

# Webinar Will Begin Momentarily

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# Individualizing Nutrition for Type 2 Diabetes: Out with the Old, In with the New

## TODAY'S AGENDA:

- Introduction & Housekeeping
- Speaker Introduction
- Presentation
- Q&A
- Closing



## WEBINAR HOST:

**Keith Hine MS, RD**

Sr. Director of Healthcare & Sports  
Orgain



## WEBINAR PRESENTER:

**Angela Manderfeld, MS, RD, CDCES, BC-ADM,**  
Registered Dietitian/ Board Certified- Diabetes  
Management

# Individualizing Nutrition for Type 2 Diabetes: Out with the Old, In with the New

November 11, 2021



Angela Manderfeld, MS, RDN, LD, CDCES, BC-ADM

*Angela Manderfeld* RD  
DIABETES NUTRITION EXPERT



[OutsmartYourDiabetes.com](https://www.outsmartyourdiabetes.com)

# What we will cover today:

- Learn the “SECRETS” of simple behavior interventions
- Identify key ways to individualize nutrition for your clients with Type 2 diabetes
- Case Studies
- Learn 3 key nutrition recommendations for managing blood sugar
- Q&A



**THE**  
S-E-C-R-E-T-S

S-E-C-R-E-T-S

S- SNACKING



S-E-C-R-E-T-S

E- END WITH CARBOHYDRATES

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S-E-C-R-E-T-S

C- Chew/Caffeine



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S-E-C-R-E-T-S

R- REPLENISH FLUIDS



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S-E-C-R-E-T-S

E- ENERGY BURN after a meal



- Lower blood pressure
- Better regulation of blood sugar
- Lower resting heart rate
- Better control of body fat
- Improved immune function
- Increased muscular strength and
- Improved cardiorespiratory functioning
- Increased flexibility
- Better joint health
- Improved mental functioning
- Higher quality of sleep
- Stress Reduction



# What if I just don't eat?

Type of Fasting	Definition	Possible Benefits	References
Intermittent fasting	A fasting day alternated with 1-6 days of normal diet. Often consuming 20-25% of total calorie needs on the “fasting” day.	Decrease in abdominal fat and blood pressure, glucose regulation, stress resistance. Anti-aging.	De Cabo R and Mattson MP. <a href="#">Effects of intermittent fasting on health, aging, and disease</a> . <i>New England Journal of Medicine</i> . 2019;381(26):2541-2551. doi: 10.1056/NEJMra1905136.
Time-restricted feeding	Eating within specific time windows. Common time frames are: 12-13 hr overnight fast 16 fast: 8 hr feeding	Improved immune system, increased insulin sensitivity, decreases fat accumulation associated with inflammation, lower cholesterol, lower fasting glucose	Schuppelius B, Peters B, Ottawa A, Pivovarova-Ramich O. Time Restricted Eating: A Dietary Strategy to Prevent and Treat Metabolic Disturbances. <i>Front Endocrinol (Lausanne)</i> . 2021;12:683140. Published 2021 Aug 12. doi:10.3389/fendo.2021.683140

## Other types of fasting:

Alternate Day Fasting- eat every other day

Prolonged Fasting- water only for 2 or more consecutive days

Protein Restricted Fasting- Restriction of certain essential amino acids

S-E-C-R-E-T-S

S- Stress Management

# Case Study #1

- 6'1" 185# (BMI 24- low body fat), 45yo caucasian male, wildlife biologist
- Dx prediabetes, high cholesterol, high blood pressure, asthma
- Meds: Crestor, Exforge, Multi-vitamin

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## Typical Day of Eating

wake up: 4:30a workout 1.5 hr

6am coffee, bowl of oatmeal with banana OR brown rice cake with PB, OR

eggs with wheat toast and avocado

9-10am apple with PB or ritz crackers

L- leftovers

Sn- carrots and hummus, rack of ritz crackers

D- chicken, salmon, salad

when traveling- mountain house dehydrated food (March- June)

## Exercise:

1-2 hours / day of cardiovascular exercise,

15-25 minutes of weight training, 3-4 days per week,

Often hiking, downhill skiing, hunting on foot in back country

Current Meds:

crestor

exforge (amlodipine/valsartan)

berberine 2 daily

MV

Niacin

Aspirin

Vit D

Mg

Omega 3

LABS	March 2019	Aug 2021
LDL	104	73
HDL	73	54
A1c	5.7	5.5
FBS	81	80

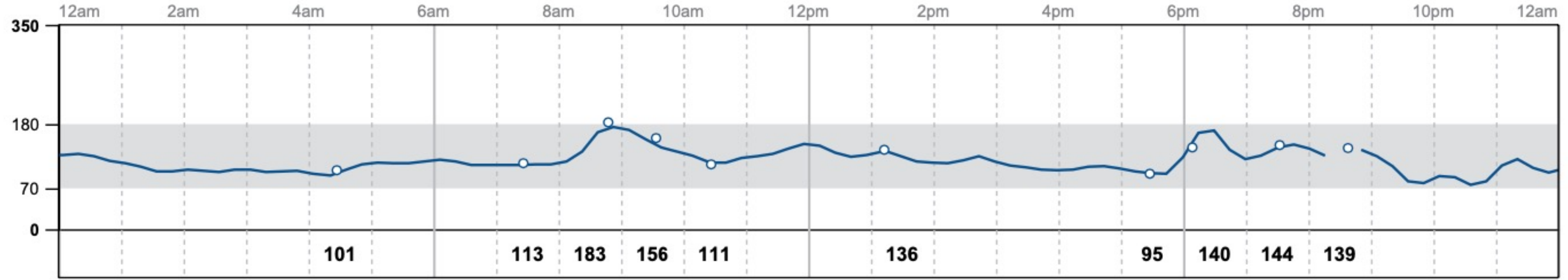


# Daily Log

July 28, 2021 - August 10, 2021 (14 Days)

