

TRACKING OVULATION

❖ What Is Ovulation?

Simply put ovulation is the release of one or more eggs (ovum/ova) from the ovary. Ovulation happens around the middle of the menstrual cycle and is when a woman is most fertile.

❖ Knowing When you are Ovulating

There are several ways to determine when you ovulate.

- Urine LH Test
- Blood LH Test
- Saliva Test
- Monitoring Cervical Mucous
- Tracking Basal Temperature
- Fertility/Menstrual Charting
- Using Digital Fertility Monitors

These tests detect one or more events (or their effects) leading up to or just after ovulation.

• Basic Female Reproductive Anatomy

- The **vagina**/birth canal leads to the cervix.
- The **cervix** is a fibrous tissue between the vagina and the uterus. Glands in the cervical canal secrete cervical mucous.
- The **uterus** is also known as the womb
- The **ovaries** are located on either side of the uterus. Eggs/ova develop here.
- The ovaries are connected to the uterus by the **fallopian tubes**.

• Before, During and After Ovulation

- At the beginning of a menstrual cycle (about day 5) **Follicle Stimulating Hormone (FSH)** is released by the pituitary gland in the brain.
- This causes 15 – 20 eggs to start growing in the fluid filled cavities (follicles) in the ovaries.
- As the eggs grow, the ovarian follicles produce **Oestrogen (oestradiol)**
- By the middle of the cycle one egg (occasionally more eggs) will have outgrown the others.
- The increasing oestrogen triggers the pituitary gland to secrete another hormone - the **Luteinising Hormone (LH)**
- LH causes the ripe egg to be released while the others die.
- Once the egg is released the follicle starts to secrete **Progesterone**.

❖ Ovulation Tests

- LH Tests

LH tests use antibodies to detect increased levels of LH (LH surge) in blood or urine.

Urine LH Tests are readily available and may be bought from most chemists, supermarkets and over the internet. These come in **strip**, **cassette** and **mid-stream** varieties, all detect LH surge 12 - 36 hours (half to one and a half days) before ovulation.



Blood LH Tests can detect the LH surge 4 – 5 hours before it is noticeable in urine (up to 41 hours before ovulation)

LH tests are not recommended if you are taking drugs such as clomid as this will most likely give a false positive result




Using Urine LH Test

1. Calculate the average length of your menstrual cycle - this is the number of days from the first day of you period to the day before the start of your next period, this will help work out when to begin testing.
2. Use the table below to determine when to start testing:

Length of menstrual cycle	Day to start testing	Length of menstrual cycle	Day to start testing
21	4	31	10
22	5	32	10
23	6	33	12
24	7	34	13
25	8	35	14
26	9	36	15
27	9	37	16
28	9	38	17
29	9	39	18
30	10	40	19

You may also determine when to start testing using an online ovulation calculator. (See [Directory](#))

3. Carry out test as shown below:

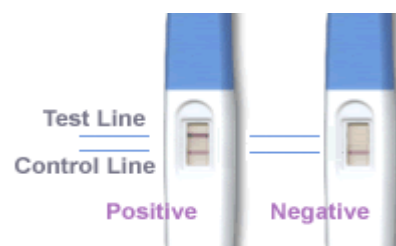
Strip LH tests	Cassette LH tests	Midstream LH tests
		
<ul style="list-style-type: none"> • Collect urine (not first in day) in a dry, clean container • Dip tip of strip in the urine for about 6 seconds • Results can usually be read in 3 – 5 minutes 	<ul style="list-style-type: none"> • Collect urine (not first in day) in a dry, clean container • Use pipette to draw up sample of urine • Deposit 4/5 drops of urine in the cassette window • Rest test on flat surface • Results can usually be read in 3 – 5 minutes 	<ul style="list-style-type: none"> • Remove cap • Hold absorbent tip downwards in urine stream (or in container of urine) for 10-15 seconds. • Replace cap • Place test on flat surface • Results can usually be read in 3 – 5 minutes

Reading Urine LH Test Results

All three tests display results in a similar manner, there is a **test line** and a **reference line**, the line closest to the tip is the test line – this is usually indicated on the test.

