

## Natural Family Planning: The Various Components

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### Introduction

In 1968, Pope Paul VI concluded his landmark encyclical, *Humanae Vitae*, by encouraging married couples to teach Natural Family Planning to other couples (n. 26). He also encouraged doctors and medical personnel to learn Natural Family Planning (NFP) “so as to be able to give to those married persons who consult them wise counsel and healthy direction, such as they have a right to expect” (n. 27). Since that time, much progress has been made, but there is still much to be done. Some information about NFP has become fairly well known, but other facts remain less known or have been forgotten. The purpose of this article is to review the basic components of NFP so that the physician<sup>1</sup> will have a well-balanced understanding of these components and thus be able to give that wise counsel that his patients have a right to expect.

There are two basic methods of Natural Family Planning—1) ecological breastfeeding and 2) periodic abstinence. Ecological breastfeeding is a non-systematic method that does not require fertility awareness or periodic abstinence. The method of periodic abstinence is subdivided into various fertility awareness systems for determining the fertile and infertile times of the cycle. Today these systems are commonly categorized as mucus-only, sympto-thermal, and temperature-only systems. The various fertility awareness systems are called “methods,” but they all constitute variations of the systematic method of periodic abstinence.

Teaching ecological breastfeeding and all the common signs of fertility enables the client couple to make their own choices. It is axiomatic that a person can only choose what he or she knows. The physician who is going to offer that “wise counsel and healthy direction, such as [couples] have a right to expect” (H.V. 27) will inform his patients about ecological breastfeeding and the multiple components of Natural Family Planning. After patients make a choice, the physician should support them within the limits of that particular method or system. If and when they encounter problems, he should be ready to suggest other moral alternatives within the broad scope of Natural Family Planning.

### I. Non-systematic Natural Family Planning

#### Breastfeeding and infertility

When breastfeeding is done according to the norms of nature, the normal side effect is an extended time of natural infertility. This part of Natural Family Planning has fallen out of the common parlance of NFP-talk for two reasons. First, the emphasis in the last 30 years has been mostly on the various systems of systematic NFP. Second, breastfeeding as it is commonly done in the United States has little or no effect on the return of fertility. That is, the frequent-nursing norms of nature have been forgotten or ignored. However, from its beginning in 1956, La Leche League noted the baby-spacing effects of breastfeeding, and in 1969 Sheila Kippley researched and wrote a book on the subject, *Breastfeeding and Natural Child Spacing*.<sup>2</sup> In 1972 she published her research,<sup>3</sup> and in 1978 her behavioral findings became central in a debate in *Science* concerning the influence of the weight-to-height ratio on breastfeeding infertility.<sup>4</sup> The Kippley research reported an average duration of 14.6 months of breastfeeding amenorrhea in 1972, 14.5

months in their larger study of 1989. In his 1989 doctoral dissertation, Professor H. William Taylor used the same criteria and found a mean postpartum anovulatory interval of 14.1 months.<sup>5</sup> Dr. Taylor also reported on his international breastfeeding research at the 1998 Catholic Medical Association convention.

What Mrs. Kippley's research discovered, and what Dr. Taylor's research has confirmed, is that it is not just any kind of breastfeeding that spaces babies but only the form characterized by mother-baby closeness and frequent suckling, day and night. Therefore, Sheila Kippley coined the term "ecological breastfeeding" to distinguish this very natural form of baby care from "cultural breastfeeding" with its use of bottles, pacifiers, and baby-sitters, all of which contribute to mother-baby separation and less frequent suckling. In the most recent edition of her book, Mrs. Kippley focuses on Seven Standards that characterize ecological breastfeeding and distinguish it from cultural nursing. These behavioral Standards are as follows:

1. Do exclusive breastfeeding for the first six months of life; don't use other liquids and solids. (After six months, the mother gradually begins to introduce other liquids and solids.)
2. Pacify your baby at your breasts.
3. Don't use bottles and pacifiers.
4. Sleep with your baby for night feedings.
5. Sleep with your baby for a daily-nap feeding.
6. Nurse frequently day and night, and avoid schedules.
7. Avoid any practice that restricts nursing or separates you from your baby.<sup>6</sup>

These practices are commonplace in less developed countries, and that is why their babies are frequently spaced two to three years apart without contraception or periodic abstinence. These practices are, however, countercultural in the West.

