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2018 AADE Diabetes Educator of the Year
50 year Joslin Medalist

Clinical Professor
Baylor Scott & White
Peds Program Director



@sugarsurfing



/sugarsurfing

sugarsurfing.com

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1

I have no conflicts of interests to report

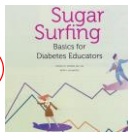
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2



Sept-Nov 2019

pdf available at sugarsurfing.com



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Free e-book offer for newly diagnosed



- ✓ For type 1 diagnosis < 90 days
- ✓ Go to sugarsurfing.com
- ✓ Or e-mail patsy@sugarsurfing.com

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5

Themes of this chat...

- 1) You can't manage what you don't measure.
- 2) Diabetes results are driven by choices and how frequently those choices are made.
- 3) Sugar Surfing is a skill, therefore it gets better with practice
- 4) Patience, consistency and resilience are core virtues

6



Silence the
"guilt monster"

7

Diabetes care must be individualized



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Diabetes care is about *CHOICES*

35,000 each day 12,775,000 a year



225 about food each day 82,125 a year

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Defining “Sugar Surfing™”

“Dynamic Diabetes Self-Management”.

Based on *frequent pattern management*

Blends heuristic and analytical thinking

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Points can define shapes

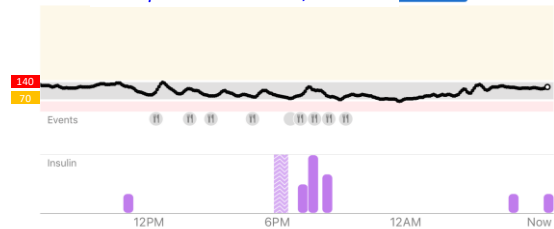
Constellation Ursa Major



11

September 20th-21st, 2019

24 hr



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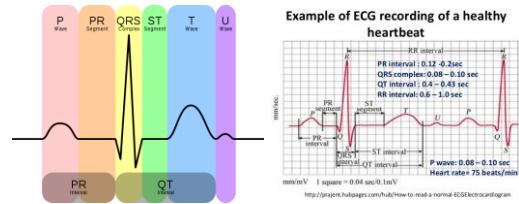
Shapes can be significant



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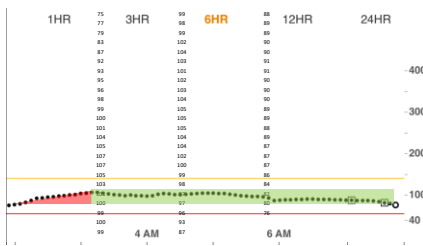
Shapes can carry valuable health information



Shapes, patterns, and intervals

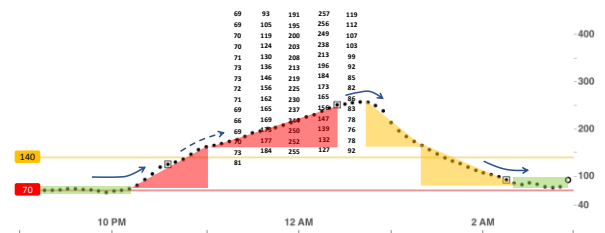
14

Same information, different format. Which is easier to understand?



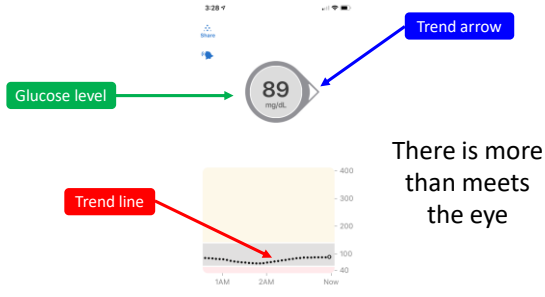
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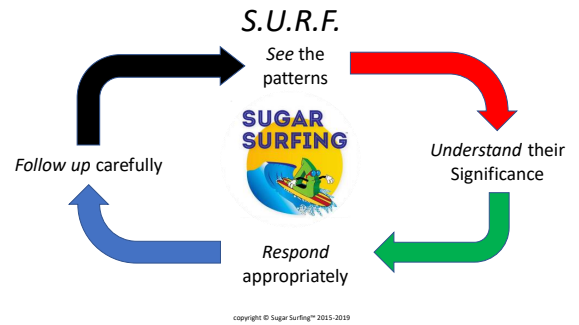


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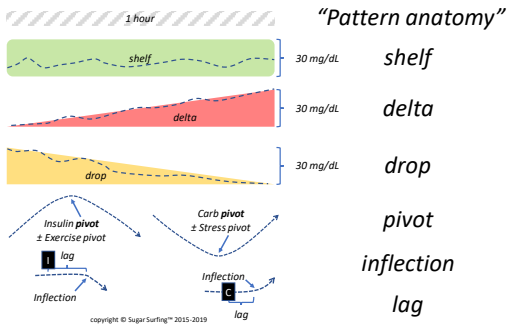
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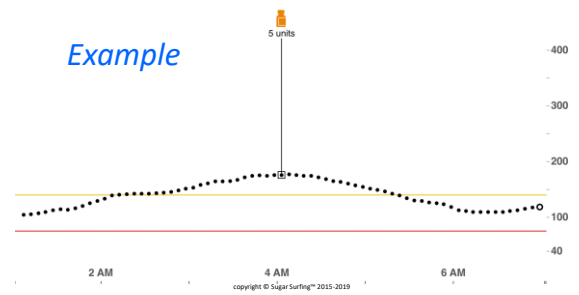
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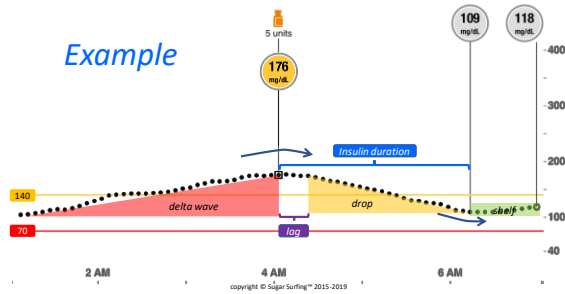


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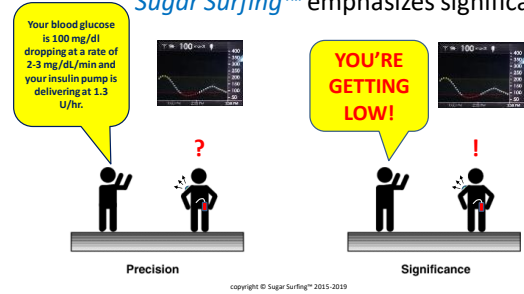
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Example



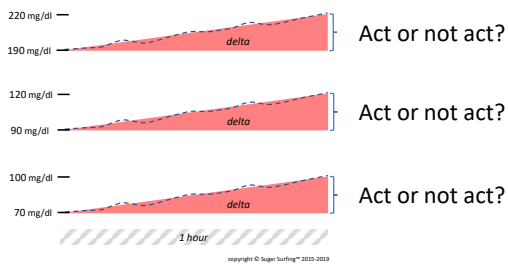
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Sugar Surfing™ emphasizes significance



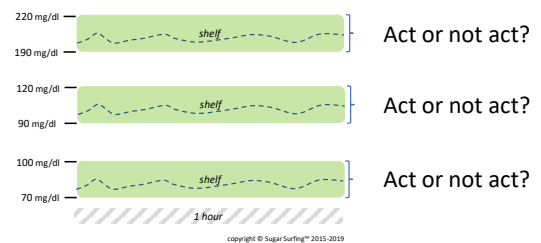
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Significance is situationally dependent



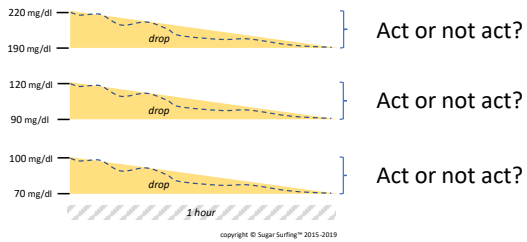
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Significance: patient determines

