A New Bead on Birth Control

Behind This Funny-Looking Plastic Necklace Is Research That Could Restore the Much-Maligned Rhythm Method to Fashion

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It looks like an uncommonly ugly necklace, made up of 32 oblong plastic beads. Slightly more than half are a translucent amber brown, a dozen are white, like piña colada jelly beans. One bead in the center is throat-lozenge red, and next to it is a small black plastic cylinder, which bears the necklace’s brand name: CycleBeads.

CycleBeads are not jewelry, exactly. They’re integral to a new pregnancy-prevention method called the Standard Days Method, developed at the Institute for Reproductive Health (IRH) at Georgetown University.

The necklace is a tool that helps a woman track her menstrual cycle: Slide the little black gasket onto the fat part of the red bead on the first day of a period. Then advance that gasket across the brown beads, at the rate of one a day. When the gasket reaches the 12 white beads, pregnancy is likely if a woman has unprotected sex. (This danger zone is easy to confirm in the darkness of the bedroom, since the white beads glow in the dark.) After the gasket slides past the white beads, it resumes its march across brown beads, and pregnancy is unlikely once more.

According to two studies in the peer-reviewed journal Contraception -- one published this year and one two years earlier -- the method, used correctly, is more effective than a diaphragm and nearly as effective as a condom. This summer, the Standard Days Method and CycleBeads will be inducted into the bible of contraception, “Contraceptive Technology.” Being included in the latest update of this family planning reference book used by health care professionals could feed demand for CycleBeads, which retail for $12.95, and never require a refill. In the 13 months since they became available, 30,000 women have started to use this method, according to the IRH. CycleTechnologies, the New York-based company that’s manufacturing Cycle-Beads, projects that figure will double by the end of 2005.

Rhythm Variations

CycleBeads are the latest variation on one of the oldest methods of birth control: periodic abstinence, commonly known as the rhythm method. Of course, the old joke about people who
use the rhythm method is that they’re called parents. But experts say gains in knowledge about women’s fertility make “natural family planning” methods far more dependable than they were decades ago.

“These methods can be very effective [at preventing pregnancy] when used correctly,” said Paul Blumenthal, an associate professor of gynecology and obstetrics at the Johns Hopkins University School of Medicine in Baltimore and an adviser to the Planned Parenthood Federation of America.

The catch: They require more effort than taking a pill, slapping on a contraceptive patch or slipping on a condom. Today’s methods -- which include the basal body temperature method, ovulation/cervical mucus method and the symtothermal method -- all depend on pinpointing the day a woman ovulates, so she can avoid unprotected intercourse and therefore pregnancy. This requires either daily temperature taking before budging out of bed in the morning (a slight rise in “basal body temperature” indicates ovulation), or daily examining of cervical secretions (which become wet and slippery during ovulation), or daily testing of the urine for chemicals released at ovulation. Natural family planning also requires a woman to be a fastidious accountant, charting all of her bodily observations and using those data to carefully calculate her possible fertile days each month.

For women who feel like they can barely keep track of their car keys, that can be a tall order.

“These methods are just too complicated,” said Victoria Jennings, director of the IRP. “It takes two weeks to train a provider on these methods at minimum, and eight sessions with a client to learn how to use these methods.”

CycleBeads are Georgetown’s attempt to make natural family planning user-friendly: no thermometer, no cervical mucus, no math -- just move that black rubber gasket across a bead each day.

This approach just might appeal to women who don’t want to take the pill or can’t do so (because of a history of blood clots, for example), or who are put off by a barrier method of contraception, or who are religiously opposed to medical contraception, says Lawrence B. Finer, associate director for domestic research at the Alan Guttmacher Institute in New York.

The Georgetown system did appeal to Amy S. Adams, 27, a database coordinator in Lynchburg. She seriously considered going on birth control pills last December, “but you hear about the mood swings and weight gain and all that kind of stuff with the birth control pill,” she said. “I decided that wasn’t something that I wanted to deal with.”

