Kit’s Diabetes

Lets get his blood sugar under control

Background Information

- Kit Kat
  - 10 year old male DSH, 14 lbs, otherwise healthy
- Data
  - No past data due to fostering from ACC in NYC
  - Vet visit: 2/2024 = 426 mg/dl
    - Serum fructosamine shows not due to stress hyperglycemia
- Symptoms
  - Excessive urination
  - Constant thirst
  - Constant hunger

Desired State

- Remission
  - No symptoms
  - BG is between 80 & 250
- Control
  - BG > 80
  - BG < 250 typ
  - BG < 300 peak

Methods

- Low Carb / Sugar Food
  - Wet preferably
  - Dry occasionally (traveling)
  - Special treats only
- Insulin Shots
  - 12 hour insulin = 2x daily
  - 1-3 units per shot typical for cat
  - Glargine pen (Lantus Solostar) makes life easy
- Monitoring with CGM Freestyle Libre 3 (14 day life)

Food

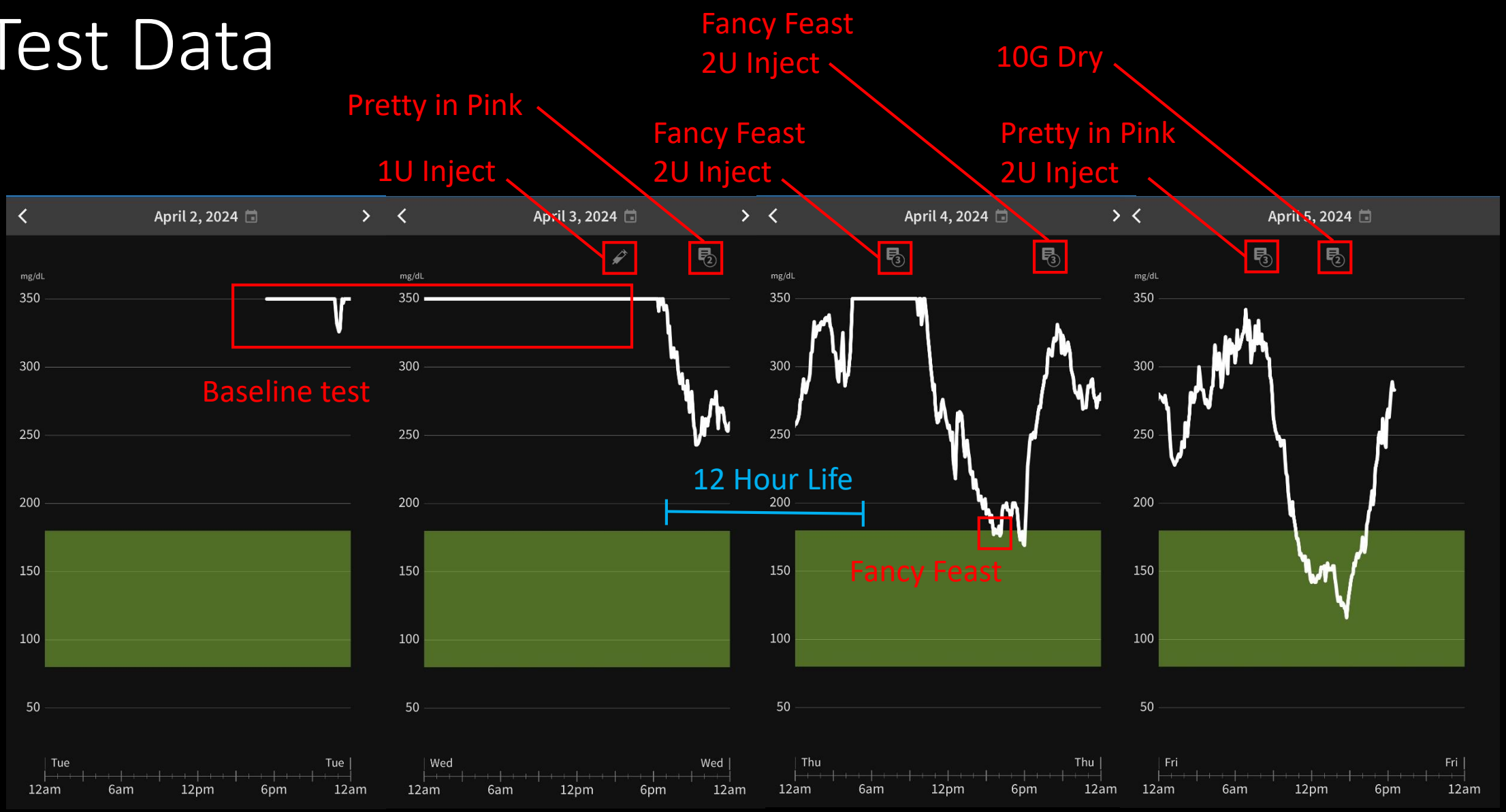
- Wet is better than Dry
  - Low carb, low sugar, high fiber (add psyllium?)
  - Protein minimum of 40, Fat maximum of 50, Carb max of 10
- Fancy Feast Classic Pate is community gold standard
  - RX/DM/RC food is junk, waste of money and time (prescriptions from vet)