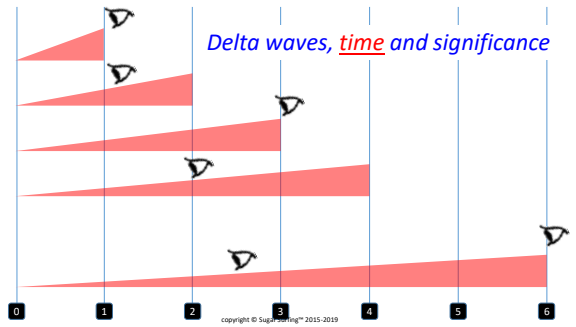


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Significance: patient determines



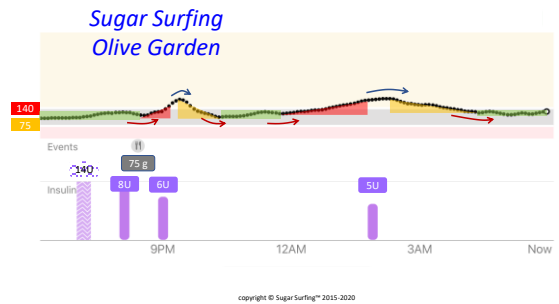
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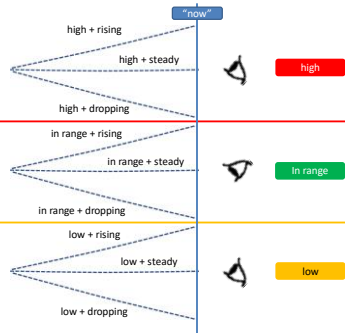
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28

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basic trending patterns



29

Determining significance: take **C.A.R.E.**

Current (what are you doing now)

Anticipated (actions/omissions)

Recent (actions/omissions)

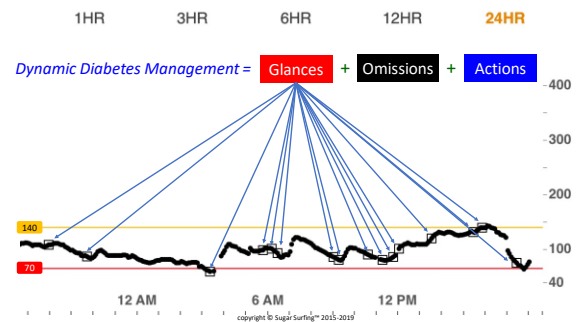
Experience (your own)

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30

Heuristics are simple, efficient rules used to form judgments and make decisions. They are mental shortcuts that usually involve focusing on one aspect of a complex problem.

31



32

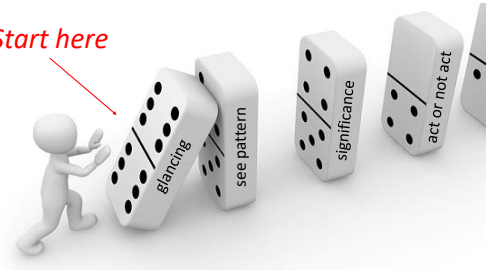
4 (maybe 3 now) Sugar Surfing prerequisites

- 1) Ya' gotta "glance"
- 2) Manage those alerts/alarms
- 3) ~~Calibrate your system carefully~~
- 4) Set a steady basal insulin effect

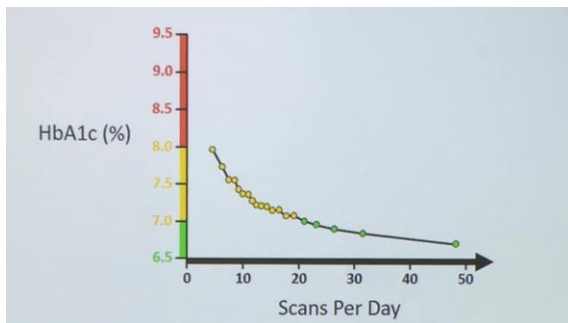


33

Start here

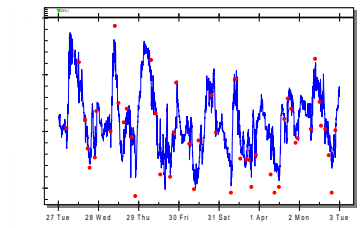


34



35

Appreciate the flux of sugar levels in non-d persons



36

In nature, no two waves are exactly the same

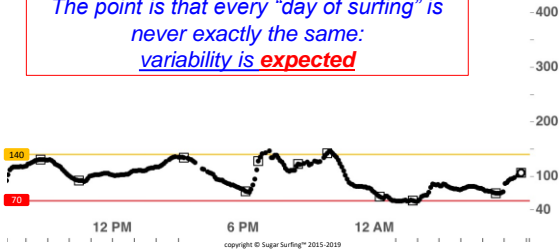


Blood glucose “waves” included...

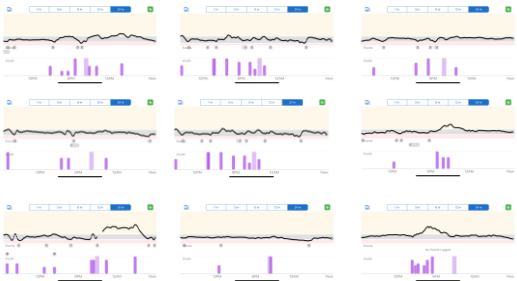
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1HR 3HR 6HR 12HR 24HR

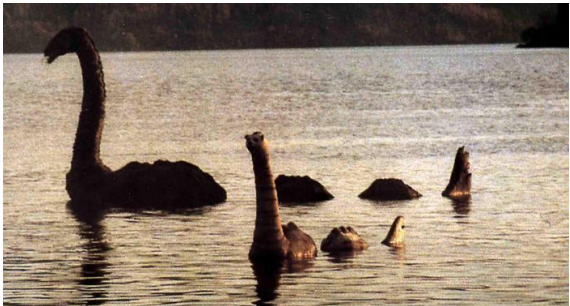
The point is that every “day of surfing” is never exactly the same: variability is expected



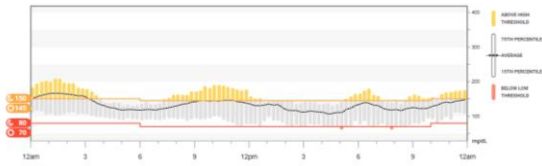
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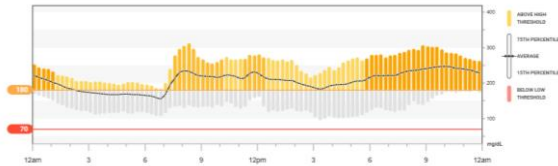
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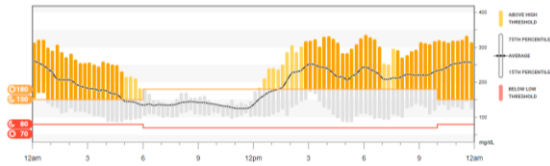
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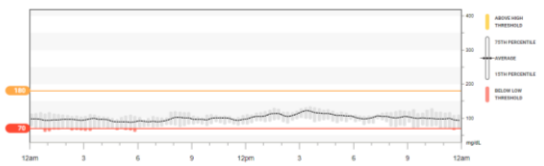
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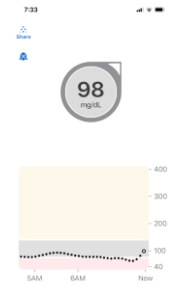
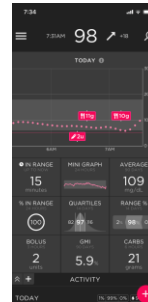


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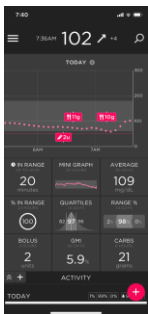
They say most people can keep up to 7 things in their head at one time

- So...create a glance/scanning "routine"
- Make the time to LOOK (more is better)
- 3 or 6 hour time windows work best
- Upon awakening, before meals or any change in activity, stress
- In time, you will "know"
- Attitude counts, this is to make you aware, not scare
- Blood sugars trends are facts, not judgments

45



46



47

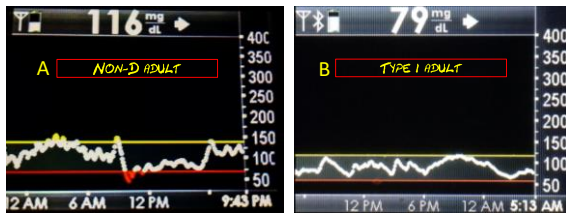
Which one uses an insulin pump?



