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Natural Family Planning – 40 Years of Reflections and Hopes

Patricia A. Carter, M.D., F.A.C.O.G.

A member of numerous medical societies, Doctor Carter served on the active staff of all hospitals in Charleston, South Carolina and after serving as chief of staff at St. Francis Xavier Hospital, was appointed the first physician member of that hospital's board of trustees. She was elected to Who's Who of American Women in 1961 and was awarded the Benemerenti Medal by Pope John Paul II on Jan. 22, 1984.



In 1941, an eventful year, Japan bombed Pearl Harbor and off to war went most all of my medical student friends – the men, that is – and despite my diet of bananas and cream and even the stretching of an osteopath, I remained too light and too short to join them.

Fortunately, since I was not allowed to have an internship anywhere below the Mason and Dixon line, a friend of mine obtained a position for me as a rotating intern at the Misericordia Hospital in Philadelphia, run by the Sisters of Mercy of Marion, Pennsylvania. This was an excellent hospital, operated by the highest standards, both ethical and professional, and there I met those who would influence my life as time progressed, when I had a chosen specialty.

I met my first mentor in the exercise of morality in obstetrics and gynecologic procedures, Dr. John Sharkey, a blessed memory. He was medical consultant to the marriage tribunal in Philadelphia and the right hand man of the archbishop there, and later of Cardinal McIntyre. He said to me, "Develop a right conscience and keep it yourself and don't let anybody else keep it for you." Since it was wartime and all social life was at a low ebb, my greatest joy was having Dr. Sharkey brief me on all the papal encyclicals pertinent to the

specialty of obstetrics and gynecology. Long discussions and intellectual exchanges launched my persistent interest in and commitment to the premise that reason and faith, properly understood, can never contradict one another. It was this contact which developed the mold into which I was cast as a mindful, considerate Christian physician, striving always for the moral order.

When I entered my obstetrical residency at the Margaret Haig Maternity Hospital in Jersey City upon completing my internship, Dr. Samuel Allison Cosgrove, a devout Presbyterian, accepted what he called my "ecclesiastical inhibitions" and never asked me to violate my conscience. When I accepted my residency, I made this clear, and my professional life at this institution from 1941 to 1944 was, in large measure, idyllic and peaceful. During this time, at my hopeful insistence, this wonderful obstetrician and gynecologist, Dr. Cosgrove, wrote the classic paper on therapeutic abortion and allowed me to collaborate with him, thus giving the moral angle which he expostulated with such great credibility, since he was so highly regarded in professional circles throughout the entire United States and even Europe. True enough, when I counseled my patients in the use of the Ogino-Knaus rhythm method, I got a few taunts from my colleagues, but they were never vicious or malignant, and I continued to use this method as an explanation for natural family planning during my OB residency.

After those three years were over, I was scheduled to go to New York University's post-graduate medical center under Dr. Danreuther for my gynecology, but my mother's illness demanded that I return to home base in Charleston, S.C. Thus, in January of 1944, I opened my office for the practice of obstetrics and gynecology, the first woman to practice this specialty in the city, the first woman to practice a surgical specialty in the state. Since I was a Catholic besides, this was a somewhat threatening situation. It must be realized that in those days, the whole state was only 1% Catholic and the city of Charleston, where there's a fairly large accumulation of Catholics, was only 0.8%. However, the group of colleagues who had no women in their ranks was ready for me. I was discounted with the remark that six months would see me run out of town due to lack of patronage, but through the goodness of God, I managed to stay afloat and develop a most wonderful and satisfying practice which continued to grow and thrive until my voluntary retirement in 1981.

Backward Glances

It was known at my first case that I was opposed to any artificial means of contraception, direct sterilization, direct abortion, euthanasia, or donor artificial insemination. Early on I became a consultant to the marriage tribunal and studied with the canonist director, all the

cases submitted for annulment. I continued to do that until the present. This necessitated burning much midnight oil, since I had never been exposed to a single course in ethics (all my undergraduate and medical studies were in nonsectarian institutions).

