

***The Medical and Surgical Practice of NaProTechnology*, by Thomas W. Hilgers, M.D. Omaha, Nebraska: Pope Paul VI Institute Press, 2004. 1290 pp. Illustrations. Appendix. Index.**

This is the definitive textbook on natural procreative technology—NaProTechnology, or NPT—which was published in 2004 by Thomas Hilgers, M.D. Dr. Hilgers is the founder and director of the Pope Paul VI Institute in Omaha, Nebraska, which is dedicated to “the development of morally and professionally acceptable reproductive health services.” This book testifies to that dedication.

Since the introduction of the birth control pill in 1960, women’s health science has focused largely on artificial reproductive technologies to control fertility. Artificial reproductive technologies, as described on the institute’s Web site, “employ contraception, sterilization, abortion, and in vitro fertilization . . . [and] are now considered the only option for the couples with reproductive and gynecological health problems and concerns. . . . As a result, physicians have stopped looking for the causes of the conditions, and treatment is aimed only at . . . the symptoms.” NPT stands in contrast to artificial reproductive technology, presenting “for the first time a thorough understanding of normal and abnormal menstrual cycles. This emerging science provides treatments that are completely cooperative with the menstrual and fertility cycles, bringing relief to women and couples.”

*The Medical and Surgical Practice of NaProTechnology* is a voluminous textbook that details this new approach to women’s health science, and it is destined to become a classic. Its ninety chapters contain a wealth of information, and are well illustrated with charts, tables, and color photographs. NPT emphasizes precise and critical history taking and recording, modern diagnostic procedures, and innovative medical and surgical therapeutic approaches specifically designed to monitor and maintain a woman’s natural reproductive and menstrual cycles.

Physicians trained in NPT glean crucial diagnostic information from the monthly charts of designated biomarkers for each menstrual period, markers that include a woman’s menstrual bleeding patterns, changes in cervical mucus flow, and the length and stability of the post-ovulatory phase. If a woman begins monthly charting at the menarche, then NPT, based on the Creighton Model FertilityCare System (CrMS), can be used to easily and objectively monitor the occurrence of known hormonal events that are responsible for normal and abnormal fertility cycles. It thus provides an early warning system of female hormonal disorders which respond well to early intervention—including thyroid disease, uterine cancer, and conditions that cause infertility and increased risk of miscarriage.

Working at the St. Louis University and Creighton University Schools of Medicine, Dr. Hilgers and his coworkers developed the CrMS in 1980. Dr. Hilgers notes that “woven into the very fabric of the Creighton Model System is a Catholic understanding of the personal nature of our human sexuality and the challenge to respect one’s spouse, to respect the workings of one’s body, and to try to understand and further allow for two people to relate in a way that God intended. Thus, [the CrMS contributes] to counteracting the extraordinary crisis that exists in our modern society” (43).

Of special importance to Catholic families, the CrMS uses a medical approach based on fertility care rather than fertility control for matters of both family planning and gynecological health. The underlying philosophy of the CrMS is to “respect and support the right and responsibility of the couple to make choices in cooperation with their reproductive potential” (220). This is the promotion of true freedom and empowerment for women and men. Common suppressive and destructive practices—like contraceptives, IUDs, and IVF—are immoral and are associated with troubling side effects and complications. The CrMS works cooperatively with a woman’s natural procreative cycles and thus protects her from adverse effects.

When used in family planning, the CrMS should not be thought of exclusively as a contraceptive method. It is a family planning method that can be used with high effectiveness for either achieving or avoiding pregnancy. In one study, for example, fifty couples of apparently normal fertility used “fertility-focused intercourse” (sexual contact during the woman’s fertile phase) to try to achieve pregnancy. The cumulative pregnancy rate reached 100 percent after seven consecutive fertility cycles. In another study, 76 percent of couples of normal fertility achieved pregnancy during the first cycle of trying, 90 percent by the third cycle, and 98 percent by the sixth.

