

Connecting the Dots: Basal Body Temperature Charting

BBT charting: A useful tool to identify your body composition and monitor your progress

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The History of Basal Body Temperature Charting

Basal Body Temperature (BBT) charting serves many purposes, the most important of which may be to confirm ovulation and distinguish fertile times in a woman's cycle. In its simplest form, BBT charting consists of taking your waking temperature daily, recording it onto a graph, and reading the results to confirm whether or not ovulation has occurred. BBT charting was first identified in the 1930s by proponents of the rhythm method of birth control. With the addition of monitoring cervical fluid and cervical positioning, the rhythm method of contraception boasts a 98% success rate. With this newfound fertility awareness came interest in using the information to increase chances of pregnancy. Since the 1990s, books and information on fertility awareness using BBT charting and cervical signs have been considered mainstream and are embraced by different cultures around the world. Today, there is a greater depth of information available from BBT charting and monitoring cervical signs to enhance fertility, especially when combined with diet, exercise and stress reduction. BBT charting can even be used to monitor effects of holistic and western fertility enhancement treatments.

In the early 1990s, Traditional Chinese Medicine (TCM) doctors in mainland China began using BBT charting to confirm diagnosis for the treatment of infertility and amenorrhea. TCM practitioners stay up-to-date by continually integrating new information and technology into a system over 2,500 years old. As new technology and concepts are recognized, they are analyzed in Traditional Chinese Medical terms and used to confirm and improve TCM diagnosis and treatment plans. This integration of new technology has allowed TCM to remain the oldest continually practiced form of medicine in the world. Today, most TCM practitioners specializing in fertility enhancement integrate BBT charting in their diagnosis and monitoring of treatments. When treating infertility, the long-term goal is a healthy baby; monitoring BBT can help women have a sense of accomplishment and hope as they begin their transformation to motherhood.

At the Isthmus Acupuncture Center, LLC, we review your BBT chart with every cycle and discuss the findings with you in detail. We are able to confirm ovulation, evaluate overall reproductive health, and identify weakness in the menstrual cycle. We continually monitor the progress of your treatments and identify when and which additional treatments may be beneficial to obtain optimal results. Your BBT chart corresponds directly to reproductive challenges identified through TCM diagnosis. As symptoms change, your BBT will also change, confirming whether current lifestyle factors enhance or weaken your reproductive health. TCM treatments encourage optimal health for both parents, promoting pregnancy naturally. Today, western treatments are designed to override the body's current hormonal state to encourage pregnancy. Therefore, western practitioners rely on ovulation predictor kits, blood tests, and ultrasound to confirm ovulation and do not use, or encourage patients to use, BBT charting.

Unfortunately, BBT charting is not for everyone. Women who work "second," "third" or "swing" shifts, and women who experience severely interrupted sleep are unable to use BBT charting. These women can confirm ovulation with predictor kits and evaluate reproductive health by physical signs and symptoms. Women who experience additional stress when taking their BBT may try taking their temperature and having their spouse or partner record and monitor the results. When BBT charting is not viable, monitoring reproductive and general health symptoms timed with your menstrual cycle is still encouraged; it can identify times during the cycle requiring improvement. General health and reproductive signs including amount and days of cervical fluid, mid-cycle cramps, and headaches can help evaluate changes in diet and exercise, and reduction in stress, along with monitoring the effects of fertility enhancement treatments.

Creating a BBT Chart for Yourself

Correctly creating a Basal Body Temperature chart isn't rocket science, but there are basic rules you must follow. For starters, you need a good night's sleep and the ability to wake up at the same time most days, a BBT thermometer, and a graph to record results. Charts can easily be created on Microsoft Excel. Templates are available in many fertility books and on our website, tcmfertility.com. Web-based programs also offer the BBT charting on-line. No system is perfect and I have discovered a handful of problem areas and exceptions to the rules for BBT charting.

