

Background and aims

Using the Continuous Glucose Monitoring System (IPro®; Medtronic Minimed) for a group of pregnant women with gestational diabetes (GD) based on IADSPG criteria (fasting, 5.0 mmol/L; 1-h, 10.0 mmol/L; 2-h, 8.6 mmol/L). We attempted to answer the following question: when does the physiological peak of postprandial glucose occur in real life for the 3 meals and after a standardized breakfast.

Results

The postprandial glucose peak was reached after 68 ± 23 min, 79 ± 30 min and 109 ± 28 for breakfast, lunch and dinner respectively. The postprandial glucose peak was observed earlier with a standardized breakfast (70 gr carbohydrates): 52 ± 11 min.

Materials and Methods

We included 13 pregnant women in our study (31 ± 3 years old, 6/13 primipara and 2/13 with GD history).

Patients received an IPro®CGMS[1] for use over 5 days after an educational program and dietary advises. This was calibrated at least 4 times a day. No problem of intolerance occurred during this trial.

The last day of the trial, patients received a standardized breakfast at hospital.

	IADPSG 75g OGTT
Fasting glucose, mg/dL	≥ 92
1-hour glucose, mg/dL	≥ 180
2-hour glucose, mg/dL	≥ 153
3-hour glucose, mg/dL	-
Criteria for diagnosis	At least 1



I-Pro®-Minimed Medtronic®



Conclusions

Our results show that the optimal time for testing in pregnant women with GD is between 45 and 120 min postprandial. Based on a practical approach, it seems to be easier to advise a 60-min interval. In real life, results depend on the type of meals but the earliest peak remains always at breakfast which could be more discriminant.