



CENTRE OF POSTGRADUATE  
MEDICAL EDUCATION



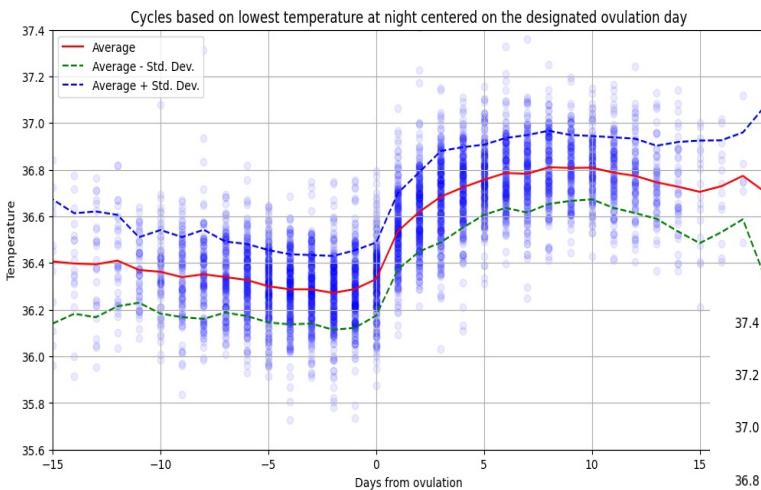
# Advantage of pseudocontinuous basal body temperature monitoring for ovulation prediction using an innovative vaginal thermometer.

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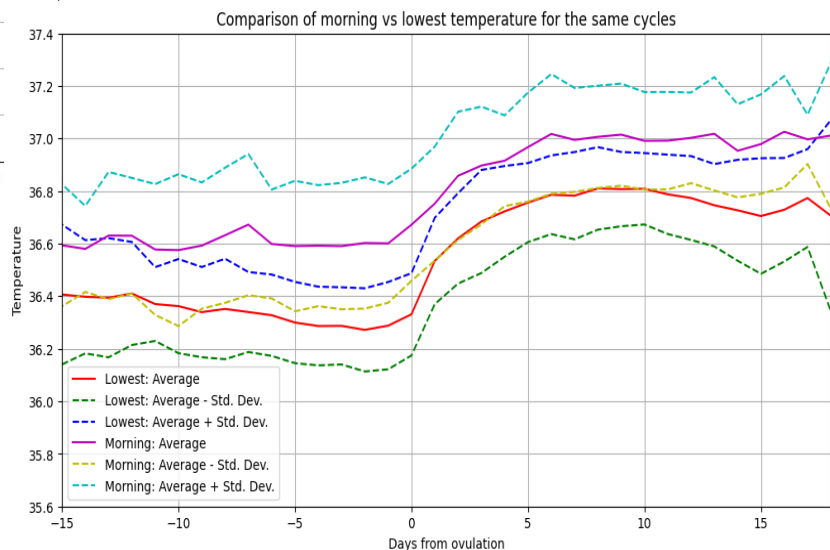
The study examined basal body temperature (BBT) fluctuations in women, which typically decrease before ovulation and rise by 0.2-0.5°C afterward due to increased progesterone. Traditional morning temperatures, often influenced by physical movements and sleep disturbances, have been used to estimate BBT. To improve accuracy, this study compared morning temperatures with more stable pseudo-continuous overnight measurements taken using an innovative vaginal thermometer. The objective was to determine which method more accurately predicts ovulation and to assess the usability of the new device by patients.

For the study, we employed the MY OVU device, a vaginal ring thermometer, following the manufacturer's guidelines. We applied the "3 over 6" method, which entails identifying a temperature increase of 0.2°C above the average of the six preceding measurements.

**The study involved 97 healthy female volunteers aged 21-35, across which 326 menstrual cycles were recorded. Participants were instructed to insert vaginal thermometers before bedtime, and subsequently upload the collected temperature data to a dedicated smartphone app. The fertility prediction accuracy derived from the lowest night temperature was compared with predictions based on the morning temperature.**



Comparing the lowest temperatures with morning temperatures for the same cycle reveals that slight disruptions in morning measurements—like measuring late or after physical activity, or the body naturally warming before waking up—can significantly impact the cycle analysis as a whole.



**In our study, we found the superiority of pseudocontinuous measurements over standard BBT assessment.**

1. In 68% the difference in determining the day of ovulation did not exceed +/-1 day. Standard measurement difference varies within +/- 4 days, in extreme cases up to +/- 9 days.

- Morning measurements had a high error rate, failing to detect ovulation in 45% of cycles where it could have been identified with nighttime measurements.
- The results of the user experience survey provide evidence of the superiority of constant intravaginal BBT observation over morning measurement.