Your BBT is your body's resting temperature upon waking. Your BBT will fluctuate if the time you wake up changes. To get the most accurate reading, I recommend setting an alarm to take your temperature at the same time every day. I have found minor adjustments can be made, although adjustments are only estimates and may not correctly represent your reproductive health. Here are the steps to adjusting your BBT chart if needed:

1. On your chart, note what time you take your temperature and track adjustments in a different color so they can be identified.
2. Adjust your BBT by 0.1 degree for every 30 minutes difference in normal waking time up to a maximum adjustment of 0.5 degree.
3. If you normally wake up at 6:00AM and you had to wake up at 5:00AM your temperature would be adjusted by increasing it 0.2 degree.
4. If you normally wake up at 6:00AM and you slept until 8:00AM your temperature would be adjusted by decreasing it 0.4 degree.
5. Remember to flag any adjustment on your BBT chart.

For example, if you woke one hour earlier, a temperature of 97.0 Fahrenheit would be adjusted to 97.2. If you woke two hours later, a temperature of 97.6 Fahrenheit would be adjusted to 97.2.

Several options are available for taking your BBT. Usually, temperatures are taken orally. Traditional glass mercury thermometers work if they are shaken down prior to taking the temperature. Thermometers made specially for BBT charting are calibrated to look for lower temperatures associated with women's hormone levels. Ordinary digital thermometers are calibrated to look for higher temperatures associated with fevers, and are therefore not recommended for BBT charting. The quality of ear thermometers varies and these work best if temperatures are taken in the ear not resting on a pillow. Some ear thermometers require adjustments to the temperature, so please check the instructions that came with your thermometer. Vaginal temperatures are not recommended since the thermometer is not sterile. When changing thermometers or methods, I recommend changing on day 1 of the cycle since thermometers are individually calibrated and usually give slightly different readings. If there is a question as to the accuracy of the thermometer, I recommend using two thermometers for one cycle to determine which thermometer is more accurate. Overall patterns derived from the BBT readings are more important than individual temperatures.

Basal Body Temperatures should be taken with a minimum of four hours of relatively uninterrupted sleep. If your night's sleep was restless or interrupted, your temperature during the first half of a menstrual cycle will often be higher, and drop during the second half of the cycle. Interrupted sleep affects the pituitary gland, which regulates reproductive hormones and influences your BBT. As mentioned above, charting does not work well for women with irregular sleeping patterns. If you wake up in the night and don't think you will be able to fall back asleep, it is better to take your temperature at that time and adjust, if possible, as discussed above.

There are several known factors, and more you may find on your own, which distort temperatures, resulting in flawed charting. Mouth breathing caused by blocked sinuses or snoring causes lower temperatures. Alcohol consumption, traveling to different time zones, and antipyretic drugs like acetaminophen and ibuprofen distort temperatures. Long-term use of anti-inflammatory medication or sleeping aids will cause unstable charting. Technical difficulties frequently occur with thermometers. In digital thermometers, batteries eventually run out and temperatures will look lower than normal as the battery life nears its end. Thermometers should be kept within arm's reach in a cool location to avoid pre-heating prior to taking morning temperatures.

BBT readings are designed to be converted into a graph for analysis. This graph corresponds to your TCM diagnosis and reflects improvements in your health over time. Day one of the graph represents a new menstrual cycle indicated by the first day of full menstrual flow. If you are not having a period, use the actual calendar date as the graphing days. If you had a distorted temperature due to a restless night, skip over it when you are creating your graph. As your health improves and your hormones balance, BBT charting should appear stable during pre- and post-ovulation phases. The Lutenizing Hormone (LH) surge and ovulation spike should be distinct. After several cycles, review your charts noting improvements or the need for additional steps to improve reproductive health.

Recap of steps to create a BBT chart:

1. Day one of the graph is the first full day of your menstrual period.
2. Choose a constant waking time and set your alarm clock.
3. Have a clean thermometer within arm's length before retiring.
4. Have a pen or pencil and paper ready for recording the temperature.
5. Make required adjustments to daily temperatures.
6. Choose a graphing method; note fertility signs and health symptoms daily.

7. Start new graph every cycle.

What's Considered Normal?

What is normal for some women may fall outside the textbook definition of a normal menstrual cycle. Research studies and my personal experience have indicated women who have irregular menstrual cycles often take longer to conceive. Some women have irregular cycles considered normal for their specific biological make up. Understanding when they are fertile is enough information to properly time intercourse for conception.

