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# Further Evolution of the Sympto-Thermal Methods

**Josef Roetzer**

## Introduction

THE TERM "sympto-thermal" refers to taking the "waking temperature" and observing various symptoms of the fertile period in the human female as a basis of natural family planning. There exist several sympto-thermal methods using different symptoms, having different evaluation approaches, and resulting in different theoretical effectiveness and different use-effectiveness. Therefore, two main points have to be stressed:

First, it is important to differentiate between the various sympto-thermal approaches.

Second, a continuous evolution in using and evaluating sympto-thermal methods is still in progress in order to achieve a higher degree of reliability in conception regulation.

Most of the groups teaching the various sympto-thermal methods throughout the world do not evaluate the temperature curve in conjunction with other symptoms of the fertile phase. The pertinent symptoms are charted only to indicate approximately the fertile period. The temperature rise is evaluated in accordance with rules referring only to the temperature curve itself, regardless of its relationship to the other symptoms.

Since about 1972 some groups have been trying to check the evaluated temperature rise against the mucus symptoms and/or against the changes in the cervix which Dr. Edward F. Keefe has been studying for many years. (Because of inaccuracy of the clinical thermometers in the United States, Keefe has had the Ovulindex thermometer manufactured since 1948.) In the first edition of his book *The Ovulation Method*, Dr. John J. Billings considered the

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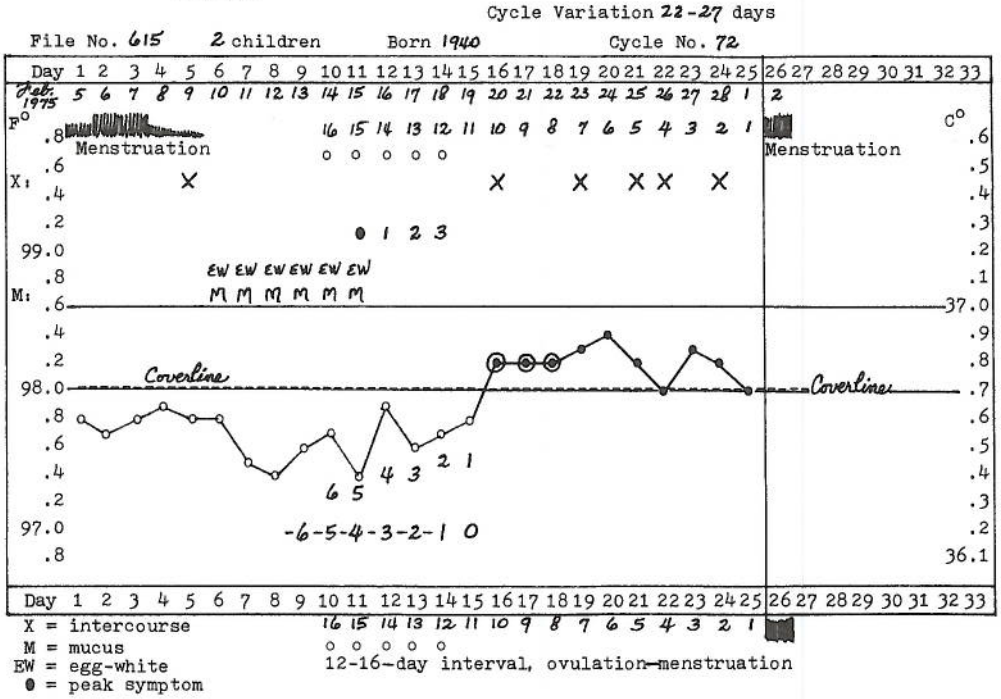
third day at the higher temperature level infertile; several years ago he abandoned taking the temperature, relying merely upon the mucus symptoms.

For determining postmenstrual infertile days, almost all groups use a calculation rule, for example, shortest cycle minus 20 or shortest cycle minus 21, which should yield the last probably infertile day in the beginning of the cycle.

FIGURE 1




One attempt to define the day of the thermal shift uses a line drawn across the temperature chart just above the postmenstrual readings (excluding disturbances: temporary elevations presumably due to illness or other episodic factors). The day before the temperature rises to stay above that line is the alleged day of the shift ("day 0" marked at the bottom of the chart).

