



Smart Rings

Practical Guidance for Pediatric and Adolescent Gynecology Providers

What are smart rings?

Smart rings are wearable jewelry devices designed to track sleep and cardiovascular metrics—including heart rate, heart rate variability, respiratory rate, and skin temperature—to generate readiness/recovery and stress scores. This physiologic data has been used in medical practice, such as in epilepsy and cardiovascular disease management, and has been proposed for ovulation and menstrual cycle tracking. Examples include the Oura Ring, Evie Ring, RingConn, Samsung Galaxy Ring, and others.

How do they work?

Smart rings detect thermoregulatory effects of progesterone during the luteal phase by measuring increases in basal body temperature, heart rate, and decreases in heart rate variability. This data is used to generate health reports and predict ovulation and menstruation.

Are they accurate?

Research suggests physiology-based cycle tracking using smart rings is significantly more accurate than calendar-based methods for predicting ovulation – about three times more accurate with fewer days of error. These devices detect ovulation correctly in 88–96% of cases, with an average error of approximately 1.26 days. They demonstrate high predictive value for identifying the fertile window within ± 3 days of ovulation, with sensitivities of approximately 83% for ovulation detection and 71–86% for menstruation detection. Performance is not affected by age or typical cycle variability, but accuracy decreases in individuals with unusually long or short cycles. While physiology-based cycle tracking is more accurate than calendar-based methods, traditional methods such as urinary LH detection and cervical mucus tracking remain the gold standard, though are more labor-intensive.

What are the benefits?

Smart rings demonstrate improved accuracy compared with calendar tracking, allowing for more precise timing for conception and *potentially* improved contraceptive effectiveness when used to avoid the fertile window. Smart rings also demonstrate significantly greater accuracy for ovulation detection (96%) compared with wrist-worn wearable devices (54–86%). Compared with traditional methods of fertility awareness such as the calendar method or cervical mucus tracking, smart ring-based cycle tracking is easily wearable.

Any concerns?

Smart rings have not been validated in individuals younger than 18 years. It is not intended for those who frequently experience anovulatory cycles or who do not ovulate due to hormonal suppression. Estimated ovulation dates should be interpreted with caution in individuals with underlying menstrual disorders, such as polycystic ovarian syndrome and thyroid disease. Of note, these devices can be expensive and may require subscription to additional apps.

Practical advice?

The use of smart rings is not currently approved or recommended in adolescents. While the inclusion of smart rings in cycle tracking may lead to more ease and greater accuracy compared with other methods of cycle tracking, caution is needed in recommending the use of the data for timing intercourse versus abstinence, depending on the goal of conception or contraception. Health reports created may serve a practical role in timing menstrual symptom management and understanding health trends over time. Despite the demonstrated improvement in accuracy, the vulnerabilities of all fertility awareness-based methods of family planning remain.