Dr. Hilgers points out the significance of these figures in evaluating couples for infertility. A couple using the CrMS to achieve pregnancy is considered to have an infertility problem after six cycles of fertility-focused intercourse. This contrasts with the standard definition of infertility as “the absence of pregnancy in a couple who [have engaged in] random acts of intercourse over a twelve-month period” (516). The standard definition is one of subtraction—“in other words, it isn’t one that truly tests . . . fertility but rather . . . the absence of expressed fertility.” The data on achieving pregnancy with the CrMS “suggest that the definition of infertility can be changed from the principle of subtraction, which is currently used, to a principle of testing one’s actual fertility with fertility-focused intercourse.”

NPT teaches couples struggling with infertility to observe nature’s signs and symptoms and then cooperate with the natural procreative mechanisms. When used with selective intercourse, NPT has a pregnancy success rate of 76 percent among so-called infertile couples. In contrast, IVF has a success rate of only 10 to 15 percent. NPT, even with extensive hormonal tests, is also much less expensive (about \$1,200) than IVF (\$15,000) or adoption (\$25,000), and it does not have the adverse emotional and psychological effects of IVF. Finally, NPT is consistent with Church teaching, whereas IVF is a serious moral evil that cannot be morally justified for any reason in any set of circumstances.

The evaluation and treatment of infertility using NPT reflect an underlying philosophy and set of values based in the Catholic view of the dignity of each person

and the dignity of marriage: “In NaProTechnology, the child is viewed as a gift as opposed to a right” (514). Dr. Hilgers cites *Donum vitae* as a guiding standard in the treatment of infertile couples: “A true and proper right to a child would be contrary to the child’s dignity and nature. The child is not an object to which one has a right nor can he be considered as an object of ownership; rather a child is a gift, ‘the supreme gift’ . . . and is a living testimony of the mutual giving of his parents” (II [B], 8). The second essential principle is also from *Donum vitae*: “Marriage does not confer upon the spouses the right to have a child, but only the right to perform those natural acts which are per se ordered to procreation” (ibid.).

The NPT approach to infertility has five goals: (1) assess the underlying cause of infertility; (2) treat the underlying cause; (3) achieve pregnancy through the natural procreative act; (4) if pregnancy is not achieved, search for unknown causes; and (5) if these efforts are ultimately unsuccessful, assist with successful family building through adoption. The offering of adoption as a part of the NPT program is an acknowledgment that no program is 100 percent successful, and that NPT “through its support of adoption programs, can assist these couples in their goal of building a family” (516).

The CrMS has also been extensively studied as a means to avoid pregnancy. A meta-analysis of the system included 1,876 couples over 17,130 couple months of selective intercourse. After twelve consecutive months, the method- and use-effectiveness rates for avoiding pregnancy were 99.5 and 96.8 percent, respectively. The method effectiveness has remained stable over the years, but with improved methods of educating couples, the use effectiveness appears to have increased to 97.9 percent.

Because couples are taught to use the CrMS both ways—to achieve pregnancy and to avoid it—the effectiveness of the CrMS for avoiding pregnancy cannot be assessed like that of contraceptive agents. Contraception researchers typically consider pregnancy rates to be the same as the failure rates of contraceptives, and use “an intentional approach” to categorizing pregnancies. In a special chapter on measuring the effectiveness and pregnancy rates of the CrMS, Dr. Joseph Stanford explains why CrMS studies apply “a behavioral approach” instead: “The intentional approach asks a couple . . . to state whether they intend(ed) to get pregnant during a particular time period . . . [and] a couple’s stated intentions are taken at face value” (217). This approach is usually applied prospectively—that is, the couple is asked to state their intentions for the upcoming cycle, month, or year.

In contrast, the behavioral approach of the CrMS “assesses the couple’s actual behavior or their actual use” of the method, asking in effect whether the couple knew that pregnancy was possible and engaged in sexual contact (220). A pregnancy occurring after such behavior is considered an “achieving-related” pregnancy. The terms *planned* and *unplanned*, *wanted* and *unwanted* are not used, because they “oversimplify a complex system of human motivations around fertility”: “Most importantly, the behavioral approach is fully consistent with the underlying philosophy of the CrMS: to respect and support the right and responsibility of the couple to make choices in cooperation with their reproductive potential” (220). Dr. Hilgers’ effectiveness rates are disputed even among some NFP researchers because of how he defines and measures failure rates; however, his approach makes objective sense.

