

Basal body temperature

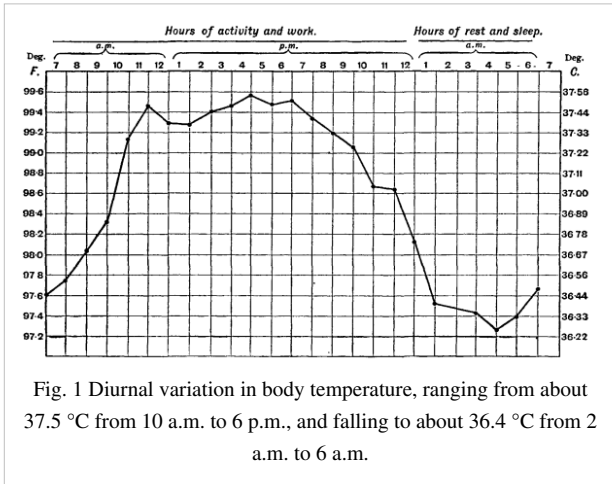


Fig. 1 Diurnal variation in body temperature, ranging from about 37.5 °C from 10 a.m. to 6 p.m., and falling to about 36.4 °C from 2 a.m. to 6 a.m.

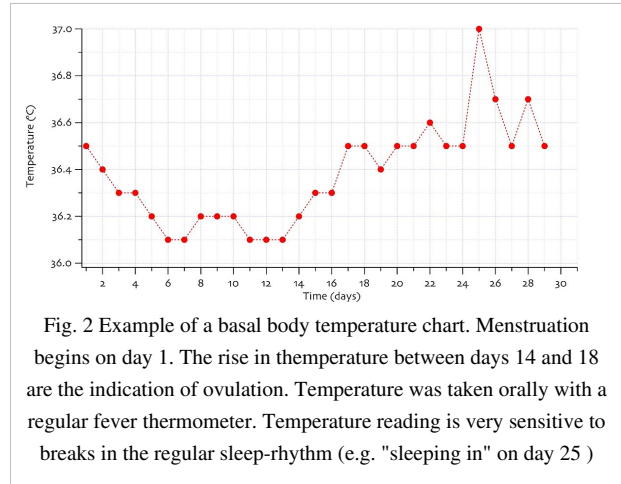


Fig. 2 Example of a basal body temperature chart. Menstruation begins on day 1. The rise in temperature between days 14 and 18 are the indication of ovulation. Temperature was taken orally with a regular fever thermometer. Temperature reading is very sensitive to breaks in the regular sleep-rhythm (e.g. "sleeping in" on day 25)

Basal body temperature	
Background	
Birth control type	Fertility awareness
First use	1930s
Failure rates (first year)	
Perfect use	0.3%
Typical use	3.1 ^[1] %
Usage	
Reversibility	Immediate
User reminders	Dependent upon strict user adherence to methodology
Clinic review	None
Advantages and disadvantages	
STD protection	No
Periods	Prediction
Weight gain	No
Benefits	No side effects, can aid pregnancy achievement

Basal body temperature is the lowest temperature attained by the body during rest (usually during sleep). It is generally measured immediately after awakening and before any physical activity has been undertaken, although the temperature measured at that time is somewhat higher than the true basal body temperature (see Fig. 1). In women, ovulation causes an increase of one-half to one degree Fahrenheit (one-quarter to one-half degree Celsius) in basal body temperature (BBT); monitoring of BBTs is one way of estimating the day of ovulation. The tendency of a woman to have lower temperatures before ovulation, and higher temperatures afterwards, is known as a biphasic pattern. Charting of this pattern may be used as a component of fertility awareness.

BBT as a Birth Control Method

Hormonal causes of biphasic patterns

The higher levels of estrogen present during the pre-ovulatory (follicular) phase of the menstrual cycle lower BBTs. The higher levels of progesterone released by the corpus luteum after ovulation raise BBTs. The rise in temperatures can most commonly be seen the day after ovulation, but this varies and BBTs can only be used to estimate ovulation within a three day range.^[2]

If pregnancy does not occur, the disintegration of the corpus luteum causes a drop in BBTs that roughly coincides with the onset of the next menstruation. If pregnancy does occur, the corpus luteum continues to function (and maintain high BBTs) for the first trimester of the pregnancy. After the first trimester, the woman's body temperature drops to her pre-ovulatory normal as the placenta takes over functions previously performed by the corpus luteum.