How well does ecological breastfeeding naturally suppress the return of fertility? Provided the mother remains in amenorrhea, the chances of pregnancy in the first three months postpartum are almost nothing; in the next three months the risk is not over two percent (according to the 1988 Bellagio Consensus<sup>7</sup> although each of the sources they cited indicated not over one percent); and after six months the limited data indicate that only six percent of such mothers become pregnant before their first period.

It has been said that before the advent of modern systems of NFP, married couples had no way to space their babies. That is seriously incorrect. God Himself built into the female side of human nature a natural spacing of babies through the simple medium of a mother being with her baby and letting her child suckle frequently and for an extended time. In the two published studies mentioned previously, the Kippleys found that, on the average, ecological breastfeeding delays the return of menstruation (and fertility) for 14 to 15 months, with 72% of mothers experiencing their first period between 9 and 20 months postpartum. As the American Academy of Pediatrics (AAP) noted in its recent policy statement on breastfeeding (December 1997), breastfeeding also provides the best nutritional and emotional start for the child and should be continued for at least 12 months.<sup>8</sup>

In 1941, Pope Pius XII urged all mothers to breastfeed their babies if at all possible.<sup>9</sup> In May 1995, Pope John Paul II endorsed the exhortation of Pius XII, and he also endorsed the recommendations of WHO and UNICEF: "Responsible international

agencies are calling on governments to ensure that women are enabled to breastfeed their children for four to six months from birth and to continue this practice, supplemented by other foods, up to the second year of life or beyond.”<sup>10</sup> The Pope was referring to a 1990 UNICEF document. Currently WHO and UNICEF are calling for “about six months of exclusive breastfeeding,” not four-to-six as previously recommended. Breastfeeding from complementary foods continues from six months to two years.<sup>11</sup> In practice, many well-informed couples rely exclusively upon ecological breastfeeding for child spacing during their family formation years. [See “Breastfeeding Articles” for the talk by each Pope.]

*Strengths and weaknesses.* The great strength of ecological breastfeeding is that it is truly God’s Own Plan for naturally spacing babies, and it does not require systematic fertility awareness and periodic abstinence. Another great strength is that it encourages extended breastfeeding which carries so many benefits for both mother and baby that describing them here would distort this paper. The AAP “Statement” lists 24 benefits<sup>12</sup>; *The Art of Natural Family Planning* describes some advantages more fully.<sup>13</sup> The weaknesses are 1) that it is countercultural in the West, 2) that it requires mothers to take full responsibility for the care of their babies instead of delegating such responsibilities to others, and 3) husbands have to support their wives.

## II. Systematic Natural Family Planning

### Calendar Rhythm

Systematic natural family planning uses periodic abstinence during the fertile time to avoid or postpone pregnancy, and it uses various ways to determine the fertile and infertile times of the female reproductive cycle. It started with the demonstration by Kyusaku Ogino (Japan) in 1923 that ovulation precedes menstruation by 12 to 16 days. His work was soon joined by that of Hermann Knaus of Austria. Although they had slightly different formulas, the Calendar Rhythm of the 1930s was associated with both of their names and was sometimes called the O-K Method.

**Terminology.** Calendar Rhythm uses formulas based on previous cycle history to estimate the fertile and infertile times of the cycle. One formula or rule calculates the end of pre-ovulation infertility, and another rule sets the start of post-ovulation infertility. For uniformity and simplicity in this paper, pre-ovulation infertility is called Phase I; the fertile time is called Phase II; and post-ovulation infertility is called Phase III.