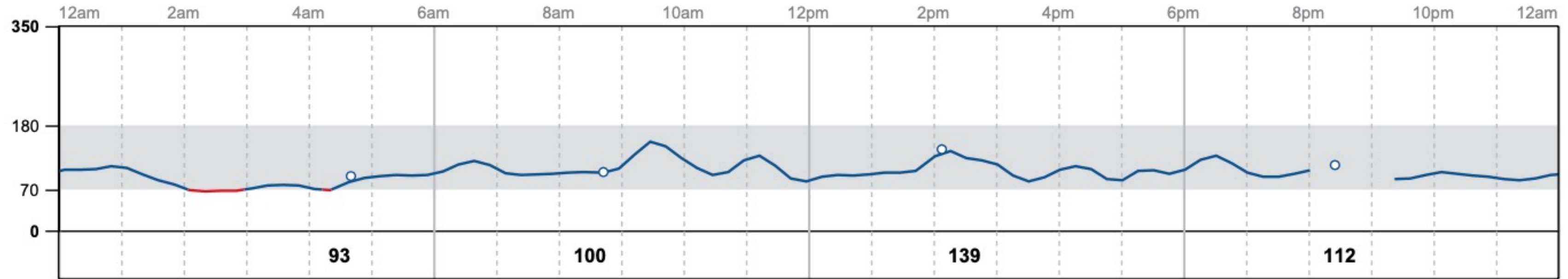
## MON Aug 2

Glucose mg/dL



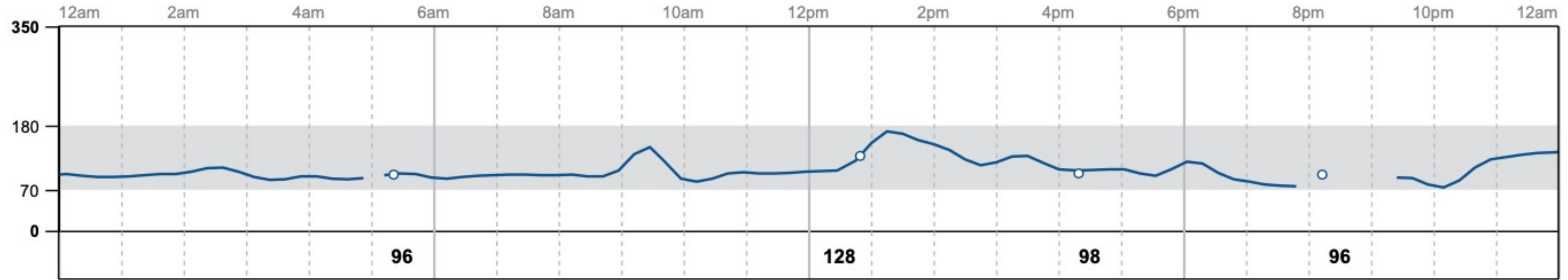
## TUE Aug 3

Glucose mg/dL



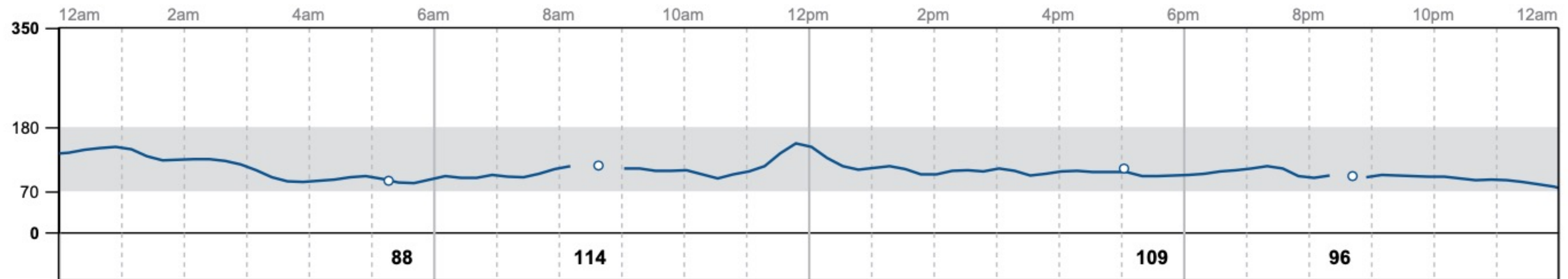
## WED Aug 4

Glucose mg/dL



## THU Aug 5

Glucose mg/dL



# Diet Considerations Worth Mentioning

## Haptoglobin Genotype

Genotype	At risk for heart disease	Diet Considerations
Hp 1-1	low risk	General healthy, anti-inflammatory eating
Hp 1-2	intermediate risk	gluten free, need probiotic
Hp 2-2	high risk 5x more likely to develop heart disease	400 IU Vit E daily beneficial, gluten free, benefit from probiotic

## Apo E Genotype

Genotype	Best Eating Style	% of population with this genotype
Apo E 2-2, 2-3	Paleo, can tolerate Ketogenic	11% - they have the lowest risk for heart disease. They benefit from a diet with 30-35% of heart healthy fats.
Apo E 3-3, 2-4	Mediterranean	64% - they do better with more plant based foods, healthy fats; typically their best fat content is 25-30% of their diet.
Apo E 3-4, 4-4	Vegetarian, will likely not tolerate ketogenic diet	25% - they are at highest risk for heart disease. They do best eating <20% of their calories from fat, mostly plant based food, and

NOTE: Vitamin E supplementation is only beneficial for Hp 2-2 genotype, it can actually raise risk for heart attacks and early death from CV disease in others.

# Case Study #2

- 5'2", 132#, pt desirable wt 115#, Filipino female, Registered Nurse
- DX: Type 2 diabetes, thyroid, gout, hypertension
- Meds: Janumet, Farxiga, Tresiba 7 units, Synthroid, Vit E, Vit B12, Fish oil, Magnesium, MV, Diflucan (weekly)

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- Labs: A1c 7.7%
- Other Notes: Tried Victoza in the past and had some reflux, but also notes she had reflux regularly prior to that

Post prandial: 180's, FBG 90-123mg/dl.

