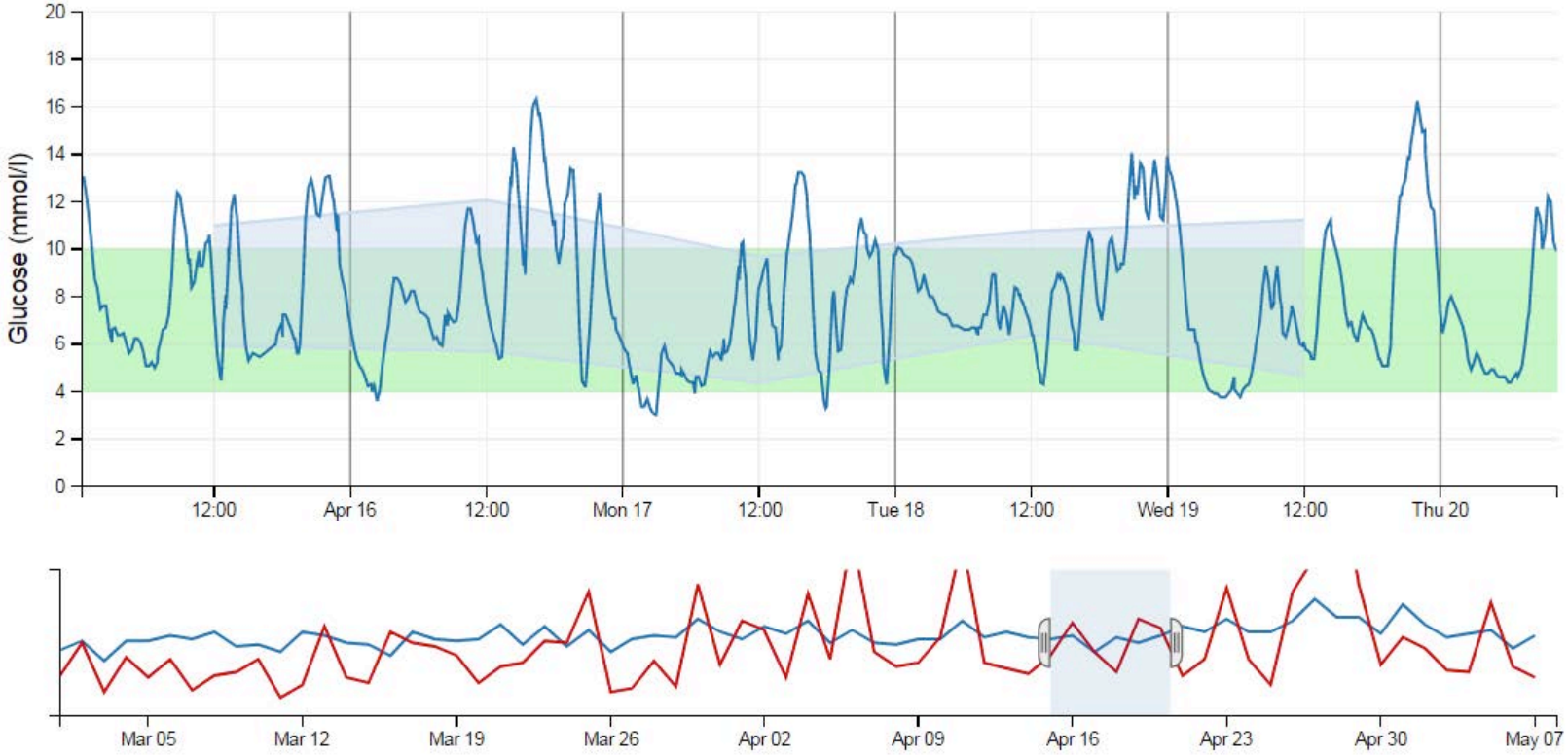




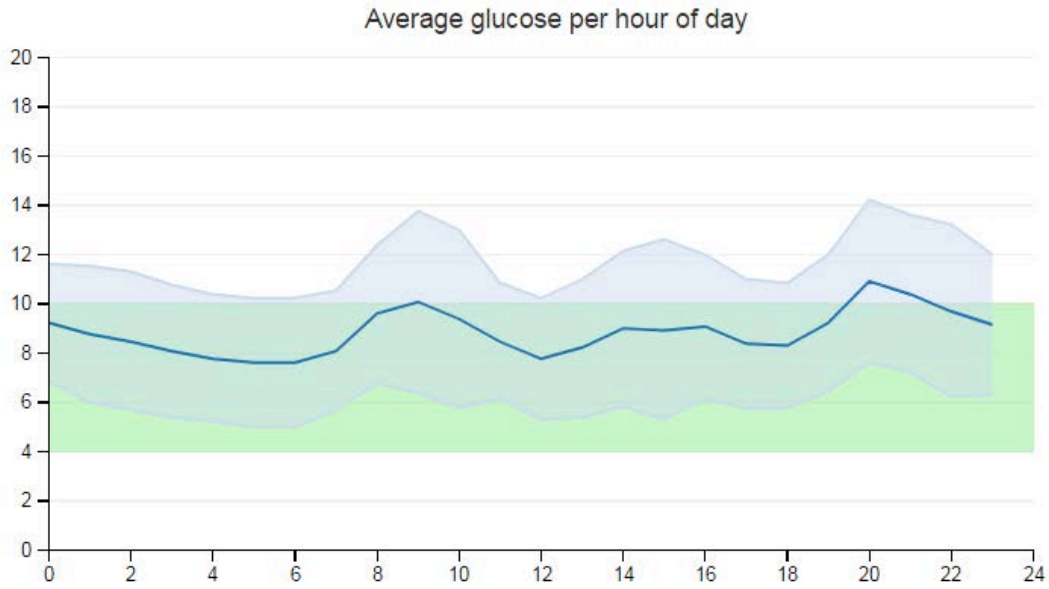


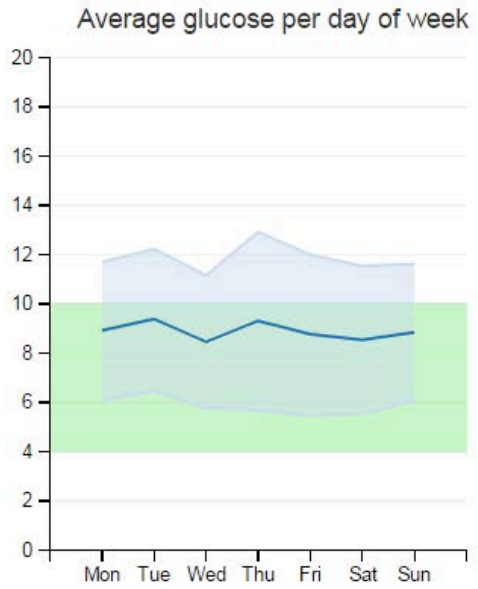
Zooming & level of detail

Focus & context

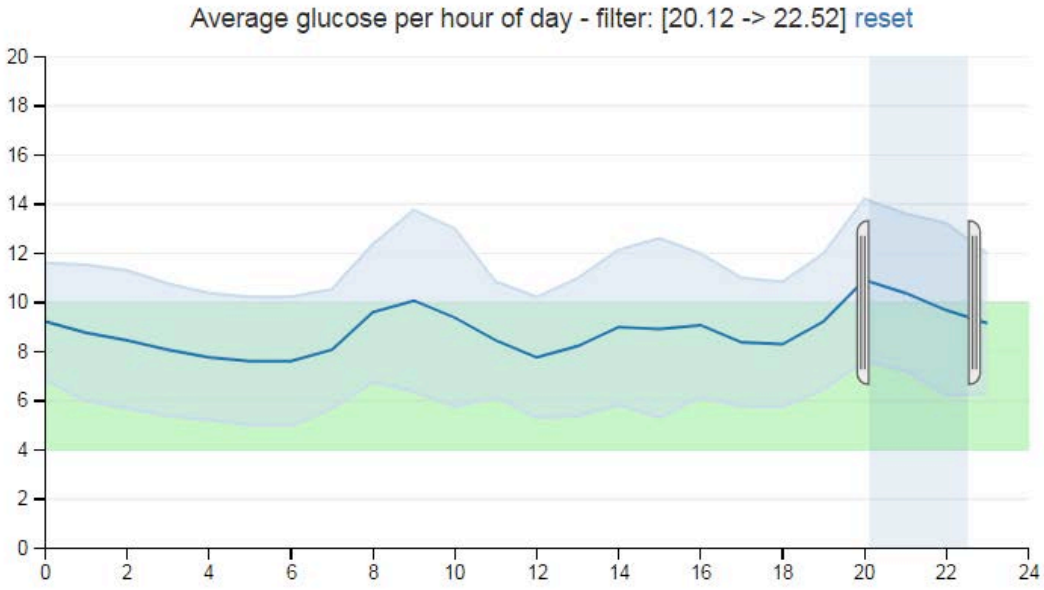


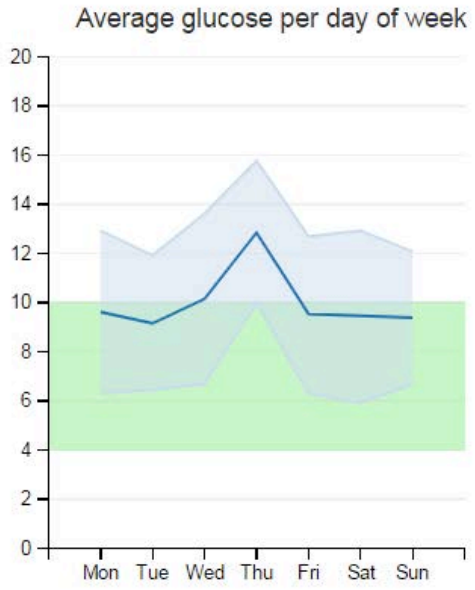
Aggregate over day and week