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48

Which user is non-d?



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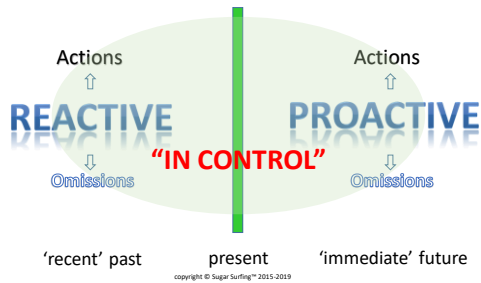
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50

How Sugar Surfing™ works...



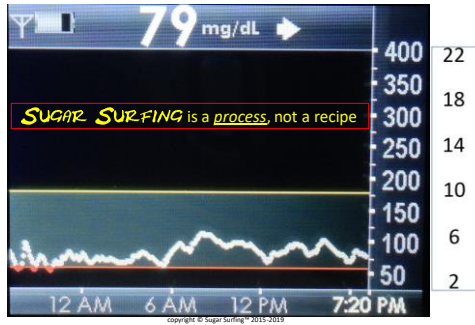
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51

Sugar Surfing exists at the intersection of....



52



53

"Sugar Surfing is about making choices 'in the moment'. It's NOT about what you choose to eat"

Stephen W. Ponder MD, FAAP, CDE

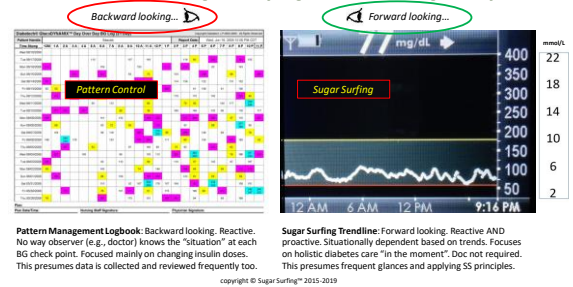
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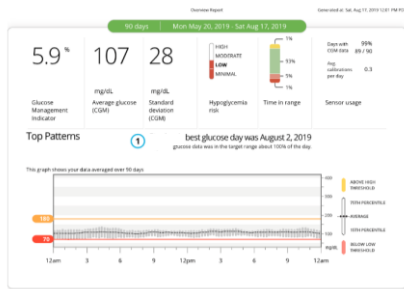
55

More reasons Sugar Surfing™ is a Paradigm shift

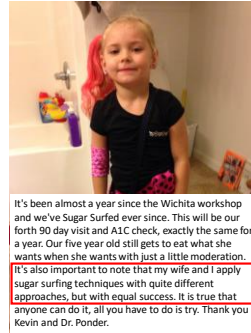


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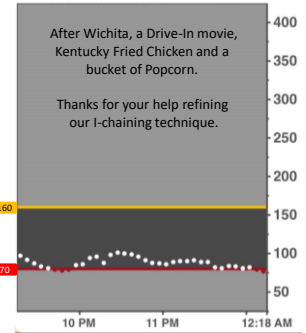
MDI



57



58



59

Sugar Surfing™ isn't about "controlling everything"

It's steering/influencing the trend in real-time

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60

What have we learned?

SUGAR SURFING



- It's *"Dynamic Diabetes Self Management"*
- aka *"Management in the Moment"*
- It's a *process*, not a formula
- How you take insulin is totally up to you (pump or injections)
- Surfing leverages dynamic thinking in proactive and reactive ways
- Sugar Surfing is a paradigm shift in d-care

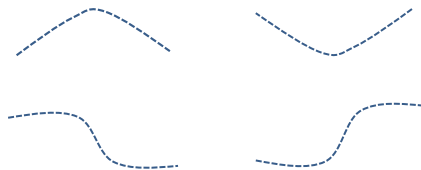
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61

BASIC SUGAR SURFING MOVES

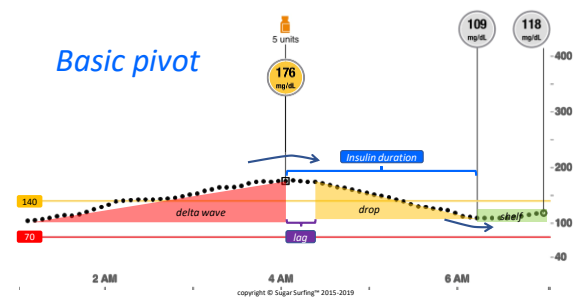
62

The 4 “core” Sugar Surfing moves



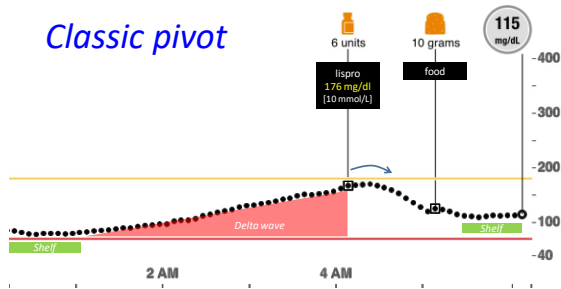
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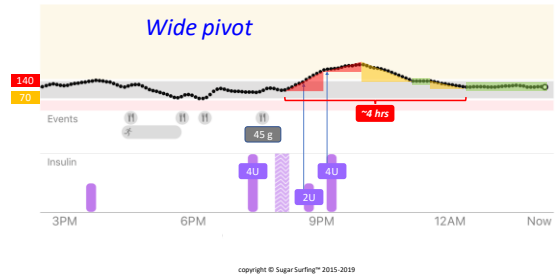
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Classic pivot



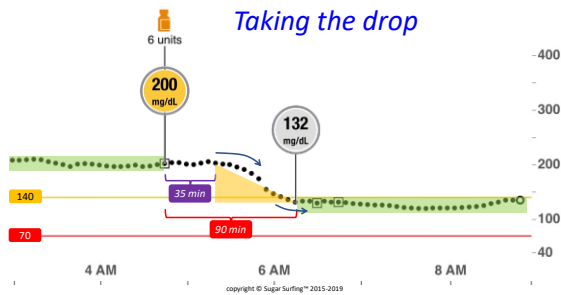
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Wide pivot



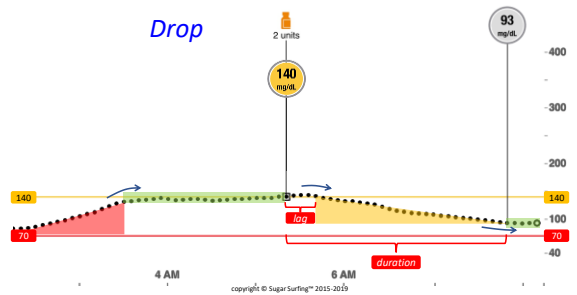
66

Taking the drop

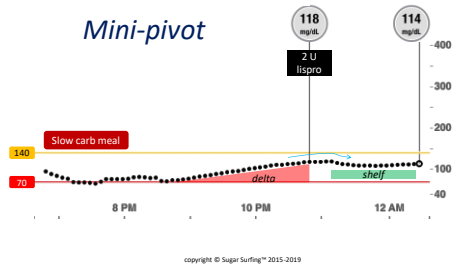


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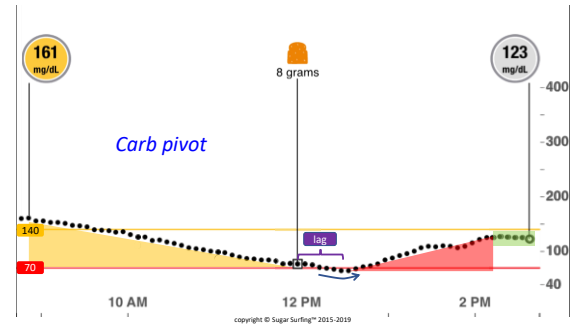
Drop



