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## A Novel Approach for Women to Identify the Precise Day of Ovulation to Conceive or Contracept

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### Abstract

**Objectives:** A) Pinpoint the time of ovulation by collecting the fertile cervical secretions with the FemCap.

B) Narrow the fertile window to three days for conception, and eight days for contraception.

C) Enhancement of the effectiveness of Fertility awareness methods (1,2,3,4,5,6,7.)

**Methods:** We recruited 40 healthy women with regular periods. Participants used the FemCap 8,9,10,11

(Fig 1a,1b) to collect their cervical secretion directly from the cervix. Women recorded their basal body temperature and the status of the cervix.

**Results:** Women using the FemCap did identify their preovulatory cervical secretions in 96% of cases. They also verified their ovulation by a positive urinary L.H. surge (Luteinizing Hormone). The Basal Body Temperature charts were biphasic and consistent with the L.H. surge results.

**Conclusions:** The FemCap, in combination with fertility awareness, allowed women to pinpoint their ovulation with astonishing precision. This method shortened the fertile window to 3 days for conception and 8 days for contraception.

**Keywords:** Fertility Awareness Methods, FemCap, Ovulation, Basal Body, thermometer Temperature Chart, Spinnbarkeit

### Introduction

Fertility awareness methods are the safest of all birth control methods, and the most cost-effective. Oddly, this method of pregnancy prevention is the least prescribed by doctors or nurses and the least used by women. The lack of acceptance is due to the perception that these methods are not highly effective, and difficult to learn. Modern women are educated and more health-conscious than their mothers were. The media is also responsible for the resurgence of fertility awareness methods due to its safety in contrast to the negative side effects of hormonal contraceptive options.

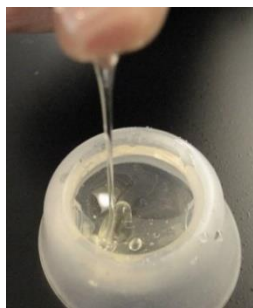
The main objective of this article is to enhance the timely detection of the physiological signs of ovulation: 1) The preovulatory egg-white stretchable mucus. 2) The change of temperature from below the baseline during the follicular phase to rise after ovulation above the baseline in the luteal phase. 3) The change of cervix, becoming higher and softer during ovulation<sup>12,13,14,15,16,17</sup>.

The timely identification of ovulation signs will increase the effectiveness of this method as well as remove the false perception that women and medical professionals have carried for years.

Currently, women subjectively collect their cervical secretions from the vagina in small quantities that could be mixed with seminal fluid, spermicide, or other vaginal discharge. In order to accurately confirm preovulatory, cervical mucus it should be obtained directly from the cervix. By using the snug-fitting FemCap (cervical cap) we can selectively collect this fertile mucus without mixing it with vaginal contents, and thus enhance the quality and quantity of this most valuable sign of ovulation.

**Materials**

1) One FemCap, ( Figure 1a,1b ) be used for both, collecting the fertile cervical, raw egg-white secretion (Spinnbarkeit) and for contraception on the fertile 8 days, 5days before the ovulation, the day of ovulation and 2 days following ovulation. 2) Basal body thermometer (Figure 2) Basal temperature chart (Figure 3).



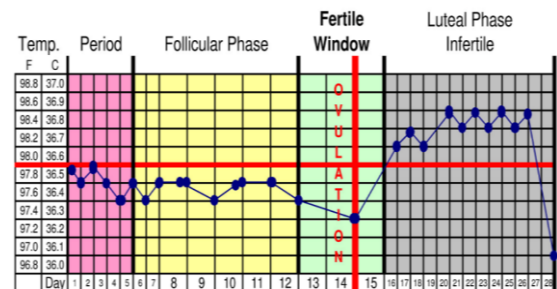
(Figure1a). The FemCap collects mucus from the cervix



(Figure 1b) The FemCap placed on the cervix for contraception



(Figure. 2) Basal Body Thermometer



( Figure 3) Basal Body Temperature

**Methods**

The fertile window is unique to every woman. The main signs of ovulation are: raw the egg-white cervical secretions, and biphasic basal body temperature (Basal temperature chart Figure 4).and the cervix become softer and higher that moves up in the vaginal canal; these are the main signs of ovulation.

We conducted a pilot study of women collecting a large quantity of their cervical secretions, using the FemCap,<sup>18,19,20,12,22,23,24</sup> a new cervical cap available in Europe and the U.S. We recruited 40 women with regular periods, ages 21-38 who did not desire to become pregnant for the duration of the study. We instructed the subjects to wear the FemCap and replace it every 12 hours to collect their cervical secretion, starting two days after the completion of menses, for a total of 8 days. This to ensure that none of Sperm are viable when the egg is released. Subjects instructed to record the color, clarity, consistency and stretchability (Spinnbarkeit) of their

cervical secretions on their BBT chart. Urine luteinizing hormone (LH) surge test results were also recorded daily starting 2 days after the completion of menses.

