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Fertility Awareness, Food, and Night-Lighting

By [Katie Singer](#)

***Author's Note:** This article is only an introduction to Fertility Awareness. It does not provide adequate information for using charts to prevent or achieve pregnancy or to gauge gynecological health. To use the method effectively, you need to take a class, and/or read a comprehensive book such as *The Garden of Fertility* and others listed in the bibliography.*

Since 1997, I've taught Fertility Awareness (FA), a natural method for preventing or achieving pregnancy based on a woman's daily charting of her waking temperature, cervical fluid and cervix changes. According to numerous studies, the method is virtually as effective as the contraceptive pill in preventing pregnancy, *if its rules are followed*. I teach FA to women and men who prefer not to use hormonal birth control, or who have allergic reactions to spermicide. I also work with couples who have difficulty conceiving, and with mother-daughter groups that help teenagers understand how their bodies work.

Fertility Awareness is known by several names. Women using the Sympto-Thermal Method chart cervical fluid, temperature changes, and (optional) cervix changes. Users of the Billings or Ovulation Method chart only cervical fluid changes. The Rhythm Method, which is much less effective, determines fertility by observations of past cycles.

In order to prevent pregnancy, couples who practice FA avoid intercourse or use barrier methods during fertile phases. Teachers of Natural Family Planning tend to practice in a Catholic framework and suggest abstinence during fertile days.

How Fertility Awareness Works

Like the earth's surface, a woman of childbearing age moves through cycles of heating and cooling, which in turn create drying and moistening, which in turn provide a fertile environment for life to evolve. Rocks, glaciers, plants and animals (including humans) all evolve in concert with these processes. Just as a meteorologist can observe and measure cycles in the earth's surface to determine weather patterns, a woman can observe her daily waking temperature, cervical fluid and cervix changes to gauge her gynecological health, and to determine when she can and can not conceive.

By the time a female fetus is four months old, she has already produced all of the eggs she will ever create in her lifetime. The eggs, which number about one million, are each encased in a sac called a follicle. With the onset of menses, during each cycle, about a dozen follicles develop in the woman's ovaries--and they emit estrogen. Besides heightening her interest in sex, estrogen also produces cervical fluid, cools her body slightly, and opens her cervix. These three fertility signals (mucus, temperature and cervix changes) can all be observed by daily charting.

When a follicle is mature, the egg within it bursts out of the ovary, and the fallopian tube's finger-like fimbria reach out and grab it. The ripe egg then lives at the outer edge of the tube for 12-24 hours. This process is called ovulation, and a fertility chart can confirm that it has taken place. (Ten percent of the time, women release two eggs at ovulation.)

It is important to note that ovulation is not the same as being fertile. Ovulation is the release of a ripe egg. A woman is fertile when she produces cervical fluid, which can keep sperm alive for up to five days--until she ovulates. If there are sperm in the cervix or if the couple has intercourse while an egg is alive in a fallopian tube, cervical fluid can provide a conduit for sperm to swim up through the uterus and the fallopian tube and try to fertilize the egg.

After ovulation, whether or not the egg is fertilized, the empty follicle remains in the ovary, and produces progesterone. This hormone dries up the woman's cervical fluid, warms her body temperature, closes the cervix, and makes the new uterine lining (created by estrogen) spongy for implantation. If an egg is fertilized, it takes about a week to travel down the fallopian tube before it implants in the newly lined uterus, and pregnancy begins. If fertilization does not occur, the egg simply dissolves. Then, 12-16 days after ovulation, a new cycle begins with menstruation.

Typically, cervical fluid "builds up" a few days after the period ends, becoming tacky, moist, then creamy; it normally peaks at a stretchy, eggwhite consistency about a week to ten days after the period ends. Because mucus can keep sperm alive for up to five days, any mucus or moist sensation at the vulva after the period signals that the fertile phase has begun. The Peak Day--the *last* day of wet mucus--signals that ovulation is about to take place. After ovulation, the mucus transitions to a dryer or completely dry consistency.

The waking temperature is typically cooler before ovulation, and warmer after ovulation.

The cervix is soft and open during fertile phases, firm and closed during infertile phases.

