

An Expert's Look at Fertility Awareness Methods

What you should know if you're considering this kind of contraception



Chelsea Polis

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In 2018, the United States Food and Drug Administration (FDA), for the first time, approved an app for use as a contraceptive method. The app, called Natural Cycles, uses an algorithm that aims to predict the days of the month a woman is likely to be fertile based on daily basal body temperature readings and menstrual cycle information (and optionally, results from a home test kit measuring luteinizing hormone in urine). The approval sparked conversation around how people are using fertility awareness-based methods (FABMs) to prevent pregnancy today, and what options are available to them.

Currently, only about **3% of women** who use contraception in the U.S. use an FABM. And while there's a misconception that "fertility awareness-based method" only means the rhythm method, the reality is that there are many different FABMs, some with more evidence than others.

These methods are based on the fact that sex can only lead to pregnancy during approximately **six to nine days of each menstrual cycle**, sometimes called the "fertile window." FABM users track changes in one or more fertility signs — menstrual cycle dates, basal body temperature, cervical mucus or position, and hormone markers in urine — as a way to attempt to identify when they are fertile each month. During potentially fertile days (a

span of time that is usually longer than the actual six to nine day fertile window), users wishing to avoid pregnancy either abstain from penile-vaginal sex or use an additional method, like a condom.

Unfortunately, misinformation about FABMs is rampant, and even the available research on these methods leaves a lot to be desired. In 2018, my colleagues and I published a [systematic review](#) which gathered all published prospective studies on FABM effectiveness and evaluated the quality of each. None of the studies we found qualified as “high quality.” (More on our systematic review below.) Some companies are also using flawed data to market their method. For example, a company that manufactures a \$330 thermometer called Daysy claimed that it was 99.4% effective in preventing pregnancy. However, this claim was based on poor study practices, and ultimately, the company’s study was [retracted](#) after I published a [commentary critiquing their research practices](#).

What’s clear is that people need evidence-based information in order to make the best decisions about preventing pregnancy for their lifestyles. Here are a few things to keep in mind when considering using an FABM.

Multiple FABMs exist

Most people have heard of the rhythm method — which involves tracking menstrual cycle dates and performing certain calculations — but other FABMs exist, many of which involve tracking other fertility signs. The table below illustrates major FABM categories, along with selected examples of specific FABMs, and which fertility signs those methods use.

| Categories of FABMs | Selected examples of specific FABMs within each category | Fertility sign(s) tracked | | | | |
|--|---|---------------------------|----------------|------------------------|------------------------------|-----------------------------|
| | | Menstrual cycle dates | Cervical mucus | Basal body temperature | Cervical position or texture | Urinary hormone metabolites |
| Calendar based methods | Rhythm method, Standard Days Method, Dynamic Optimal Timing | X | | | | |
| Mucus based methods | TwoDay method, Billings ovulation method | | X | | | |
| Basal body temperature plus methods | Natural Cycles | X | | X | | optional |
| <u>Symptothermal methods</u> | Sensiplan | X | X | X | optional | |
| Urinary hormone-based methods | Marquette model Persona | X | optional | | | X |

Some FABMs are secular. Others are grounded in religious teachings and are often referred to as natural family planning, which generally requires people to abstain from sex during the fertile window and prohibits any genital contact during the fertile time.

Some FABMs require use of an app or a mini-computer (for example, thermometers programmed with a proprietary algorithm, or monitors that aim to assess different changes in bodily fluids), others do not. Some of these apps or devices require users to enter information — like menstrual dates and daily temperatures — which feeds into an algorithm that provides predictions about which days are potentially fertile. Other apps serve as a place for users to track changes in their fertility signs, but still require users to interpret that information for themselves.

Finally, some apps or devices are intended simply for tracking periods, and have not been tested for use as contraception. Unfortunately, this is not always made sufficiently clear to users, who may not know that simply because an app displays information claiming to identify your fertile window or date of ovulation, it doesn't mean the algorithm used to make those claims has been adequately tested for accuracy.

Evidence on effectiveness of different FABMs is available, but limited

In 2018, my colleagues and I published a [systematic review](#) of research on the effectiveness of FABM, and we evaluated the quality of the studies we found. Of the 53 studies we identified, we rated none of them as high quality. We rated 21 of the studies as moderate quality, and 32 as low quality. We focused on summarizing the results of the 21 moderate quality studies. In other words, we summarized the best evidence that currently exists, but this evidence has some flaws, so findings from those studies must be considered with that in mind.