The preface to *The Medical and Surgical Practice of NaProTechnology* shows how various papal writings on human life, marriage, children, fertility, and family life motivated Dr. Hilgers to devote his career to developing a science-based approach to reproductive and gynecological health that is consistent with the theology of the body. NPT allows practitioners to form both a medical and a moral partnership with couples who want to follow the teachings of the Church on marriage. Dr. Hilgers' unique practice of medicine in the fields of family planning, reproduction, and obstetrics is thus in complete accord with the Church's teaching that human life and natural human reproduction are to be respected by both physicians and couples. Three introductory chapters further describe the background and development of this holistic approach, which is integrated with modern medical and surgical knowledge of women's gynecological and reproductive health systems.

Part One introduces the CrMS—the system by which a woman monitors her cycles and a medical practitioner interprets them—discusses its scientific foundations, and provides richly detailed instructions on charting, decision making, and practice. Part Two details laboratory testing, discussing in particular NPT's targeted hormonal assessment of the normal menstrual cycle and the sonographic classification of human ovulation disorders.

Part Three covers the medical practice of NPT. Medical NPT, which can easily be incorporated into a family practice or internal medicine setting, is used to diagnose and treat problems (like chronic cervical discharge) that make it difficult for patients to use the CrMS as well as common gynecological problems like premenstrual syndrome and unusual bleeding. It can accomplish much for patients facing infertility, often enabling them to avoid surgical intervention.

The foundation of medical NPT is a thorough history and assessment of the woman's charts, looking for signs of abnormality. Common signs include a shortened, inadequate, or absent mucus cycle; brown bleeding that occurs at the end of menstruation; premenstrual or intermenstrual spotting; a shortened or variable-length post-peak phase (time from ovulation to the beginning of menstruation); and long or irregular cycles. These signs indicate underlying hormonal or ovulation defects, but they generally go unremarked in a typical gynecological practice.

The next step, a comprehensive targeted hormonal assessment, is revolutionary in the evaluation and treatment of gynecological disorders. As Dr. Hilgers notes, "one of the most significant defects in modern reproductive medicine is the inability of physicians to consistently evaluate the various hormones of the menstrual cycle. This difficulty arises from the absence of a clinically relevant marker for the timing of ovulation during the course of everyday practice. With the . . . CrMS and the research associated with it, this problem has been solved" (251). Targeted hormone assessment is possible in NPT because a woman's observations of cervical mucus discharge provide a simple indicator of the timing of ovulation. This enables the physician to obtain preovulatory estradiol profiles and postovulatory progesterone and estradiol profiles. If a progesterone or estradiol deficiency is detected, cooperative hormone replacement can be performed.

Like targeted hormone assessment, cooperative hormone replacement is unique to NPT. Cooperative hormone replacement uses bio-identical hormones, which are chemically identical to the hormones a woman's own body produces. Dr. Hilgers explains that

estrogen or progesterone replacement during the menstrual cycle is a foreign concept in modern gynecology, but “both progesterone and [estrogen] can be supplemented as therapeutic agents during the course of the menstrual cycle in ways that will cause virtually no harm, will improve the woman’s health, and will enhance fertility without causing damage to a developing embryo upon achievement of a pregnancy” (335).

Medical NPT can also bring about significant improvement for women suffering from premenstrual syndrome, unusual bleeding, menstrual irregularity, and postpartum depression, and can prevent the need for surgical intervention for women with ovarian cysts. The uses (and potential uses) of NPT in the diagnosis and treatment of these and other disorders—including endometrial, breast, and ovarian cancers; follicular and luteal phase deficiencies; and thyroid system dysfunction—are described in detail. Although NPT treatments for breast and ovarian cancers have not yet been developed, Dr. Hilgers notes that NPT shows great promise in these two areas. He discusses the possibility that progesterone replacement in progesterone-deficient women could decrease the risk of breast cancer, and observes that ovulation defects could be associated with an increased risk of ovarian cancer. But these are speculations, and have not yet been proved, although the application of NPT is less hypothetical in breast cancer than in ovarian cancer.