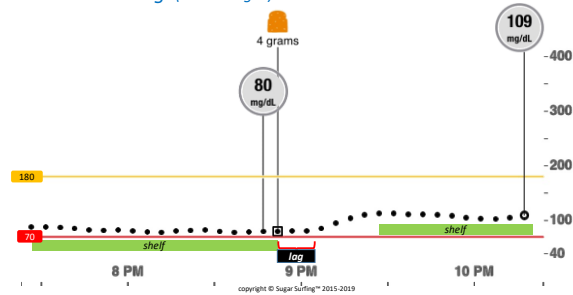
68

Mini-pivot

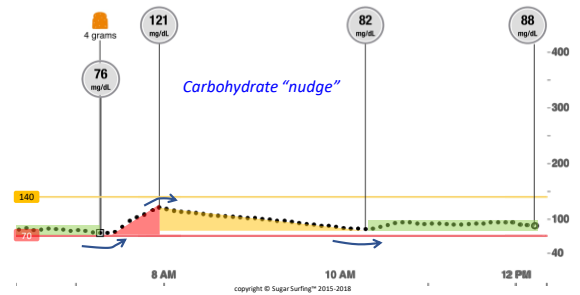
69

Carb pivot

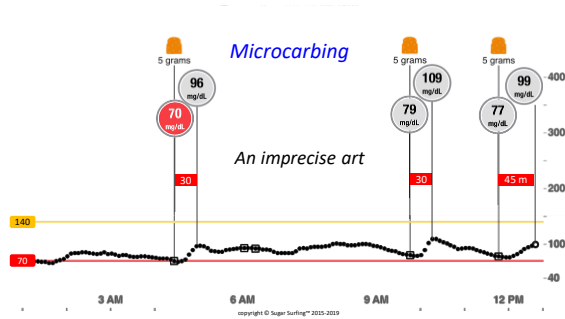
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Microcarbving (aka "nudge")

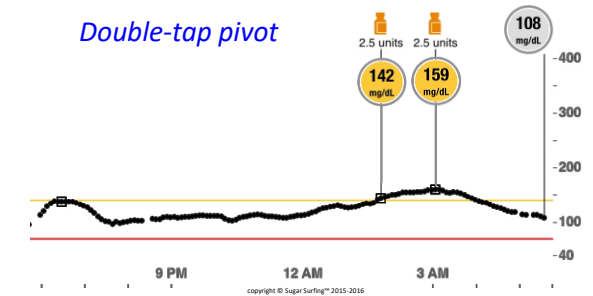
71

Carbohydrate "nudge"

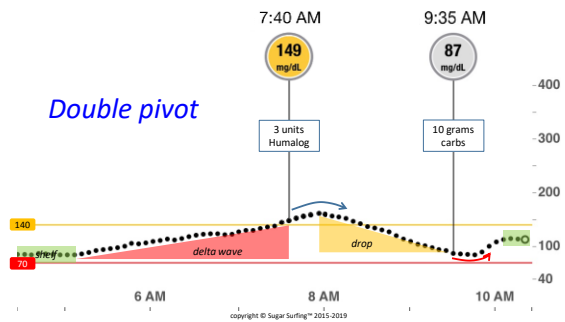
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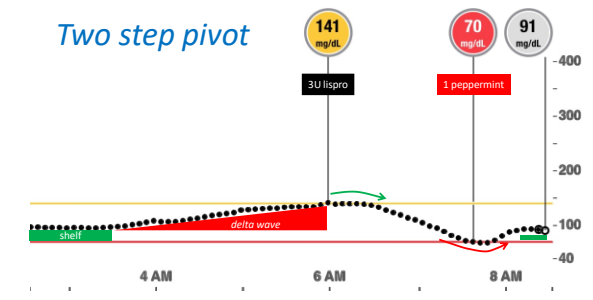
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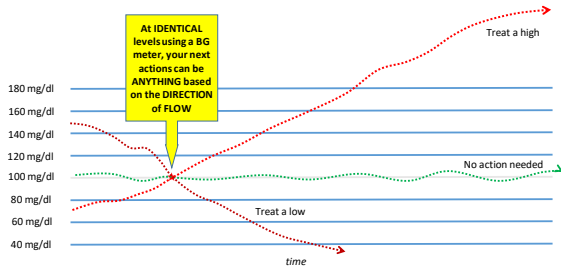
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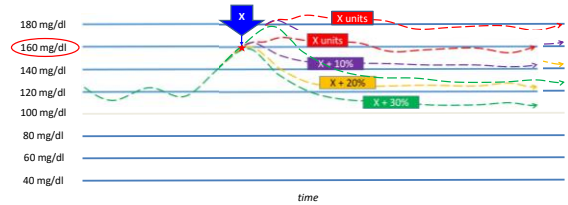


"Direction affects correction"

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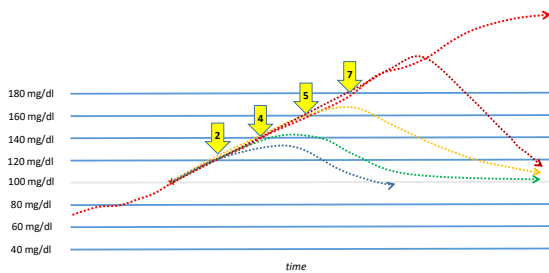
Practice *higher* dosing thresholds when first learning to pivot



Once comfortable, then *LOWER* the pivot action threshold

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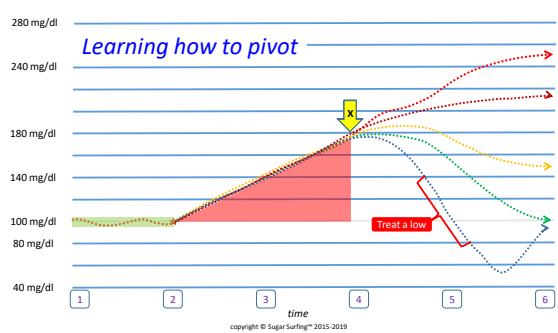
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Practicing *lower* pivot points can/will lower the flux
...and lower the A1c

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79



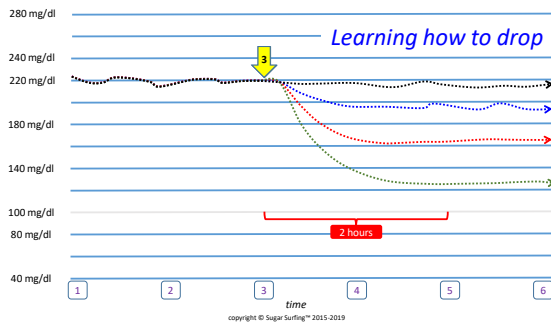
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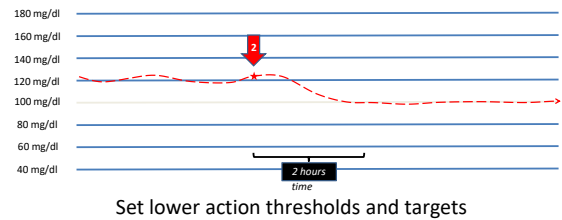


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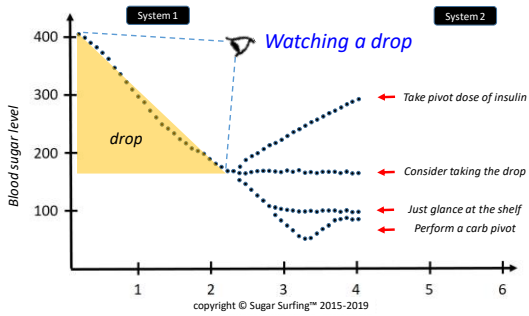


83

Then...as your *skills/confidence* grows...