Exercise: 3 times per week virtual zumba.

Stress: medium

Sleep: 7 hr at least (wakes up in middle of night to go pee and dog wakes her up)

## Food Intake:

B- hard boiled egg (1), multi-grain toast or rolls from great harvest, coffee w/ cream and half banana or slice mango

Sn- occasionally - green mango/banana

L- from work ( salad w/ dressing, chicken) or just salad

Sn- banana w/PB, 2 almond cookies, graham cracker with PB, cashew nuts, pork rinds

D- stir fry veg (eggplant, squash, bitter melon, mung beans, shrimp) 1/2 baked potato

Take out: mongolian beef, fried rice, adobo, beef with cabbage and bok choy soup

# Case Study #2

1. Contact MD for a prescription for the freestyle libre CGM
2. Add resistance training 2 times per week for at least 30-60 min. Walk your dog after dinner.
3. Use hunger scale - see documents
4. Breakfast. Check bread, needs to have 3-5 grams fiber per slice. Add 1/2 avocado, nuts/seeds, berries. Use smoothie recipe we discussed.
5. Protein (tuna, salmon, lentils, beans), hummus and raw veggies as part of lunch or for snack.
6. Salad dressing: Tessemae's Dressing

**Recommend consulting with her MD in regards to stopping farxiga, janumet, and eventually, levemir once tolerating GLP1**

