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A Prospective Multicentre Study of the Ovulation Method of NFP, III: Characteristics of the Menstrual Cycle and of the Fertile Phase

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# The Return of Fertility in Breast-feeding Women

### Suzanne Parenteau-Carreau

The purpose of our study was to correlate the clinical signs of the return of fertility—as the woman observes them in the Sympto-Thermal Method—with the breast-feeding variables. A special postpartum chart was designed to record morning temperature, cervical mucus, and other signs of fertility/infertility in relation to dates and postpartum days, as well as indicators of the "intensity" of breast-feeding (see fig. 1).

### Sample

Among the breast-feeding clients of Serena teacher-couples all over the country, each of those interested in detailed charting were invited to mail her charts and case history for this study (see table I). Here is the compilation of 54 breast-feeding experiences in 47 women. The ages ranged from 20 to 39 with an average of 27. The number of previous deliveries ranged from 0 to 6, with an average of 3.3. The duration of full breast-feeding ranged from three weeks to eight months, with an average of 3.4 months and a median of 3.3. The duration of breast-feeding ranged from two to 28 months, with an average of 8.8 months and a median of 7.6.

### **Definitions**

The date of first introduction of any supplement was counted

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All the tion (see months, that after; for as the end of full breast-feeding, and the date on which the baby was put to the breast for the last time was termed the weaning date or the end of the breast-feeding period. Any blood loss requiring the use of a pad or tampon was called a bleeding. The word "menstruation" was reserved for bleeding episodes preceded by a sympto-thermal shift. The occurrence of an ovulation was assumed when a temperature shift was preceded by fertility signs and followed by infertility signs.

As a measurable benchmark regarding the sympto-thermal shift, the first day of the high temperature plateau was chosen. We do not claim that this is ovulation day, since it is well known that neither the mucus symptom nor the waking temperature pinpoint the day of ovulation; still, they indicate a period of a few days during which ovulation occurs. Once the first hyperthermal point was defined, it was possible to count the number of days of hyperthermia, to the eve of the beginning of the following menstruation, inclusively.

## A Few Figures

The sample is too small for the statistics to be significant. More cases will be analyzed during the next months but the present sample indicates some trends.

First S-T Shift vs. First Bleeding vs. Breast-feeding

Among the 54 cases, 35 (65%) had a sympto-thermal shift before the first bleeding (see table II). For 13 of them, the shift was after weaning; for 19, it was after the introduction of supplements but before the end of weaning; for three, it occurred during full breast-feeding. Among the 19 cases who had their first sympto-thermal shift after the first bleeding, the shift occurred after weaning in four cases and during the weaning period for 15.

First S-T Shift vs. Breast-feeding

All the cases were classified according to breast-feeding duration (see fig. 3). When breast-feeding lasted from two to five months, the first shift was close to the weaning date and generally after; for breast-feeding durations between five and nine months,

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ANADA. ernational 4ay 22-25, a majority had a shift close to weaning (often before) but a few ovulated much earlier or later; finally, the women who breast-fed between nine and 28 months had a shift weeks or months before the end of breast-feeding.

Among the 54 cases, 17 (31%) had a shift after weaning, 34 (63%) between the introduction of supplements and weaning, and three (6%) while still fully breast-feeding.

# Duration of Hyperthermia

In Serena, one traditionally counts four high, normal temperatures instead of three before confirming the first plateau in postpartum. The present study confirmed that an unexplained plateau of three days may occur and not be followed by any bleeding, but this is a very rare occurrence. Yet all plateaux of four days or more were followed by either menstruation or confirmed pregnancy. The duration of hyperthermia ranged from four to 14 days with an average of 8.9, and a median of 8. Since the early works of R. Palmer, 1 a hyperthermia of eight days or more has been considered necessary for a successful implantation. On the other hand, the corpus luteum function is recognized to be often defective in the first postpartum cycles. In our sample, 69% of the first sympto-thermal shifts were followed by a plateau of eight days or more. To determine whether time elapsed from delivery has an influence on the length of hyperthermia, the percentage of plateaux of eight days or more was calculated for each month after delivery when the sympto-thermal shift occurred. For the shifts occurring during the first six months of postpartum, between 0 and 75% of the plateaux lasted eight days or more; between six and 10 months, the percentage was between 70% and 100%, and after 10 months, it went up to 100%, with the exception of one woman who had her first shift at 16 months (see fig. 2).