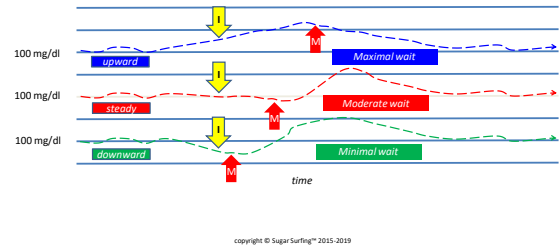


84



85

*Waiting for the bend and meal timing depends on BG trend
And it also depends on the food (fast, medium or slow)*



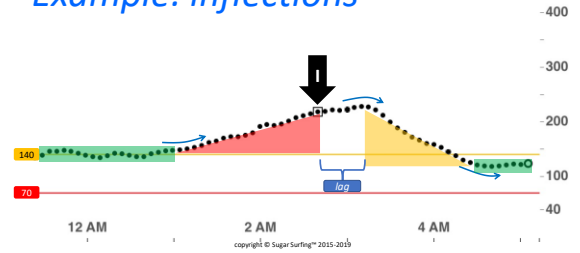
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*microcarb*ing...takes repetition to master



87

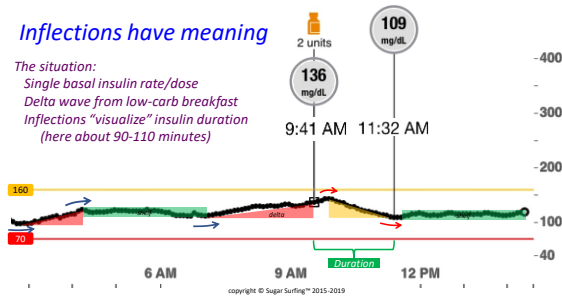
Example: inflections



88

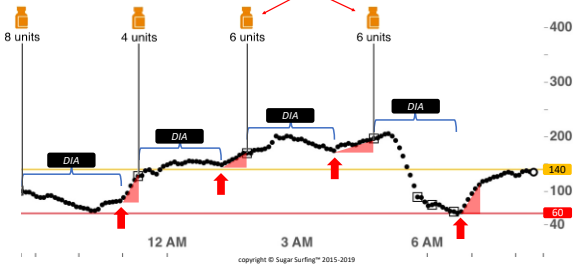
Inflections have meaning

The situation:
Single basal insulin rate/dose
Delta wave from low-carb breakfast
Inflections "visualize" insulin duration
(here about 90-110 minutes)



89

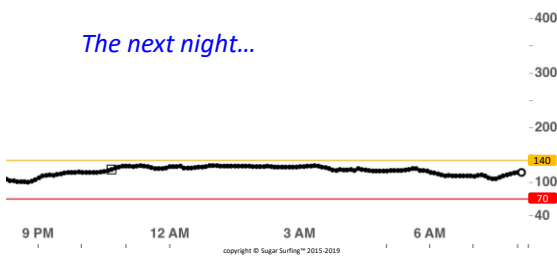
Why the different 12HR insulin responses?



90

1HR 3HR 6HR 12HR 24HR

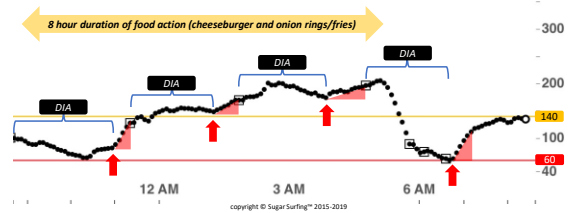
The next night...



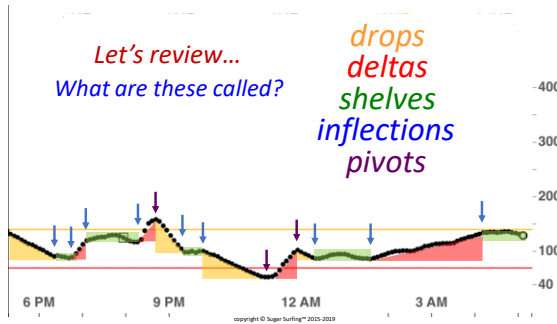
91

1HR 3HR 6HR 12HR 24HR

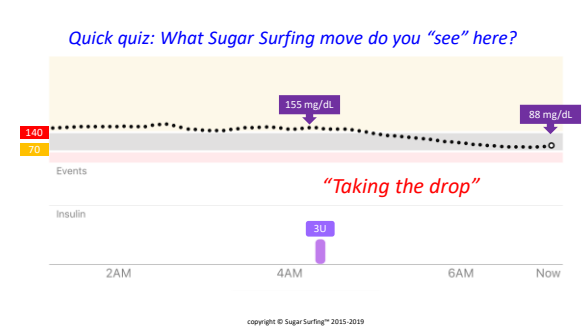
Inflections are revealing



92



93



94

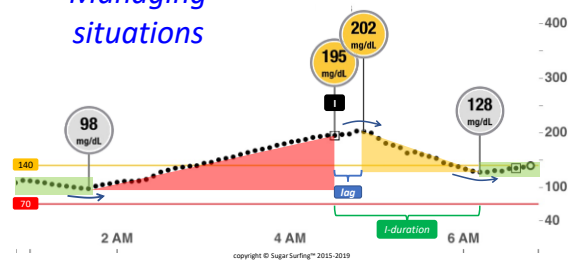
Core Sugar Surfing concepts

1. Recognize BG patterns visually and assign significance to them
2. Managing "situations", not just blood sugar, food and insulin
3. "Pre-empting" significant blood sugar changes as they happen
4. Chain dependent insulin dosing ("I-chaining")
5. Knowing that insulin action is not a constant. Many things change it
6. You are steering a trend, not just reacting to a number

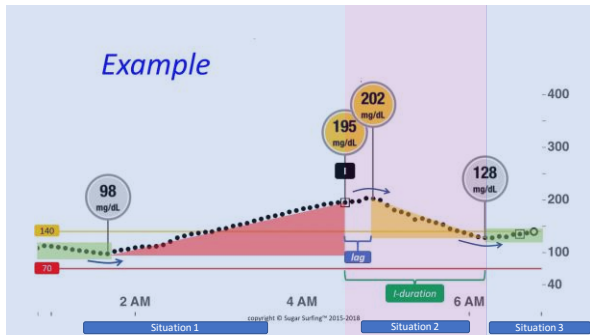
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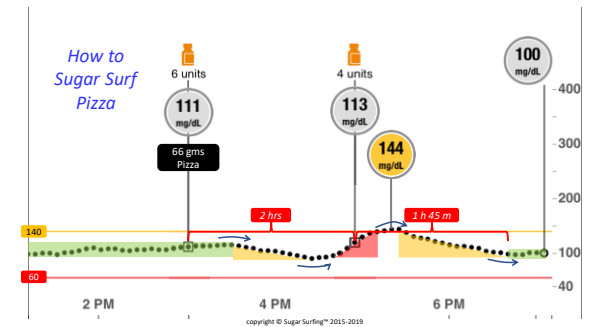
Managing situations