**Start: .25mg Ozempic once weekly for 4 weeks and increase to .5mg/dl, 2000mg Metformin XR, diet and exercise.**

**Recommend using freestyle libre prescription and get sample of ozempic to see if she can tolerate.**

## April 29, 2021 – May 12, 2021

FreeStyle LibreLink

SN: AFBF4B26-F92A-4ACE-

A538-5EF1FB3F8E6A

**163**

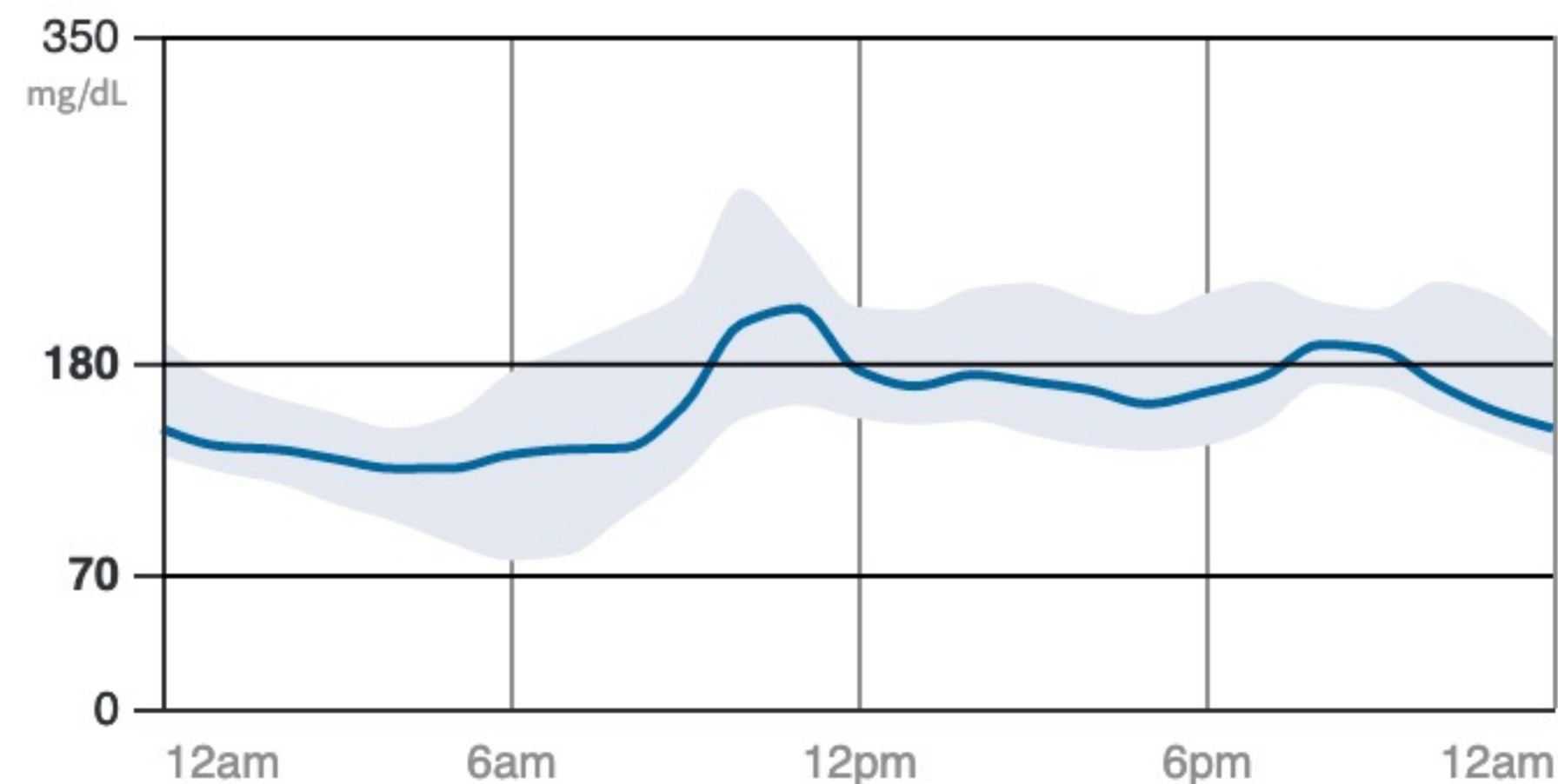
mg/dL  
Average  
Glucose

**43%**

Days of Data

**0**

Hypo Events



## May 13, 2021 – May 26, 2021

FreeStyle LibreLink

SN: AFBF4B26-F92A-4ACE-