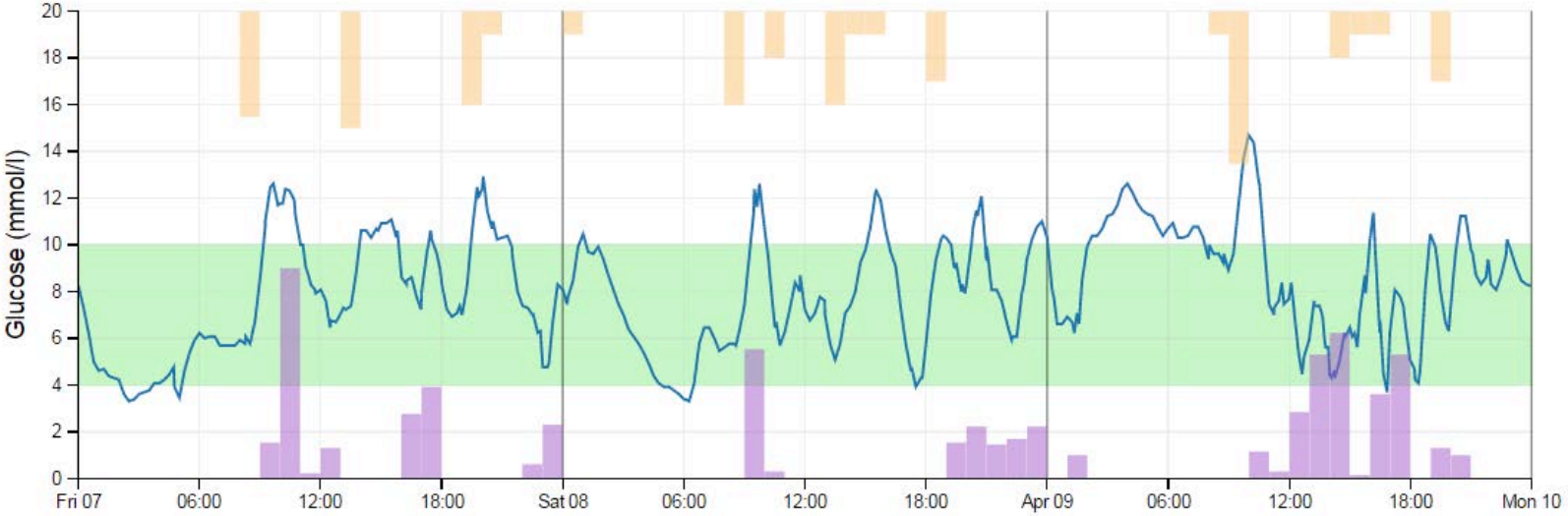


Aggregate over day and week





Activity & insulin



My wish list

Include more variables

Select and aggregate data based on a query

Automatically detect patterns

Give advice based on the patterns that work best