96



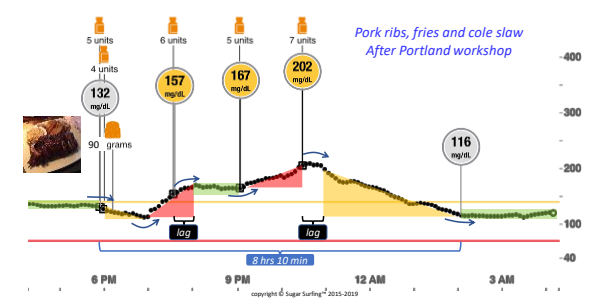
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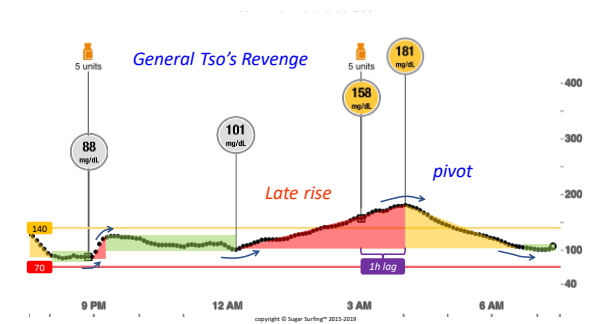
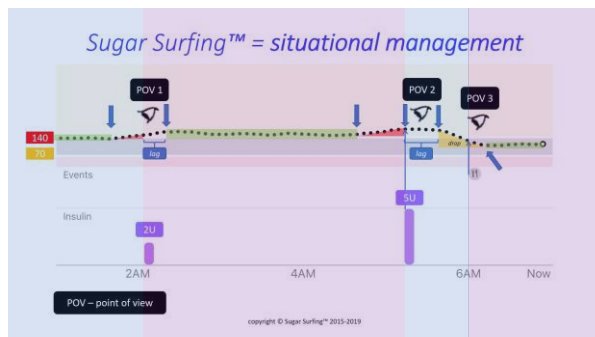
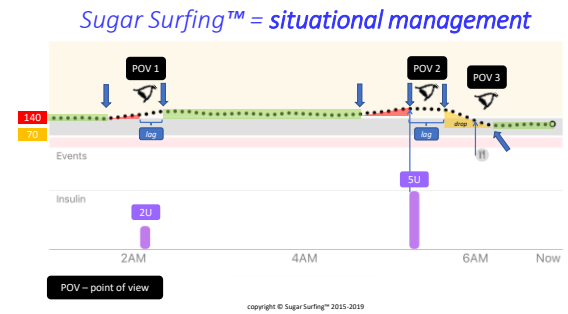
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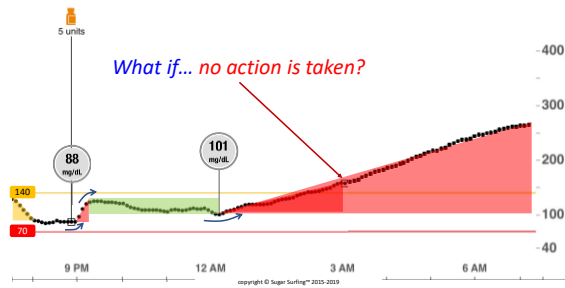


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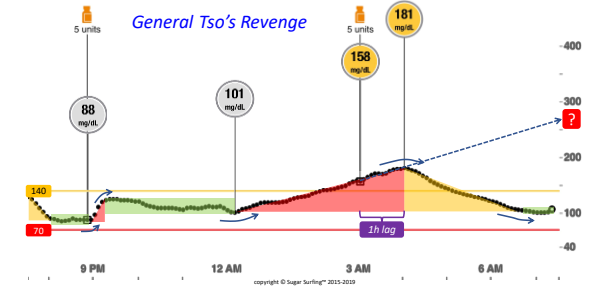


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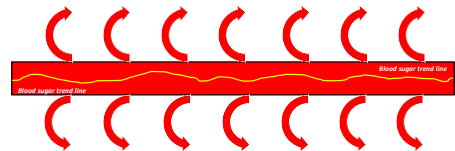


106

BASAL TESTING

What a basal insulin is *supposed* to facilitate

BALANCE: Incoming blood sugar (influx)



WITH: Outgoing blood sugar (efflux)

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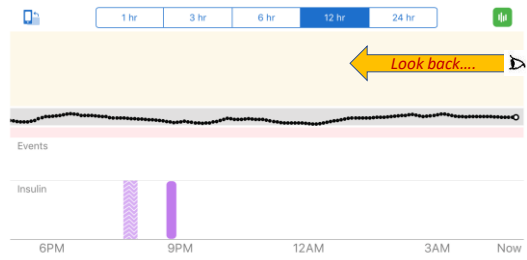
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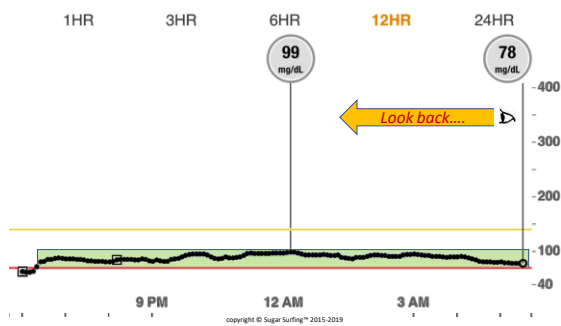


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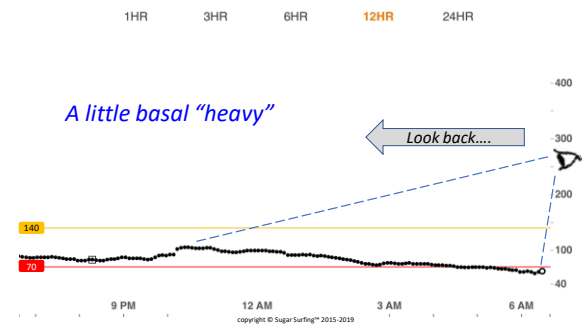
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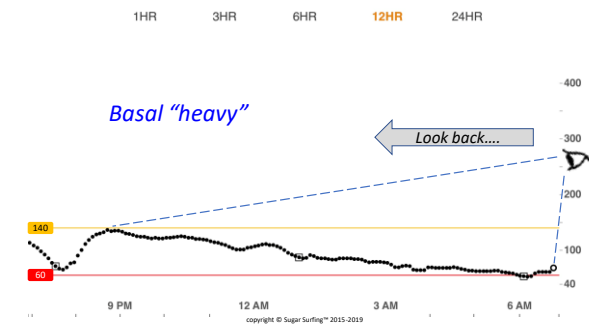
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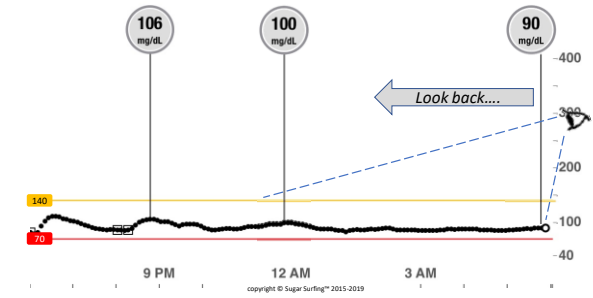
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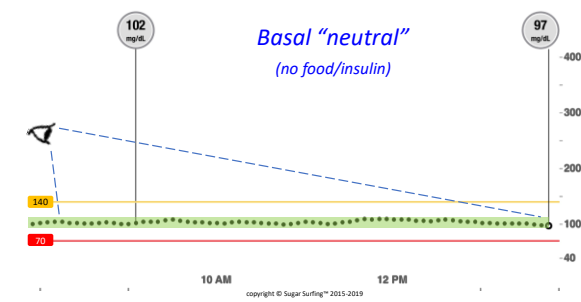
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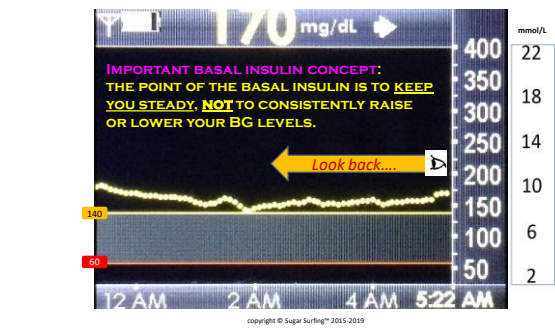
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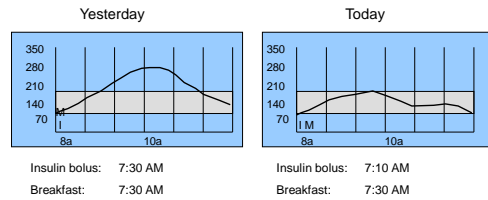
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TIMING IS EVERYTHING