With about two minutes of daily attention, women can observe and chart their fertility signals. *If its rules are followed*, Fertility Awareness is virtually as effective as the Pill in preventing pregnancy.

It has also helped countless couples to conceive. Charts can also be used to determine whether a woman is pregnant; if she may have a thyroid problem, progesterone deficiency, a propensity for polycystic ovarian syndrome (PCOS); or if she's miscarried. I consider Fertility Awareness a basic life skill. Practicing the method encourages a woman to live in concert with her own cycles; and couples often experience enhanced communication and intimacy.

Fertility and Diet

Early in my tenure, I began noticing that about 25 percent of the women who take my workshop are not ovulating. Or, their charts indicate that they may have hypothyroidism or progesterone deficiency. Often, more than one of these conditions shows up in the charts. Until they begin observing their fertility signals, most of these women consider themselves to be in good health. However, a woman who ovulates infrequently or not at all, for example, is at increased risk of uterine cancer, diabetes, polycystic ovarian syndrome, infertility, and other health problems. Once a woman understands from data she has collected herself that she isn't ovulating or that her fertility charts indicate some other health problem, she may question her feminine identity and become eager to strengthen her health. Learning Fertility Awareness

seems to lead people to wanting the same information that the people Dr. Price studied knew so well: how to ensure health and fertility, generation after generation.

I've wondered why so many women have problem cycles. Geraldine Matus, a Canadian midwife and psychologist who has taught FA for twenty-five years, told me that when she started teaching the method, her students usually had charts that reflected healthy menstrual cycles. Now, she says, "I rarely see women with normal charts. I think this reflects the use of hormonal birth control--by today's women and their mothers. Sexual abuse, sexually transmitted infections, the use of alcohol and recreational drugs, increased stress--all of these affect reproductive health. And the typical North American diet (which includes hormonally treated animal products, fast foods, and a deficit of fresh, non-processed foods) also interferes with the normal functioning of male and female reproductive systems."

I know of no pharmaceutical treatment that can help a woman normalize her cycles. When a student asks about her options, I often inquire about her diet. I've had numerous students who are vegan, or who were vegan during their teenaged years; many have been on the Pill for several years or more. (The Pill is known to deplete the body of key nutrients, including thyroid hormones¹ and zinc, which are both crucial for reproductive health.) Some women have no "obvious" history that might cause their cycles to be irregular.

When Jenny, 23, took my class, she realized that she hadn't had a period in six months. Jenny was in school full time. She ate most of her meals in her college's cafeteria, and drank coffee to keep herself going. Once she understood basic reproductive anatomy and physiology, could read her own chart, and realized that not having periods also meant not ovulating, she asked for a way to start improving her health. I introduced her to Dr. Price's nutritional principles.

"It's not realistic for me to buy and cook my own food right now," she said. "Until I finish school, I'll be eating in the cafeteria."

Still, she decided to eliminate sugar and tofu from her diet, to decrease her coffee consumption, and to drink more water. She began ovulating almost immediately, and has had 35-40-day (ovulatory) cycles in the six months since.

I've seen many women's temperatures increase significantly when they cut soy out of their diets. Yet others become ovulatory after they cut back on sugar and increase their consumption of cod liver oil, butter and eggs.

Night-Lighting

In addition to incorporating Dr. Price's principles into their diets, many women with irregular cycles have benefitted from addressing their night-lighting situation. Exposure to light at night can inhibit the pineal gland's production of melatonin. The pineal gland directs your body's rhythmic activities--including sleep, appetite, and the onset of puberty--through its production of melatonin. This hormone is primarily secreted at night, and it requires darkness to be produced. Bright light suppresses melatonin secretion.²

The hypothalamus gland, also located in the brain, is richly supplied with melatonin receptors. This gland regulates your body's overall homeostasis, including things like blood pressure, emotions, temperature, and the endocrine (hormonal) system. Hormones secreted by the hypothalamus stimulate the anterior pituitary gland to secrete its hormones; and these, in turn, stimulate the thyroid gland, the adrenals and the ovaries to secrete yet other hormones. The ovaries (and the testicles) are also thought to contain melatonin receptors.³

You can see how melatonin production--and thereby sleeping in darkness or with light--can affect the whole body's functioning, including the menstrual cycle: if the hypothalamus doesn't receive sufficient melatonin, its ability to regulate the hormonal system will be impaired.