The Calendar Rhythm rules of Ogino and Knaus were promulgated in the early 1930s, but experience led others to modify them. Thus, while Ogino had said that the end of Phase I should be calculated by the formula, “Shortest cycle minus 19 = Last day of Phase I,” Konald A. Prem proposed in 1968 that the rule for women with irregular cycles should be modified to “Shortest cycle minus 21 = Last day of Phase I.” For the time of post-ovulation infertility, Ogino proposed the rule, “Longest cycle minus 10 = First day of Phase III.” Rev. Jan Mucharski has summarized the experience-based opinions of others who suggested modifying that “minus 10” rule to 8, 7, and even 6 days.<sup>14</sup>

That experience hints at the great problem with Calendar Rhythm. It worked well for women with regular cycles. However, delayed ovulation and irregularities with the length of the luteal phase made the proper determination of the start of Phase III difficult if not almost impossible for women with certain types of cycle irregularities. Thus by the

later 1930s experienced counselors would tell women who experienced sickness or psychological stress, both of which can delay ovulation, to continue to abstain until the start of the next cycle. On the other hand, problems affecting Prem's conservative "End of Phase I rule" are very small regarding effectiveness. The "Prem 21-Day Rule" was used by Wade et al in their comparative study of the Ovulation method and the Sympto-Thermal Method in which they found zero unplanned pregnancies in the formal study among the couples using the 21-Day Rule for the End of Phase I plus a Sympto-Thermal rule for the start of Phase III.<sup>15</sup>

**Evaluation.** Calendar Rhythm has gained a bad reputation for two reasons. First, it has the previously mentioned problems concerning the beginning of Phase III. Second, despite the fact that the basic rules can be printed in big print on a business card, even with provisions for stress, the actual rules were not well known. Instead, many couples followed various guesswork and makeshift plans.

Unfortunately, some still think that Calendar Rhythm is poor at determining the End of Phase I. That is not correct. As a rule for avoiding pregnancy, the 21 Day Rule is highly effective. On the other hand, as a conservative rule, it extends the duration of Phase II in cycles of delayed ovulation.

Can Calendar Rhythm be used for determining the start of Phase III as well as the End of Phase I? Probably not in the West where couples demand very high effectiveness. However, Robert Kambic of John Hopkins has called for a re-evaluation of Calendar Rhythm for use in Third World countries where it will be decades before teachers of the modern methods of systematic NFP will reach them.

Can Calendar Rhythm be used for seeking pregnancy? Certainly. A couple merely has to reverse their timing or forget the rules entirely. Will it identify the days of the most fertile time as well as the mucus flow and the opening of the cervix? Certainly not.

*Strengths and weaknesses.* The first strength of Calendar Rhythm is its simplicity and low cost. The rules can be printed on one side of a business card. The second strength is its demonstrated effectiveness for determining the End of Phase I with a 20- or 21-Day Rule. The great weakness of Calendar Rhythm is its inability to determine reliably the beginning of Phase III in the face of cycle irregularities. A second weakness is that the conservative nature of a 20- or 21-Day Rule requires more abstinence when ovulation is delayed.

### The temperature sign

In 1926, Theodore Hendrik van de Velde, a Dutch gynecologist, declared that the corpus luteum caused a post-ovulation upward shift in temperatures. Building on this, a German Catholic priest, Wilhelm Hillebrand, in 1935 was the first to investigate the upward temperature shift in connection with or as a replacement of the Ogino-Knaus rules for determining the start of Phase III. This was followed by the work of others in the Forties, Fifties and Sixties, and prior to the publication of *Humanae Vitae* there were French (Vincent<sup>16</sup>) and German (Doring<sup>17</sup>) temperature-only studies showing a 99% level of effectiveness in avoiding unplanned pregnancies.

Can couples use the temperature sign to determine the End of Phase I? Definitely yes. Germany's G. Doring used a temperature-only calculation to replace Calendar Rhythm calculations for the End of Phase I. Doring's formula is simple: First day of

elevated temperatures (in at least the previous six cycles) minus 7 yields the last day of Phase I. Without having his couples make any reference to the presence or absence of cervical mucus, Doring still found an unplanned pregnancy rate of less than 1% among the rules-keepers.

This system has not been widely used in the United States because most couples learning a multi-component system of Natural Family Planning have learned either the 20- or 21-Day Rule and/or the last dry day rules associated with the mucus sign. Beginning with the fourth edition of *The Art of Natural Family Planning* (1996), The Couple to Couple League began to suggest that the Doring Rule may be particularly useful for women whose luteal phases are less than 10 days long as measured by elevated temperatures. Short cycles caused by short luteal phases can make the 20- and 21-Day Rules excessively conservative, but short luteal phases do not affect the Doring End of Phase I rule.