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**129**

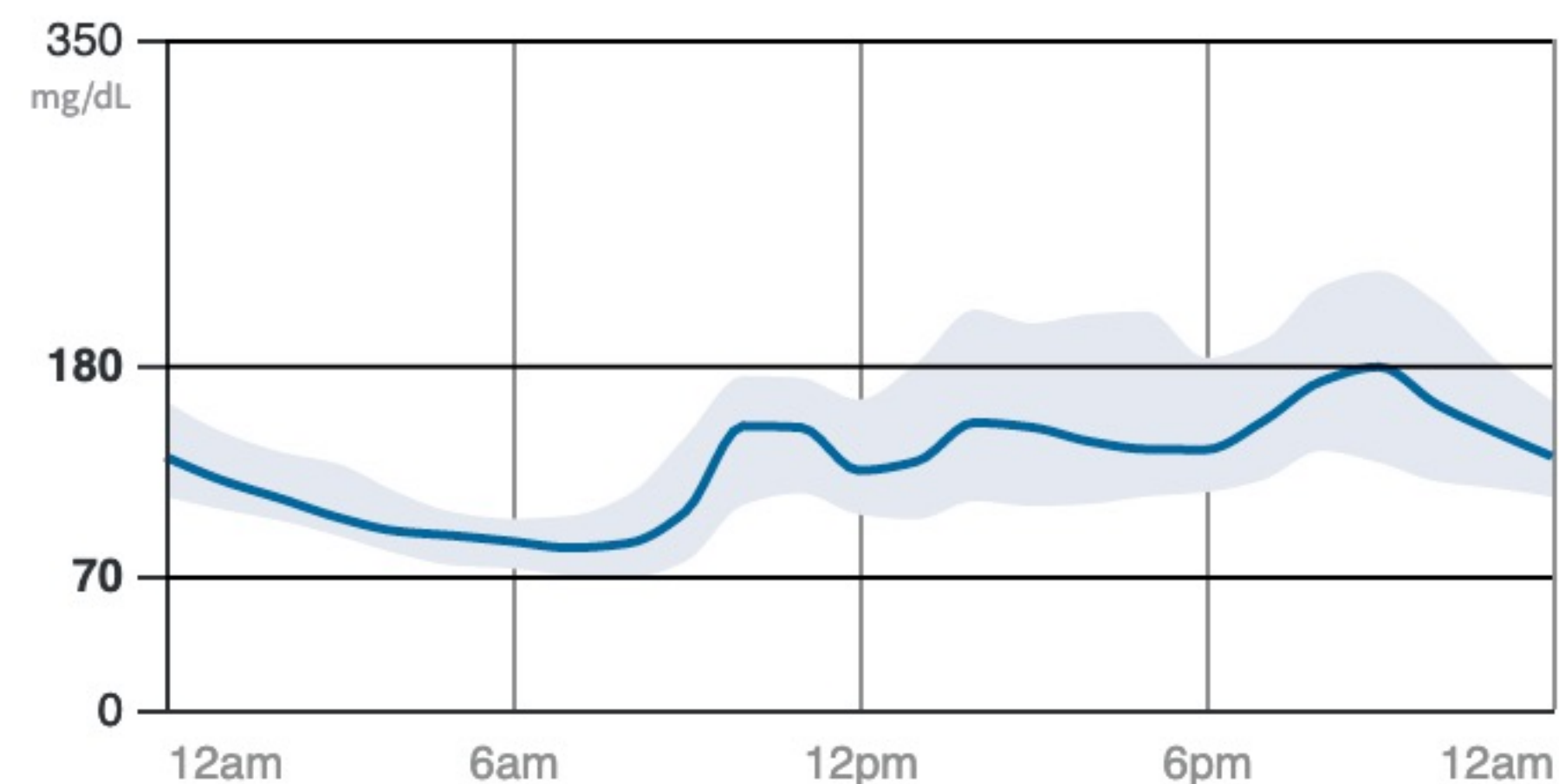
mg/dL  
Average  
Glucose

**100%**

Days of Data

**2**

Hypo Events



## August 5, 2021 – August 18, 2021

FreeStyle LibreLink

SN: AFBF4B26-F92A-4ACE-

A538-5EF1FB3F8E6A

**109** **100%** **8**

mg/dL  
Average

Days of Data

Hypo Events

August 19,  
2021 – September 1,  
2021

FreeStyle LibreLink

SN: AFBF4B26-F92A-4ACE-

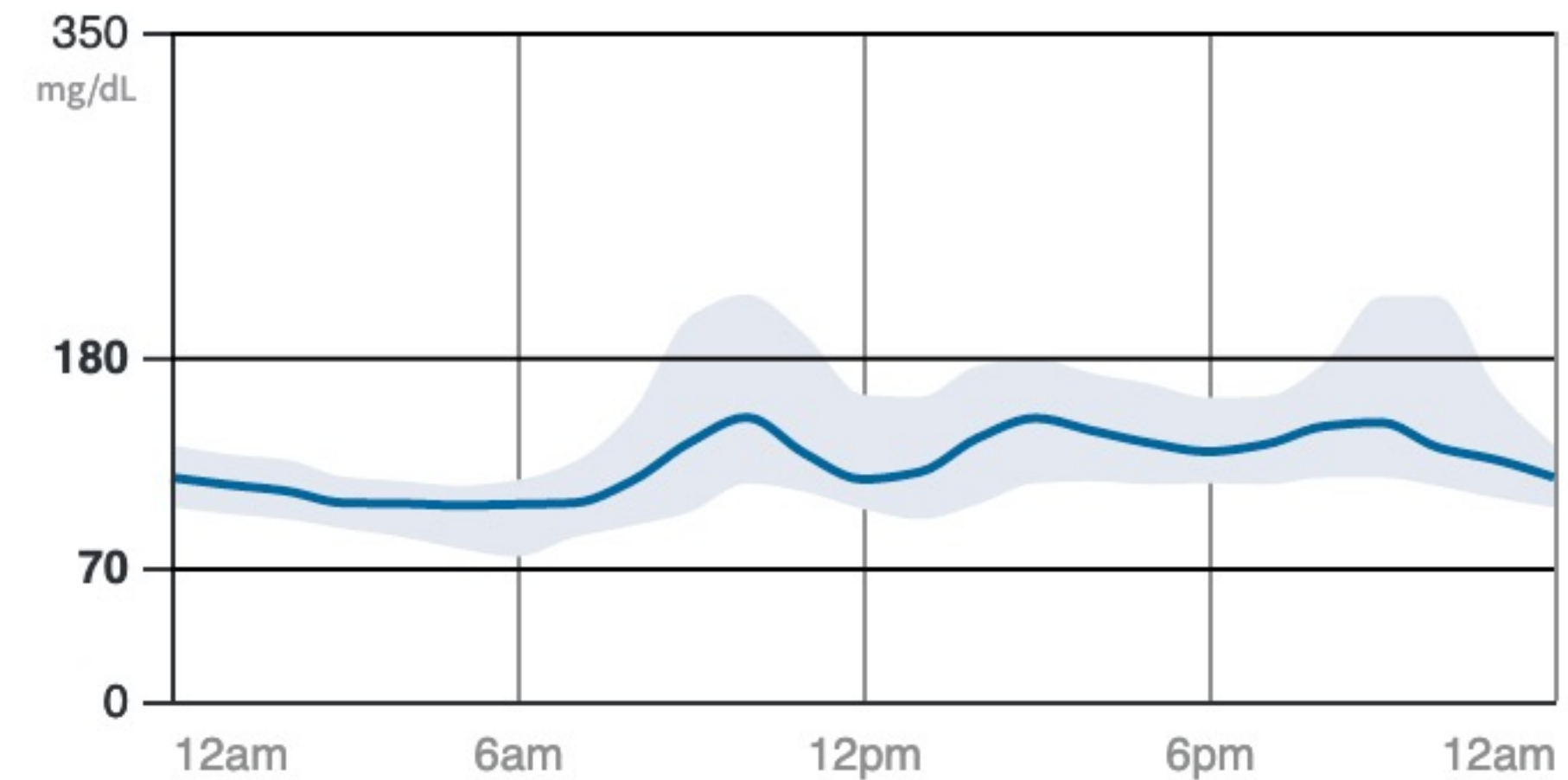
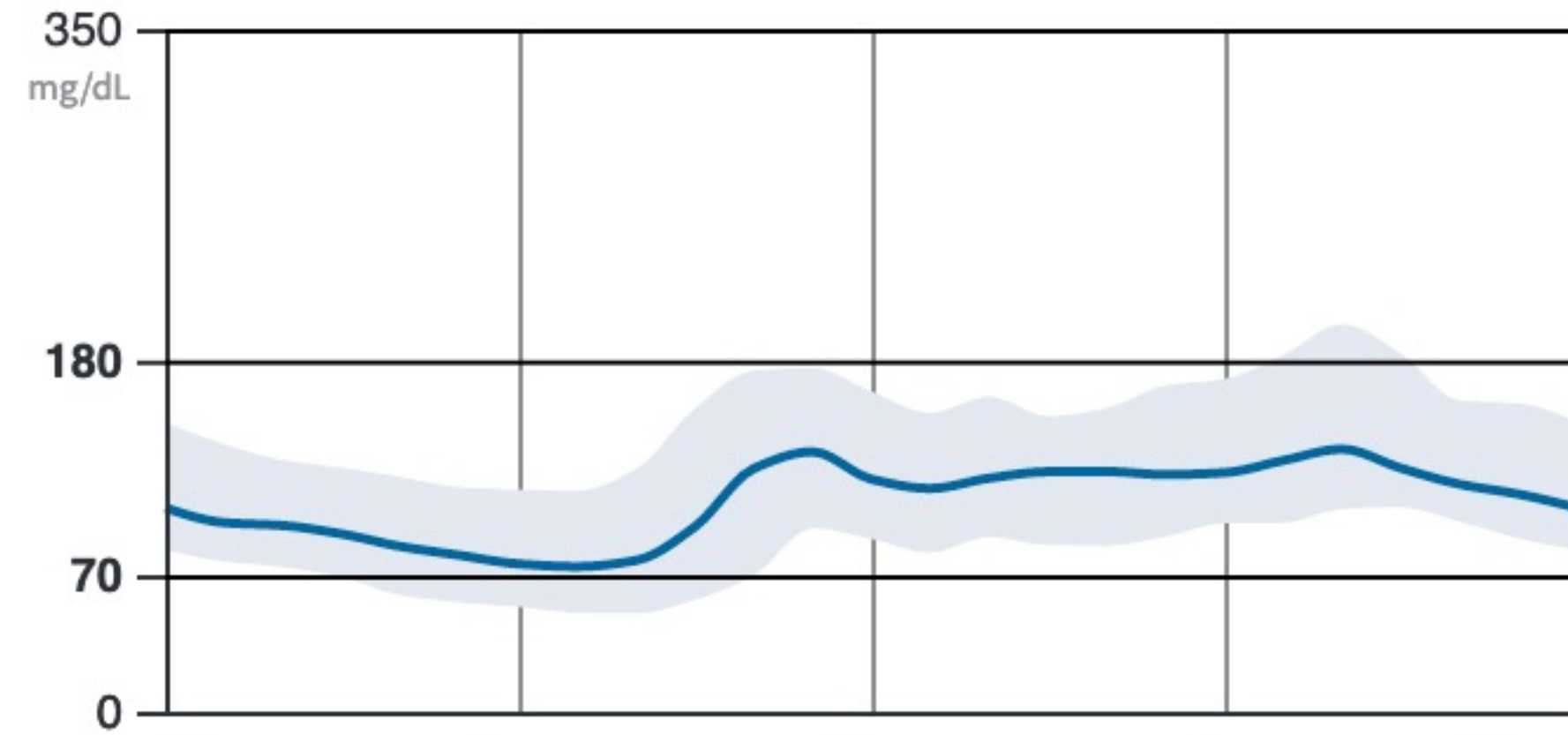
A538-5EF1FB3F8E6A