Brand - Product	Type	Per Label								Water Content Removed					
		Moisture	Protein	Fat	Fiber	Ash	Sugar	Starch	Total	Adj-Protein	Adj-Fat	Adj-Fiber	Adj-Sugar	Adj-Starch	Adj-Total
Purina DM	Wet	78.0	12.0	4.5	2.0	3.1			99.6	54.5	20.5	9.1	0.0	0.0	84.1
RC Glycobalance	Wet	84.5	7.5	1.5	1.7				95.2	48.4	9.7	11.0	0.0	0.0	69.0
FF - Classic Pate - Sea1	Wet	78.0	12.0	2.0	1.5	3.3			96.8	54.5	9.1	6.8	0.0	0.0	70.5
FF - Classic Pate - Sea2	Wet	78.0	11.0	4.0	1.5	3.3			97.8	50.0	18.2	6.8	0.0	0.0	75.0
FF - Classic Pate - Sea3	Wet	78.0	12.0	2.0	1.5	3.3			96.8	54.5	9.1	6.8	0.0	0.0	70.5
TruLuxe -PiP	Wet	85.6	11.6	1.9	0.0	1.0	0.1		100.2	80.6	13.4	0.1	0.6	0.0	94.6
TruLuxe -MMaR	Wet	84.5	12.8	1.7	0.0	0.84	0.2		100.0	82.6	10.7	0.1	1.3	0.0	94.6
RC Glycobalance	Dry	8.0	44.0	14.0	6.7		5.4	24.0	102.1	47.8	15.2	7.3	5.9	26.1	102.3
Dr Elsey - CP Salmon	Dry	8.0	61.1	20.5		8.0	1.8		99.4	66.4	22.3	0.0	2.0	0.0	90.6
Dr Elsey - CP Chicken	Dry	8.0	62.4	19.0		7.5	2.5		99.4	67.8	20.7	0.0	2.7	0.0	91.2

