Teaching All Indicators is Not the Same as Teaching All Methods - Some Clarifications

By Dr E. L. Billings

A recent document prepared by the NFP Secretariat of the Australian Catholic Social Welfare Commission (ACSWC) contains several recommendations related to the service and delivery of service of natural family planning methods. A team of coordinators has been elected who will work closely with both ho and Sympto-Thermal Method groups of NFP teachers. These co-ordinators are mostly teachers of one or other method, and therefore it is desirable that as far as possible, they all should understand the methods of natural family planning other than their own. One of the suggestions made by the Secretariat of the ACSWC was that all teachers should teach all methods and then invite the couples to choose the one they wish to use. This point needs analysis in the light of the history of the methodologies and in the development of the Ovulation Method™ (Billings). The World Health Organization (WHO) attached the name of Billings to the Ovulation Method™ so that its authenticity could be preserved.

These notes have been prepared to explain and emphasize why the Billings Ovulation Method® must be kept separate from other natural methods. It is of importance and benefit to teachers of all methods that the reasons for this separation of methods be clearly understood. It is important to understand that the methods are different and why an indicator does not per se constitute a method. It is important to encourage all teachers to teach that methodology which they are best equipped to teach and with which they are most confident. Most of all it is desired that as teachers of natural family planning, we teach with love, not only the couples who in our society have shown a great need for our help, but also that all teachers should have a loving regard for each other and a respect for the work that we all do.

Choice of NFP Method

Couples coming to a centre to be taught the Billings Ovulation Method® have usually already made a choice in the light of their past experiences. Some have abandoned contraceptive methods, some have found the IVF programme to be a failure, and some have discarded the Sympto-Thermal Method, finding Rhythm calculations and the Basal Body Temperature unsatisfactory, especially in cases of delayed ovulation, for example, breast-feeding, stress, in the years leading up to the menopause and also coming off contraceptive medication when various physiological disorders may be encountered. In some cases, this dissatisfaction had resulted in abstinence for many years as we heard from the couples, with consequent discontent and sometimes serious disturbances in the marriage with frustrations, alcoholism and intentions to resort to surgical solutions for fertility control. There were unhappy children.

Couples with no preformed ideas on methodology will logically expect to be advised as to which is the best method by those presumed to be experts. Logically they will be advised according to what the expert believes to be the best. They will not expect to be encouraged to use what is believed to be second best by the experts or to be taught what they, the experts, do not have faith in or are incapable of teaching professionally; as in medical practice, patients, being unknowledgeable, accept the advice of professionals and are not expected to choose their own treatment. This would be considered unprofessional and unethical.

Common Indicators used in Natural Family Planning

The most common indicators used in natural family planning are as follows:

- (a) Rhythm calculations.
- (b) Cervical mucus response to ovarian hormones.
- (c) Basal body temperature (BBT).
- (d) Pain.
- (e) Vulval swelling.
- (f) Bleeding.
- (g) Self-examination of the cervix.
- (h) Inguinal lymph gland sign.
- (i) Vaginal response to ovarian hormones.
- (j) Ovarian hormone monitoring, using Professor J. B. Brown's Ovarian Monitor.

The Billings Ovulation Method® uses:

- (i) The cervical mucus response.
- (ii) The vaginal response discharge.
- (iii) Bleeding.
- (iv) Vulval swelling.

Adjuncts are used as indicated, for example BBT, lymph gland sign, ovarian hormone monitoring using the Ovarian Monitor. The way that we finally arrived at the definitive Ovulation Method (Billings Ovulation Method®) was by studying the various indicators individually between 1953 and 1969 and by being determined to get the best out of each one. We were greatly assisted by Professor J. B. Brown's laboratory work from 1962 onwards, and by Professor E. Odeblad from the mid-70's.