This line is the so-called coverline. The day of the third point after crossing the coverline is considered infertile. Since this rule results in a biological failure rate, the "three higher temperatures" should be evaluated in conjunction with the mucus symptoms. "Higher" points should not be assumed before cessation of fertile-time mucus ("egg-white mucus" on the chart). This manner of making the evaluation of the temperature curve dependent upon mucus symptoms constitutes my approach (first published in German in 1965, with an English summary added in 1968). With this evaluation, the biological failure rate in avoiding conception is *zero*.

### Cervical Mucus Secretion

The most important individual sign indicating the fertile period is the increased cervical mucus secretion. Proper instruction helps the woman to become aware of the different types of mucus. The duration of this learning process depends on the teaching material provided and on the opportunity for its repeated discussion with a teacher or a teacher-couple. At any rate, the woman must be repeatedly instructed.

It seems to be easier for women in developing countries to learn to recognize the different sensations at the entrance to the vagina. In the western civilized countries, it is helpful to use toilet paper. On each visit to the toilet and before urinating, the woman notices how her vulva feels—Is it dry, moist, or wet? Using her fingers or wiping herself with a piece of toilet tissue at the vaginal opening, she can easily notice whether the vaginal entrance is dry or whether the tissue slides over the opening very easily. She readily distinguishes the mucus by checking the tissue paper. The whole observation takes only a few moments.

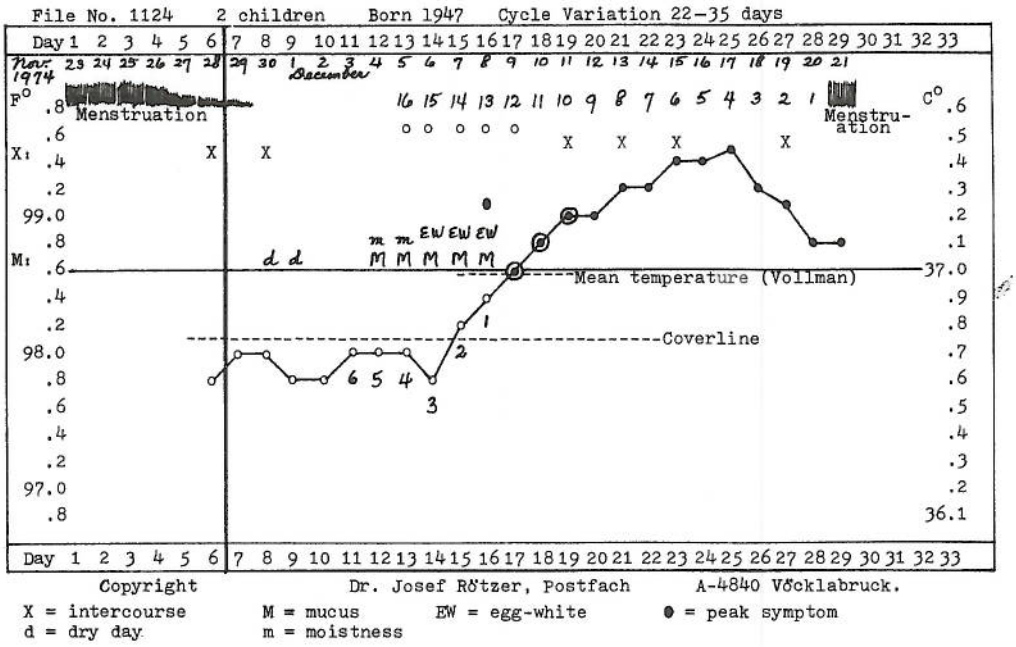
By folding the tissue one can test whether the mucus is stretchy, stringy, elastic ("spinnbarkeit"). This is a very important point, especially for women who complain about a constant vaginal discharge. A continuous pathological discharge looks different from the healthy mucus secretion. Above all, the pathological discharge is not stretchy, not stringy, not elastic. The cervical mucus can be recognized in this way even though there may be a constant discharge. The cervical mucus secretion can look like the white of a raw egg ("egg-white mucus").

