## Case report: Correlation between blood glucose and hormones using Mira

Woman with type 1 diabetes and IUD placement







## Patient background and situation



37 female

She has a Mirena IUD.

Fluctuating blood sugar during luteal phase and some symptoms of possible perimenopause (PMS-like symptoms)

2 pregnancies

BMI: 22



Type 1 diabetes, migraines.



Exercise

Strength training 2-3 days/week, cardio 4-5 days/week.

Co Nutrition

Diet: normal, aiming for lower carb (around 30 grams per meal).



## Patient background

Labs 

Vit D: 29 ng/mL

B12: 505 pg/mL

TSH: 1.79 μIU/mL

Cholesterol: 189 mg/dL

Triglycerides (TG): 34 mg/dL

HDL: 81 mg/dL

LDL: 101 mg/dL

A1C: 6.4 %





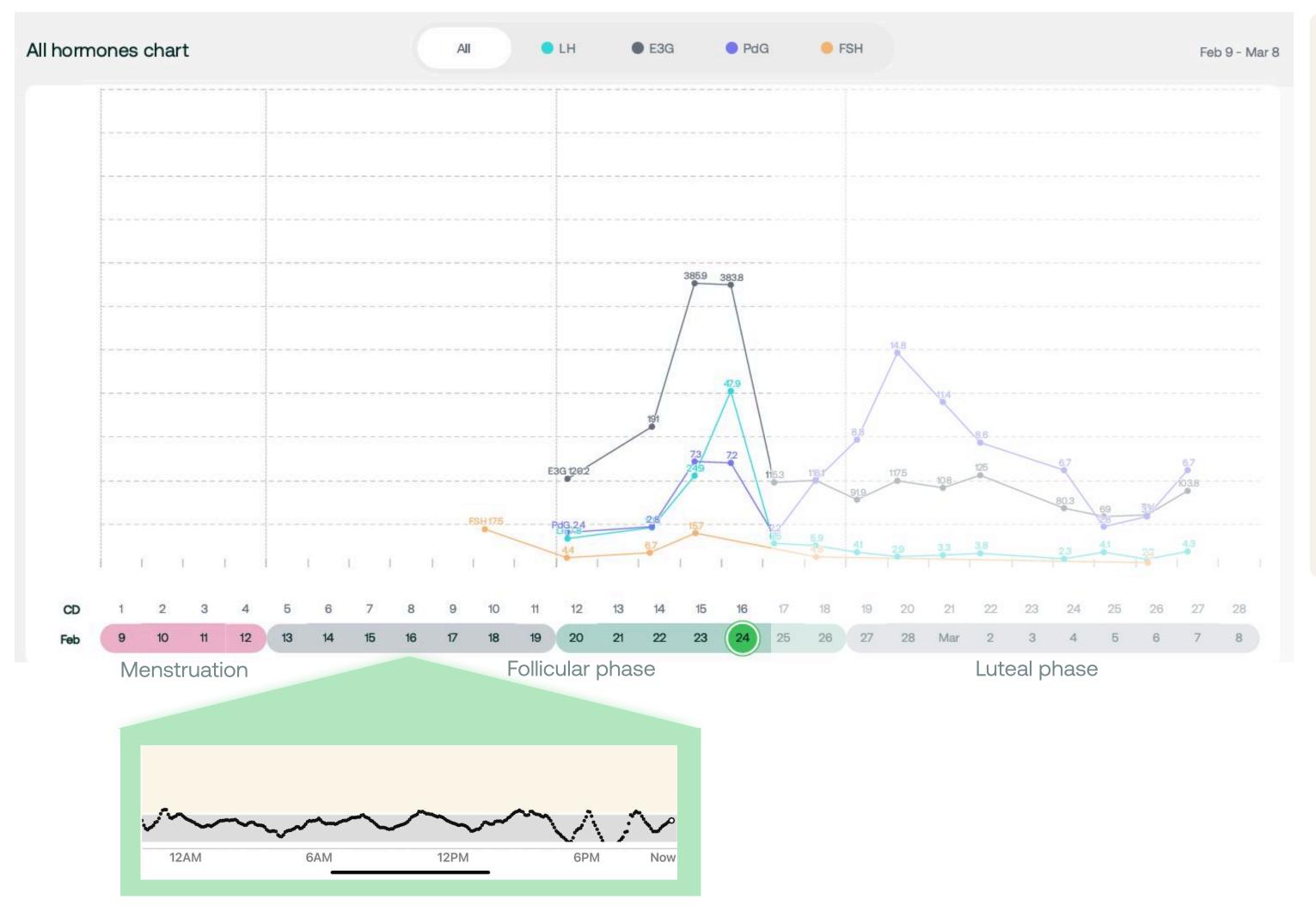
Novolog, Ozempic, Spironolactone



Vitamin D, Magnesium Glycinate



## Understanding blood glucose response in relation to increased insulin sensitivity during the follicular phase



#### During Mira

#### Follicular phase details:

Improved insulin sensitivity leads to more efficient blood sugar regulation with lower insulin levels.

Minimal fluctuations in glucose levels observed.

Glucose remains consistently within the target range.





# Understanding blood glucose response in relation to decreased insulin sensitivity during the luteal phase





### During Mira

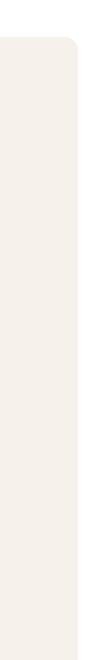
Luteal phase details:

Increased susceptibility to blood sugar fluctuations during the luteal phase.

Greater frequency and amplitude of glucose fluctuations.

More time spent outside the target glucose range.

Heightened sensitivity to blood sugar drops, leading to more instability.





### **Outcome After Data Collection**







Patient learned that she is ovulating despite Mirena IUD in place.



Observed change in glucose response based on phase of the cycle.



Based on these insights, she is able to adjust lifestyle, diet, and activity to help mitigate glucose fluctuations related to changes in insulin sensitivity across different phases of the cycle.





Lindsay Cohen is the Founder of Mama-betes and a Diabetes-Focused Dietitian & Health Coach.

Lindsay Cohen is a Registered Dietitian, Certified Diabetes Care and Education Specialist, and National Board-Certified Health and Wellness Coach. Diagnosed with Type 1 Diabetes at age 9.

As a mom of two, Lindsay specializes in supporting busy families with realistic nutrition and wellness strategies through her practice and online platform, Mama-betes.



#### Testimonial:

"Mira was incredibly helpful to understand what was happening during my cycle. It really opened up my eyes to what was happening with my blood sugars in relation to my hormone levels and put a lot of puzzle pieces together for me. It gave me peace of mind that my cycle is still 'normal' but also validated that I may be having some symptoms due to my progesterone levels being on the low side. I will definitely be bringing my data in to my doctor to discuss further and determine if there is anything I want to look into further in regard to treatment".