### Basal Body Temperature Chart

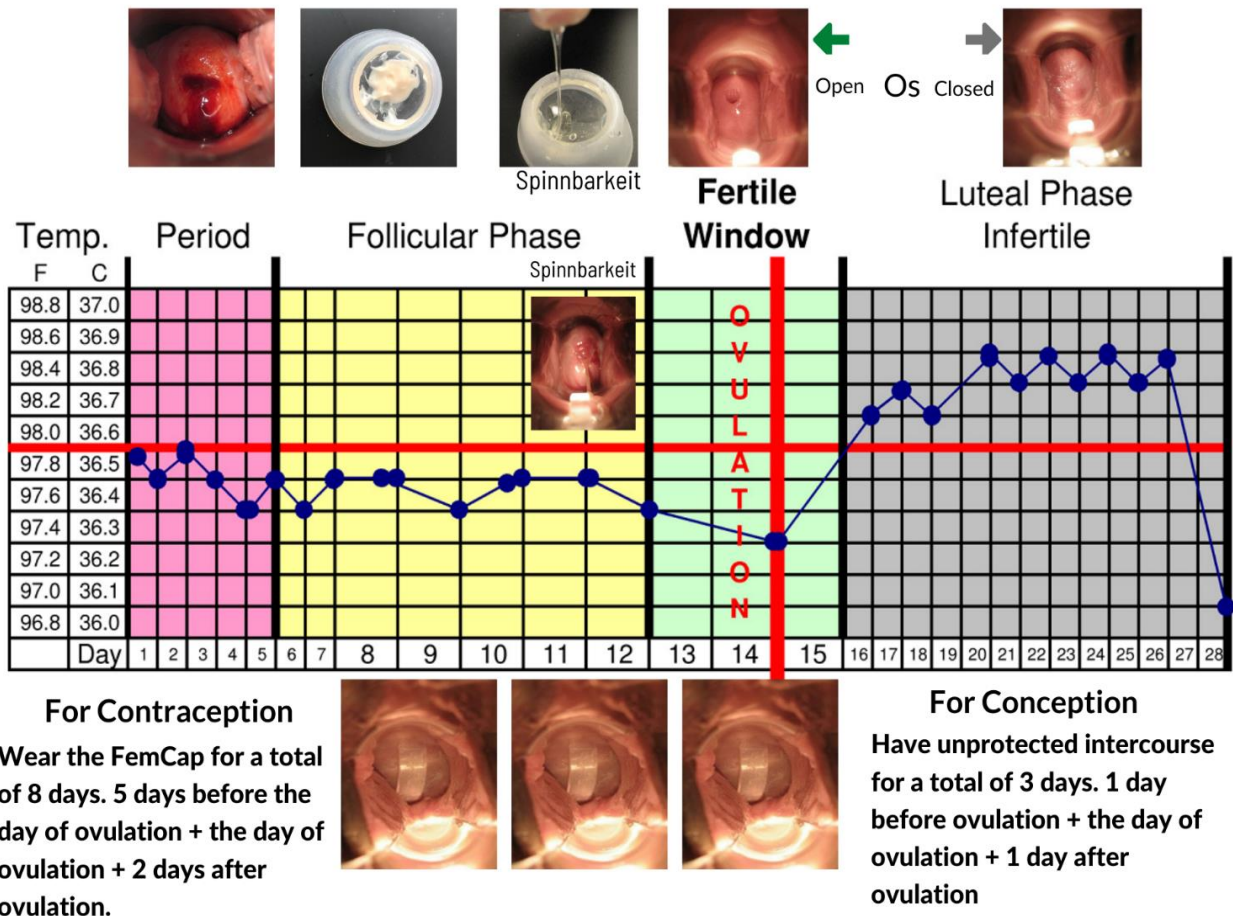


Figure 4 BBT Chart

### Results

Thirty women followed this protocol for three cycles. Twenty-nine women (96.6%) could identify their preovulatory raw egg white cervical secretions that stretches 2.5-3 inches. This was verified by a positive urinary LH surge test result and microscopic examination of the Ferring which is collected from cervical mucus. The BBT Temperature charts (Figure 4) were biphasic and concordant with the LH surge and the characteristics of the preovulatory cervical secretions. We interviewed all the women that followed the protocol for three months. We asked them, if

they would like to use this method in the future or recommend to a friend. The vast majority answered Yes.

### **Conclusions**

The collection of the cervical mucus by the FemCap allowed women for the first time to collect large quantities of their cervical secretions and describe this mucus as clear raw egg-white and stretch about 2.5 - 3 inches before it breaks and thus would be able identify ovulation and their fertile window with astonishing precision<sup>25</sup>. This methodology shortened the fertile window to 3 days for conception and 8 days for contraception. This simple non-invasive and low-cost method can maximize the chance of conception or contraception in healthy women having regular periods. It should be noted that the efficacy of this method depends intensively on user motivation, compliance, and accurate and consistence recording.

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