

Information Sheet: Ovulation and Ovulation Testing

I. Introduction: the Biology of Ovulation

The timing of intercourse plays a crucial role for all couples attempting to conceive. While sperm live for two to three days, the egg is around for only 12 to 24 hours. Therefore, marital relations should ideally occur in the days prior to ovulation to give the sperm cells enough time to travel as far into the fallopian tubes as possible by the time the ovum is released.

On about day 12 of an average 28-day menstrual cycle, one of the ovaries releases a mature ovum into the fallopian tube leading to the uterus. If the ovum encounters sperm cells early enough in its journey through the fallopian tube, the two cells can meet while both are still viable, and proceed toward implantation and pregnancy.

Complexities of ovulation

Although people commonly assume that a woman's peak fertility coincides more or less with her immersion in a mikveh, this is only true for an average menstrual cycle of 28 days and an average menstrual period of 5-7 days. If ovulation occurs later, the couple should adjust their attempts accordingly. If testing reveals that ovulation occurs before the woman will immerse in a mikveh, a number of halachic considerations come into play ([link](#)).

Lack of ovulation (anovulation) or irregular ovulation are a different type of challenge and a number of treatment options exist for inducing and regulating ovulation ([links](#)).

In this article we will deal with methods of testing when ovulation occurs.

II. Ovulation testing

A. BBT testing

Basal body temperature testing is the simplest and least invasive method of determining ovulation. All that is required is a thermometer and some means of tracking daily temperature variations. Basal body temperature (BBT) - a person's temperature at rest - rises about one degree Fahrenheit at mid-cycle and maintains that increase through the second half of the cycle (not all women are equally sensitive to these changes).

To track BBT, a woman will generally take her temperature orally every morning before engaging in any activity, then record the reading. The couple can choose to attempt conception immediately upon detecting the rise in temperature, but as mentioned above, the odds favor intercourse that precedes ovulation by at least a day. If her cycle is reasonably regular, the couple will know for the following cycle how to time their attempts.

תהילים קכ"ו: "הזורעים בדמעה ברינה יקצרו"
"Those who sow with tears shall reap with joy" Psalms 126:5

B. Home ovulation testing kits (LH tests)

Although helpful, BBT charting has its limitations, especially for those women whose BBT changes do not clearly indicate ovulation. A more precise test is to check for luteinizing hormone (LH) in the urine. LH triggers ovulation; if it is absent or too low, ovulation has not happened. Under normal circumstances, the development of a "ripe" ovum prompts the release of significant amounts of LH. The increased LH level precedes ovulation by 12-36 hours, usually on about day 14 of an average 28-day cycle.

Using a home testing kit, a woman can determine her LH level and thus anticipate ovulation in order to optimally time intercourse. Using the test requires dipping a color-coded stick into a urine sample; the colors indicate different levels of LH.

C. Ultrasound testing

Many specialists use ultrasound testing (sonograms) in addition to other ovulation testing. The test can help provide an additional indication whether ovulation is taking place, and what her egg supply might be. In the test, a probe is inserted into the vagina up to the cervix, but no farther.

III. Halachic considerations

A. Testing on Shabbat

Each of these methods present challenges with regard to Shabbat:

BBT. The most obvious hurdle is that of recording the temperature, as writing is a Biblically prohibited melacha. Fortunately, one can easily circumvent the issue, either by remembering the figure and writing it down only after Shabbat, or by preparing number pieces before Shabbat and selecting the appropriate ones.

The other problem involves taking temperature, which might violate the Rabbinic prohibition to measure on Shabbat (part of the prohibition against commerce, which itself is prohibited lest one write). The Tzitz Eliezer rules leniently in this case and allows a standard mercury thermometer¹. Rabbi Moshe Feinstein and Rabbi Shlomo Zalman Auerbach both note that temperature is not associated with commerce at all, and therefore not included in the prohibition². One must, however, avoid using creams, lotions or the like to assist in taking temperature rectally, for example, and avoid soaking cotton in alcohol to clean the thermometer afterwards; even dipping the thermometer in alcohol is problematic unless one intends to use the thermometer again on Shabbat.

Home ovulation testing kits. Coloring of the test strip is a formidable challenge as coloring is a Torah prohibition. Rabbi Shlomo Zalman Auerbach's recommendation is to cause the color change in the test strip indirectly by dipping only the edge of the stick in the urine and letting the urine diffuse into the rest of the

1 Tzitz Eliezer Vol. IX no. 38 and Vol. XII no. 44:5.

2 Igrot Moshe Orach Chaim 1:128, and Shmirat Shabbat K'hilchatah, Vol. I, 40:2 and footnotes 2-3.

stick on its own³. Once this is done, one may not handle the urine sample again until after Shabbat, as it is muktzeh⁴.

Ultrasound testing. Ultrasound equipment runs on electricity, which may not be used on Shabbat except to save a life. The test can generally be scheduled for some other day of the week; if it cannot, it is generally forbidden to have the test performed on Shabbat. A competent halachic authority should be consulted for each case, as it may involve additional Shabbat considerations such as transportation and commerce beyond the technicalities of the sonogram itself.

B. Niddah status

BBT and Ovulation testing kits. Neither of these pose any niddah-related problems.

Ultrasound testing. The ultrasound procedure, as noted above, involves inserting a probe into the vagina. Any such contact of an outside object with the vaginal canal can be cause for halachic concern, as it may induce bleeding. In this case the concern is minimal as (a) bleeding as a result of a vaginal ultrasound is rare; (b) since the probe does not penetrate beyond the vaginal canal, any bleeding that might result is not significant as far as the laws of niddah are concerned.

IV. Summary

- The ideal time for intercourse is a window of 5 days concluding with the day of ovulation.
- Methods of predicting ovulation vary and couples may encounter Shabbat and niddah related considerations.
- On Shabbat BBT testing may be performed with a mercury thermometer.
- On Shabbat the test strip of ovulation testing kits should only have the edge dipped in the urine.
- Ultrasound testing should be scheduled for days other than Shabbat and in most cases does not raise niddah problems.

3 Shmirat Shabbat K'hilchatah, Vol. I, 33:20, note 83. More lenient sources are also cited along with Rav Auerbach's opposition to these lenient rulings.

4 Shulchan Aruch, Orach Chaim 308:34-35 and Mishna Brura ad loc, 134 and 136.