For our intent, defining a normal menstrual cycle includes two phases and two transitions. Phase I begins about day 3 or 4 of a cycle. Estrogens begin to rise and should remain elevated for 10 to 12 days. Phase I represents the final stage of follicular and egg development when temperatures are the lowest. Your body chooses a dominant follicle and completes finishing touches on an egg to be released. During phase I ovaries produce estrogen, lowering BBTs and generating cervical mucus. Fertile cervical mucus production commences up to five days prior to ovulation. Cervical mucus has several phases indicated by changes in consistency with the most fertile type being stretchy, egg white-like mucus at ovulation. Phase I ideally ends with a temperature dip prior to ovulation.

Ovulation is the transition from phase I to phase II. This transition starts with a Luteinizing Hormone (LH) surge, usually indicated by a temperature dip prior to ovulation. The dip is followed by a spike signifying the start of phase II, post-ovulation. Ovulation predictor kits use the LH surge to indicate ovulation will occur within 24 to 36 hours. With healthy cycles, the LH surge will only be detected for a few hours. Testing during the morning and evening is required. If the ovaries work less efficiently, greater amounts of LH are released, and a positive will be observed on a predictor kit. It is important to test for the LH surge until you reach a negative. Ovulation should occur about 24 hours after the last positive. Women whose ovaries work harder to ovulate will not see the temperature dip immediately prior to ovulation, but will see a slight increase or erratic temperatures prior to ovulation. If increases or erratic temperatures are observed near ovulation, I recommend confirming ovulation with predictor kits for a couple of cycles to identify cycle patterns.

Fertility monitors register fertile days as low, medium, high, or peak by monitoring LH in the urine. When the ovaries work efficiently, less LH is needed to trigger ovulation. Ovaries are healthier when transition to high or peak days is rapid, taking just one or two days. When transition is slow, over three days or more, steps should be taken to improve reproductive health.

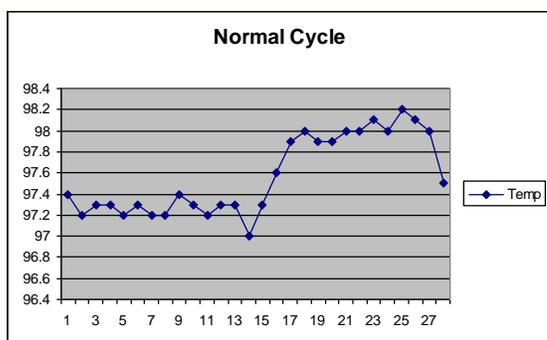
Women are most fertile immediately prior to and during ovulation. Timing intercourse between 24 hours prior to and immediately after ovulation is important. Cervical fluid generated before ovulation provides a safe environment for sperm to live in for a few days. This allows time for sperm to make it through the uterus and fallopian tubes and wait for release of an egg. If health of sperm is questionable, increasing the amount and improving the quality of cervical fluid increases the chance of pregnancy.

Phase II, the luteal phase, occurs when temperatures are highest. This phase begins after ovulation has occurred. Progesterone generated from the corpus luteum remaining after ovulation causes temperatures to rise. Fertilization and implantation occur during this phase. Your temperature should ideally shift quickly, over one or two days, after ovulation. Phase II should last 14 days if pregnancy did not occur. When pregnancy occurs, there may be a dip in temperature at the time of implantation, usually five to seven days after ovulation, and an additional rise in temperature of 0.3 to 0.5 degree Fahrenheit after 12 to 14 days post-ovulation. For some women, it is normal to have a period or lighter bleeding when they are pregnant; the only indication of pregnancy occurring is when temperatures remain elevated. It is critical to take a pregnancy test if this occurs, so lifestyle changes and fertility treatments can be adjusted.

The menstrual period is the transition from phase II to phase I. The first day of full menstrual flow signifies day one of a new cycle. There should be at least a 0.4 degree drop in temperature the morning of the first day of your period. Spotting brown blood prior to the full flow or temperature dip is often seen with luteal phase defects, endometriosis, fibroids, and sometimes pregnancy. Both ovulation and menstrual transitions should ideally shift 0.5 to 1.0 degree within a day or two.