In 1944, my first year of practice, all we had to offer our couples was the rhythm Ogino-Knaus method and, as is well known, erroneous counting of days (often taught by well-meaning but uninformed priests), irregular menstrual cycles, breast-feeding, lack of comprehension on the part of patients, and total absence of couple motivation in many cases, made any degree of success almost wizardry, not education. We struggled along, however, speaking before any and all groups who would welcome or allow us to appear before them, always doing home the incontrovertible fact that natural modes of family planning, which were either family increases or more often limitation, would be most wholesome for the family unity. Our success was very limited, but God bless those couples! Many of them adhered absolutely to the fundamental laws of morality. They were disappointed when the rule of the rhythm failed to regulate family size, but were never disgusted or unmindful of their responsibility under the sacramental state of matrimony, to accept the responsibility of parenthood if they engaged in the conjugal act.

I was never called upon to abrogate my fundamental concept of good. Occasionally I was asked to prescribe diaphragms or to give advice on spermicidal jellies or condoms, but once I stated my case that rhythm was the only way I could go, they either accepted my suggestions or went elsewhere.

No one requested abortion or asked to be referred for abortion. No doubt many sought this disastrous alternative elsewhere, but not through me. I had many duties, being the only Catholic Ob-Gyn person in the state. It became customary for all seeking advice to be referred to me for consent or dissent. Thus, for my first 10 years, I was a gadfly all over the state, giving priests and lay people explanatory sessions on matters pertinent to medical-moral matters as to family planning, the opposition to abortion, etc.

In 1952, I decided the time had come for more education in the treatment of malignant diseases. No one in the city was competent surgically, or in the use of radium and X-ray, to treat diseases of the female reproductive system. I was fortunate to be given an appointment at the postgraduate hospital which I had had to turn down many years before, and I studied there for two years under Dr. Walter Danreuther and Dr. Gray Towmbly. I learned much about radical surgery and treatment of malignancies with radium and X-ray, which greatly enhanced my value to my patients. I also learned much about the activity of Planned Parenthood, and while I had few tools or weapons to join in the fray, I managed to be quietly disruptive of their weekly sessions staged in a small apartment on 8th Street East in New

York. I attended every meeting possible and kept accusing the directors of trying to "Sangerize" the world and force everyone to swallow one way of controlling population. I suspect all this was disturbing, but not effective, not productive of change in the Sanger group, did not convince anyone, but I felt exhilarated whenever I got questions about the alternatives to mechanical contraception or abortion.

It was during this interval that Cardinal Cushing sent for one of my mentors on the staff, Dr. Lock McKenzie (a good Scotch Presbyterian), who was very interested in fertility and infertility. The Cardinal queried him as to how a specimen could be collected from the male at coitus without abrogating the fundamental moral law of using an intact condom. Dr. McKenzie and I got our heads together and realized that if there were one or two pinholes in the condom, then there was no absolute barrier to the passage of the sperm, but a good amount of ejaculate could be obtained. This was presented to His Eminence and it was incorporated in the rules and regulations governing instructions to the infertile couple in the New York area in the 1950s. I then began to think about this matter and got the Millex Company to consider the formation of a spoon of plastic material to be placed in the vagina. The spoon could fit behind the cervix with a lip that fit over the introitus so it would not move and when the ejaculate was deposited in the seminal pool, after a period of a few minutes, the spoon could be removed and the ejaculate with its semen and sperm could be competently evaluated for number, motility, and morphology. It was used in my office very satisfactorily until the day I retired.

ST Basal BT Graphs

In 1951, I became aware of the importance of determining, if possible, the time of ovulation in a more exact method than that of the calendar rhythm method. Pius XII, in his talk to midwives, spoke of the temperature method of accurately delineating the time of fertility. Hearing about the method was one thing; knowing enough about it to teach it was another. Back to the books I went and found material by Dr. Raoul Palmer, a Frenchman who had conducted a study of temperature variations in sterility cases. Although it was never published for birth regulation, Dr. Michelle Chartier published an article in 1954 based on 1,027 graphs furnished by nonmedical counselors, which supported the fact that temperature shifts could determine the time ovulation had taken place.

In 1955, Elizabeth Randu and her physician-husband wrote the first version of the *Meno Thermal File* and dispensed it to the couples who sought advice from them. They credit Rev. Stanislas deLestakis and the research of Dr. Guy Van der Stappen with the impetus for this monumental work. In 1960, Van der Stappen proved that periodic

abstinence could be used successfully as a method of natural family planning, even by couples of low income and little education. I was this man, who died young, having helped and counseled over 1000 couples of low socio-economic status, who said in spite of ridicule, "Periodic abstinence carried out by the temperature method can achieve a great deal in favor of an important mystery, the mystery of love." From these monographs, we in America learned the so-called elaborated temperature method, the sympto-thermal method of natural family planning.