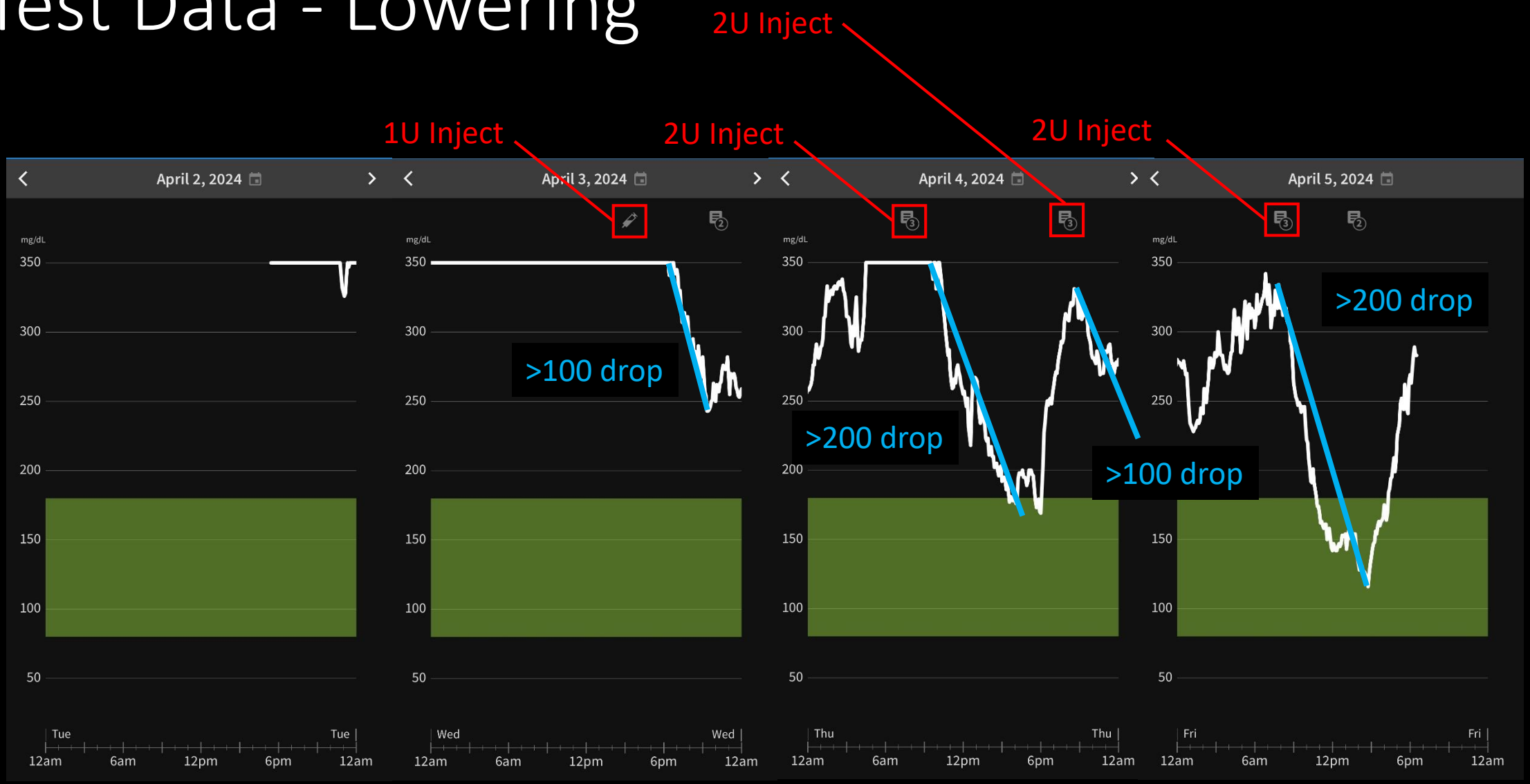
Insulin Shots

- Consistent schedule (2x daily, 12 hour apart)
  - Easy to remember, hard to mess up
- Food and Insulin behaviorally interact in BG level
  - Align with feeding with shots (-1 hour)
  - Insulin has to scale with food intake
    - Also with food type
- Better to miss than overdo
  - Traveling
  - Bent needle, etc
  - With absence of data (CGM)