In the charts the capital letter M stands for mucus, and EW means egg-white mucus. Some women prefer the expression "glassy" or "glary" to describe this fertile-time mucus. The less-fertile–time mucus is sticky and cloudy. Ovulation can be assumed somewhere within the limits of the mucus symptoms or soon afterward. So you can recognize a delay in the temperature rise in this case (figure 1) and you can see that the so-called day of the shift ("day 0") has no close relationship to ovulation time.

The coverline already mentioned disturbs the evaluation of the temperature curve in conjunction with the mucus symptoms. Furthermore, the definition of the "day of the shift" is not possible for practical purposes. The shift is a process, a movement, lasting for several days when the temperature ascends from the low to the high level. For determining the beginning and the end of the fertile period, it is not necessary to define the day of the thermal shift. On the contrary, the search for a theoretical definition of the shift distracts from an appropriate evaluation of the temperature curve, the mucus symptoms, and other signs of the fertile time.

Equally, doctors and couples should stop dating ovulation, because that is impossible and the attempt hinders an appropriate evaluation of the temperature curve.

FIGURE 2




**Evaluation of Temperature in Conjunction with Mucus**

A true high-temperature phase is about to be established if the temperature rises after cessation of the fertile-time mucus secretion. An earlier rise in temperature should not be interpreted as the beginning of the shift in the first instance, as it may be due to some disturbing factor.

In my Marriage Advisory Service, the woman is instructed to apply the following rules:

*First (and Most Important) Rule:*

As long as fertile-time mucus of some sort is present (for example, "egg-white," "glassy," or "glary" mucus), do not consider any rise in temperature a "higher" reading and do not encircle any "higher" point.

The evaluation of the three higher temperature readings is made by drawing little circles around them, as can be seen in figures 1–6.

The letter X marks intercourse; on the left side of the charts an X is printed in the margin on the proper line to indicate where the X's should be drawn. Similarly, there is an M printed on the left side of the charts to indicate the line on which the M for mucus should be drawn during the cycle. As you can see, it is just above the line for 37° C (98.6° F); since the temperature curve usually does not reach this height during the phase of the mucus symptoms, the charting of the M and of the temperature do not interfere with each other in such an ar-

rangement. On the contrary, on the days with the mucus symptoms the temperature points are usually low, in most cases forming a valley as the temperature curve progresses.

My purpose in arranging the chart in this manner is to construct a visual picture of the conjunction between the different symptoms of the fertile and infertile periods. Therefore, the marks of the different symptoms should be charted close together so that everything is clear at a glance.

*Second Rule:*

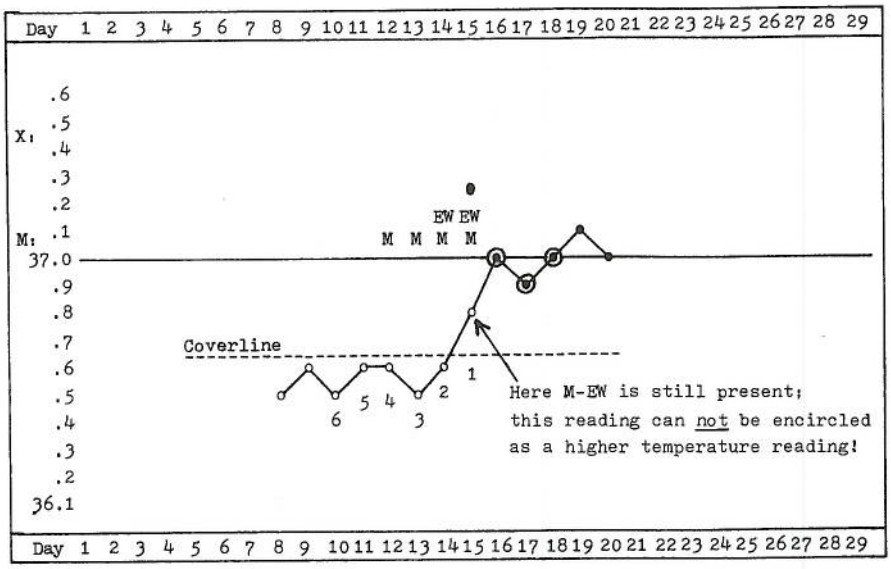
Only after cessation of the fertile-time mucus secretion does the woman look for three consecutive temperature recordings which are higher than the six preceding lower points. In the evening of the third higher temperature recording determined in such a manner, a woman can be sure that she has already entered the absolutely infertile phase.