Results are determined by comparing these two lines:

- **Absence** of a test line indicates a negative result (no LH Surge)
- When test line is **lighter than** reference line, the result is negative
- When test line is **the same as** reference line, the result is positive
- When test line is **darker than** reference line, the result is positive



Ovulation occurs 12 – 36 hours after LH surge is detected.

- **Cervical Mucous**

Another way to determine when you are about to ovulate/ are ovulating is by monitoring the quantity, colour and texture of cervical mucous.

At the beginning of the menstrual cycle there is little or no cervical mucous then thick, creamy sticky mucous is produced. Increase in oestrogen around the middle of a menstrual cycle causes cervical mucous to increase in volume and become thin, clear and stretchy. In this state it is more sperm-friendly protecting it and providing it with energy for the swim ahead.

Monitoring Cervical Mucous

This is can be done easily.

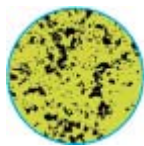
1. Collect cervical mucous by inserting a finger into the vagina - go as close as possible to the cervix - then circle finger around the cervix. Alternatively you can wipe the entrance to the vagina with a tissue. The former is better.
2. Note colour – this is clear around ovulation
3. Stretch collected mucous between index finger and thumb to analyse texture – it should be stretchy (elastic) around ovulation.



It is not necessary to monitor cervical mucous over several cycles but this might be useful in accurately predicting your cycles.
(See our **Three Month Ovulation Tracker**)

- **Saliva Test**

Oestrogen also causes the microscopic structure of saliva to change. These patterns may be observed and monitored using an ovulation microscope such as **ISIS Microscope**, **Fertile Focus**, **BabyStart Focus** and **Maybe Baby** ovulation microscope.



Prior to increased production of oestrogen, dried saliva appears as pebbles or dots



2-3 days before ovulation, small fernlike patterns start to appears amongst the pebbles and dots



During ovulation a distinctive, full fern pattern is observed. A fernlike pattern at the start of a cycle does not signify ovulation.

Please note: when observed under microscope these patterns are actually translucent or grey against a green background

Using an Ovulation Microscope



Ovulation microscopes are small, discrete and usually resemble a tube of lipstick. These microscopes consist of an eyepiece to view sample and a slide to hold sample for viewing.

- Test daily and first thing in the morning before brushing and eating or drinking anything.
- Assemble microscope according to manufacturers' instructions – this is usually straight forward and will not require any tools.
- Place a small sample of saliva on the slide (or lick the slide)
- Allow the sample to dry (about 5 minutes) – crystallisation will only be observed in dried saliva
- View sample by placing one eye to the eye piece
- A fernlike pattern signifies ovulation taking place

The microscope is reusable but make sure it is cleaned thoroughly after each use. The Microsoft may also be used to view cervical mucous as they behave similarly to saliva at ovulation.



• Tracking Basal Temperature

One of the effects of progesterone is an increase in **Basal Body Temperature (BBT)**.

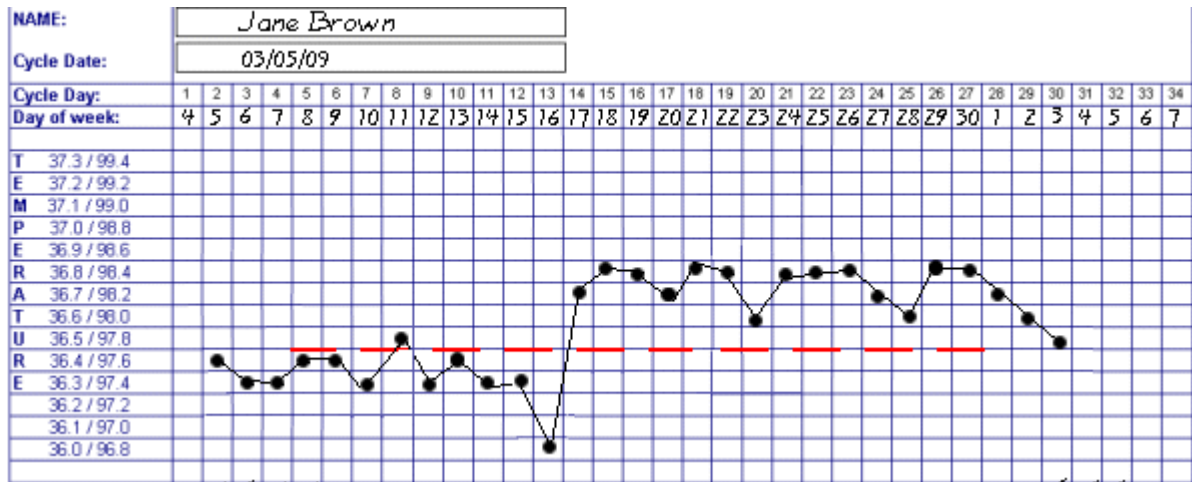
BBT is temperature of the body on waking up (after at least 4 hours uninterrupted sleep) As progesterone is produced after egg is released, there is an increase in BBT after ovulation has occurred. Charting BBT over a period of time can help predict ovulation before it occurs.