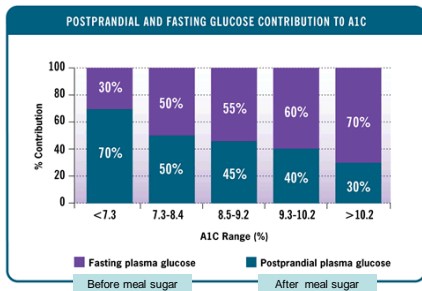


117

Learning from the Line Graph – Insulin Timing

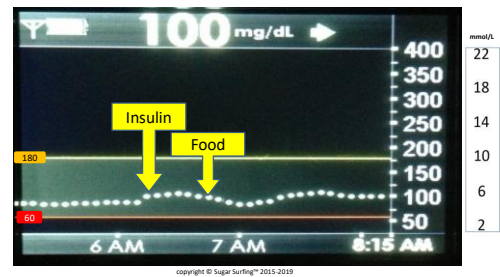


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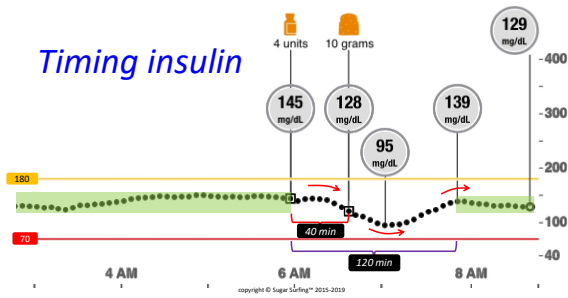
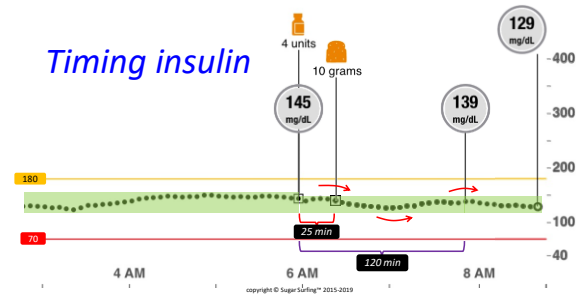
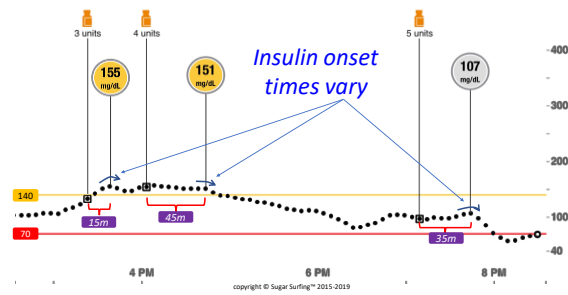
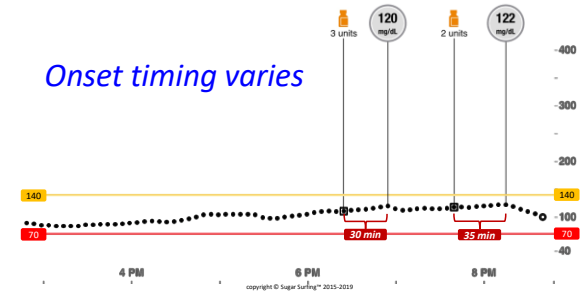


119

Timing 101 – 20 min. match

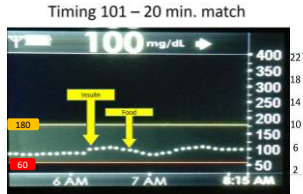


120

Timing insulin*Timing insulin**Insulin onset times vary**Onset timing varies*

What have we learned: **TIMING**

- 1) Watch your lag times (they vary)
- 2) Inflection points matter
- 3) "Wait for the bend" (an inflection)
- 4) Know when your insulin peaks
- 5) BG direction, speed and sensor lag all affect correction and the timing of your actions
- 6) Don't feel bad when you can't always do this! Life goes on.



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125

I-chaining tips

- Based on determining your own duration of insulin action
- Dosing is based on pre-empting a rise after a meal/stress that lasts longer than your last rapid-acting insulin dose
- Assuming food intake is complete, then follow up doses are usually smaller (stepped down) than the first.



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126

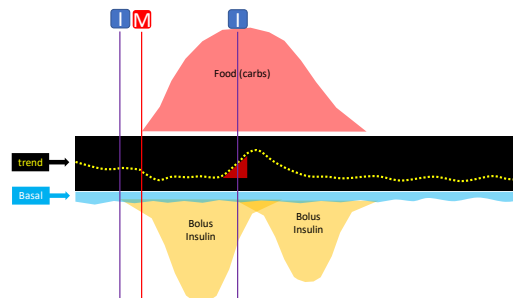
i-chains are like an insulin "relay race"

- Know your insulin lag time (wait for it)
- Know your range of insulin actions (when to start inflection hunting)
- Be mindful of the basal insulin running in the background
- Consider the amount and type of meal you've eaten too.

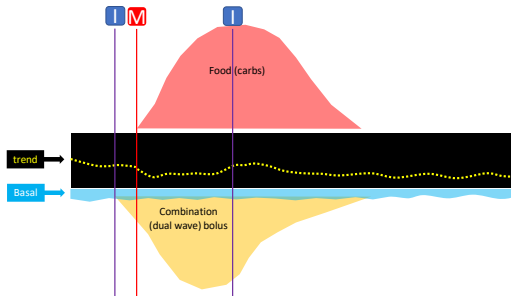


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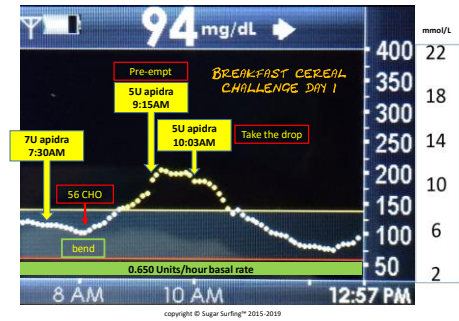
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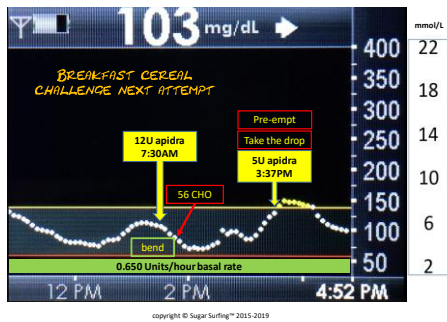
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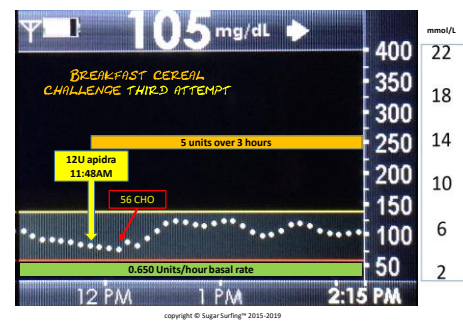
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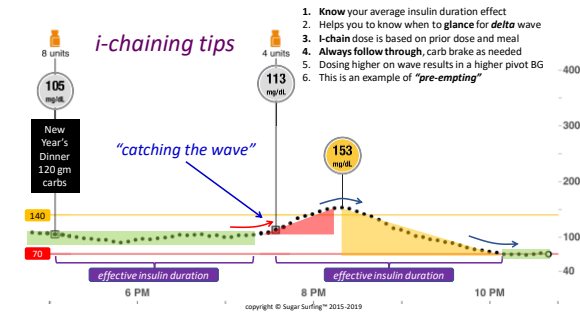
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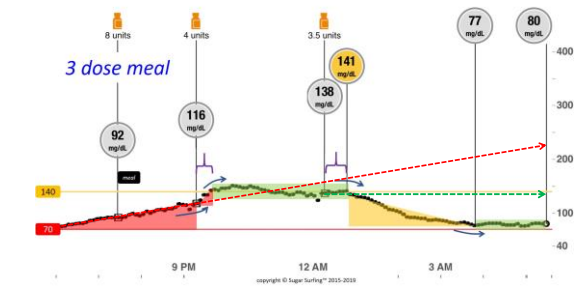
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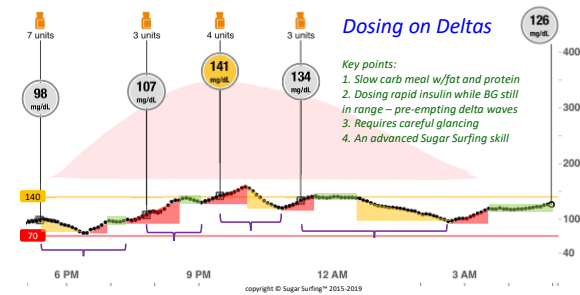
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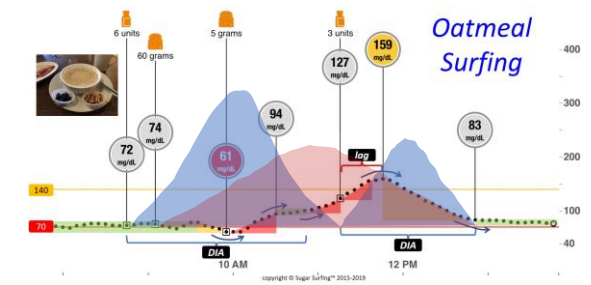
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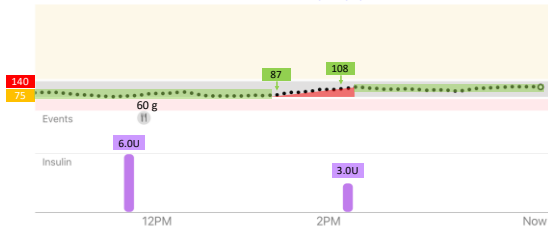