*Third Rule:*

Upon the recording of the third higher temperature point, a temperature level must have been reached which is at least 0.2° C (0.36° F) higher than the highest point of the six preceding lower-temperature points.

For evaluating the three higher temperature recordings, it is not necessary for the temperature to show a continuous rise, each point being higher than the preceding one. For example, there can be a zigzag rise when a second or third point is a bit lower than the preceding one but when each of the three readings is still higher than the highest one of the preceding lower recordings (figure 3).

FIGURE 3



In figure 3 the coverline confuses the appropriate evaluation of the temperature curve in conjunction with the mucus symptoms. After the peak symptom (large dot [●] above M-EW), each one of the higher points should be higher than the highest of the six low points immediately preceding the first high temperature evaluated.

In case there is a distinct rise in temperature while egg-white mucus is still present, the right evaluation demands three additional recordings in the sustained high-temperature phase past the peak symptom (figure 4).

FIGURE 4

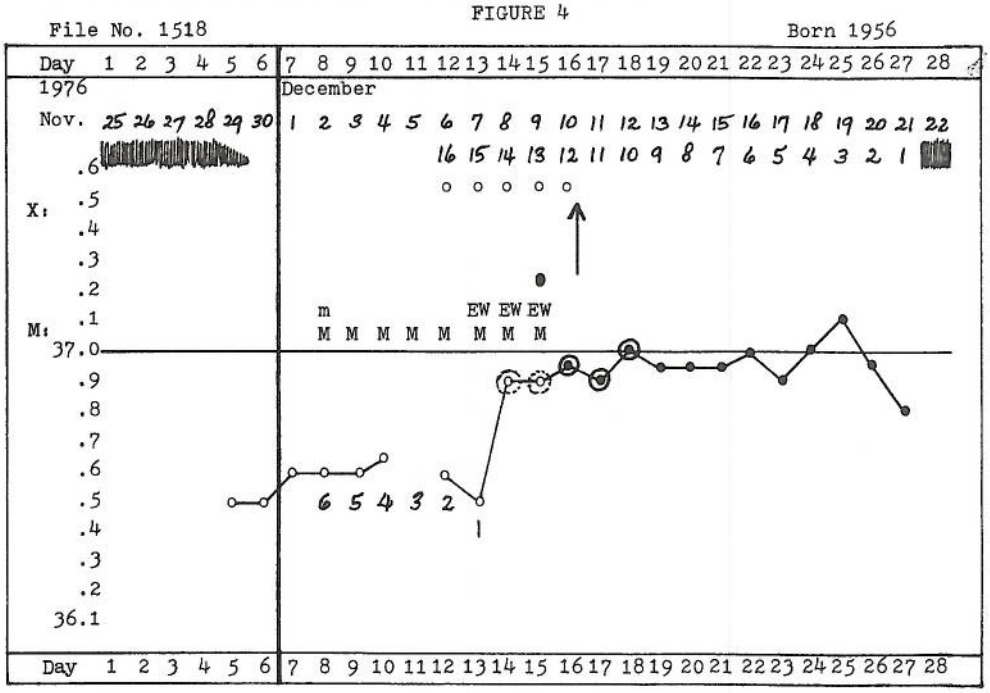



Figure 4 explains the possibility of conception in the evening of the third higher temperature recording (arrow) or in the morning of the fourth higher reading unless the temperature rise is evaluated in conjunction with the mucus symptoms. In my overall failure rate, one such surprise pregnancy is included; the woman neglected to observe her individual mucus pattern.