Very rarely, the corpus luteum may form a cyst. A corpus luteum cyst will cause BBTs to stay elevated and prevent menstruation from occurring until it resolves, which could take weeks or months.

While trying to conceive

Regular menstrual cycles are often taken as evidence that a woman is ovulating normally, and irregular cycles is evidence she is not. However, many women with irregular cycles do ovulate normally, and some with regular cycles are actually anovulatory or have a luteal phase defect. Records of basal body temperatures can be used to accurately determine if a woman is ovulating, and if the length of the post-ovulatory (luteal) phase of her menstrual cycle is sufficient to sustain a pregnancy. Some fertility computers and software, can help a woman to determine these factors.

Pregnancy tests are not accurate until 1–2 weeks after ovulation. Knowing an estimated date of ovulation can prevent a woman from getting false negative results due to testing too early. Also, 18 consecutive days of elevated temperatures means a woman is almost certainly pregnant.^[3]

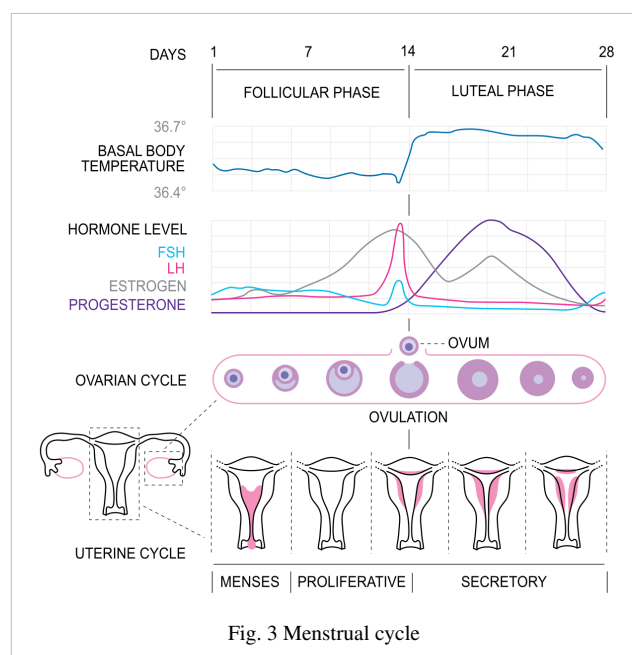
Tracking basal body temperatures is a more accurate method of estimating gestational age than tracking menstrual periods.^[4]

While avoiding pregnancy

Charting of basal body temperatures is used in some methods of fertility awareness, and may be used to determine the onset of post-ovulatory infertility. However, BBTs only show when ovulation has occurred; they do not predict ovulation. Normal sperm life is up to five days,^[5] making prediction of ovulation several days in advance necessary for avoiding pregnancy.

References

- [1] Döring, GK (June 9, 1967). "The reliability of temperature records as a method of contraception (Über die Zuverlässigkeit der Temperaturmethode zur Empfängnisverhütung)". *Deutsche medizinische Wochenschrift* **92** (23): 1055–1061. doi:10.1055/s-0028-1103790. PMID 6024685.
- [2] Kippley, John; Sheila Kippley (1996). *The Art of Natural Family Planning* (4th ed.). Cincinnati, OH: The Couple to Couple League. pp. 72,298–299. ISBN 0-926412-13-2.



[3] Weschler, Toni (2002). *Taking Charge of Your Fertility* (Revised ed.). New York: HarperCollins. p. 316. ISBN 0-06-093764-5.

[4] Weschler, pp.3-4,155-156, insert p.7

[5] Weschler, p.374

External Links

- BBT Q&A, with an example of a BBT chart (<http://www.fertilityplus.org/faq/bbt/bbt.html>)
 - Free spreadsheet to chart your BBT (<http://www.fertilityplus.org/faq/bbt/bbtdownload.html>)
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