Automate synchronization of data sources

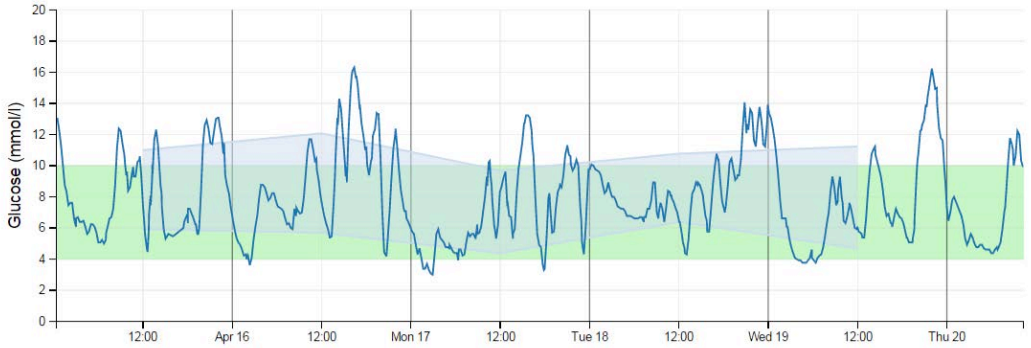
Effects on my diabetes

Being able to identify patterns

Make changes in my approach and lifestyle

Effects on my diabetes

Being able to identify patterns

Make changes in my approach and lifestyle

But also: motivation