**127** **100%** **1**

mg/dL  
Average  
Glucose

Days of Data

Hypo Events



# AGP Report

August 19, 2021 - September 1, 2021 (14 Days)

LibreView

## GLUCOSE STATISTICS AND TARGETS

August 19, 2021 - September 1, 2021

14 Days

% Time CGM is Active

98%

Ranges And Targets For	Type 1 or Type 2 Diabetes
<b>Glucose Ranges</b>	<b>Targets</b> % of Readings (Time/Day)
Target Range 70-180 mg/dL	Greater than 70% (16h 48min)
Below 70 mg/dL	Less than 4% (58min)
Below 54 mg/dL	Less than 1% (14min)
Above 180 mg/dL	Less than 25% (6h)
Above 250 mg/dL	Less than 5% (1h 12min)
Each 5% increase in time in range (70-180 mg/dL) is clinically beneficial.	

**Average Glucose**

**127** mg/dL

**Glucose Management Indicator (GMI)**

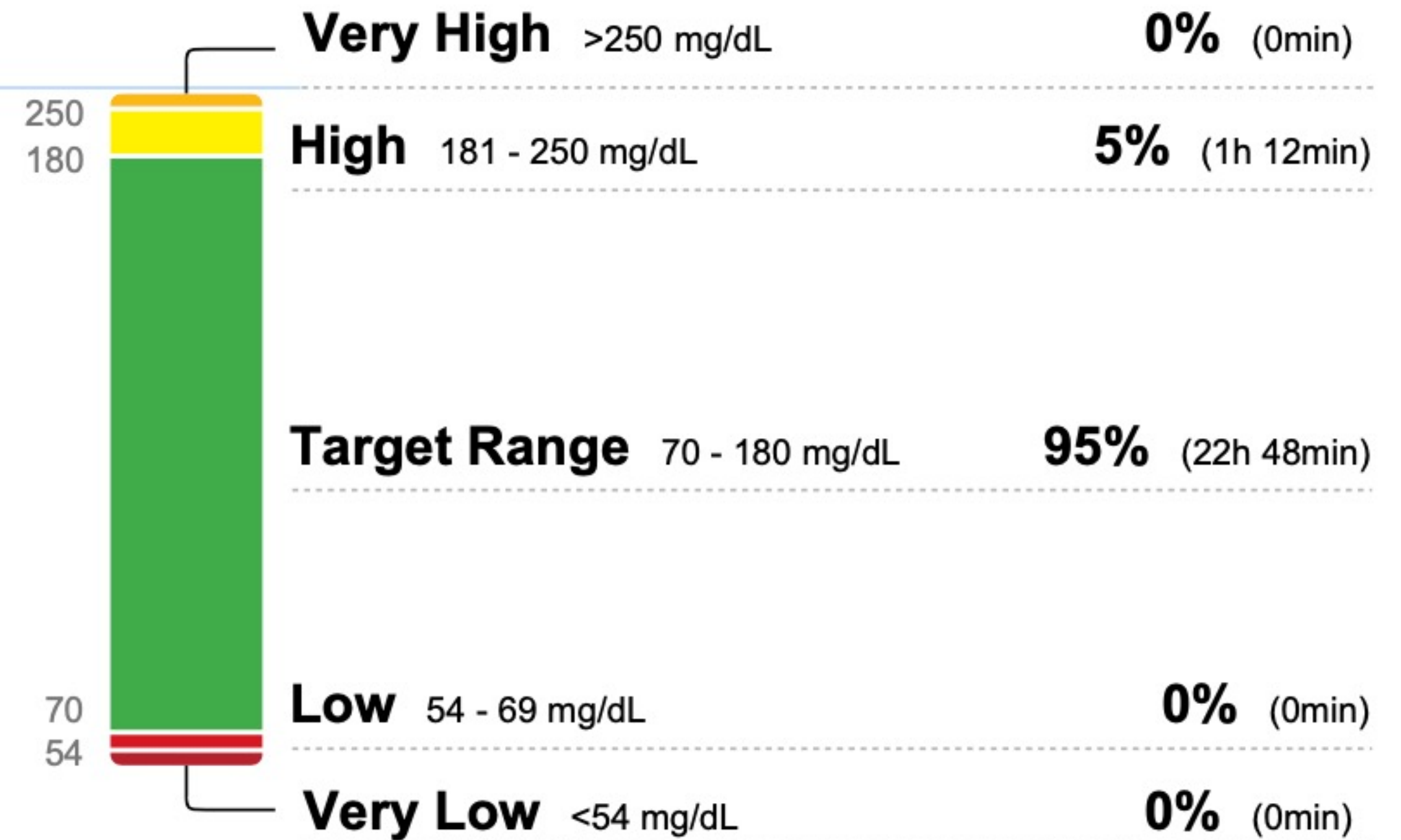
**6.3%**

**Glucose Variability**

**21.4%**

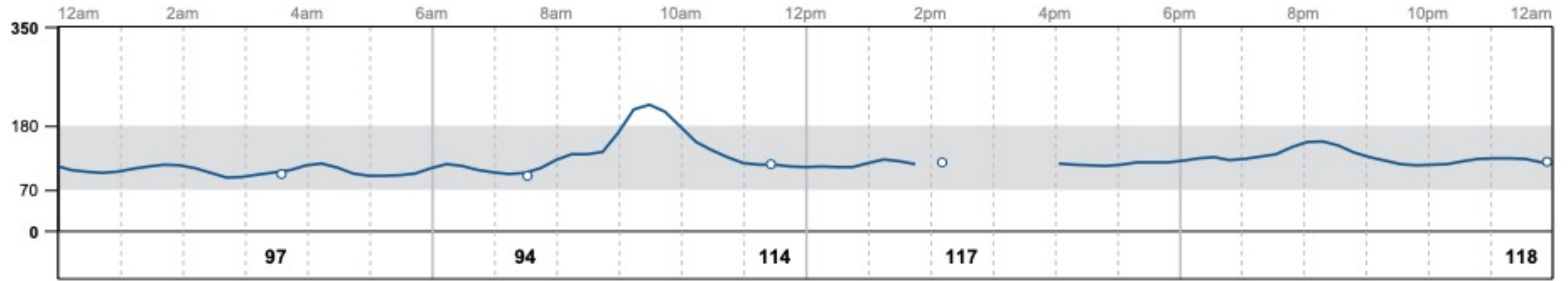