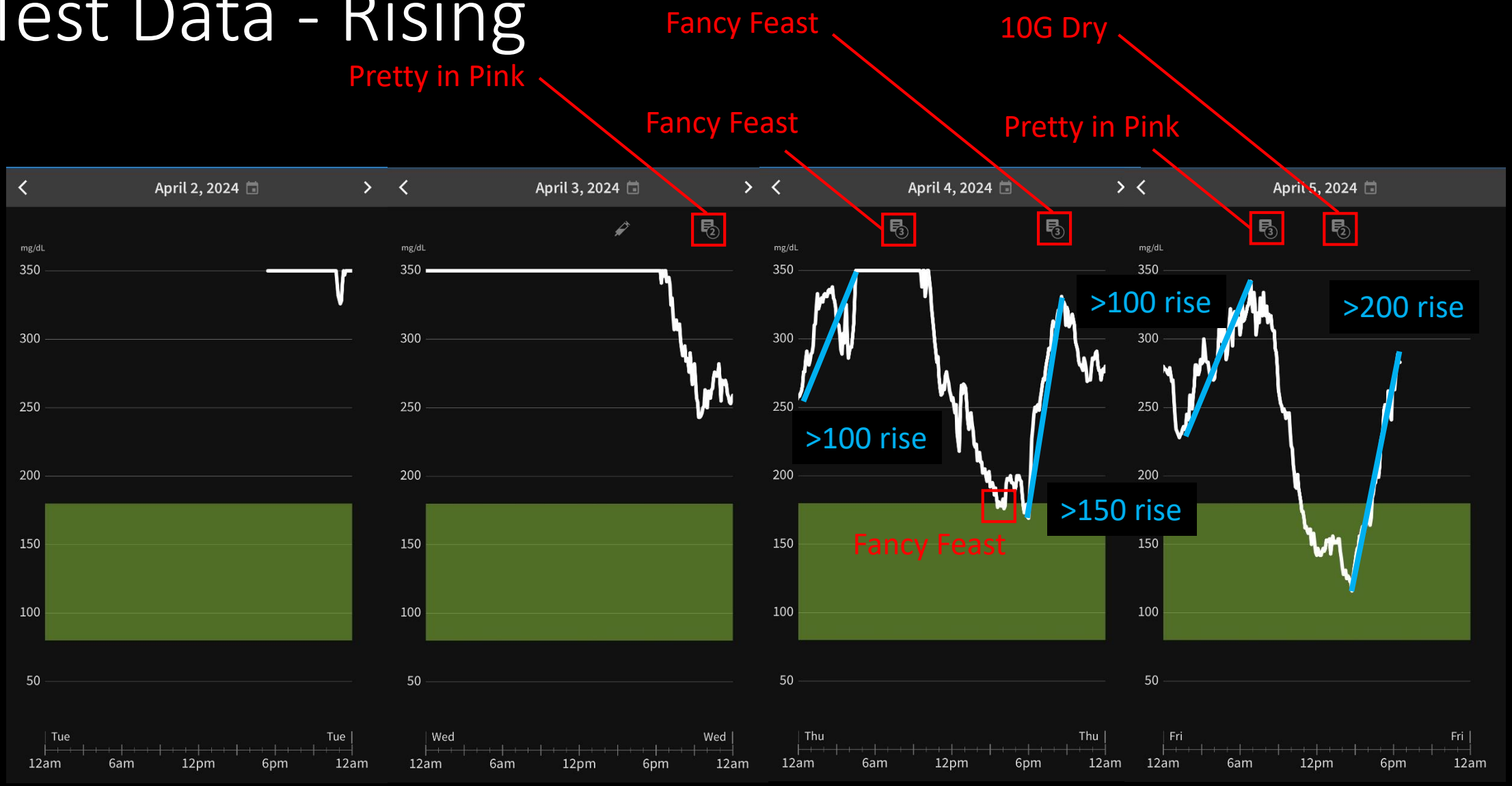
Test Data


Fancy Feast
2U Inject
10G Dry
Pretty in Pink
Fancy Feast
2U Inject
Pretty in Pink
2U Inject
1U Inject
April 2, 2024
April 3, 2024
April 4, 2024
April 5, 2024
mg/dL
350
300
250
200
150
100
50
Baseline test
12 Hour Life
Fancy Feast
Tue
Wed
Thu
Fri
12am
6am
12pm
6pm
12am