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136

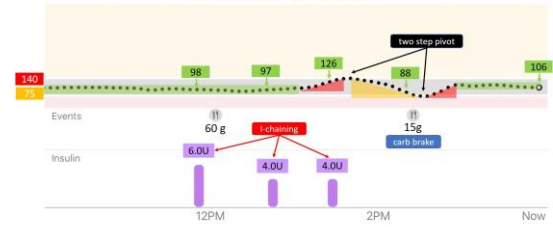
Pizza Hut 2 slices pepperoni



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137

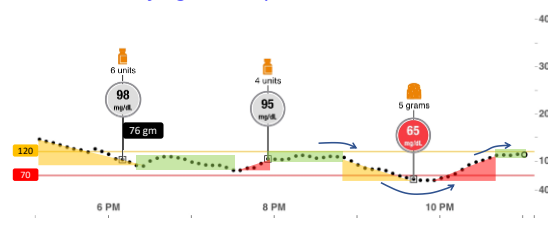
Domino's Meatzza



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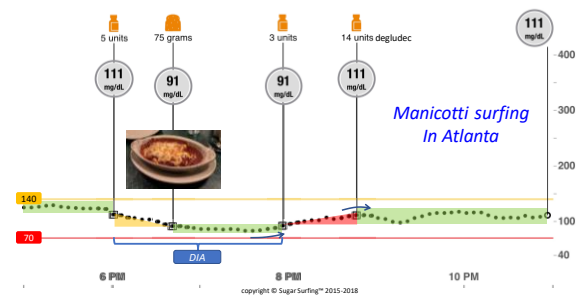
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Pizza Surfing at Camp Seale Harris



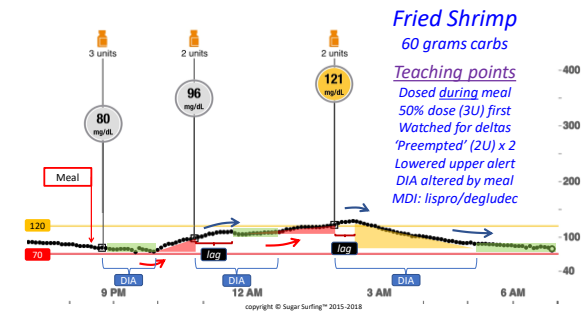
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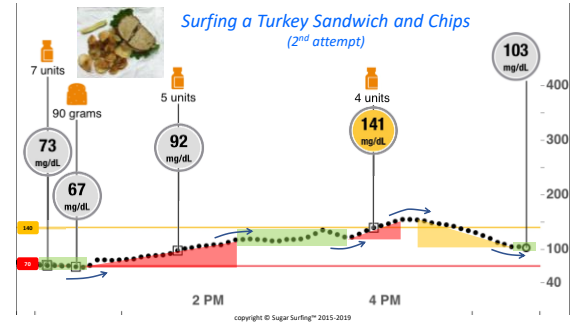


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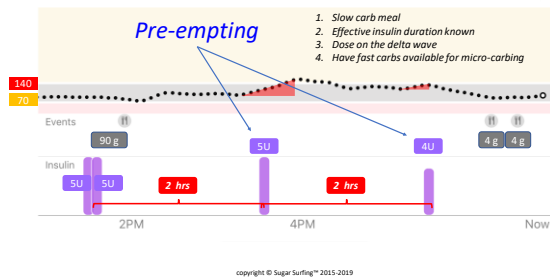
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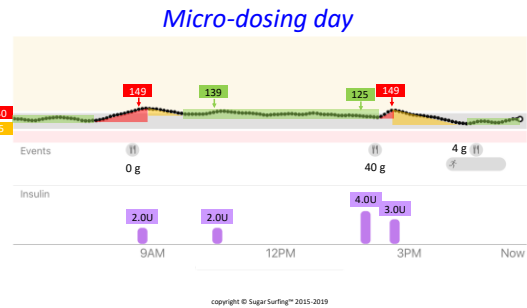
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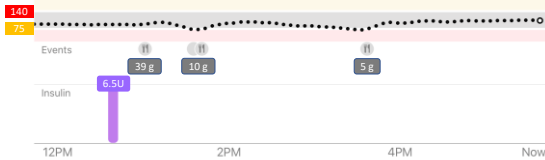


143



144

Sugar Surfing In and Out



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145

Major take aways

- S.U.R.F.
- CGM allows situational management
- Start with prescribed management at first
- Calibrate a steady basal effect
- Learn the effect of insulin/food/stress/exercise
- sugarsurfing.com (free e-book for newly diagnosed t1d any age)



146

Sugar Surfing tips

1. Keep your eye on the line. *Glance* often. Glance smartly.
2. Become comfortable seeing *at least an hour ahead* and recalling the last few hours, but always be anchored in the present
3. Insulin wears off. Food wears off. Learn to tell the difference between the two. *Inflections matter*.
4. Trend line significance is always defined in the moment.
5. Rapid-acting insulin effects can be overlapped. It's called *chain-dependent insulin event management*.
6. Stress happens. It acts as a glycemic "wild card"

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147

PRINCIPLES OF SUGAR SURFING

1. A CGM is no better than its user.
2. Flux and drift happen...steer them!
3. Manage the situation, not just BG.
4. Keep an eye on the trend line.
5. Learn patience.
6. Experiment a little
7. Learn to micro-dose
8. Don't let "good enough" be an enemy.
9. Pre-empt: stay ahead of the wave.
10. Sugar Surfing is a skill, not a recipe.



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148



Thank you!

To join the surf colony go to sugarsurfing.com

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149

Thank you!

SugarSurfing.com

- workshops, lessons, videos, and conversation
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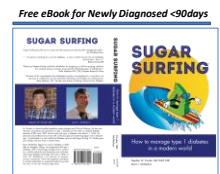
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Inquiries by Email To:

admin@SugarSurfing.com

- ***Stephen W. Ponder MD FAAP CDE***

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150