In the late 1950s I used this method, teaching couples at an off-times I had, explaining the reading of the thermometer, but I was never allowed time in the so-called Planned Parenthood Clinic conducted at the Medical University of South Carolina, and after repeated requests, I was informed by the director of the department that despite my teaching and ancillary efforts with students (I was then in natural family planning, of course), I would never be allowed to advance above the level of associate in the department of Obstetrics and Gynecology. Thereupon, I withdrew from my many hours of clinical service and remained only as attending until my final withdrawal in 1978, but as my friend, Rev. Daniel McCaffrey, would say, the fight continued "foxhole to foxhole" regardless of the wounds, and I feel something has been accomplished in this barren area, granted that until now it was, in truth, miniscule.

The 1960s: Hazardous Publications

There was no doubt about it. Some way of perfecting the expected time of ovulation was imperative. For those women with irregular cycles, in cases of breast-feeding, with long periods of hypomenorrhea, the shifts were guaranteed to result in method failure. The other risk group, the pre-menopausal women, were easily led into a hidebound contraceptive determination. Clearly something scientific, inexpensive, easily prehensible to all educational levels was urgently needed.

Dr. John Doyle of Boston publicized a simple litmus test supposed to be able to foretell the occurrence of ovulation. We called it the "Tes-Tape Method." It required an awkward plastic instrument about eight inches long, which held the tape so as to touch the cervical os, causing changes in color on the litmus paper indicative of glycogen content of the cervical mucus. This was to be inserted daily from the end of one menstrual cycle to the onset of the next cycle. It required purchase of the instrument, litmus paper, and much difficulty with insertion, depending on the position of the neck or cervix of the uterus, the depth of the vagina, and the presence or absence of vaginal discharges which also altered the pH and thus the color of the inserted tape. Dr. John Rock and many other investigators could never redupli-

cate the stated results or the deductions made from them. After a futile trial on my own private patients, I abandoned the method because even if glycogen or sugar did appear in the mucus at the tip of the womb due to the hormonal effect, the recognition of actual ovulation continued to be extremely variable.

1963: Dr. John Rock — The Time Has Come

This eminent scientist, teacher, lecturer and author exerted a powerful effect on my thinking. He was, to my mind, a sound moralist and a good theologian. He researched all the pertinent encyclicals, quoted all the best authorities on the interpretation of the moral law and literally seduced many of us who believed, as we were taught, that the moral law was immutable and not to be confused with the ecclesiastical law. His premise was that of a contraceptive mentality and, therefore, contraception was permissible for a serious and dependable reason and that, in point of fact, the only difference in the societal belief that contraception was acceptable for demographic purposes primarily to reduce the population to zero and the Church's promulgations, were a matter of methodology. I fell for this in that time of mood elevation and sociologic consciousness-raising while great commissions on human sexuality were poring over their manuscripts at Vatican II and leaking to the secular and religious press mellifluous promises that the Pill, the IUD, and diaphragms, condoms, and spermicidal jellies were fine and advisable and harmless, and all evaluations of purposes in conjugal love as simply satisfaction of human appetite, not procreation, were admissible. The Pill was the new panacea for all ills, and its discovery and prevalence meant health and happiness for all. Many people of good will fell under the spell. Millions were made in the stock market as a result of the discovery of suppression of ovulation by the Pill and various combinations of hormones. The investigators and discoverers were hailed as saviors of mankind from wanton destruction of the world and its environs because of overpopulation. We all danced a merry tune to quality, not quantity. Nagging doubts assailed me during this time of ecclesiastical silence. Having been called upon to speak often in the state at various religious and secular conferences, I began to decline, realizing I could no longer proclaim the fundamental concepts of medical-moral situations without wondering where the multitudinous opinions of churchmen and medical authorities as to the sound doctrine were leading us.

1968: *Humanae Vitae* — Pope Paul VI

Once I read this encyclical and realized it contained the doctrinal immutability of morality clearly and incontrovertibly as expressed in the section "*Respect for the Nature and Purpose of the Marriage Act*," nonetheless the Church, calling man back to the observance of the

norms of the natural law, as interpreted by its constant doctrine, teaches that "each and every marriage act (*quilibet matrimonii usus*) must remain open to the transmission of life." I found my way again to the teaching set forth by the magisterium.