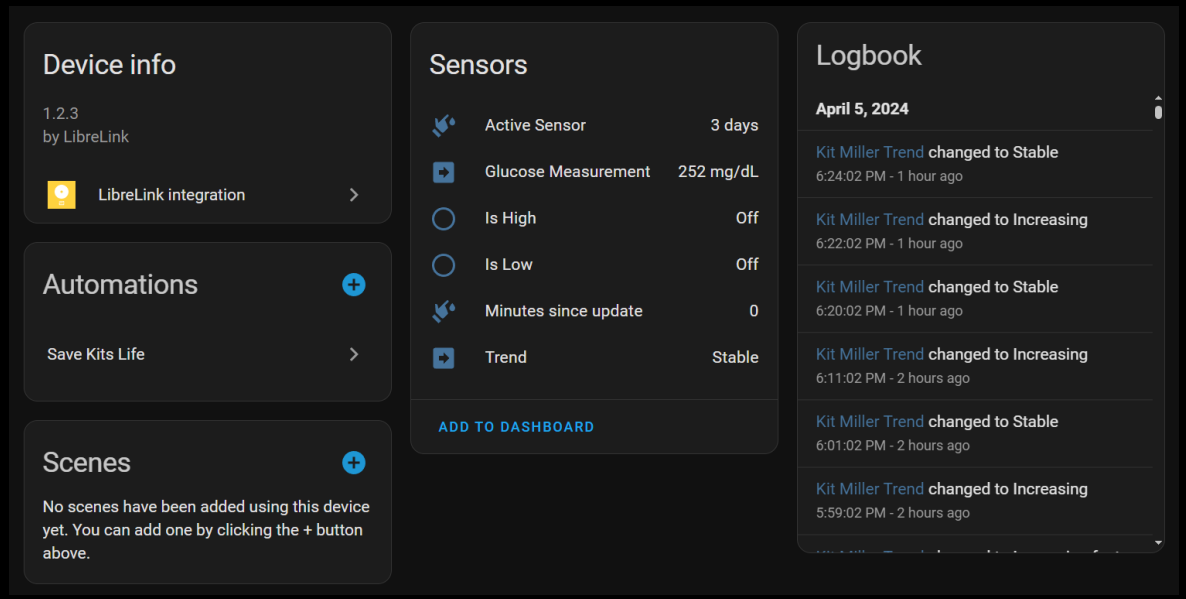
Test Data - Lowering

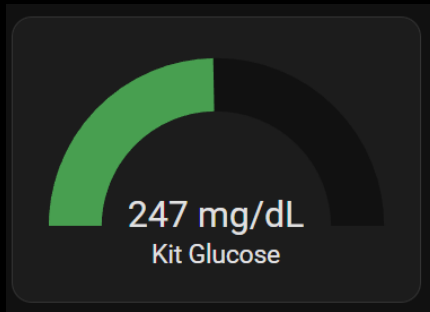


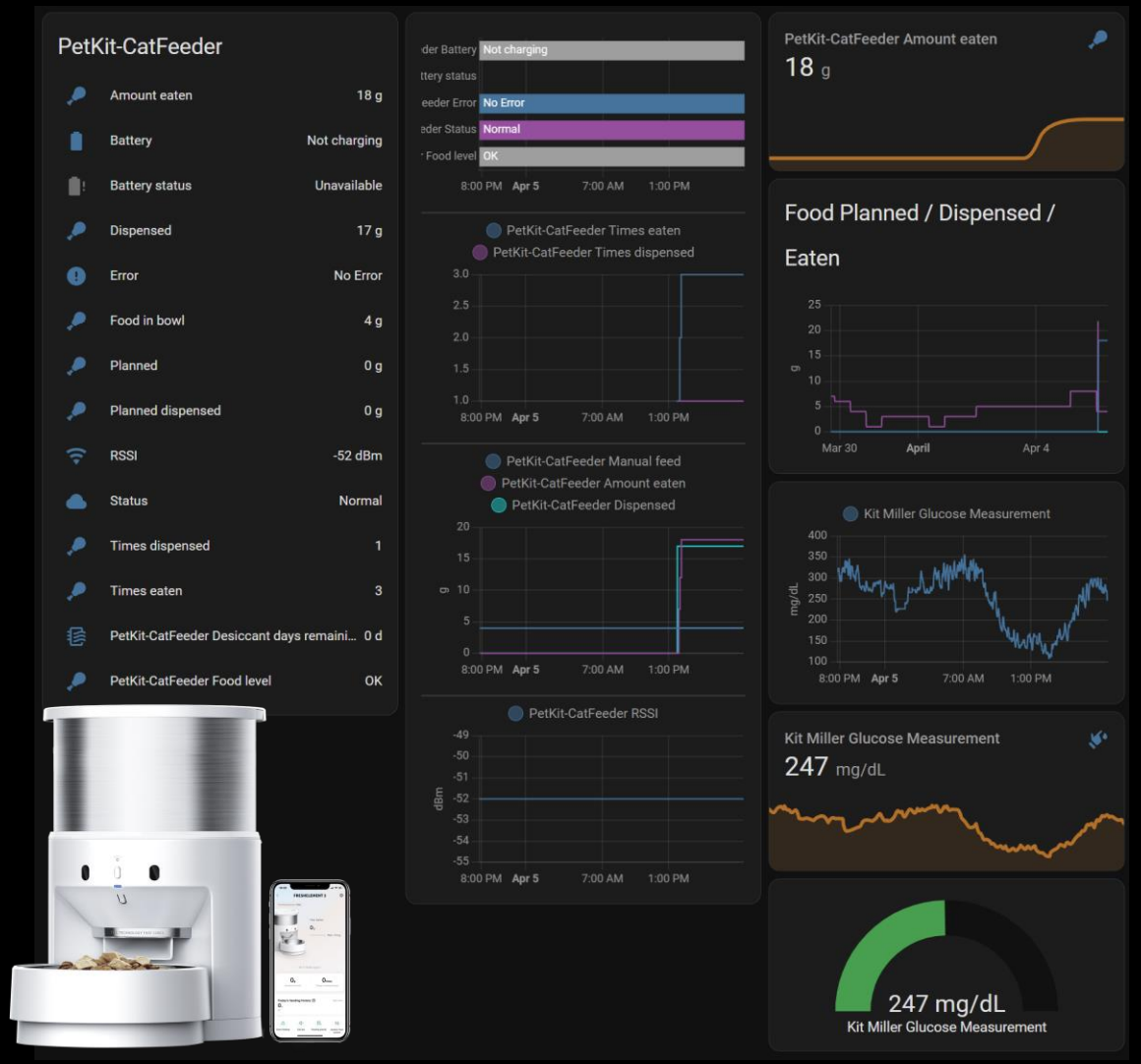
Test Data - Rising



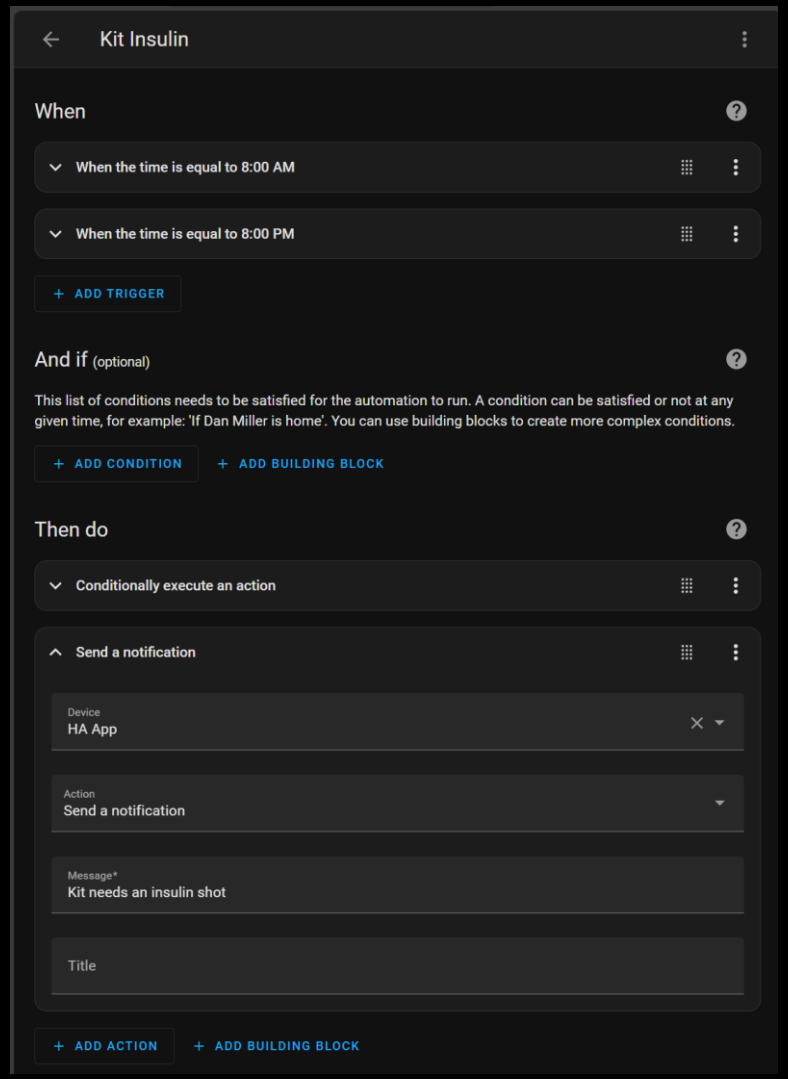
Home Assistant Integration

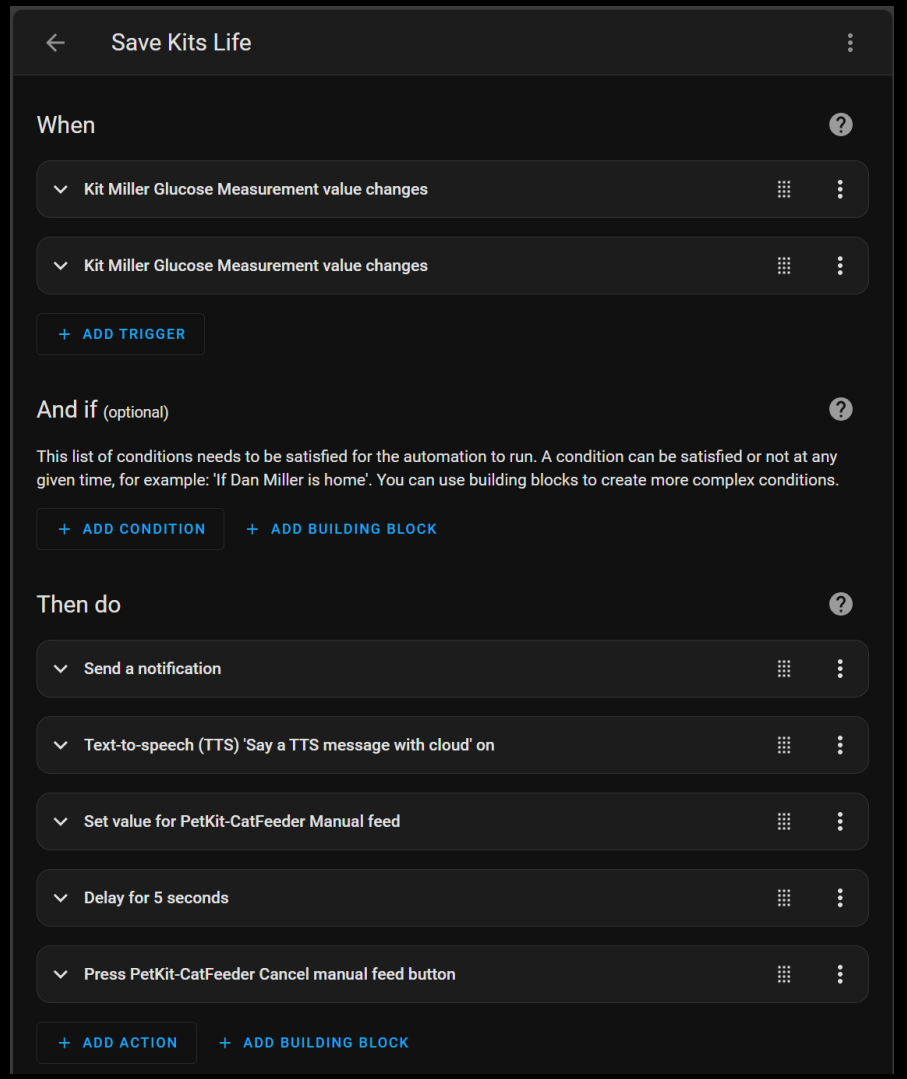






Home Assistant Automation





Critical Symptoms During Treatment

- Hypoglycemia (diabetic ketoacidosis)
  - Lethargy
  - Excessively sleepy
  - Drunken/Abnormal Walk
  - Seizures
- What to do
  - Immediate meal