Defined as percent coefficient of variation (%CV); target  $\leq 36\%$

## TIME IN RANGES



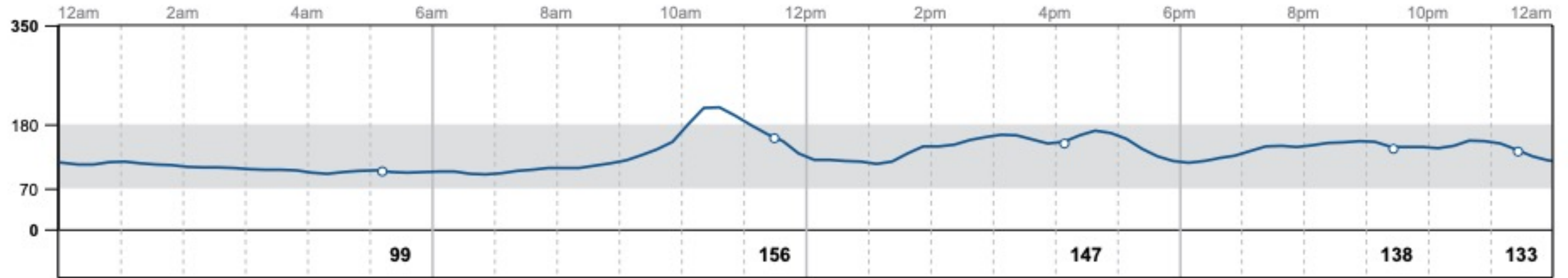
**FRI Aug 27**

Glucose mg/dL



**SAT Aug 28**

Glucose mg/dL

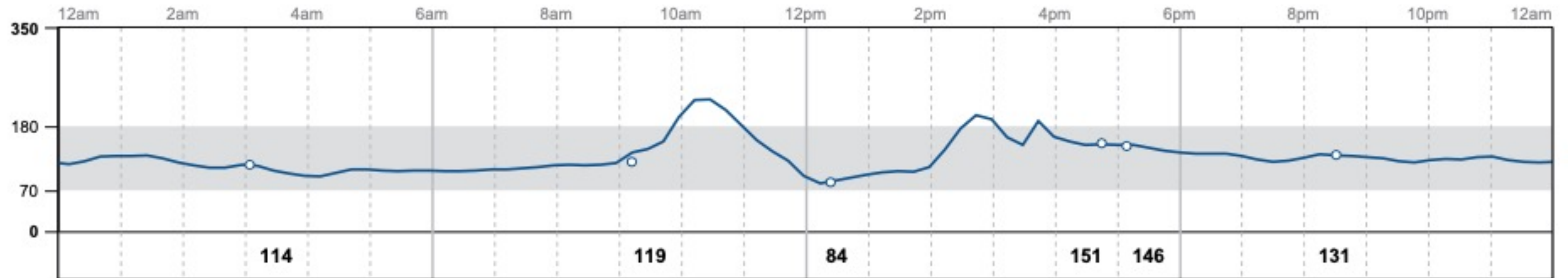


Notes

9am breakfast 1/2 bread and hard boiled egg. Coffee with creamer

**SUN Aug 29**

Glucose mg/dL

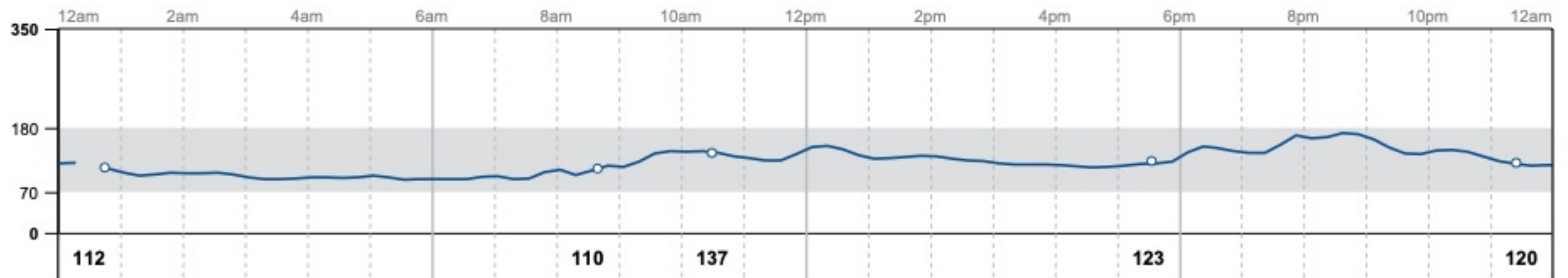


Notes

Breakfast was fried bananas and coffee.

**MON Aug 30**

Glucose mg/dL





# Case Study #2

## Current:

1mg Ozempic

2000mg Metformin ER

Glycemic Manager (Integrative Therapeutics)

DGL Plus as needed for GERD symptoms

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## 2 months later.....

Wt: 122# Ht: 5'2" (lost 10# )

2 week average down to 125mg/dl from (136mg/dl in June and 166mg/dl in early April.)