*Strengths and weaknesses.* The great strength of the temperature sign is that a sharp upward shift for three days provides a positive indication of Phase III. This strength becomes particularly apparent in cycles with more than one mucus patch. The temperature sign can also be used very reliably to determine the end of Phase I. Another strength is its objectivity. Numbers are numbers. Almost anyone can read a thermometer, even the mercury variety, and record the identical temperature. Anyone with a little training—husband, wife, physician or NFP counselor—can interpret a normal temperature pattern.

The temperature sign is very helpful in the early post-pill cycles when cervical mucus can be quite confusing. After fertility has returned for the nursing mother, it can reduce abstinence in breastfeeding cycles in which the mucus continues during a well-defined upward thermal shift.

A possible medical benefit of the temperature sign is that very low pre-ovulatory waking temperatures (97.3 F and lower) hint at low thyroid activity.

A former weakness of the temperature sign was that observation took five minutes upon waking. Though recommended as a good time for one's morning prayers, that time has been reduced to a minute or two with the digital thermometer. Another weakness is that it should be taken at the same waking time each day. Theoretically, that poses a problem for women working variable shifts; in practice, taking the waking temperature after the best sleep of the day provides many such women with classic temperature patterns.

It is sometimes thought that the temperature sign is of no help in determining the most fertile time of the cycle for seeking pregnancy. While such determination is certainly the forte of the mucus sign, many women find the temperature sign is also helpful. Estrogen has a slight temperature depressing effect, and this not infrequently causes the five or six temperatures during the most fertile time to be slightly lower and steadier than those prior to the high estrogen influence.

The greatest weakness of the temperature sign is that sometimes its rise is ambiguous, not acute, and sometimes it rises slightly even before ovulation. Thus, in certain cases of a weak or ambiguous temperature rise, one or two days need to be added to the standard three-day count.

### The mucus sign

A number of researchers from the mid-19<sup>th</sup> century onward have commented on the cervical mucus discharge, frequently in connection with the fertile time. Mucharski notes that W. Tyler Smith wrote in 1855 that cervical mucus “appears to afford a suitable medium for the passage of the spermatozoa through the cervix uteri into the uterine cavity.”<sup>18</sup> In 1868 J. Marion Sims described cervical mucus as “about the consistency of the white of an egg,”<sup>19</sup> terminology still used today. In 1953 New York gynecologist Edward F. Keefe began to recommend making regular observations of the mucus sign along with temperature observations. Twenty years later, John J. Billings, an Australian neurologist, began to promote the concept of using the mucus sign exclusively to identify the fertile and infertile times of the cycle.<sup>20</sup>

It has been alleged that the mucus-only system known as “the Billings Ovulation Method” is superior to any other system of Natural Family Planning both in effectiveness and in the rate of continuation. This claim was put to the test in 1976-1978. HEW-funded researchers at Cedars of Lebanon-Mount Sinai medical center in Los Angeles conducted a randomized study to compare the user-effectiveness of the Ovulation Method (OM) and the Sympto-Thermal Method (STM). They found perfect-use effectiveness unplanned pregnancy rates of zero for the STM and 5.7% for the OM. The Pearl user-effectiveness rates were 13.7 per 100 woman-years for the STM and 39.7 for the OM.<sup>21</sup> The study had been planned to last three years, but the principals concluded that the difference was so obvious that it would be unethical to pretend the contrary, and they concluded it after two years. The dropout rate in the OM group was twice as high as in the STM group. The time required to teach the OM was 50% greater than for the STM. Criticisms by Billings and Hilgers were published, but they did not affect the final report. Apparently the principals believed that any problems of study design applied equally to both sides of the study. While there have been numerous studies of variations of the OM that show better results, the present author is not aware of any other comparative studies.

*Strengths and weaknesses.* The great strength of the mucus sign is that it is a positive sign of the fertile time. Its first appearance can be used to determine the start of Phase II, and its disappearance can be used to determine the start of Phase III. Another strength is that it does not require a thermometer and is therefore usable by any woman in the world.

Its weakness is that sometimes it may not give adequate indication of the start of Phase II. For example, if a woman had only a three-day mucus patch and had relations on the last day before the mucus started, that marriage act might be one to three days prior to ovulation. A combination of a short mucus patch and long sperm survival is the most likely explanation for so-called “dry-day” unplanned pregnancies.