In the late 1960s, Louise Lacey, a writer, realized that being on the Pill took her body away from its natural rhythm. She went off it, and subsequently had very irregular cycles. She began reading about circadian rhythm and the sexual cycles of some primates, which suggested peaks of sexual activity relating to the lunar cycle. Lacey wondered if the moon's cycles relate to human reproduction, and if so, how? She wondered whether artificial lights could interrupt the moon's effect.

A newspaper article that reported the effects of night-light on the menstrual cycle then caught her attention. John Rock (the Ob/Gyn whose experiments with giving infertile women synthesized progesterone led to the creation of the Pill) and physicist E.M. Dewan found that women's menstrual cycles became regular by sleeping in complete darkness Days 1-13, sleeping with a 100-watt bulb burning all night (under a lampshade in their bedroom) Days 14-17, and then returning to sleeping in complete dark.⁴

Thrilled by the possibility that she could return to healthy cycles, Lacey tried variations on the above experiment, beginning in 1971. She also began to chart her temperature. She found that sleeping in complete darkness except for three nights each cycle (when she slept with a 40-watt bulb under a lampshade *or* with a 75-watt bulb beaming a shaft of light from a nearby bathroom (essentially mimicking full-moon light) triggered ovulation. She called the technique Lunaception, and found that it could be used to direct her fertility--and that of her women friends. By avoiding intercourse on the days they slept with light, Louise Lacey and 27 of her friends developed regular, healthy menstrual cycles, and used Lunaception to avoid pregnancy effectively until menopause.⁵

Other clinical researchers have also found that sleeping in the absence of light (introducing it for a few days each cycle, or sleeping only in the absence of light) can help women in a variety of situations to strengthen their cycles.^{6,7}

- Women with anovulatory cycles have become ovulatory.
- Women with unclear mucus readings develop discernible, healthy mucus build-up.
- Cycles that had been very short (26 days or less) or very long (35 days or more) become 27-31 days long.
- FSH levels become healthy.
- Spotting at various times during the cycle is significantly reduced.
- Progesterone levels are strengthened.
- Women with a history of miscarriage are able to sustain pregnancy.
- Premenopausal women develop a more discernible mucus pattern; and the intensity of their premenopausal symptoms, including hot flashes, sleeplessness, and mood changes are reduced.

So what does sleeping in total darkness mean? Fifteen minutes after turning out the lights, you can't see objects in the room, including your own hands. Bedroom windows are covered with room-darkening blinds or curtains backed by light-blocking fabric. Cracks of light from under doors can be covered with a towel. Cracks around the edges of windows can be covered with aluminum foil. More specific directions for sleeping in the absence of light to strengthen menstrual cycles are available in my book.

A practitioner of Fertility Awareness recently reported to me, "I went on the Pill when I was 17 to regulate my cycles because they were so long and far apart. By the time I was 18 (and still on the Pill), my menstrual cramps had become incredibly intense. When I was 23, I was diagnosed with endometriosis.

After nearly twelve years on and off the Pill, I stopped taking it and tried Lunaception." She was amazed that for five consecutive months, she ovulated within one or two days of the last day of sleeping with light. She felt healthier than she had in years.

I was touched, as I often am, by this woman's motivation to strengthen her health once she identified a problem in her menstrual cycle--and learned a technique that could help her without side effects.

Indeed, Fertility Awareness proves to be a powerful tool for connecting people to the wide web of resources that are necessary for sound reproductive and overall health.

FOR MORE INFORMATION:

Singer, Katie, *The Garden of Fertility: A Guide to Charting Your Fertility Signals to Prevent or Achieve Pregnancy--Naturally--and to Gauge Your Reproductive Health*, Avery/Penguin, 2004. Includes chapters on Fertility Awareness and breastfeeding, food and reproductive health, night-lighting, healing childbearing losses, and women conducting research based on their fertility charts. www.gardenoffertility.com includes charts that can be downloaded free of charge.

Weschler, Toni, *Taking Charge of Your Fertility: The Definitive Guide to Fertility Awareness*, 2nd Edition. HarperPerennial, 2001. www.tcoyf.com includes message boards especially for women who want to conceive.