

Using Continuous Glucose Monitors in Bariatric Surgical Patients: A Surprised Finding

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IFSO 2024

Disclosures

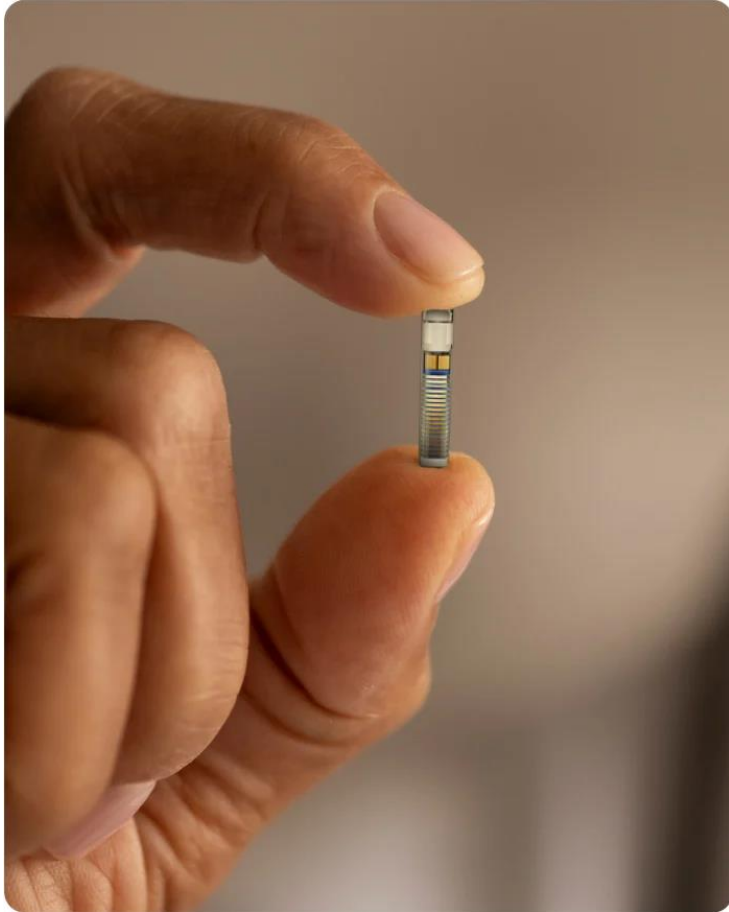
- Consultant for Medtronic
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- Partner Transform Health Partners
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Continuous Glucose Meters (CGMs)

- Dexcom G7
- Signos
- Libre
- Eversense (Senseonics or Ascensia)



Eversense CGM



Background

- Gastric bypass patients can develop symptomatic hypoglycemia.
- Dietary change with high protein diet is recommending along with increasing frequency of small meals.
- Hypoglycemia may lead to weight regain and sugar cravings.
- Many RY gastric bypass patients cannot receive coverage for GLP1RA due to not having a Type 2 diabetes diagnosis.
- CGMs can help provide diagnostic evidence of symptomatic hypoglycemia or type 2 diabetes.