# First Bleeding

The first bleeding occurred between Day 33 and 16 months, with an average of 5.9 months and a median of 5.5. Some of these lasted only a few hours, and occurred long before the signs of return of fertility. It is quite probable that they would have been

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months, of these ns of reve been overlooked in a retrospective survey where the woman relies only on her memory. Many breast-feeding women tend to use the expression "first period" for a bleeding episode which is comparable in amount to their former periods. But Dr. Pascal² has found in her study of 750 cases that there was little correlation between the amount of bleeding and the fact that it was preceded or not by a thermal shift.

Of 53 cases (one became pregnant before any bleeding), 39 (73.6%) had their first bleeding during breast-feeding, and six during full breast-feeding. For one woman, it was on the day of weaning and for the remaining 13, after. The seven cases of bleeding which occurred during the first two months were not preceded by an S-T shift. The first real menstruation, i.e. a bleeding which was preceded by an S-T shift, occurred on Day 66.

# Soother or Thumb-Sucking

It is generally accepted that the baby who satisfies his or her sucking needs with a soother or thumb-sucking will exert a lower blocking action on his or her mother's fertility. We compared the S-T shift dates and the first bleeding date according to whether the baby used a pacifier or sucked his or her thumb, or satisfied all his or her sucking needs at the breast. The average date of the first day of hyperthermia was Day 206 for the first group, compared with Day 219 for the second. The average date of the first bleeding was Day 176 for the first group, compared with Day 193 for the second (see fig. 4).

# More Findings

There are more features which come out of the study and will be mentioned here, although they have not been quantified yet. Flattening of Temperature Graph prior to the S-T Shift

It is well known that postpartum temperatures show marked variation from day to day. We were struck by a flattening of the curve for one or more weeks before the shift in many of our sample cases. Temperature is usually considered a retrospective test for ovulation in comparison with prospective signs like the mucus

symptom at the vulva or cervix changes, but, in postpartum, it often has warning value as well.

Individuality of Each Postpartum Experience

In the same way that each cycle should not be expected to be an exact copy of the others, successive postpartum experiences may be different for the same woman. For example, a woman who had had her thermal shift after her first bleeding in three previous experiences had it before any bleeding in a fourth one. Another woman had had 12 days of lubricative, transparent, and thready mucus before the shift in a first post partum. In a second one, she was expecting the same kind of pattern and overlooked a period of one month of creamy mucus interspersed with sticky vellow secretions, spotting, and days of dryness. She was taking her temperature about once a week, waiting for the expected pattern of fertile-type mucus to appear to take it daily. She was then surprised to observe higher temperatures during 26 days before she spontaneously aborted. Perhaps it was only logical that such a defective follicle (which had generated so few fertility signs) was followed by a defective corpus luteum which could not sustain a pregnancy.

Circumstances when the Shift Occurred during Total Breast-feeding

The three sympto-thermal shifts that occurred during total breast-feeding took place at two, five, and seven months respectively. The mother who had a shift at two months had delivered a very small, sick baby who was kept in the hospital while the mother extracted her milk, hoping to breast-feed when her baby came home. This is a pathological, rather than a physiological, case. The fifth-month shift was followed by a plateau too short for implantation. The baby was sleeping 10-hour nights and sucking its thumb. The seventh-month shift was followed by a pregnancy. The baby was sleeping 10-hour nights, and using a pacifier. In all cases, there had been fertile-type mucus before the shift. Two of those women were practicing cervical palpation and had also observed fertility signs at the cervix.

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Variability of the Symptoms during the Breast-feeding Period

Some women displayed a very classical pattern of prolonged dryness as long as the breast-feeding was intensive, with increasing occurrence of less-fertile type mucus when the baby was taking supplements, and finally days or weeks of fertile-type mucus prior to the temperature shift. Others had all sorts of atypical mucus as a basic infertile pattern. Some even displayed fertile characteristics for weeks and months, not knowing what to expect as an immediate warning for ovulation. Finally their temperature shift was announced by a dramatic change in the quantity of expelled mucus; perhaps postpartum is the exceptional circumstance when the quantity of mucus is significant.

Bonnie Bauer<sup>3</sup> and others have reported on the usefulness of cervical palpation in postpartum. Many women in our sample learned this test during their postpartum. After an initial period of hesitation, many found it a useful confirmation of the other signs, and a few found it the most valuable sign.

### Conclusion

The special postpartum graphs, which seemed loaded with details, aroused real enthusiasm in some women who wanted to develop self-awareness and understand the factors of the return of fertility in the breast-feeding situation. Others did not do daily charting throughout the breast-feeding months, but did record landmarks and undertake daily charting when changes appeared, either in the mucus symptom or in the mother-child relationship.

Some cases remain to be analyzed. The study is ongoing and, a larger sample will show if the same trends are maintained.