Another weakness is that a woman may have more than one mucus patch in a given cycle. If, for example, a woman’s stress delayed ovulation, she might have a first mucus patch not associated with ovulation, then a few dry or less-fertile mucus days, and then a second mucus patch, this time associated with ovulation. This happens often enough that at least one mucus-only system insists that the mucus observations be made with just as great diligence after a mucus patch (and presumed ovulation) as before. In the event of double mucus patch, a woman taking her temperatures is told by her continued low and flat temperature pattern that no ovulation occurred with the first patch.

A third weakness is that some women experience confusion about their mucus sign. This requires continued personal instruction, especially in the absence of the temperature and/or cervix signs. The mucus sign is also more subjective than the temperature sign.

### The cervix sign

In 1962 Edward F. Keefe first reported on physical changes in the cervix and related them to the fertility cycle. Under the influence of estrogen, the cervix rises, the os opens, and the tissue around the os becomes softer. Under the influence of progesterone, these changes are reversed. These changes can be used in a multi-component system in conjunction with changes in the cervical mucus and the temperature pattern. No one has published an effectiveness study of a cervix-only system.

*Strengths and weaknesses.* In many cases, the opening of the cervix is more sensitive to elevated estrogen levels than is the cervical mucus, and the cervical os begins to dilate before the mucus discharge is noted. In cases of ambiguities of the mucus sign, the physical changes in the cervix may be more helpful.

Closely related to the observation of the cervix changes is the internal observation of cervical mucus directly at the os. A study published in 1980 found that 88% of those making both internal and vulval observations found mucus at the os at least one day before they noticed it at the vulva. Further, of these study participants, 75% found their internal observations easier to interpret than those at the vulva.<sup>22</sup>

A new strength of the cervix sign was reported to The Couple to Couple League in 1998. A blind woman who had experienced an unplanned pregnancy with a mucus-only system noted that she was helped greatly by the multi-component approach. Her sighted husband could record the temperatures, and her lack of sight did not interfere in the least with her touch observations of the cervix.

In brief, many women have reported that the cervical changes and the mucus at the os provide them with the most certainty, especially in times of ambiguity such as the return of fertility after childbirth and during premenopause.

A weakness might be that it requires common sense—normal soap and water hygiene, and women making this observation should keep their fingernails trimmed.

Around 1980 moral considerations were raised about the cervix observations. It was speculated that the internal observation might be a source of temptation towards masturbation. Rumors circulated in the NFP movement that unnamed parties were lobbying the Vatican to declare this observation to be immoral, and the Pope responded. On July 3, 1982, the Holy Father told an NFP audience organized by an OM promoter that it is providential that God has provided various ways of doing NFP and that advocates should not criticize other methods.<sup>23</sup>

### The Sympto-Thermal Method

The Sympto-Thermal Method as taught by The Couple to Couple League [as of this writing in 2001] uses the mucus and temperature signs as primary signs and the cervix sign as a secondary aid. The League teaches couples how to use the primary signs in a cross-checking way; this uses the strengths of each sign in order to reduce unnecessary abstinence while maintaining high effectiveness. For example, in the face of a weak temperature rise, more emphasis is placed on the mucus sign. In the face of a

very strong temperature shift and a delayed drying-up of the mucus, more emphasis is placed on the temperature sign.

Women are taught how to observe cervical mucus both at the vulva and at the os. The choice is up to them. Many women record their cervix observations as an additional cross-check, and some women report that the cervix is their greatest fertility awareness sign during premenopause. If any particular couple find that observing more than one sign is bothersome, they are free to use a single-sign approach. They are also free to return to a cross-checking approach when they feel the need for more information.

## Discussion

There are still other signs that can be used in conjunction with the major components of fertility awareness—mittelschmerz, ferning of cervical mucus, and fanning of saliva all have been mentioned. The purpose of this article has been to review only those signs and methods that are widely taught within the NFP movement as it exists today.

Various claims have been made for each of the signs and/or systems described in the body of this article. In the past many have used Calendar Rhythm, but no organized programs promote it today in North America. Today many couples are using various systems—the full cross-checking sympto-thermal system, mucus-only systems, a temperature-only system, and probably variations of all of these. The question is, what sort of support should NFP user couples expect from their physicians, especially Catholic doctors?

