

## Your Right to Know: Cervical Mucus

It may seem strange in 2013 to write about your right to know about cervical mucus as a fertility marker, but outside the NFP movement proper education about cervical mucus as a sign of fertility seems to be hit-or-miss at best. For example, a study about the fertility awareness value of cervical mucus was published online just this past July 12, 2013 in *Fertility and Sterility*. This information is so basic that it's amazing to see it reported in a scientific journal. You certainly have a right to know about the value of cervical mucus, and you also have a right to know about its limitations.

- Almost every fertile-age woman can identify it.
- It is a positive sign of the fertile time.
- It can work well for purposes of avoiding pregnancy, but it works better when used in a cross-checking way with waking temperatures.

Cervical mucus was known to the ancients. Aristotle described a white discharge as well as a red discharge. In the story of the two daughters of Lot who got their father drunk so that he would impregnate them (Gen 19:30ff), a question is raised, "How did they know the right days?" (I heard Dr. John Billings raise this question in a lecture years ago.) A number of researchers had something to say about cervical mucus starting in the 18<sup>th</sup> and 19<sup>th</sup> century. In 1855 Dr. W. Tyler Smith noted that cervical mucus "appears to afford a suitable medium for the passage of the spermatozoa through the cervix uteri into the uterine cavity." (Jan Mucharski, *History of the Biologic Control of Human Fertility*)

Many others commented on it, but the first to introduce the observation of cervical mucus into natural family planning instruction was Dr. Edward F. Keefe, a New York City OB-GYN doctor who taught it to his patients. He first did this in 1949 by instructing users of his Ovulindex thermometer to note on their temperature charts "a clear vaginal discharge, seen for a few days before ovulation." In his 1953 Ovulindex booklet, he included a drawing to show how "cervical mucus can be drawn out to a long, thin thread" a day or two before ovulation. Mucharski notes that "He also pointed out that a woman can determine 'the approach of the fertile time in the falling temperatures and the changes of the cervical mucus; the end of the fertile time in the rising temperatures'."

"In 1954, in an exhibit at the Chicago meeting of the American College of Obstetricians and Gynecologists, Keefe emphasized that 'the probable date of the next ovulation cannot be predicted from calendar calculations or from basal body temperature studies alone without observation of cervical mucus' " (Mucharski). That was ten years before Dr. John Billings published his book on the sympto-thermal method of natural family planning.

Dr. John J. Billings taught the mucus sign in conjunction with the temperature sign in 1964, but by 1973 he had decided to use only the mucus sign by itself. What especially characterized the work of Dr. Billings and his wife Dr. Evelyn L. Billings, was their focus on the peak symptom that we describe as the last day of the more-fertile mucus before the drying-up process begins. Mucharski reports that hormonal research with 22

women found that the peak day “occurred in five women on the day of ovulation, in nine women one day before, and in four women two days before. The onset of the mucus occurred on the average of 6.2 days before the estimated day of ovulation.” That accounts for 18 of the 22, but what about the other four? In later research Hilgers would find that ovulation sometimes occurs one or two or even three days after the peak day.

The Doctors Billings and their supporters vigorously promoted what they called the Billings Ovulation Method that relied solely on the mucus signs to determine the limits of the fertile time. That raised questions about its effectiveness relative to the other available natural systems. A study in Australia (1978) found as follows: “(1) the symptoms-and-temperature method combined with preovulatory calculations [such as the 21-day rule] generated 1.5 percent failures per 100 woman-years of use; (2) the symptoms-and-temperature method combined with preovulatory cervical mucus appearance [instead of something like the 21-day rule] generated 3.39 percent failures (3) the ovulation method alone generated an associated failure rate of 11.2 pregnancies per 100 woman-years.” It is not clear from Mucharski if these rates were perfect-use or imperfect-use or a generic total rate.

An NIH study in Los Angeles found an OM imperfect-use rate of 39.7 and an STM imperfect-use rate of 13.7 pregnancies per 100 years of use. The OM group experienced six perfect-use pregnancies; the STM group experienced zero perfect-use pregnancies.

The advocates of the mucus-only systems continue to claim great effectiveness in avoiding pregnancy based on their own studies and methods of evaluating pregnancies. However, whenever a comparative study has been conducted, it has shown that those couples who use cross-checking signs have much higher effectiveness rates in terms of avoiding pregnancy.

One of the great advantages of cervical mucus is its advance indication of fertility. The woman who is well experienced in mucus observations and interpretations will be able to put this knowledge to good use during the irregularities of premenopause and during the delay of postpartum fertility especially when breastfeeding.

Summary. Cervical mucus is essential for mutual fertility since it provides a medium for sperm transport and an environment favorable to sperm life. Its presence can be noticed by almost all women at the most fertile time. Its use in fertility awareness was first promoted in the United States by Dr. Edward Keefe in the 1950s in conjunction with other signs of fertility and infertility. **Comparative effectiveness studies about avoiding pregnancy favor using mucus in a cross-checking way with other fertility markers instead of just by itself.**

And that is something you have a right to know.

John F. Kippley, July 28, 2013