Initial Studies

The study of natural family planning was begun in Melbourne with the Calendar-Rhythm Method and as was widely acknowledged this method was only reliable when the woman had regular cycles. Our first 2 or 3 years were spent in correcting errors in the teaching of the Rhythm calculations and then the critical importance of the cervical mucus in the achievement of conception and as a marker of fertility was discovered by Dr John Billings in a search of the scientific literature (Billings 1983); this was followed by his clinical studies which revealed that the occurrence of the cervical mucus secretion during the cycle is a familiar observation to every fertile woman. The woman's observations of the mucus immediately corrected the problems of the irregularities of ovulation and confirmed that the woman was able to recognize the mucus sign as an indicator of fertility 2 weeks before menstruation. There were some women who could not follow the instructions of the male teachers. For this reason, the BBT was added as an adjunct to the cervical mucus sign. In teaching the BBT throughout the 1950's and 1960's Fr Maurice Catarinich, who was an expert counsellor to troubled couples, particularly in the problem of infertility, became an expert in BBT. He formulated excellent guidelines and conditions for its use and devised comprehensive charts and the marginal line. He insisted that the temperature should be taken under specified conditions and recorded daily, not just when ovulation was thought to be imminent. Ovulation in the cycles was sometimes missed unless daily recordings were taken from the beginning of the cycle. Mucus observations were made and recorded under specified conditions. The mucus and temperature records were separated from each other and from other indicators and recorded on special charts so as not to be influenced by one another.

The BBT Indicator

The BBT is a hormone indicator which responds irregularly to the rise in progesterone which occurs only after ovulation has taken place. It is subject to influence by fever, alcohol, anti-depressants, and other circumstances. Because a rise in the BBT is indicative that ovulation has occurred even though it does not give the precise information as to when, it was found to be useful in some cases of infertility by establishing that ovulation was indeed occurring. However, as the rise usually occurs only after ovulation it was not very useful because it was already too late for fertilization to occur.

The temperature is useful in confirming that a bleeding episode is either menstrual or intermenstrual. It also confirms pregnancy.

The concept of studying patterns is important in the interpretation of all indicators in natural family planning because they can be related with varying accuracy to the hormonal patterns. In using the BBT indicator, as has been mentioned, it is important that the whole pattern is recorded daily from the beginning to the end of the cycle under the specified conditions. In the presence of a poor mucus symptom, for example in the post-pill situation, the use of the BBT has been advantageous. Ordinarily, however, by recognition of the Peak symptom, a woman will identify menstruation or will know that she is pregnant because menstruation has not occurred at the appropriate interval following an act of intercourse during the time of recognized fertility. Heavy intermenstrual bleeding sometimes obscures the Peak. All bleeding is covered by the rules of the Billings Ovulation Method® (sec Billings et al. 1989; Billings and Westmore 1992), so that conception

does not occur unexpectedly. Intercourse is not recommended during heavy bleeding in contrast to directives in some Sympto-Thermal methods.

In the use of the multiple-indicator or Sympto-Thermal Method the mucus component is subjected to Rhythm calculations in the first part of the cycle even though irrefutable scientific evidence for the validity of the Early Day Rules of the Billings Ovulation Method® exists as well as proof in the field for over 25 years. These rules exclude the use of days of heavy menstrual bleeding for intercourse. It is well known that some pregnancies occur from ignoring this rule. When the woman learns the Billings Ovulation Method® she can identify the occurrence of an early ovulation. In some cases of apparent infertility, it is necessary to overcome any taboo against the use of days on which any bleeding is present, because the women who consistently have short cycles will not achieve pregnancy unless intercourse occurs very early in the cycle.

The "alternate evening rule", an Early Day Rule, is necessary to ensure that the woman is not confused by the discharge of seminal fluid following intercourse on the previous evening. The Rhythm count eliminates this rule and prevents recognition of the Basic Infertile Pattern and point of change which is critical in determining the onset of possible fertility.

It is at this point that we see one of the important divergences between the Billings Ovulation Method® and the multiple-indicator method. If it is taught that mucus observations must be checked by Rhythm counts, the woman will not gain confidence in her observations, indeed will not make accurate observations because acts of intercourse on consecutive days will prevent her from doing so. The valuable experience of learning to identify her Basic Infertile Patter in average cycles thus will be denied to the woman. Later in the cycle her confidence in the mucus will be subject to the BBT rise. This marks the second important divergence. When the time comes for total reliance on the Basic Infertile Pattern, ovulation having been suspended, she will need to overcome her mistrust of the mucus which must now stand alone without these checks. The teacher must likewise gain confidence in the reliability of the Billings Ovulation Method® because that is all that is left - just as good and reliable now as it was when the woman's cycles were regular and fertile, but there is much re-learning now to be done before the teacher's and the woman's confidence in the mucus patterns are established. The Early Day Rules and the Peak Rule remain the same in all the circumstances right through to the climacteric and beyond, when the woman has stopped ovulating permanently.