It took some time to convince my well-meaning patients who had been allowed to use the Pill (I never inserted an IUD or prescribed a diaphragm or contraceptive jellies) as a method of controlling ovulation, of the inherent dangers of this method of family limitation. I began by refusing to prescribe any sort of Pill, regular or mini for unmarried girls. Next to come under the block were all women who smoked — no Pill. And finally it became apparent I was adamant when I refused to prescribe the Pill for women over 30 years of age. Fortunately my practice continued to be extremely busy and the Pill-users were replaced by those anxious for offspring or those well beyond the childbearing years.

I began a concerted effort by 1969 to use the ovulation method which I had studied in literature, particularly that of Billings *et al.*, and this was primarily used to assist couples in achieving pregnancy. At this time I also used the ST method of ovulation determination. Both of them required much study on my part and much time after my regular office hours to attempt to advise and instruct couples. I also offered determinations of Spinbarkeit free of charge after having explained the basal body temperature graph and the presence of mucus and I instructed each couple as best I could to try to recognize the appearance of mucus at the introitus, then to come to the office at the end of my hours or on Saturday or Sunday. I like to think I was moderately successful, but it was very time-consuming and not a protocol I could interest my colleagues in espousing. In my eagerness to make up for my unawareness of doctrinal differences requisite for the practice of moral medical modes in obstetrics and gynecology in that hiatus of study by the commission of Vatican II, in that silence on what was the true vision and interpretation of Christian marriage, I was very strict in my comments to the pre-Cana and Cana groups. I felt inadequate to the task of reminding well-disposed but uninformed couples of the requirements to observe the unitive and procreative meaning of marriage, neither at the expense of the other. Meanwhile, there was silence from the pulpits or mush in the confessional, so the people of God in our locale really had nowhere to turn. Repeatedly I was told that the marriage instruction they had been given by their priest was "Let your conscience be your guide," and that what I was preaching and teaching was "old Church" and disparate with the new teaching on birth control. Furthermore, I was criticized by my fellow Catholics of teaching an outmoded, unworkable method, despite my citing many sound scientific articles on the credibility and reliability of natural promises to support NFP in patients who were determined not to use mechanical or chemical methods of family limitation.

After reading this material, I felt for the first time that I had a firm foundation to promulgate the credibility of natural family planning. The physiology and anatomy of reproduction were again my introduction to teaching NFP. Furthermore, the safety factor, lack of financial outlay (by now the cost of the Pill had increased threefold) and method of credibility were my new slogans. I sent couples to areas where convocations were being held to teach the method, which I chose over all the others — ST or BBT, etc. — as being more easily managed. Above all, the necessary inclusion of both spouses in the successful management of this method was strongly appealing. Respect for the biologic process of human reproduction, perception and acceptance of the unitive and creative powers of the sexual union were strong telling points. After several years of Pill usage, the complications began to surface. Hypertension, bloating, wild and unpredictable menstrual aberrations, scotomata, blindness and even pseudotumors of the cerebrum all contributed to sympathetic listening to alternate methods of family limitation and family increase. Despite efforts to impress the young premarital woman with detailed instructions on how to observe the cervical mucus and what I considered an adequate knowledge of the method, most remained unconvinced. When one considers that a stringy, slippery mucus secreted by the cervix had been known for more than 100 years, and that this mucus forms a firm pattern and channels favoring sperm migration, it is hard to understand why so many people remain refractory to the benefits of NFP. I continued to press on, but my modicum of success remained with those trying to achieve, not with those wanting to limit, their family.

In 1978, I decided to limit my practice to gynecology only. It was a welcome relief but a great sadness, since obstetrics was my first love. I delivered well over 5,000 babies in my years as a budding and practicing obstetrician and each one was a glorious experience for me. I had a rather weighty and busy gynecologic practice, with much surgery as well as many office consultations, and when I knew we had many young talented specialists to take over in obstetrics, I decided to walk off while I was queen of the hill. I was the dean of all of our group when I retired finally in 1981. I had been chief of Ob-Gyn at St. Francis Xavier Hospital in Charleston for over 10 years, also chief of staff of this excellent institution and I had ridden herd over operating surgeons and gynecologists in our group for many years, making sure that they made no effort to get around the promulgated ecclesiastical determinations for ethical practice in Catholic hospitals. I finally felt that at age 65, I had really fired my best shots and that if I were ever

to enjoy any leisure and travel and do all those joyful things which I had held in abeyance in my busy years, this was the time for me to go.