Just as there is no perfect human being, there is no perfect BBT chart. We all have strengths and weaknesses also evident in BBT charting. For reference, an optimal BBT chart ranges from 97.2 degrees to 97.8 degrees during phase I. Prior to

ovulation, around day 14, there is a dip up to 0.3 degree, corresponding to the LH surge prior to ovulation. Ovulation can be confirmed by a 0.5 degree or larger spike in temperature occurring after the dip. During phase II of the cycle, after ovulation, the normal temperature range varies from 97.8 to 98.6 and remains steady until the day menses begins. The post-ovulation portion of the cycle is 13 or 14 days long and the total menstrual cycle lasts between



27 to 30 days, with the first day of full menstrual bleeding signifying a new cycle.

Some women may have a 28- to 30-day menstrual cycle and think everything is fine until they start BBT charting. Some women discover they are ovulating on day 18 or 20, with only 8 to 12 days during phase II of their cycle. Less commonly, women find they are ovulating on days 11 or 12 with 16 to 18 days during the second phase. The total cycle may look normal, but these discrepancies and others can indicate weaknesses in the reproductive cycle. Women who experience fertility challenges accompanied by irregular cycles often have difficulties with the pituitary and ovaries properly maturing eggs or difficulties with implantation.

The notion of women's eggs being too old for fertilization is a generalization. The issue with egg quality is as a woman ages, the ovaries improperly mature the eggs. Over time, ovaries are negatively impacted by stress, poor diet, environmental toxins, and genetic influences. Poorly developed eggs are released at ovulation as a result of these negative influences and others. There are thousands of eggs held in a suspended state prior to being chosen to begin the maturation process. These eggs held in suspension are the same for a woman in her 20s as they are in her 40s. The two exceptions to this are diminished ovarian reserve, occurring when a woman is born with fewer eggs than required for a lifetime, or after exposure to chemotherapy or radiation. The only way to confirm diminished ovarian reserve is to go through the IVF process and evaluate the health of the embryos after fertilization. Questionable ovarian health is reflected in BBT charting by irregular or unstable charting. For women over 40 with questionable BBT charting, holistic treatments including acupuncture, chiropractic, Chinese herbs, improved nutrition, and Maya Abdominal Massage are best suited to restore ovarian function and reproductive health.

Individual Body Compositions and Charting

A useful tool to understanding reproductive health begins with analyzing BBT graphs and symptoms and identifying your Individual Body Composition (IBC). Once you understand your composition, you should make lifestyle changes and monitor treatments by assessing the effects on your charting. The body strives for balance and perfection, but realistically it functions anywhere from slightly to significantly off mark. BBT charting provides great insight to identify reproductive weaknesses. IBC provides understanding how to strengthen weaknesses.

All physiological processes within the body are generated from three basic energies. These energies cool, warm, or activate the body to initiate and carry out desired functions. The menstrual cycle is the perfect example of these three basic energies. Phase I requires the body to run cooler; phase II requires the body to run warmer. The shifts between phases are active, resulting in a quick transition. If physiological functions are running too warm, too cold, or have stagnation, BBT charting will reflect an assortment of abnormalities.

Commonly, your IBC will be a combination of running too cold, too hot, or stagnant in carrying out reproductive functions. You can have one predominant body type or be a combination of two, or even all three body types. All women have a genetic predisposition to their IBC, and they may have similar body types to other family members. Examples seen in my practice are younger women whose IBC is 75% stagnant and 20% too hot and 5% too cold. Women between 35 and 40 can often run 50% too cold, 25% stagnant and 25% too hot. Women over 40 are usually 40% too hot, 40% too cold, and 20% stagnant. Changes in diet, lifestyle and environment along with fertility enhancement treatments significantly shift your individual body composition.

Too Cold, Too Hot, or Stagnant?