How to monitor basal temperature

1. Because the increase in temperature is very small and normally unnoticeable (about 0.4 – 0.6°F) you need a thermometer with readings up to two decimal places (2 digits after the point e.g. 97.02°F), ideally you should get Digital Basal Thermometer.
2. You will also need somewhere to note your temperature readings preferably a chart – these are readily available over the internet, also see our **Three Months Ovulation Tracker**
3. Keep your thermometer by your bedside as you need to take your temperature first thing in the morning before getting out of bed.
4. Try to start taking your temperature on the first day of your cycle (day you get your period).
5. Take temperature by placing metal tip of thermometer under your tongue for 2 – 3 minutes or until you have a reading – most thermometers beep when this is done.



- Write down your temperature or mark it on your chart. Try to take your temperature at roughly the same time each morning.



- Typically, body temperature is about 97°F (but can vary slightly from person to person)
- Some women show a slight dip in temperature at ovulation.
- Increase in normal body temperature indicates ovulation has taken place. Sustained increase in temperature indicates fertilisation (pregnancy).

Fertility Charting/Counting

After a few months of monitoring ovulation (with any of the methods above, but best with a combination), most women will notice a pattern in their menstrual cycle. This method works best for women with regular cycles.

All you need is a calendar (or **Three Month Ovulation Tracker**) and a pen or pencil.

THREE-MONTH OVULATION TRACKER

CYCLE DAY	MONTH:										MONTH:										MONTH:																
	Date	Basal Temp.	No mucus	Creamy	Cloudy	Clear	Sticky	Stretchy	Urine test	Date	Basal Temp.	No mucus	Creamy	Cloudy	Clear	Sticky	Stretchy	Urine test	Date	Basal Temp.	No mucus	Creamy	Cloudy	Clear	Sticky	Stretchy	Urine test	Date	Basal Temp.	No mucus	Creamy	Cloudy	Clear	Sticky	Stretchy	Urine test	
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Fertility Charting

- Mark the first day of your cycle (day you get your period) on your calendar
- Mark your first LH surge day on your calendar or
 - Take and record your BBT at the same time every morning or
 - Note the quantity and texture of your cervical mucous every day or
 - Note the pattern in your saliva every day
- Continue for at least 3 menstrual cycles

4. Note length of your menstrual cycle – this is the first day of your period to the day before the start of your next period.
5. Count how many days into your period you ovulate,
 - if this is regular – for instance every 14 days, you know to inseminate 13 – 15 days into your cycle
 - if this different for different cycles, you might need to monitor and chart a while longer, then take an average

- **Digital Fertility Monitors**

These work on the same basis as the methods described above and are designed to remove the hassle (and sometimes guess work) out of ovulation monitoring. Most detect one but usually more hormones to predict when you are most fertile. Initial and running costs are high compared to other methods but ease of use and accuracy compensates for this.



Popular Fertility monitors are **Clearblue Fertility Monitor** and **Ovacue**.

Follow manufacturers' instructions for use.



❖ References

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- Dr Miriam Stoppard (1996). Woman's Body, A Manual For Life. London: Dorling Kindersley Limited
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