The Cervical Mucus Indicator

The cervical mucus indicates the function of the cervix, which is responsive to ovarian hormones. The cervical mucus furnishes the most accurate indicator as has been scientifically proved. This comes as no surprise as we know that it is the mucus, which is the essential ingredient of fertility, being responsible for the welfare of the sperm cells. Since the mucus also provides the sign of fertility which the woman readily recognizes, it is logical to regard it as the most accurate of the indicators, and logical to use it as a reliable method of defining infertility and fertility. The cervix may in some physiological states be unresponsive to hormones, for instance, as the cervix ages and also sometimes in younger women. By failing to produce mucus with fertile characteristics the cervix reliably indicates to the woman that she is infertile. The sperm

cells under these conditions will not survive. The cervix, therefore, is a reliable indicator of fertility and of infertility in all physiological circumstances. A rise in the BBT following ovulation, in the presence of a non-responsive cervix and the absence of any mucus symptom, does not indicate fertility. The woman who knows the Billings Ovulation Method® identifies her infertility in the cycle.

Besides the response of the cervix which produces mucus, the vagina also responds to minimally raised oestrogen levels, and produces a discharge, which results from the breakdown of the intermediate cells from the vaginal wall (Odeblad 1989). This occurs particularly in the reproductive states of breast-feeding, premenopause and others where ovulation is delayed. The Billings Ovulation Method® uses all this information to define the Basic Infertile Pattern. The recognition of the Basic Infertile Pattern, whether it is composed of dryness or an unchanging discharge of vaginal origin at the vulva, is a unique contribution of the Ovulation Method (Billings Ovulation Method®) and was responsible for solving the "hard case" which other indicators could not do. It reflects a basic low level of estrogen in the preovulatory phase of the cycle too low to stimulate cervical mucus and therefore support sperm cells.

The Basic Infertile Pattern will be evident also in those circumstances when the cervix is unresponsive to raised oestrogen and produces no mucus and no support for sperm cells. This demonstrates the advisability of studying the patterns within the cycle. *The Basic Infertile Pattern is an unchanging pattern* reflecting a basic low level of oestrogen or may result from the fact that the cervix is not responding to a raised oestrogen level. *The fertile pattern is a changing pattern*, reflecting a steadily rising level of oestrogen as the woman comes closer and closer to ovulation. The maximum quantity of mucus and the most marked stringiness are usually evident a day or so before the Peak of the mucus symptom which is the last day of the slippery sensation, produced by the S-mucus and P-mucus secretions (Odeblad 1994). Closely related in time to the Peak symptom many women notice a soft swelling of the vulva, which they may describe as a "fat feeling". On the day after the Peak there is an abrupt change to dryness or, if any mucus is present, it will be sticky, and she feels no longer slippery or wet.

In the days when we routinely taught the Temperature Method as well as the mucus sign, we would often see on the charts that the woman had marked the Peak incorrectly. When asked, "Why did you mark the Peak here?" she would answer, "Because the temperature went up". It is not true to say that mucus and temperature will always correlate, because of the inaccuracies of the temperature shift. While some teachers of the Sympto-Thermal Method declare that the BBT is the *sine qua non* of methods, others, notably Professor Joseph Roetzer, never contradict the Peak symptom of the Ovulation Method (Billings Ovulation Method®) in locating the beginning of post-ovulatory infertility.

When in the late 1960's the Rhythm calculations and BBT readings were dropped from our routine teaching, the Ovulation Method (Billings Ovulation Method®) flourished. Simply by declaring the mucus adequate, women concentrated on this indicator and the rules were formulated and verified hormonally. In the mid-1970's they were again verified by Professor Odeblad's studies on the cervix. Towards the end of the 1960's women were asking repeatedly "Why is it necessary for me to take my temperature when I can identify the Peak so clearly?" and "Why must I keep taking my temperature when, for months on end, the temperature is not giving me any information?" Those who were breast-feeding were asking "Why must I keep taking my temperature when I am getting no help from doing so?" This was also a frequent complaint