*Do Not Evaluate the Temperature Curve Alone*

If you were trying to evaluate the temperature curve only in accordance with the coverline in figure 2, the third "higher" point would be the first one with a small circle positioned above it. This temperature reading, however, is recorded just one day after the last day with egg-white mucus. The *last* day of this fertile-time mucus—not the day with the greatest *amount*—is regarded as the "peak day" or "peak symptom."

The peak symptom, as we have seen, is indicated on the chart with a large dot placed above the M and EW. It is possible to conceive one or two days past the peak symptom, and in certain cases even three days afterward. Therefore, in this particular case (figure 2), intercourse on the day of the third or fourth higher reading determined solely by the coverline could have resulted in pregnancy.

### Peak Day Rule

The *Curriculum Outline in Natural Family Planning* edited by the Human Life Foundation of America and by the World Health Organization describes the evaluation of the peak symptom (the "Peak Day Rule") in the following manner (Module III, 16):

> Identify when a woman is using the Ovulation Method that the first three days following the peak cervical mucus are considered fertile days.

It is not necessary to follow this rule if there are three higher temperature readings immediately after the peak. On the chart in figure 2 the sign X for intercourse is marked on the evening of the third higher point past the peak. If using the Ovulation Method, however (a mucus-only approach without taking the temperature), the couple must wait until the *fourth* night past the peak before resuming intercourse.

### Checking Back

Beginning at the end of the cycle and counting backward from 1 through 16, one can estimate the probable ovulation time in accordance with the normal interval between ovulation and the approaching menstruation, which varies within a range of twelve through sixteen days. Little circles are drawn below these five days, the twelfth through sixteenth before the following menstruation. In this manner one can check these days against all the other symptoms of ovulation time in the chart to see whether there might have been a normal and probably fertile cycle. Although this is only a check after the cycle has already been completed, it nevertheless provides a better understanding of the cycle's progress and reinforces the confidence of the couple about their own observations during the cycle.

### Postmenstrual Infertile Days

For determining postmenstrual infertile days, I use a combined procedure:

*Item 1:*

The days from the first day of a "true" menstrual period up to and including the sixth day of a cycle are considered infertile, regardless of the cycle length, as indicated by the thick line between the sixth and seventh day.

A "true" menstrual bleeding is recognized by the fact that it was preceded by a high-temperature phase of normal length. On the other hand, it is possible to have a "cycle" without a temperature rise (which could mean that no ovulation took place) but nevertheless with bleeding. Such bleeding is not "true"

menstruation; within and after such bleeding *no* infertile days may be assumed. It is possible that ovulation could occur in association with it.

Without a temperature record it is impossible to judge whether a bleeding is "true" menstruation. That is one reason why the above-mentioned *Curriculum Outline* is obliged to give the following instruction (Module III, 9):

> Identify that when using the Ovulation Method, menstrual days are considered fertile because the menstrual flow can disguise the presence of cervical mucus.

In my research project for the Human Life Foundation of America, I have thus far observed only one pregnancy resulting from intercourse on the sixth day of the cycle in 5,807 doctor-supervised cycles in which the couples always assumed infertile days at the beginning of the cycle; that would lead to a Pearl Index of 0.2.

The pregnancy resulting from intercourse on the sixth day of the cycle occurred in a woman with very short cycles who for seven years had been able to assume infertility through the fifth day. (You can see one of this woman's charts in figure 1.) The range of cycle variation was 22–27 days.

*Item 2:*

It is possible to consider more than six days infertile if the bleeding stops before the seventh day and/or if dry days can be observed immediately afterward (figures 2, 5, and 6). Dryness is not only an absence of perceptible mucus but a positive sensation of dryness, usually a disagreeable feeling, sometimes associated with itchiness.