  - Rub light karo syrup, honey, or sugar-water on gums
    - Dose of one tablespoon per 5 pounds
    - So like 2-3 tablespoons of sugar for Kit

References

- https://felinediabetes.com/FDMB/
- https://catvets.com/diabetes-toolkit/treatment
- https://github.com/gillesvs/librelink
- https://www.home-assistant.io/dashboards/
- https://petkit.com/products/petkit-fresh-element-infinity-5l

Type	Formulation	Duration of Action	Starting Dose	Median Maintenance Dose
Lente (Vetsulin/Caninsulin)	U40	Medium-acting (8-10 hours)	0.25-0.5 U/kg q12h 0.11-0.23 U/lb q12h	0.5 U/kg q12h
Glargine (Lantus)	U100	Long-acting (12-24 hours)	0.25-0.5 U/kg q12h 0.11-0.23 U/lb q12h	2.5 U/cat q12h
PZI (Prozinc)	U40	Long-acting (13-24 hours)	0.2-0.7 U/kg q12h 0.1-0.3 U/lb q12h	0.6 U/kg q12h
Detemir (Levemir)	U100	Long-acting (12-24 hours)	0.25-0.5 U/kg q12h 0.11-0.23 U/lb q12h	1.75 U/cat q12h

**This table was created based on the ISFM Guidelines on Diabetes Mellitus. Print this chart.*