from the women who had reached the menopausal years. As a result of teaching the method without the BBT, it became easier and quicker to teach and to learn, especially as women now accepted the responsibility of teaching. It became simpler and it was, of course, very convenient because no devices were needed, and the couples quickly achieved autonomy. We realized then that this had a universal application for people anywhere in the world, in any circumstances and for all physiological conditions. Realizing this it was with great confidence that we first introduced the method overseas, first of all in Singapore, Malaysia and Hong Kong in 1969 and then in the next year in Latin America and so on. During the past 25 years the result has been that the Billings Ovulation Method® is now taught in more than 100 countries. A survey in 1987 indicated that at least 50 million couples were using the method, and the number is increasing from year to year. It has also been estimated that 80% of natural family planning world-wide is now the Billings Ovulation Method®. In 1978 an International Conference was conducted in Melbourne and attended by delegates from 48 countries. Knowledge of the authentic Ovulation Method (Billings Ovulation Method®) was thus disseminated even more widely.

BBT Sometimes Useful as an Indicator

We were and are still prepared to use the BBT if it seems that it will be useful for the couple. There were certain circumstances where the cervix was producing no mucus as, for example, following surgical procedures. For these women we used the BBT until the woman became familiar with her now diminished mucus sign, the value of the symptom of sensation being emphasized as an important clement of the Ovulation Method (Billings Ovulation Method®) teaching. Blind women can use the method satisfactorily. In teaching, however, we would always begin with helping the woman to understand as much as she can about the mucus sign. As the woman draws closer to the end of her natural fertility and she ovulates less and less frequently and eventually stops ovulating, the time comes for total reliance on the mucus. It is now that the BBT will give less and less information and finally none at all and it is because of this insecurity that total abstinence results.

If the BBT is regarded as necessary or is requested, then it will most certainly be taught. The first teaching is always the mucus pattern, and this remains pre-eminent when other additions are used. The aim is to equip the woman to do without these aids and adjuncts, once the problem is solved. The procedure now when a couple wishes to change from the Sympto-Thermal Method to the Ovulation Method (Billings Ovulation Method®) is simply to separate the various techniques and study each one to its full. In this way we can demonstrate the adequacy of the Ovulation Method (Billings Ovulation Method®) and allow the couples to choose to give up temperature-taking which they usually do, but sometimes like to use it occasionally.

Where it is available, Professor Brown's Ovarian Monitor, which gives information about the whole cycle as well as the occurrence and the timing of ovulation, replaces the BBT. The Monitor is of exceptional value in infertility associated with a poor mucus symptom, as in couples striving to become pregnant after discontinuing contraceptive medication; in these cases the physiology of the vagina as well as of the cervix may be disturbed, making it too difficult to identify an occasional limited time when conception may be possible.

In the application of the Billings Ovulation Method® for avoiding conception in cases where the mucus sign is poor as, for example, the approach to menopause when the cervix is aging, the procedure is to follow the Early Day Rules. By the application of these simple guidelines during months and years when ovulation is cither suppressed or ended, couples are secure and free in their choice to avoid conception.

In the case of achieving pregnancy the Peak mucus with fertile characteristics is important. The slippery sensation without visible mucus is an important consideration. Professor Odeblad's recent discovery of P-mucus at the time of the Peak symptom (Odeblad 1994) substantiates the woman's observations. In close association with Professor Brown since 1962, over which time he has made thousands of ovarian hormone measurements which have validated the basic principles and guidelines of the Ovulation Method (Billings Ovulation Method®), the deficiencies of the Temperature Method have been illustrated, for example, the absence of the temperature shift in proven ovulation, the late luteal rise particularly in the premenopausal era and also preovulatory rises.

Other Indicators

All the other indicators were carefully studied and hormonally evaluated in the course of our continuing research programme. Intermenstrual bleeding and pain were found not to be reliable indicators. Everything was now to be related to the mucus symptom as the really reliable reference.

Self-examination of the cervix has never been taught in conjunction with the Ovulation Method (Billings Ovulation Method®). This is judged to be medically unacceptable, especially in consideration of the danger of causing microscopic abrasions of the lining of the cervix which is an epithelium of an internal organ similar to that which occurs above the anal canal. This damage makes the delicate lining susceptible to the entrance of micro-organisms, especially viral infections, for example, HIV. It is easy to see how anal intercourse leads to the spread of AIDS so readily.