Pt husband is very supportive and helping her with meal prep, working out with her.

Pt is moving more, especially at work and after dinner to help with BG and reflux.

Encouraged 4-7-8- breathing for stress.

Having salads at lunch with protein. Snacking less, if snacks, maybe fruit (cherries, apple)

Cardio: zumba, walking, lifting weights 3x/wk

GMI for past two weeks is 6.3%

Diet is not overly restrictive, she still eats rice, but just less.

Totally off insulin, SGLT2 (causing yeast infections), no more diflucan, off DPPIV since she started GLP1

Labs: 7/22/21 A1c 6.9%. (In April it was 7.7%)



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**“I want to tell you what I have accomplished...”**

Stopped Tresiba

Improved A1C

Stopped diabetes meds - Janumet, Farxiga

Weight loss (134-119 on MD's clinic scale)

Improved eating/lifestyle behaviors

Learned to eat small portion of my food when dining out

Sleeping better

Improved energy level

Retuned to being active - exercise (3x/week)

Started reading food labels to choose healthy foods

Not craving for sweets

Overall better control of my diabetes

Feeling great!

My husband is doing this with me, too.

# A Couple Notable Herbs and Vitamins...





# Berberine



# 3 Key Nutrition Recommendations for Better Blood Sugar

- Healthy Fats + Fiber = Full
- Non Starchy Vegetables= Less Sugar Cravings and Better Gut Bacteria
- Mindfulness > Calorie/Carb Counting



# Quick Nutrient Dense Meal

**Base:** Water

**Non-Starchy Veg:** 1-2c Swiss Chard, Spinach  
(leafy greens for Mg)

**\*\* Pause and blend water and veg first\*\***

Then add protein powder and .....

**Fiber/Fat Add-ins:** avocado, chia, ground flax



**Pick an idea you  
heard today.....**

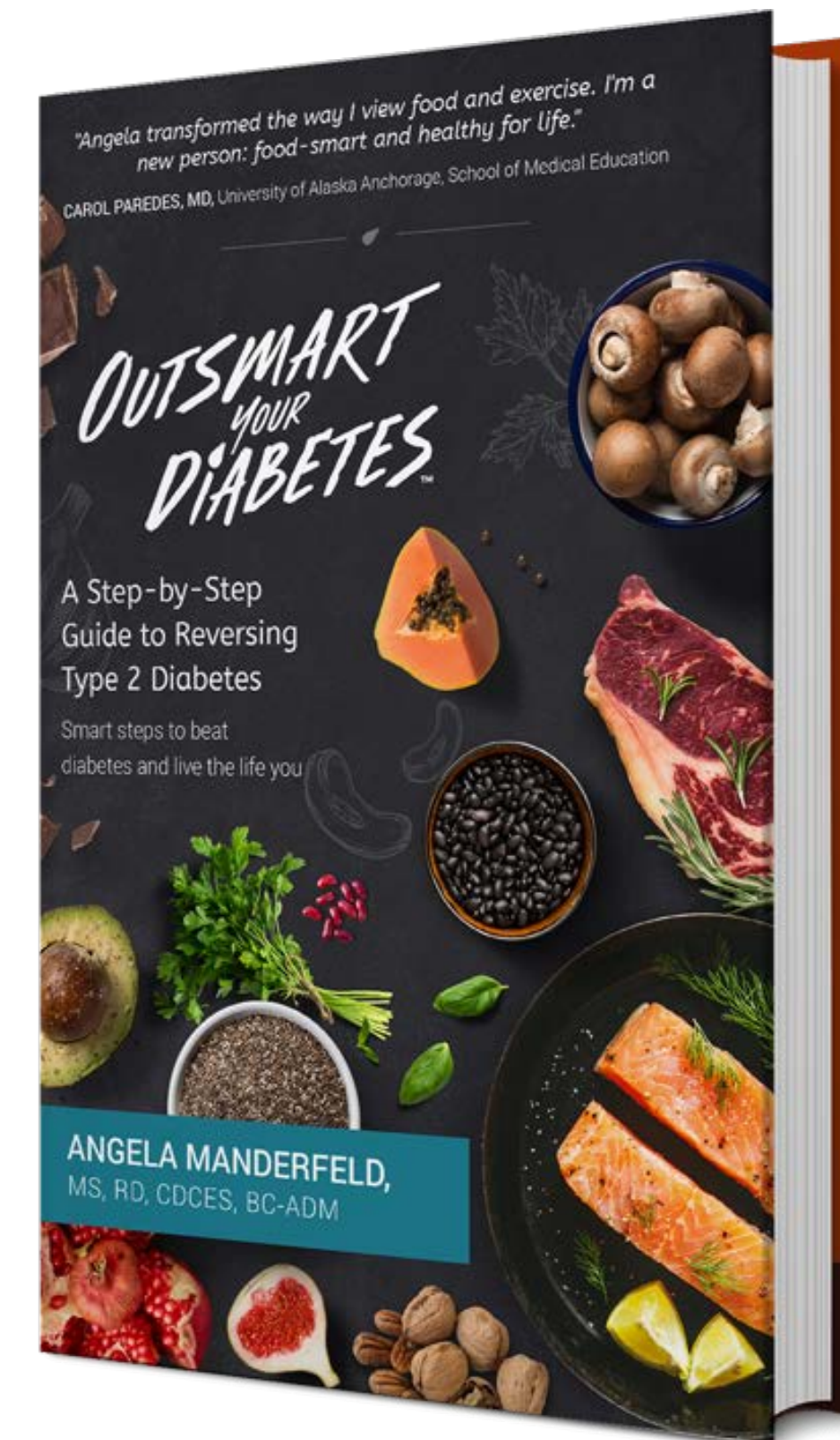
**Encourage clients to focus  
on consistency**





# Questions?

[angela@outsmartyourdiabetes.com](mailto:angela@outsmartyourdiabetes.com)



Available on Amazon

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### GENERAL INQUIRIES:

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# Resources

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