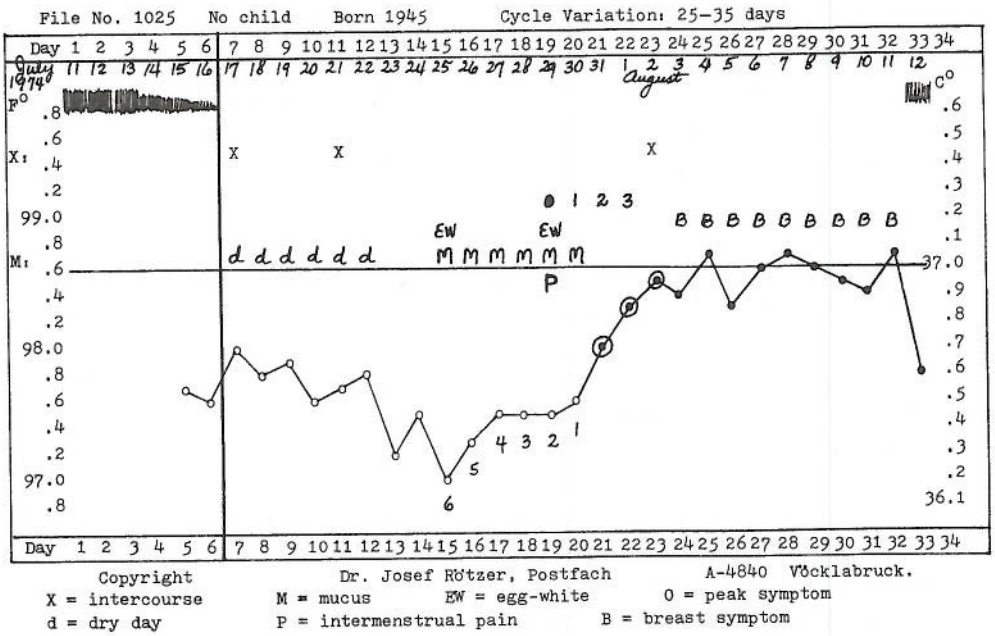
*Item 3:*

If a woman has lost the feeling of dryness but does not yet feel moist, this interim might indicate to her that "something is happening." If she can observe such an interval between the end of the dry days and the beginning of the mucus symptoms, she can consider all the *dry* days infertile.

Figure 5 shows the observations of a married woman, age 29, who successfully postponed her first pregnancy for several years (more than fifty cycles). She used the dry days, which she could be sure were infertile because of the interim which followed. The peak symptom is marked on cycle day 19, after which the "Peak Day Rule" has been evaluated with the figures 1, 2, and 3. The fourth day past the peak can be considered infertile if the temperature has shown a rise. In this case, the "Peak Day Rule" is corroborated by three higher temperature points. The letter B marks a breast symptom—a tenderness, a fullness of the breast—which is helpful in cases with a very slow rise in temperature, because it indicates a functioning corpus luteum. You can also see the letter P indicating intermenstrual pain.

Two cycles later, this woman and her husband wanted their first child. Intercourse on a day with EW mucus resulted in pregnancy, and a healthy child was later delivered.

FIGURE 5




*Item 4:*

According to Dr. Gerhard Doering's system, the woman checks her previous cycles to look for the earliest-occurring temperature rise, from which she then counts back six days. This count-back gives the first probably fertile day postmenstrually. Doering has reported a Pearl Index of 3.1. It is possible to conceive more than six days before the temperature rise, particularly in longer cycles. Therefore, the woman also checks the day of earliest temperature rise in relation to the mucus pattern.

*Item 5:*

The next comparison deals with the calculation "shortest cycle minus 20," which determines the last infertile day postmenstrually, with the exception of the first six cycle days, which are almost always to be considered infertile. Likewise, it is not necessary to follow this calculation rule if the woman has a good mucus observation. She then understands that she should observe her dry days and the interim very carefully in order not to overlook the beginning of the mucus symptom.

*Item 6:*

Postmenstrually, the woman must follow the "Early Days Rule" given in the *Curriculum Outline* (Module III, 52):

Instruct women that the Early Days Rule refers to intercourse at night following

a dry day and avoidance of intercourse the next day and night.

This rule permits intercourse only at night following a dry day and discourages intercourse on successive days, as can be seen in figure 6, showing a short cycle of only twenty-six days.

The woman who contributed this chart wrote this to me in a letter dated 25 February 1977: "I changed my doctor because he declared me to be crazy, and the new doctor accepted your method to be the 'only right and beautiful' one."