Palpation of the cervix interferes with sperm selection (Odeblad 1989). He maintains that the cervix is an organ as delicate as the eye. As well as this, most women find the instruction to palpate the cervix repugnant. Sometimes reports have reached us of this practice leading to a stimulating and masturbatory effect. As far as gaining additional information is concerned it merely produces confusion since it studies mucus at the cervix. Mucus is changed as it passes through the vagina due to the physiology of the vaginal wall, especially the lower vagina at the Pockets of Shaw where dehydration of the mucus occurs under the influence of progesterone. Because of this, the observations at the upper vagina and at the vulva will be contradictory. Vulval observations made by women in a normal and natural way as they walk around have been evaluated by hormonal studies by Professor Brown (Billings et al. 1972; Brown et al. 1983) and verified by cervical studies by Professor Odeblad (Odeblad 1994).

Field Trials of the Billings Ovulation Method®

By the early 1970's the Tongan trial was under way. This was the first overseas trial conducted on the Billings Ovulation Method®. The method-related pregnancy was reported in the Lancet (Billings et al.1972)

as 1% but later on it was proved to have been 0%, the couple involved revealing the relevant information at a later date. The total pregnancy rate was 25% due to couples choosing to become pregnant.

The menopausal study which was being conducted in Australia at about this time showed a method-related pregnancy rate of 0% and a total pregnancy rate of 1% due to a deliberate departure by a couple from the Peak Rule, having been influenced by the temperature chart to do so. Many of these couples had had a recent pregnancy before learning the Ovulation Method (Billings Ovulation Method®) and this was the reason for them seeking information about the method. By now the Rhythm count and the BBT had been eliminated from routine teaching.

Over the years many other trials of the Ovulation Method (Billings Ovulation Method®) have been conducted, including the WHO five-country trial in 1979 - 80 (WHO 198la, 1981b, 1983, 1984, 1987). Now recent world trials consistently show a method-related pregnancy rate of less than 1%. These trials have taken place in India, Indonesia and Burkina Faso and the couples participating have come from Muslim and Hindu as well as Christian communities. The Billings Ovulation Method® has proved to be universally acceptable and has been used successfully amongst couples who are illiterate and living in abject poverty. The continuation rate is substantially higher than any reversible method of contraception. The Ovulation Method (Billings Ovulation Method®) has also established itself as the primary measure to be undertaken for the management of apparent infertility.

AIDS, Condoms and the Billings Ovulation Method®

Following the trend to use condoms as advocated by the "safer sex" proponents of the AIDS programmes, many couples are trying to incorporate condoms into the Billings Ovulation Method®. There is a biological incompatibility between condom use and the Billings Ovulation Method® due to the production of secretions following intercourse with condoms which interfere with proper evaluation of the beginning of the fertile phase and of the Peak symptom. Confusion results. Couples are led to believe that they are protected against pregnancy as well as HIV infection. The result is an encroachment on the fertile phase for intercourse. Since the pregnancy rate of the condom is 5-15%, unintended pregnancies will be inevitable from time to time. This removes the choice couples make from cycle to cycle, as they come to rely on the contraceptive action of the condom. This introduces a weakening in their co-operation and in the acceptance of the child, and introduces a subtle discord into the harmony of the marriage with the insidious tendency for it to grow. Protection against conception ultimately means rejection of the child. Complete acceptance of the child grows as couples rely on natural methods and accept responsibility for their combined decisions and actions.

The fact that biologically the Billings Ovulation Method® and condoms cannot be used together is a strength of the Ovulation Method (Billings Ovulation Method®). Condoms can be combined biologically with BBT and Rhythm when they are essentials of the method being used and the mucus pattern is regarded as of secondary importance. All the other disadvantages of condoms become obvious in time.

Concluding Remarks

Teaching all indicators, therefore, is not the same as teaching all methods. It cannot be claimed that the Billings Ovulation Method® is taught as part of the Sympto-Thermal Method when the mucus is simply another indicator to be incorporated into a multiple-indicator method. The Billings Ovulation Method® must be taught and recorded separately and thus keep its identity. The Basic Infertile Pattern and the Early Day Rules, the Peak and the Peak Rule are fundamental parts of the method. So too are the techniques of making and recording observations and of their interpretations. So, likewise, are the considerations associated not only with the physiological value of all phases of the cycle, infertile and fertile, but also of the psychological and spiritual value of all phases of the cycle. In the application of the guidelines of the method and the effect that this has on the relationships in the marriage, we perceive the inherent goodness of this lifestyle for couples. This results in an acceptance of nature, of the Creator, of the child, and of each other. The assurance that a woman gains from knowing her patterns of infertility and fertility results in a raising of her status in many cultures where respect for women is low. She now has the power of rectifying a disorder in the marriage, and the means of awakening love and respect in her husband who may have treated her far beneath her natural dignity and calling.

