Case Study 1.3: Jumpy CGM V 2.0

Incidences of erratic CGM - what that may do to your FCL
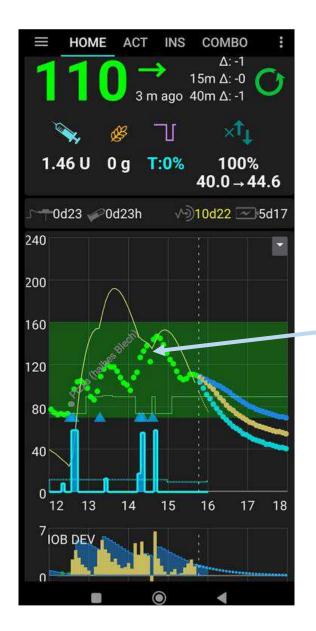
One jumpy value in late phase of digesting Pizza triggers (too) big SMB
Bernie   08 Aug 2023   12-17h

Case Study 4.1 discusses this entire pizza meal. Here we like to look only at the 14:33 (compression?) low CGM value followed by a significant fake acceleration noticed 14:38 = 02:38 PM which triggered a significant SMB of 1.7 U:

To get nice size SMBs at detected strong acceleration, and to run fully automatically <u>without</u> setting EatingSoonTT, I have an Automation that sets TT=74 mg/dl for 26 minutes

15 immediately when strong acceleration is detected. Shooting towards that low temp. target

16 contributed to the SMB size.

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18 The additional insulin due to the **„fake" strong rise made the situation risky** with respect

19 to going a bit too low between 17 and 18 h, and I had to watch out whether I need a snack,

20 or whether I just reach a nice low starting bg for my upcoming dinner.

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22 Avenues to avoid the problem could be:

23 • First and foremost, make sure the principal quality of your CGM values are of good

24   quality- See section 1.2.

25 • Build in more „quality control": What is your loop is allowed to see as a sudden

26   acceleration („logical pattern") in your bg curves?

27   Comparing the sequence of deltas (in my screen about +3 +3 -18 +21, or

28   comparing short-average-delta (=the average of the last 3) with the new delta

29   • (+3+3-18)/3= -4 compared to -18   or

30   • (+3-18+21)/3= +2 compared to +21

31   both point to an artefact, and you could build an Automation rule that captures

32   the cases you tend to occasionally have.

33 • Formulate an Automation that gives an alarm at any sudden strong drop; better yet:

34   that sets for ~ 10 minutes an odd TT, so no SMB could be devised at the expected

35   jump back up.

36 • Specifically, if you have nighttime compression lows, consider (1) different sensor

37   placement on your body (2) nighttime SMB shut-off using odd profile target ((see also

38   section 5.1.1)), or (3) use an over-case (3D-printed).

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43 Invitation to add other case reports, here or as an extra case study.
44 Please contribute also one that emphasizes utility of SMB-off at night