Regular condom use also didn’t appeal to Adams and her new husband, Robbie. The couple married in May, and “we don’t want to take away from the intimacy of [sex],” she explained. So she hit the Internet, found CycleBeads, and bought herself a set. They sit on her dresser now, and Adams advances the gasket across the beads each morning. When she’s in her “white bead days,” she says, she warns her husband, “Honey I’m fertile today, so we have to be extra careful. . .”

So far, Adams is pregnancy-free. “We knew there was a balance, and we were determined to find that,” she said. “I feel really confident that this method really works.”

The Wild Egg Chase

Throughout history, women who have relied on avoiding unprotected sex at certain points in the month to prevent pregnancy have been sorely disappointed.

Until recently, medical experts have had a poor track record at pinpointing when a woman is likely to ovulate each month. In the late 19th century, doctors assumed that women ovulated just before menstruation, as many animals do, explains Andrea Tone, a professor in the social studies of medicine at McGill University in Montreal.

“Doctors advised women wishing to avoid pregnancy to have intercourse only mid-cycle,” said Tone, the author of “Devices and Desires, A History of Contraceptives in America” (Hill and Wang, 2001). This meant that women were advised that pregnancy was unlikely at precisely the moment when they were most likely to conceive.

“You can imagine the results,” she said.

It wasn’t until the 1920s that surgical retrieval of eggs from the fallopian tubes revealed that women tend to ovulate sometime around the middle of their cycle. But to prevent pregnancy, doctors needed to be able to predict the timing with more precision. They also needed to know how long before and after ovulation a woman remained fertile. Complicating the question was the knowledge that most women’s cycles vary slightly each month with changes in eating, exercise, sleep and stress.

In addition, doctors weren’t sure of the shelf life of sperm and egg: If intercourse occurred a few days before ovulation, how long could the sperm survive inside a woman’s body to fertilize the egg? If intercourse occurred after ovulation, how long might an egg still be able to be fertilized?

The answer to these problems would eventually come from a research project begun in 1982 by a man who came to be known as “the King of Pee.”

For four years, Allen J. Wilcox, an epidemiologist at the National Institute of Environmental Health Sciences in Durham, N.C., had 221 women who hoped to become pregnant record the days of their menstrual periods and the days they had intercourse. The women also gave a daily urine sample,
and Wilcox ultimately gathered more than 30,000 little jars. By testing the urine for hormones released during ovulation, Wilcox was able to determine the ovulation date for each woman each month.

Wilcox’s analysis revealed the exact length of the fertile period: six days each month, including five days prior to ovulation and the day of ovulation. It turns out that sperm are hardy and can survive for up to five days in a woman’s reproductive tract, but eggs are delicate and die quickly if no sperm are in the neighborhood.

And when in their cycles did the women ovulate? He found that while women with irregular cycles could be ovulating at almost any time, women with regular cycles of about 28 days followed a certain pattern: If you view Day 1 as the first day of a woman’s menstrual period, the majority of women have their six-day fertile period somewhere between days 7 to 17.

“The Standard Days Method isn’t right for everyone,” said Jennings. “It’s only appropriate for women who have regular cycles of 26 to 32 days long. Women with cycles longer or shorter than that should use another method.”

The risk is small, he added, “but it’s not zero.”

The Game of Life

All reversible methods of pregnancy prevention are about playing the odds, to a certain extent. (Among typical users of condoms, for instance, 15 percent of women became pregnant in one year, as did 8 percent of women who took an oral contraceptive, according to the forthcoming edition of Contraceptive Technology.)

So when the Georgetown institute was developing its Standard Days Method and CycleBeads, it sought to define a fertile period that would apply to most women, said Jennings.

Armed with Wilcox’s findings, the Georgetown team analyzed a World Health Organization database of 7,500 menstrual cycles, including information on the date of ovulation for each cycle. They determined that about 80 percent of all women have cycles of 26 to 32 days, and 95 percent of these women will ovulate and have their six-day fertile window somewhere between days 8 and 19 of their cycles.