The Billings Ovulation Method® is not a contraceptive because it does not suppress or destroy fertility, nor does it impose any barrier to obstruct the meeting of the sperm cell and ovum; it is not taught with the object of having no children. Each phase of the cycle is taught as having its own positive value. Thus, the fertile phase becomes the time for procreation and when a husband and wife make a prudent decision to postpone pregnancy the fertile phase becomes a time lo be respected, a time when conjugal love demonstrates itself as fidelity, consideration and acceptance of each other in foregoing physical intercourse. Thus, the infertile time of the cycle becomes a time of happiness, a mutual turning to each other in gratitude, solidarity and love.

All this befits human nature of which human sexuality is a part, and like no other reproductive element to be found within the animal kingdom. In human sexual love, free will and intelligence are fully expressed.

The accuracy of the Ovulation Method (Billings Ovulation Method®) has been known for many years and is appreciated for the help that it has been to many millions of couples. The better part, as we have found, but which we did not anticipate at the beginning, has been the strengthening of the marriage bond, the flourishing of love and respect between husbands and wives, with fidelity and the solidarity in the family. The responsibility and love for the child with security and happiness for them is an outstanding result.

Last but not least is the benefit to the woman's health who has lived her life naturally in conformity with the Creator's plan and therefore has escaped the ravages of all technological interference. A woman's good reproductive health is an undeniable entitlement. One of the great benefits of the Billings Ovulation Method® is that the woman's chart displays disturbances caused by pathology. Early recognition of an abnormality enables the teacher to refer the woman to her doctor for appropriate early diagnosis and treatment. When a woman knows her own normal patterns, she soon learns to ask for an explanation of anything which varies from the normal. This is particularly the case in changes in bleeding patterns which must be diagnosed promptly because the presence of cancer must always be considered. The Billings Ovulation Method® teachers are trained and accredited to recognize these abnormalities and refer them.

References

Billings, E.L, Billings, J. J., and Catarinich, M. (1989). "Billings Atlas of the Ovulation Method." 5th Edition. (Ovulation Method Research and Reference Centre of Australia: Melbourne.]

Billings, E. L., Billings, J. J., Brown, J. B., and Burger, H. (1972). Symptoms and hormonal changes accompanying ovulation. Lancet i, 282 - 4.

Billings, E. L., and Westmore, A. (1992). "The Billings Method." 3rd Edition. [Anne O'Donovan: Melbourne.]

Billings, J. J. (1983). "The Ovulation Method." 7h Edition. [Advocate Press: Melbourne.]

Brown, J. B., Harrisson, P., Smith, M. A., and Burger, H. G. (1983). Correlations between the mucus symptoms and the hormonal markers of fertility throughout reproductive life.

Appendix 1 in "The Ovulation Method", by J. J. Billings, 7th Edition. [Advocate Press: Melbourne.]

Odeblad, E. (1989). The cervix, the vagina and fertility. Appendix 1 in "Billings Atlas of the Ovulation Method, 5th Edition, by E. L. Billings, J. J. Billings, and M. Catarinich [Ovulation Method Research and Reference Centre of Australia: Melbourne.]

Odeblad, E. (1994). The discovery of different types of cervical mucus and the Billings

Ovulation Method. Bulletin of the Natural Family Planning Council of Victoria 21, No.3 WHO (1981-1987). A prospective multicentre trial of the Ovulation Method of natural family planning.

- I. The teaching phase. Fertility and Sterility 36, 152 8 (1981a).
- II. 'The effectiveness phase. Fertility and Sterility 36, 591 8 (1981b).
- III. Characteristics of the menstrual cycle and of the fertile phase. Fertility and Sterility 40, 773 8 (1983).
- IV. The outcome of pregnancy. Fertility and Sterility 41, 593 8 (1984).
- V. Psychosexual aspects. Fertility and Sterility 47, 765 72 (1987).