American Diabetes Association

Defining type 2 diabetes

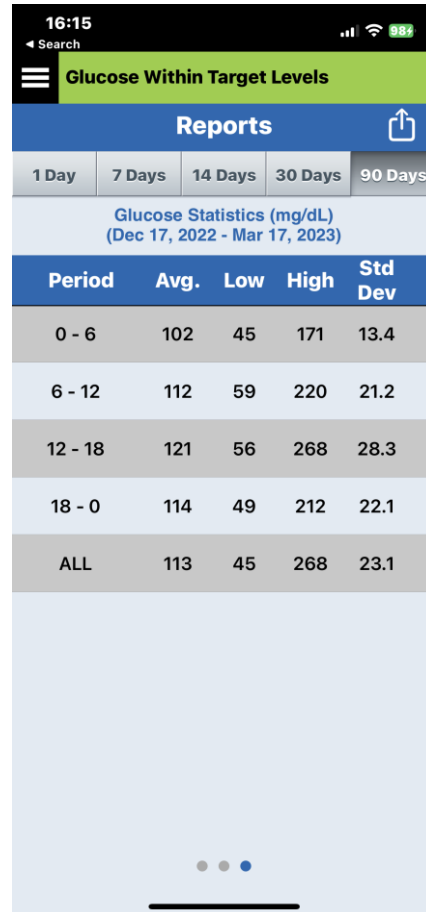
- **Random (also called Casual) Plasma Glucose Test**
- This test is a blood check at any time of the day when you have severe diabetes symptoms.
- **Diabetes is diagnosed at blood glucose of greater than or equal to 200 mg/dl**

<https://diabetes.org/about-diabetes/diagnosis>

Study

- Retrospective
- N=4
- All patients had gastric bypass.
- Patients had daily symptomatic hypoglycemia to below 50 fasting.
- CGM data also showed glucose over 200 mg/dL 30-60 minutes after eating. Subsequent hypoglycemia is seen.
- This resolves with GLP1RA treatment.
- High protein diets were recommended.
- Small frequent meals.

Case report#1: Patient with RYGB in 2000



16:15
Search
Glucose Within Target Levels
Reports
1 Day 7 Days 14 Days 30 Days 90 Days
Glucose Statistics (mg/dL)
(Dec 17, 2022 - Mar 17, 2023)

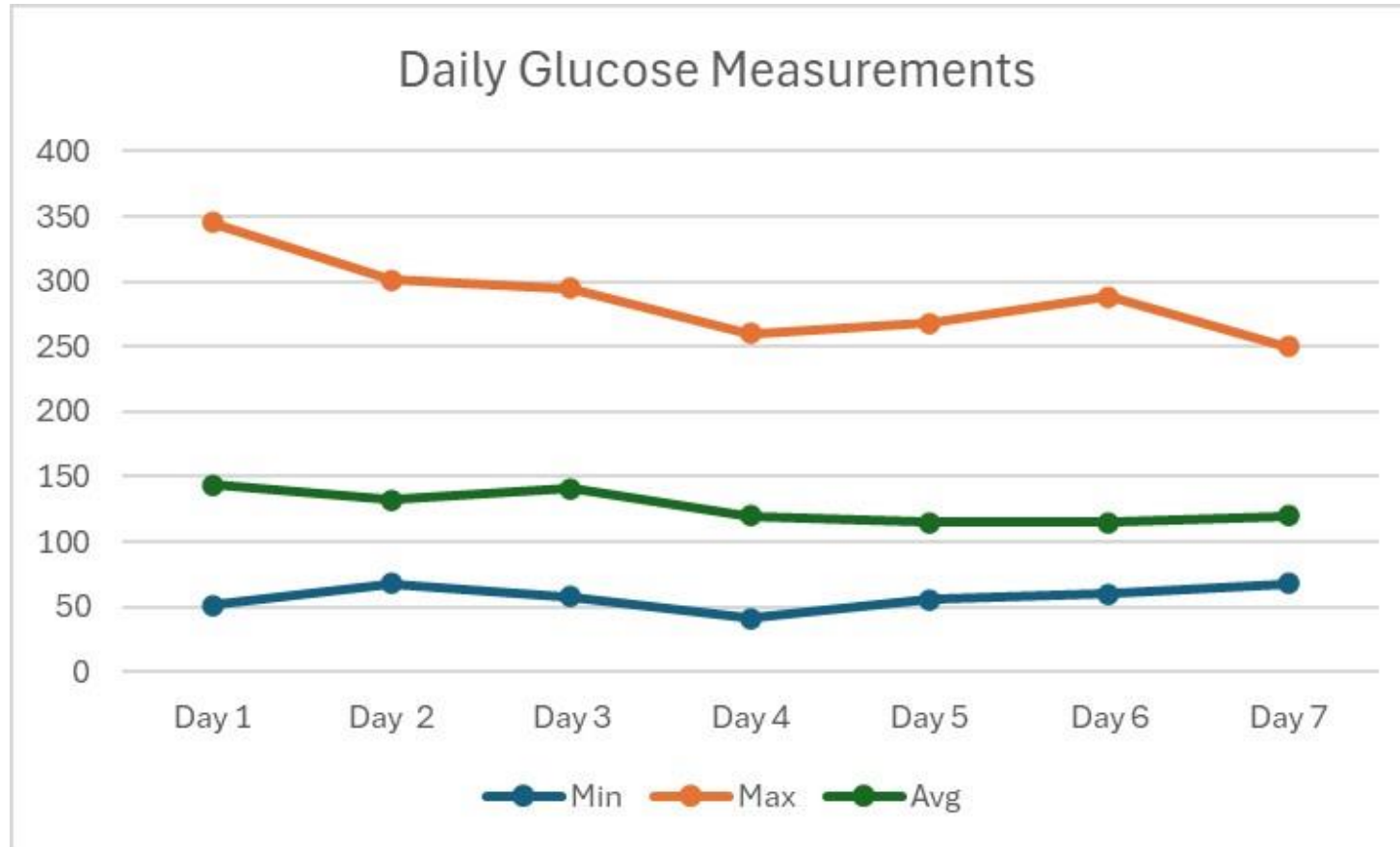
Period	Avg.	Low	High	Std Dev
0 - 6	102	45	171	13.4
6 - 12	112	59	220	21.2
12 - 18	121	56	268	28.3
18 - 0	114	49	212	22.1
ALL	113	45	268	23.1