To be sure, women who use CycleBeads instead of other methods of natural family planning are sacrificing a certain amount of accuracy for convenience. Methods that depend on extensive self-monitoring and charting can be calibrated to woman’s individual cycle. Because CycleBeads depends on playing the averages, it requires more abstaining days than other methods might.

Jennings is frequently asked whether CycleBeads can be customized to a woman’s individual cycle: If a woman knows her cycle is exactly 25 days, for example, or can pinpoint her date of ovulation, couldn’t she subtract or add beads to make the necklace work better for her?

“We haven’t tested that,” said Jennings, “so for us, it sort of doesn’t exist as a possibility,” she said.

The Condom Conundrum

Of course, the big question for CycleBeads users is, what does a couple do if the woman is in her fertile period
but they’re in the mood? The question is not just hypothetical. A study by Wilcox published last month in the journal Human Reproduction found that the six days of the month when a woman was most likely to have sex are the same six days as her fertile window -- whether or not a couple is planning to conceive a child.

Wilcox suggests that ovulation may be tied to changes in libido or feelings of attractiveness that make intercourse more likely or be linked to increased secretions of pheromones, chemicals though to communicate sexual desire.

“Abstaining during fertile days may be little tougher than you might otherwise suspect,” he said.

It’s key for couples to develop a strategy for handling their desires during the fertile days, said Jennings, because most unwanted pregnancies among women using CycleBeads come from “oh, what the heck” moments.

“It’s chance-taking, mostly,” she said, along the lines of, “I know we’re on Day 16 of my cycle, but let’s just not bother to abstain or use a condom today, let’s just take a chance.”

Wait, wait. A condom? Isn’t this natural family planning? How did a condom get in to the conversation?

It’s here that Jennings, and CycleBeads, step onto some delicate political and religious territory. During the “white bead” fertile time, the only instruction that you will find on the CycleBeads product insert is: “Do not have unprotected sex if you do not want to get pregnant.” That’s because Jennings intends CycleBeads to appeal to a larger audience than simply those who shun contraception on religious grounds -- although she doesn’t really want to alienate them, either.

It’s a difficult line to walk, and there’s tension in her voice as she lays out the position she takes with family planning providers: “If you’re part of a church-based group, [advise women to] abstain on fertile days. If you’re part of a Planned Parenthood, or another such organization, offer CycleBeads along with condoms,” she says.

“The final choice is up to the couple, and not you and me. I want to make that message very clear, and I will say that over and over again . . . politely,” she says.

In fact, Jennings tailors the many presentations that she makes on CycleBeads to the leanings of the group she’s addressing. “The method is not about any philosophy,” she says. “The method is flexible.”

When counseling patients who use CycleBeads, Blumenthal says, he always talks about back-up plans -- condoms or emergency contraception -- “in case there’s a lapse.” Most U.S. couples using CycleBeads use a condom during their fertile days; according to Georgetown’s research, only 15 percent of couples abstain. Blumenthal also discusses other contraceptive options that require less patient involvement, such as a patch by OrthoEvra that needs to be changed only once a week and the NuvaRing, inserted once a month.

“The convenience factor is real,” said Blumenthal. “Patients often find more success with methods that are more convenient -- unless they are extremely motivated,” he says.

On the other side of the fence, the idea of condom use along with CycleBeads isn’t a crowd-pleaser.

“At Catholic institutions, we do not teach the use of barriers along with the fertile time,” said Richard J. Fehring, director of the Institute for Natural Family Planning at Marquette University, in Milwaukee. “By definition, it’s no longer natural family planning.”

Jennings prefers to focus on CycleBeads’ widening marketing potential.

For instance, she says, CycleBeads are now being sold in health food stores, where they are being positioned to reach an audience that’s interested in chemical-free alternatives to existing birth control methods.

“Look at the percentage of people who use these methods now,” she said. “It’s extremely low, despite decades of experience. I’m excited to bring a new perspective to this. This method is easy and people say, ‘Oh gosh, I get that,’ and it reaches people.”

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