First, it seems to me that out of deference to the AAP and the Pope, every doctor should be an advocate of breastfeeding. Furthermore, he should recognize well the difference between ecological and cultural breastfeeding, and he should advocate the former. To be well informed on this, the doctor should be well acquainted with Sheila Kippley's book on the subject since it is the only such book on the market.

Second, the Catholic physician should be catholic in his approach. The Catholic physician should be well acquainted with all the components of contemporary Natural Family Planning. He should let his patients know about all the signs and how they can work together in a cross-checking way or separately. He should leave the choice of a multi-component or single-sign system up to them on the basis of their knowledge and experience, not ignorance of what is available. He should not criticize or denigrate those who choose a system different from that used by him and his spouse.

The question of ethics regarding the internal observations needs to be re-addressed. First, it needs to be repeated that in 1982 Pope John Paul II dismissed any claim of immorality about these observations. Quite obviously, if any particular woman experiences strong temptations with internal observations, she shouldn't make them, and she might also do well to find good spiritual direction.

Second, if people have a right to know something that will help them in an important area of life, is it ethical to withhold such information? In his 1981 *Apostolic Exhortation on the Family*, John Paul II noted that “the ecclesial community at the present time must take on the task of instilling conviction and offering practical help to those who wish to live out their parenthood in a truly responsible way.”<sup>24</sup> He said that the Church calls “with renewed vigor on the responsibility of all—doctors, experts, marriage counselors, teachers and married couple—who can actually help married people

to live their love with respect for the structure and finalities of the conjugal act which expresses that love. This implies a broader, more decisive and more systematic effort to make the natural methods of regulating fertility known, respected and applied.<sup>25</sup>

The doctor is to be a helper, not an ideologue. If a woman is having difficulty making sense out of her external mucus observations, is it ethical to withhold from her the information that she can obtain her mucus sample directly at the cervical os—and that many women find this more helpful than observations at the vulva? Is it ethical to deliberately withhold from her that she may also find helpful the physical changes in the cervix? Is it ethical to deliberately withhold from a couple the value of the temperature sign when the woman is having a confusing mucus pattern? I believe that physicians are ethically obliged to let their patients know these options. These signs do not constitute esoteric or extraordinary knowledge. They are commonplace within large parts of the NFP movement. The only debatable question is 1) whether regular NFP instruction should include meaningful instruction about all these options or 2) whether regular instruction should be limited to the single sign preferred by the teacher who then has the option—and the responsibility—to inform the client about the other signs when the teacher judges the client needs such help.

In The Couple to Couple League [in 2001], teachers do not presume to make such judgments. They are pleased to teach the multi-component Sympto-Thermal Method plus ecological breastfeeding. Our collective experience is that couples take the information and use it in the way most comfortable for them. Some rely primarily upon ecological breastfeeding during their years of family formation. Others use the full STM, others mucus-only, and perhaps others take a temperature-only or calendar-temperature approach. We agree with Pope John Paul II that it is providential that there are these different ways of doing NFP, and we are pleased to give couples the knowledge-based freedom to make those decisions. To paraphrase the Lord, the truth about all the signs and methods makes the couple free to choose what best fits their family needs.

## Further information

Physicians will find helpful the fourth edition of *The Art of Natural Family Planning*.<sup>26</sup> This users' manual goes beyond the basics to enable couples to be autonomous in the face of a number of irregularities and special situations. It also addresses morality and religion, generosity in the service of life, the need for good nutrition, and contains a practical applications workbook. [See "Our Books."]

## Summary

Every Catholic physician needs to accept his or her responsibility to be part of that "broader, more decisive and more systematic effort to make the natural methods of regulating fertility known, respected and applied" called for by Pope John Paul II. There are two basic methods of NFP—ecological breastfeeding and periodic abstinence. Within the method of periodic abstinence, various systems of fertility awareness use one or more common signs of female fertility to determine the fertile time, and these signs are easy to learn. Understanding all the common components of Natural Family Planning and their relationships with each other will enable the physician to give that wise counsel called for by *Humanae Vitae*.

## References

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