We found that “typical use” failure rates — which is the number of unintended pregnancies expected among people who may not use the method perfectly at all times — varied widely across different FABMs. Most typical use estimates ranged between 10 to 34 unintended pregnancies per 100 women in the first year of use, except for the Sensiplan and Marquette methods, which had, respectively, typical use estimates of two and seven unintended pregnancies per 100 women per year, meaning these two latter methods might be somewhat more effective, based on limited currently available data.

We also found variation in “perfect use” failure rates (i.e., the number of unintended pregnancies expected among people using the method perfectly at all times). Most perfect use estimates ranged from one to five unintended pregnancies per 100 women per year, except for the Persona method, which had an estimated rate of 12 unintended pregnancies per 100 women per year, and the Sensiplan and Marquette methods, which had estimated rates of less than one unintended pregnancy per 100 women per year.

Results from our systematic review are visualized in [this interactive infographic](#), where you can click to learn more about each FABM. Overall, it is important to remember that the studies that currently exist on the effectiveness of individual FABMs are limited in number and quality. As scientists continue to study FABM effectiveness in higher quality studies and in more diverse populations — the information we currently have about FABM effectiveness may change, potentially substantially. For example, some FABMs may prove less effective when studied in more representative groups of people. Effectiveness rates for many other contraceptive methods are more likely to remain fairly stable, due to the availability of more data on those methods.

What to keep in mind when thinking about using an FABM

Unfortunately, avoiding misinformation — particularly around effectiveness — on FABMs can be challenging. Extreme proponents of the methods sometimes cherry-pick evidence or overstate their effectiveness, while extreme skeptics sometimes dismiss existing data or behave condescendingly to people interested in FABMs. Furthermore, a [weak regulatory environment](#) around what medical information is allowed to be shared on social media allows some influencers — who may receive commissions from companies — to spread misinformation.

People deserve to use the contraceptive method that feels right for them, based on reliable information about the various characteristics of that method. For example, some people may prefer using a method that requires minimal work on their part to achieve very high effectiveness, such as a contraceptive implant or an IUD. Others may wish to avoid the use of hormones or devices, may enjoy tracking signs of fertility as a way to learn more about their body, or may have religious orientations that only permit the use of certain methods. People interested in using an FABM to avoid pregnancy should know that effectiveness depends on several factors, such as:

- How well the rules of that particular FABM accurately identify the fertile window.
- Whether the user is able to correctly interpret fertility signs (if applicable) and follow the rules of their FABM.
- The ability of a couple to avoid unprotected sex during days believed to be fertile (whether via abstinence or via use of an additional contraceptive method).

FABMs have unique advantages and disadvantages. For example, they require communication and negotiation around the timing of sex; which may appeal to some, but might make FABM use infeasible for others. They also require a user to take daily action to avoid pregnancy, and (unlike IUDs or hormonal methods) they are unforgiving of imperfect use; however, FABMs have no side effects. The number of days identified as potentially fertile (and thus, the number of days requiring either abstinence or use of a backup method to avoid pregnancy) may also vary across different FABMs.

Some methods may require working with an [instructor](#) to learn to use the method. If a couple's pregnancy intentions change, they can adapt their behaviors to maximize chances of pregnancy by having sex on days identified as fertile. However, unlike condoms, FABMs offer no protection against sexually transmitted infections. Certain medical conditions, like breastfeeding, PCOS, and others, or medications (like antihistamines) can make FABMs more difficult to use. Calendar-based methods may not work as well for people with long or irregular menstrual cycles, though other FABMs may be appropriate.

The experience of using different FABMs can vary widely. For example, some FABMs like the TwoDay method, were designed to be extremely simple to learn and use. TwoDay method users check for cervical mucus at least twice a day. If cervical mucus of any type, color, or consistency is either present today or was present the day before — today is considered a potentially fertile day. Other FABMs like Sensiplan involve tracking multiple fertility markers (menstrual cycle dates, detailed observations about cervical mucus, daily basal body temperatures, and optionally, changes in cervical position) on [detailed charts](#), and applying a more complex set of rules to interpreting that information. Learning to use a method like Sensiplan generally requires a more substantial time investment and working with a certified instructor who has undergone significant training.

Ultimately there are many other factors to consider in deciding whether an FABM — or any other contraceptive method — is the right choice for you. If you strongly wish to avoid pregnancy, more highly effective contraceptive methods backed by a more extensive evidence base are available. If using an FABM is your preference, it is important to learn more details about your FABM of interest from an evidence-based, impartial source, and to ensure that you understand how to use the method most effectively. If you wish to avoid pregnancy, you deserve to find and access a method that you feel safe and comfortable using.