1981: The Creighton Model

After 38 years in the practice of Ob-Gyn, I decided to withdraw from active practice. My goals were travel, writing my memoirs and generally doing what I desired and had delayed for so many years.

I got a call from an army chaplain, Rev. Daniel McCaffrey, asking for a short interview. I thought he wanted a bit of information about some medical-moral problem, would go on his way and I would be back in my haven of rest. He arrived and we discussed natural family planning for approximately an hour, during which time I was on the borderline of being unpleasant, telling him that "my head was bloody though unbowed" after 38 years of trying to implement this in the city of Charleston with very little success. I asked him to see some younger Catholic physicians in my area, assuring him of their assistance and cooperation. Needless to say, he persisted in asking for my attention to a convocation on the ovulation method to be held in New York in August, 1981. I listened, hoping to discourage any further unfortunate request to return "to active duty" as an obstetrician-gynecologist. I knew he needed someone to act as a physician-in-attendance at lectures on natural family planning. I was a most unwilling member, but I went, spurred on by my remembrance of how trifling I had been in the days before Pope Paul VI's encyclical, *Humanae Vitae* — illness and rather extensive gastric surgery caused the cessation of my activity for several months.

Meanwhile, one of the team formed by Father McCaffrey, Mrs. Ann Nerbun of Sumter, had attended a concentrated, scientific session presided over by Dr. Thomas W. Hilgers at Creighton University in Omaha. Her account was a stunning tribute to the expertise, knowledge and ability to impart confidence far greater than any other learning experience offered. The march was on to get a physician out to Creighton to be exposed to the adequacy of the method, the safety and the scientific credibility of the mucus observation which then, in team effort with practitioners and educators, would be imparted with confidence to all those anxious to learn the safe, moral methodology of family planning. Broken-down athlete that I was and am, I went to learn what I could to beef up our most enthusiastic group headed by Mrs. Nerbun and her husband, Bob, a professor of physics at the University of South Carolina—Sumter. Various personal difficulties made my trip, first in September, 1982 and the other in February, 1983, less than the acme of perfection, but learn I did, and I continued to derive benefits from the two immersion courses. Dr. Hilgers is a man of the highest scientific, professional and personal excellence. He has developed a most admirable protocol for the various levels of

instruction and education of the teachers and medical consultants for the model of natural family planning which he espouses. I was impressed with his scientific and technologic research and the derived statistics. The horizons are limitless for teaching and expanding this wonderful method of fertility appreciation. Already an academy of natural family planning has been established and is functioning; this will make defections from the high standards set at Creighton detectable and correctable. The ovulation method of birth regulation (Billings, Hilgers, *et al.*) is now on the high road, able to be disseminated from one end of the world to the other, as well as from one end of the United States to the other, from one continent to the other, because of the work of these dedicated scientific researchers. Thanks to Drs. Lynn and John Billings and the high degree of scientific research and dissemination of Dr. Hilgers, it's no longer necessary to apologize for this method of family planning, increase in planning or limitation of the number of children in a family. For my part, it is a whole new vision of life for the married couple. Benefits range from increased caring and communication to preservation of the reproductive system of the woman, a true conjugation, if you will, of man and woman united in the sacramental state of matrimony.

Conclusion

In conclusion, this new methodology, the ovulation method, the mucus method, can only grow and intensify through expanded research in this field. A sound public policy is mandatory to achieve this objective. Millions of dollars are provided each year in the United States and abroad to augment mechanical and chemical birth control methods which are odious to those of us wanting to pursue a safe, credible, inexpensive medical and moral method of natural family planning. Why can't approximate funding be provided to the good scientists, Dr. Hilgers and his group, to enable an advance and study of this important method? This would ensure religious peace and protect and promote the national interest of the United States.

I have the frightening impression that contraception by chemical or plastic objects is passing and that far more heinous ways of family limitation, namely sterilization by tubal ligation, vasectomy, and even hysterectomy, will be the modus operandi of the not-too-distant future unless natural family planning is advanced. The morbidity and mortality of an immediate or latent type are well documented in both procedures. John R. Newton and Shena Gillman, King's College Hospital Medical School, London, SE58RX, have a reliable 1973 report on tubal ligations of 2,122 women sterilized by both the Pomeroy and laparoscopy methods: failure of the method, 0.5%; operative trauma, 0.6%; and 4 maternal deaths. These findings come from teaching hospitals with supposedly good supervision.