## Results

A preliminary survey which is undergoing a continuous process of investigation, supported by the Human Life Foundation of America, is presented in figures 7–11.

Further opportunity in the evolution of the sympto-thermal methods is available, for example in autopalpation of the cervix as described by Keefe.

In the postpartum period, with or without breastfeeding, and in the premenopause an improved observation of the mucus signs is the basis for determining infertile days, always checked and controlled by temperature.

In conclusion, let me cite from a letter to the World Health Organization written by Keefe, my esteemed colleague who has contributed so much to this field: "Rather than search for a prediction of ovulation, let us use the dependable signs of fertility already available and spread knowledge of them."

I add a personal request: "Don't call a woman crazy for using this method!"

FIGURE 6

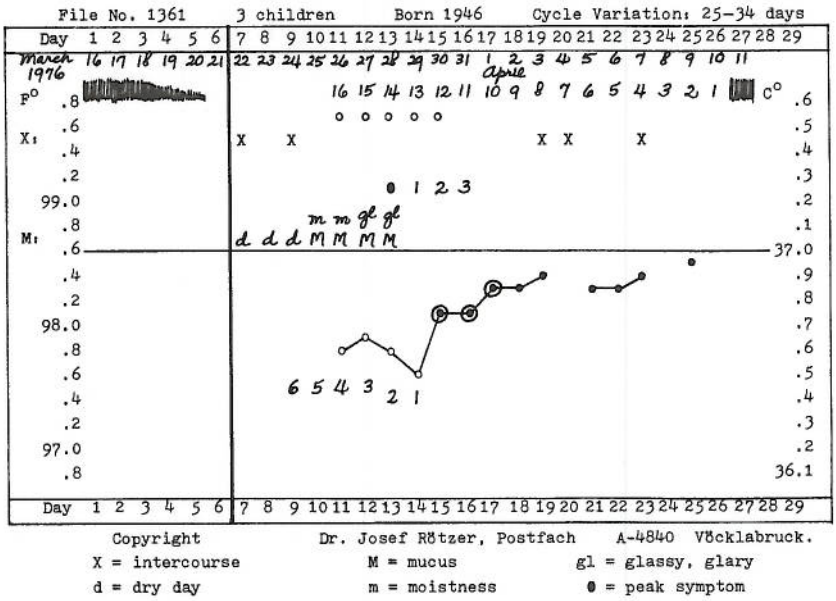


FIGURE 7
Practicability of Cervical Mucus Observation
*(Trial 1967 and HLF 1976)*

| | | |
|---|---|---|
| 6.7 % | 27 | women without any perceptible mucus |
| 93.3 % | 375 | women charted sign M (without differentiation) |
| | 402 | women |



FIGURE 8
Practicability of Cervical Mucus Observation
*(HLF 1976: Preliminary Survey)*: *222 women*

| | | |
|---|---|---|
| 4.5 % | 10 | women without any perceptible mucus secretion |
| 14.4 % | 32 | women without "egg-white mucus" or "glassy mucus"; only "less-fertile-time mucus": the last day is then considered the "peak day" |
| 81.1 % | 180 | women observing M-EW or M-gl: the last day of this "fertile-time mucus" is the "peak symptom" |

FIGURE 9
Overall Figure of Female Participants
(*HLF 1976: Preliminary Survey*): *222 women*

Ages 18–44 9,291 cycles
524 children, 31 miscarriages, 2 stillborn.
Monophasic cycles: 140 (1.5%)
With an appropriate technique of taking the "waking temperature," it is uncommon to find monophasic cycles in fertile women.



FIGURE 10
Biological (Theoretical) Effectiveness

1. 3 "higher" points after the "peak" (X in the evening)
   Pearl Index: 0
2. Infertility of the first 6 days of the cycle:
   1 pregnancy in 5,807 cycles
   Pearl Index: 0.2



FIGURE 11
Overall Use-Effectiveness Using
Post- and Premenstrual Days
(*Trial 1967 and HLF 1976*)

380 fertile women
12,323 cycles
7 surprise pregnancies
Pearl Index: 0.7