- A1c 4.7.
- BMI 20.
- CGM data 90 days pre GLP1 treatment Jan-March 2023.
- Glucose down to 45.
- Glucose up to 268 after eating.
- Daily sugar cravings.

Case report #2

- 45-year-old male who had RY gastric bypass in 2021.
- Lowest weight 180 lbs. in 2022. Preop weight 260 lbs.
- Weight of 220 lbs. BMI 32.9. March 2024. 40 lbs. regain.
- A1c 6.1. Fasting glucose 48.
- Symptomatic hypoglycemia
- CGM data from April 1- May 31st 2024 shows hypo and hyperglycemia
- GLP1 medication provided with improvement of hypo and hyperglycemia.

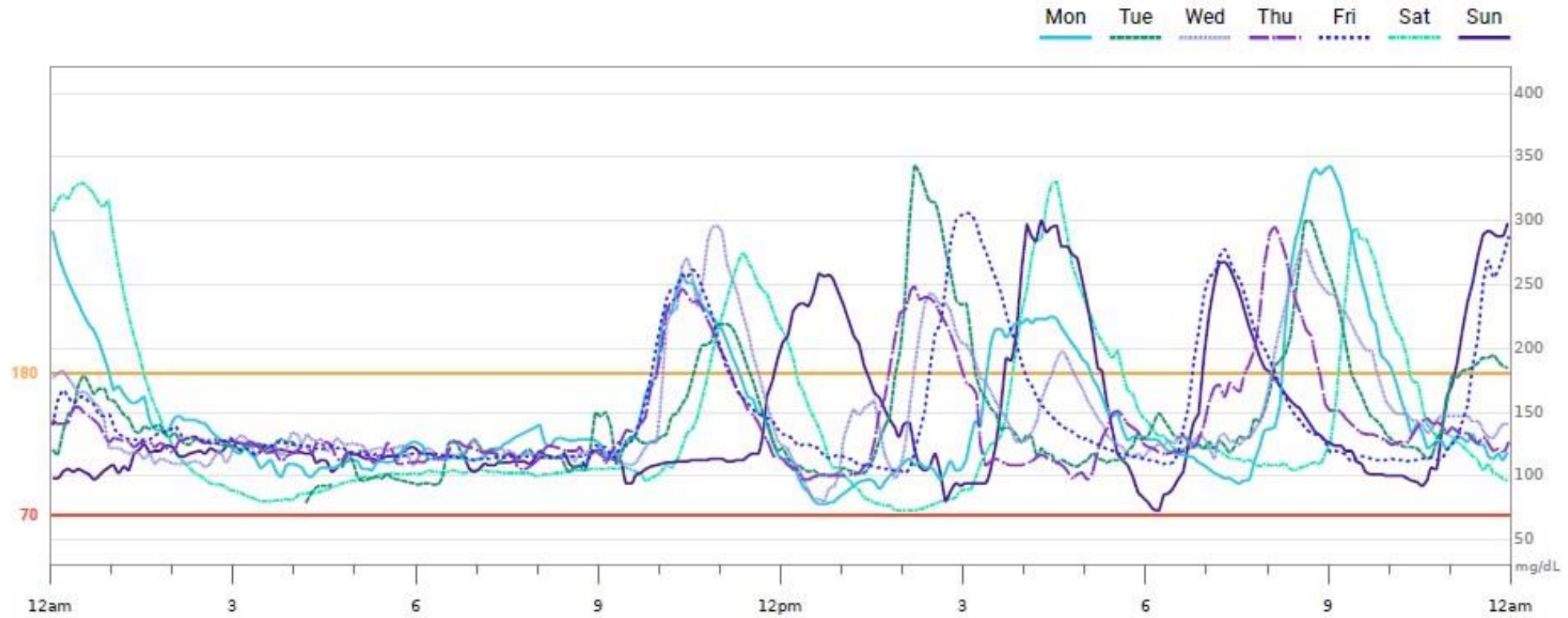
Week 1: hypoglycemia/hyperglycemia



Week 3

Overlay

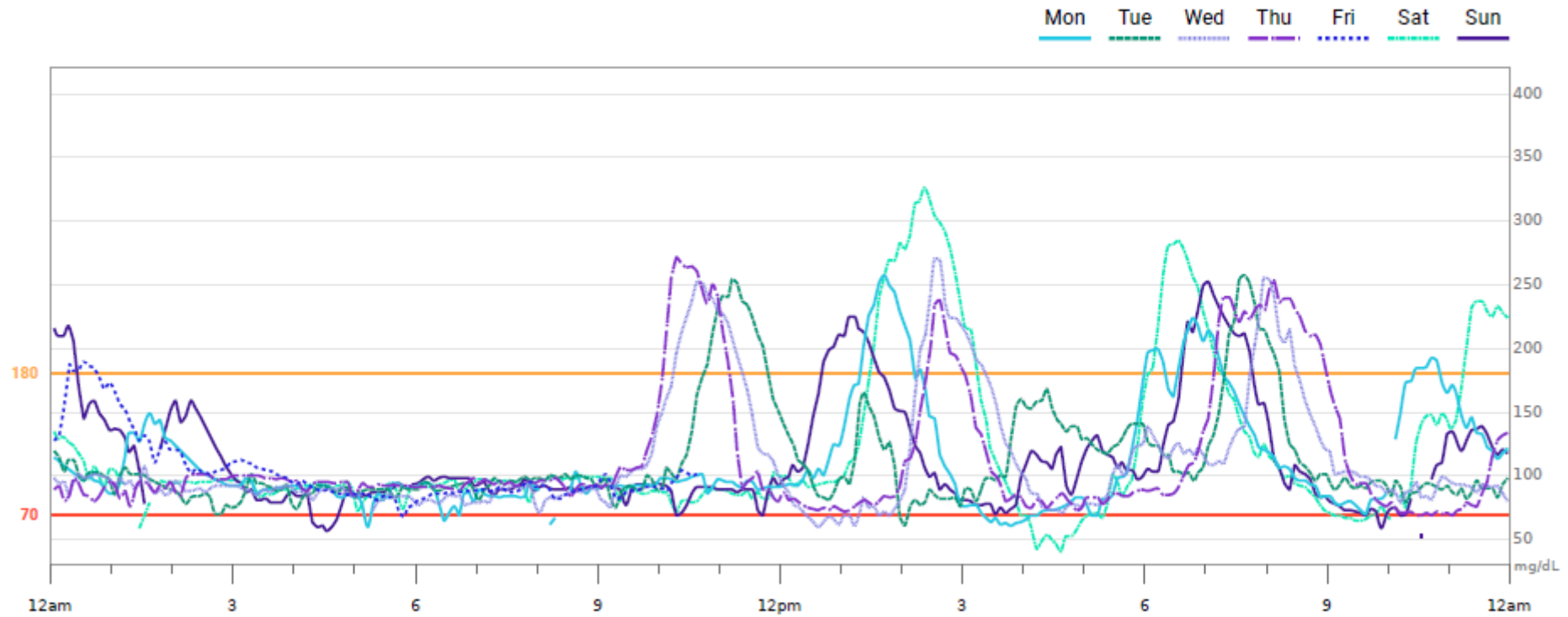
61 days | Mon Apr 1, 2024 - Fri May 31, 2024
Week 3 | Sat Apr 13, 2024 - Fri Apr 19, 2024