Tubal ligation is not an innocuous procedure, but with all the hoopla over world crowding, it is being constantly advanced as a precise method of family limitation. The reversal procedures by microsurgery are both expensive and only 4-14% successful. Even if the tubes are recannulated there's no guarantee of a resumption of fertility. As far as vasectomy is concerned, in the urologic clinics of North America, Anthony A. Caldamone, M.D., and Abraham T. K. Crockett, M.D., of the University of Rochester School of Medicine, report in *Urologic Clinics of 1981* (vol. 8, no. 1 [Feb., 1981]) on immunologic consequences of vasectomy, and I quote: "Vasectomy clearly results in sperm antibody production . . . the most common are anti-sperm antibodies, next sperm agglutinating antibodies, sperm immobilizing by these and cytotoxic effects and immune fluorescent antibodies." Spermatozoa pass auto-immune potential as a result of two factors: (1) late development of spermatozoa relative to other body tissues, and (2) the efficiency of Sertoli cells being impaired by antibodies in the blood barrier in not allowing spermatozoa in seminal components to be recognized as cells "by the immune system [S]perm granulomas are formed in 35% of men requesting reversal of vasectomy." Fifty percent of all vasectomized males, at least, develop sperm antibodies. Vasectomy and subsequent tumor formation are possibilities. Systematically, an elevation of blood cholesterol is frequently reported as well as an increase in atherosclerosis, presumably as a result of circulating antibodies. Genital-urinary tract infection is a most frequently found complication in the early days after vasectomy (Alexander W. Walker *et al.*). These often require hospitalization. The most staggering statistic of all is "approximately 250,000 vasectomies are performed each year and increasing in number daily." Those of us concerned with the health and well-being of the human race are mandated to spread the alternative, safe, creditable, optional method of birth regulation.

In this anecdotal monograph which I might call "A Backward Glance," I have used my personal experience with patients over 38 to 40 years of age to emphasize a firm belief in the issues derivative in the use of some methods of natural family planning. These are basically philosophical, scientific and theological. All of us believers know mechanical contraception is wrong since it destroys the unitive and procreative nature of the conjugal act. It is not a Catholic stunt; it's God's law for the human race. There are times when a pregnancy is unwise, threatening to life, or deleterious to the marriage. The reasons are far too numerous to elaborate, but medical, psychological and sociological needs are foremost. Granted this premise: it is good for realistic, scientific investigators to study and research the modes of family limitation and by education and information to spread the good news. The prime movers in these areas are the Doctors Billings *et al.*, and Dr. Hilgers. They have fulfilled this mandate and continue to

add to our store of knowledge. It is a continuum of efficacious and pertinent factual discoveries. We in the field acutely need well-informed practitioners in the field of natural family planning. The young, especially, are hungry for this inspiring information and that is where success lies for this moral message, which, I repeat, is safe, creditable and effective if properly taught and learned.

And so we come to the end of this ode to natural family planning by an old soldier. As Shakespeare says, "The young men shall see visions and the old men shall dream dreams." My dream is for faithfulness and success in carrying out inspiration and assistance to all people of good will. We pass the torch to you. This is a new day of achievement and may God keep you ever in the palm of His hand.

Summary of Various Methods of Family Planning Which Have Been Studied

1. The Calendar Method

This can be reviewed in the writings of Doctors Hanna Klaus, Hilgers, Roetzer, Marshall and many other authorities. This was good in its day, but the limitations made for many cases of discontinuance. These limitations are well-delineated elsewhere. Suffice it to say, this method has one big drawback: it does not clearly distinguish the true biologic periods of fertility and infertility.

2. The Temperature Method

I taught this for many years in conjunction with the calendar method. It served my patients well, but in light of the ovulation method (Hilgers), the fact that it is post-ovulatory makes it restrictive.

3. The Sympto-Thermic Method

This is still efficacious. It combines the observations of the shift in basal body temperature for detection of the postovulatory, infertile phase with the calendar method and symptoms of impending fertility: "mittel schmerz," breast tenderness, abdominal distention, backache, and mucus discharge for the determination of the preovulatory phase.

4. The Ovulation Method (Billings, Hilgers *et al.*)

This is the newest concept of determination of expected time of ovulation based on consistent, accurate observations of characteristics of the cervical mucus as it appears at the vulvar orifice. No internal examinations, no thermometers are necessary, just observations and charting of the consistency, color and change of the mucus. This requires careful instruction of the couple by a well-trained teacher, but from all current data, it is extremely satisfactory to achieve a limit of pregnancy.