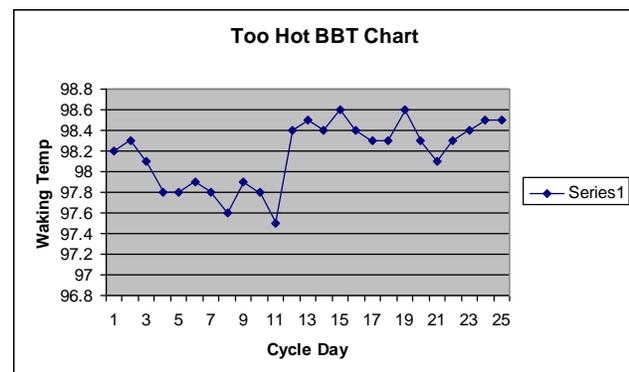
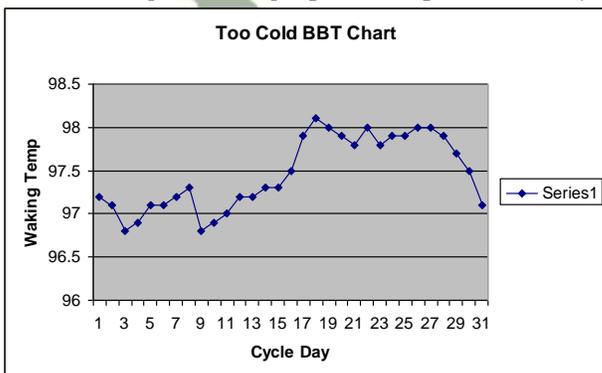
BBT charting indicating a person is predominately too cold is usually more consistent month to month than any other body

type. If you are too cold, BBT charting often shows phase I lasting 16 days or longer with temperatures below 97.2 degrees. The transition at ovulation will be a slow rise of 0.2 or 0.3 degrees per day. There may be drops in phase II temperatures at any time, or a three- to five-day decline in temperature prior to the end of phase II. Pale, thin, or pink spotting occurring with a drop in phase II temperatures indicates a luteal phase defect and BBT temperatures that are too cold.

Temperatures are less predictable for people who run too hot.

Going to bed late,

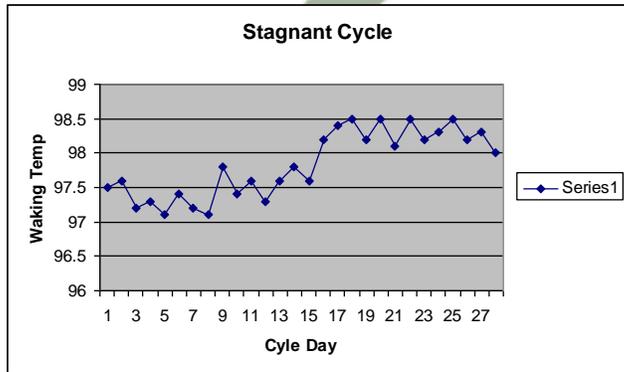
restless sleep, drinking alcohol, and stress will easily cause increases in BBT if you tend to run too warm. These temperature spikes in phase I can negatively impact egg development and encourage premature ovulation.



When ovulation occurs too early, the egg doesn't have sufficient time to mature inside the follicle and can be released too early. When running too hot, phase I can run either too short or too long. If you're running very hot, phase I will usually run shorter than 12 days. If you are running slightly too hot, phase I temperature may be above 97.8 degrees and last more than 16 days. This indicates a longer time for the estrogens to build. If you're too hot, phase II can have temperatures above 98.4, last longer than 14 days without being pregnant, and have bright red spotting. If there is a rise in BBT for a couple of days after the period starts, this indicates the body is generating additional heat when shedding the menstrual lining. The too hot body types' BBT charting usually varies a small amount month to month because stress and external factors easily generate heat in the body.

Stagnation in the reproductive system can result from hormones not flowing freely or stress strongly affecting the hormones. This stagnation can occur because the pituitary, liver, or ovaries are not functioning properly. Emotional stress, alcohol, poor diet, and environmental toxins will cause or exacerbate stagnation of hormones.

