

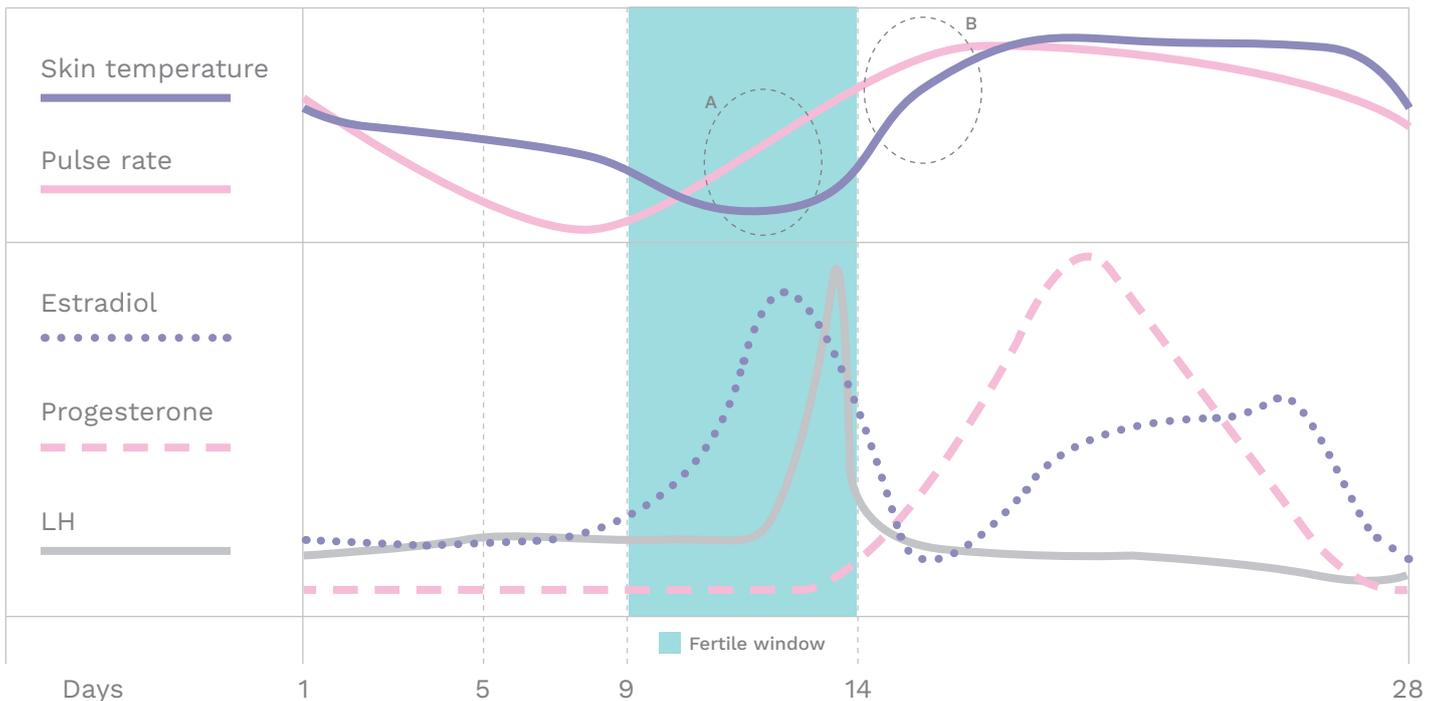
## Ava Fertility Tracker: overview of clinical and scientific background



The Ava bracelet is worn only during sleep. In the morning, the recorded data is synced with a smartphone app where the user can see her fertility prediction.

The app gives physiological and reproductive health insights and informs the user about the best time to conceive. It enables the user to log menstruation, sexual intercourse, and health symptoms.

### Physiological and hormonal changes in the menstrual cycle



#### Changing physiology

Typical behavior of physiological signals observed in clinical trials testing Ava

**Before ovulation (A):** Pulse rate increases of 2.1 beats per minute<sup>1</sup> and skin temperature is suppressed of 0.17° C<sup>2</sup> during the fertile window compared to the menstrual phase

**After ovulation (B):** Pulse rate increases an additional 1.5 beats per minute<sup>1</sup> compare to the fertile phase, and skin temperature increases of 0.5° C<sup>2</sup> compared to the fertile phase.

#### Doubling the chance to conceive

Timing of intercourse during the peak fertile days leads to an estimated conception probability of 30%, while untimed intercourse averaging once per week produces a 15% chance of conception per cycle.<sup>3,4</sup>

Couples who are willing to have sex every or every other day can achieve high chances to conceive without using a fertility tracker. Fertility trackers are especially helpful for couples who cannot or do not want to have sexual intercourse in high frequency<sup>5</sup>.

#### Identifying the fertile days

Reproductive hormones influence a variety of physiological parameters. Ava uses the changes in the physiological parameters caused by reproductive hormones to calculate the current status of the cycle.

Ava recognizes more fertile days than other methods. Based on clinical data, Ava's algorithm was demonstrated to detect 5.3 fertile days per cycle with an accuracy rate of 89%.<sup>6</sup>

#### Clinical trials testing Ava:

Clinicaltrial.gov 1: <https://clinicaltrials.gov/ct2/show/NCT03128983>  
 Clinicaltrial.gov 2: <https://clinicaltrials.gov/ct2/show/NCT03161873>



<sup>1</sup> Shilaih et al (2017) Pulse Rate Measurement During Sleep Using Wearable Sensors, and its Correlation with the Menstrual Cycle Phases, A Prospective Observational Study

<sup>2</sup> Shilaih et al (2017) Modern Fertility Awareness Methods: Wrist Wearables Capture the Changes of Temperature Associated with the Menstrual Cycle

<sup>3</sup> Weinberg et al (1995) A model for estimating the potency and survival of human gametes in vivo

<sup>4</sup> Wilcox et al (1995) Timing of Sexual Intercourse in Relation to Ovulation

<sup>5</sup> Andrews et al (1992) Is fertility-problem stress different? The dynamics of stress in fertile and infertile couples.

<sup>6</sup> Leeners et al. (2016) Digital woman's health based on wearables and big data. Symposium conducted at the Annual Meeting of Swiss Society of Gynecology and Obstetrics.