Week 9

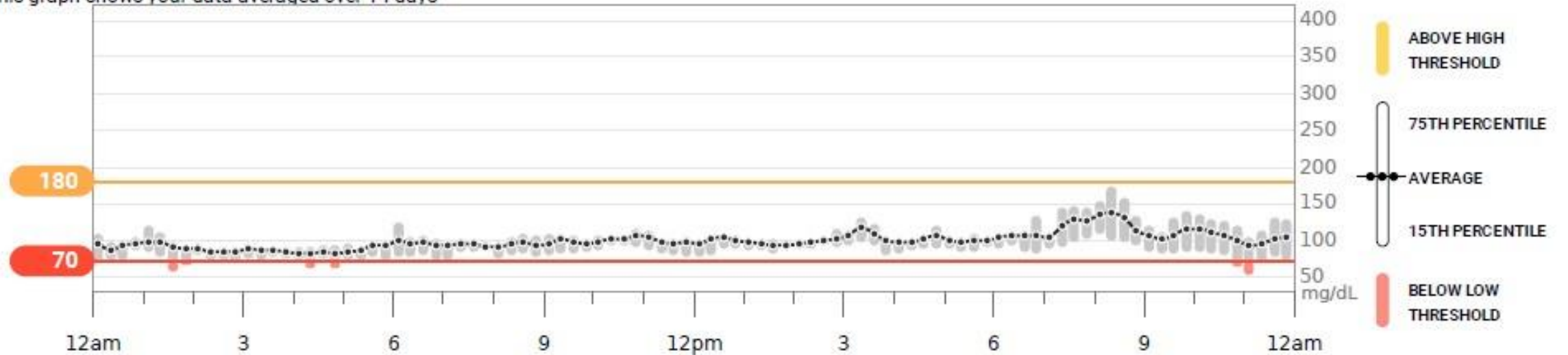
Overlay

61 days | Mon Apr 1, 2024 - Fri May 31, 2024
Week 9 | Sat May 25, 2024 - Fri May 31, 2024



After several months GLP1RA treatment

This graph shows your data averaged over 14 days



Conclusions

- CGMs can help patients get coverage for GLP1 medications by diagnosing Type 2 diabetes in gastric bypass patients in patients with normal A1c and fasting glucose.
- GLP1s improve glycemic control and mitigate symptomatic hypoglycemia.
- Any patient with weight regain or hypoglycemia after gastric bypass should be given a CGM and started on a GLP1RA.