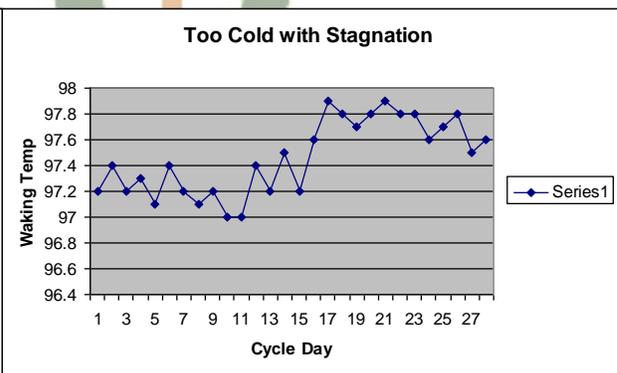
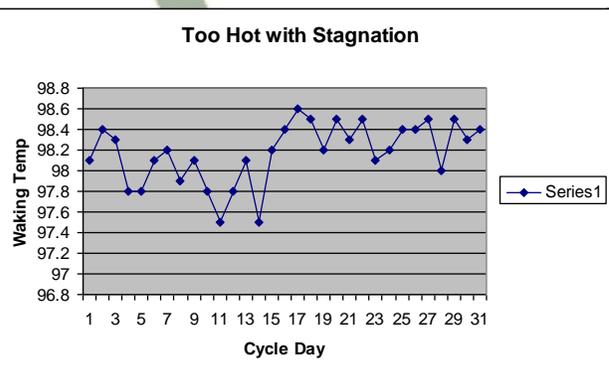
People who experience stagnation tend to have increased PMS (Premenstrual Stress) symptoms and irritability around ovulation and menstruation. Temperatures are unstable and unpredictable from month to month for people who have stagnation. Transformation from one phase to another is often slow and bouncy. Temperatures will fluctuate almost daily by 0.3 or more, forming a jagged tooth-like pattern on the graph. Severe stagnation causes phase II to be longer than 16 days without being pregnant. Ovulation often occurs on different days each cycle and erratic increases in temperature may occur prior to ovulation. Pain at ovulation or with menstruation always indicates stagnation. High temperatures with brown spotting



or spotting with clots at ovulation or prior to the period indicates severe stagnation. Stagnation can cause cysts, which can develop at ovulation naturally or with the use of fertility drugs. Cysts can prolong phase II more than 16 days with spikes in the phase II temperatures when the period should be starting. These cysts can mimic pregnancy with signs like breast tenderness and nausea. When ovulation is not easily detectible using BBT charting, ovulation predictor kits are helpful.

You may have a combination chart indicating running too hot with stagnation or too cold with stagnation. Less common is when an individual is both too hot and too cold with signs of stagnation. If ovulation occurs around day 10 or 11 and there is a shortened luteal phase causing menstruation to start around day 22 or 23, the reproductive system is critically depleted.

This indicates running both too hot and too cold. If the up and down pattern seen with stagnation is present, and ovulation is regularly early or late, the predominant body composition is stagnation with a smaller element of running too hot or too cold. Looking at other indicators of heat and cold can help identify complex body compositions which are usually predominately stagnant.



Hormone therapy affects each IBC type differently. Women who run too cold without much stagnation will often do well with Clomid. Women who run too hot fair better on injectable hormone therapy such as Follistim. When

stagnation is present, hormone therapy is not easily utilized by the body and problems may occur with ovulation and BBT charting may appear worse. When the body cannot properly manage its hormone levels, additional hormones create a greater imbalance. Women who have stagnation complain of longer cycles, up to 40 days, when taking hormones such as Clomid, nutritional supplements like DHEA, or strengthening herbs. It is critical to release stagnation before warming or cooling the body, and to supplement the body slowly.

The path to pregnancy is individual and there is no owner's manual. Every woman's journey to motherhood is unique. We can try to follow established protocols, rationalize why we think we should be at our predetermined goal of a healthy and happy baby, and analyze every aspect of our lives; but in the end, no one knows exactly why pregnancy occurs and why healthy babies are born. We can do our best to make choices that support health and happiness along the way. Using BBT charting can help us understand what factors influence our bodies to respond a particular way. BBT charting is not the key to pregnancy. However, charting can guide us down the path to health and well-being.