Part Four of the textbook covers the practice of NPT in the evaluation and treatment of infertility. Individual chapters detail the effects of specific disorders on fertility, including hypothalamic-pituitary-ovarian dysfunction, endometriosis, polycystic ovarian disease, pelvic adhesive disease, amenorrhea, and anovulation. Dr. Phil Boyle discusses a family physician’s approach to infertility using NPT and, in a separate chapter, NPT and pregnancy in couples for whom artificial reproductive technologies failed.

Part Five covers perinatal applications, including progesterone use during pregnancy, the prevention of preterm birth, and the evaluation and treatment of recurrent spontaneous abortion.

Part Six, on surgical NPT, provides detailed and well-illustrated chapters on diagnostic laparoscopy (“keyhole surgery”), visual findings in endometriosis, pelvic adhesions, uterine leiomyomata, ovarian wedge resection, and tubal occlusions. Surgical NPT is unique in its focus on meticulous and thorough diagnosis using “near contact laparoscopy” and in its conscientious attention to adhesion prevention.

Dr. Hilgers defines surgical NPT as a specialized form of gynecological surgery “whose primary aim is to reconstruct the uterus, fallopian tubes and ovaries in such a way that pelvic adhesive disease can be eliminated and not caused by the surgical procedure itself. It is, in a sense, a ‘near adhesion free’ form of surgery” (839). As with plastic surgery, the goal is to “reconstruct the pelvic tissues in such a way that they resemble tissues that have never been adversely affected” (843). In some cases, laparotomy (abdominal exploration) may be employed instead of laparoscopy to achieve an adhesion-free outcome, as it better facilitates “an ability to work directly with the tissues, particularly to reapproximate and repair the tissues once the pathology has been removed” (841). Eight chapters are devoted to pelvic excision and repair surgery (PEARS), Dr. Hilgers’ reconstructive technique, in the treatment of specific conditions, including endometrioses, pelvic adhesive disease, polycystic ovarian disease, distal tubal occlusion, and proximal tubal occlusion.

For the treatment of polycystic ovarian disease, Dr. Hilgers discusses the benefits of ovarian wedge resection. This procedure fell out of favor—despite a pregnancy rate of 85 percent for patients with PCOD who underwent it in the 1960s—because of the adhesions that commonly formed from the original technique. Dr. Hilgers has developed a new surgical technique for wedge resection that minimizes adhesions, so women with PCOD can benefit from it without the former complications. In patients who have had a wedge resection, Dr. Hilgers states, “not only do the menstrual cycles resume their cyclicity at a high rate and the pregnancy rates are extremely high but also the androgen levels which are often elevated in these patients decrease significantly” (1028).

Like medical NPT, surgical NPT is founded on principles of respect for a woman’s fertility, which translate into respect for the pelvic organs themselves. Dr. Hilgers’ success in the surgical treatment of gynecological diseases stems from his underlying desire to restore and uphold a couple’s procreative power, which is fundamental to the dignity of women and the dignity of marriage.

Part Seven covers NPT in practice. Three special contributors write about their areas of expertise—NPT in family practice, by Peter Danis, M.D.; the role of the FertilityCare practitioner, by G. Randall McCaslin, CFCP; and NPT nursing, by Linda Cady, RN—and Dr. Hilgers provides summaries of NPT biomarkers and medical protocols and a discussion of the cost effectiveness of NPT.

The scientific and medical data presented in every chapter are well referenced, with citations to articles in peer-reviewed medical journals. A detailed appendix covers progesterone assessment in pregnancy.

In addition to his work with the Pope Paul VI Institute, Dr. Hilgers is a clinical professor in the Department of Obstetrics and Gynecology at Creighton University School of Medicine and a member of the Society of Reproductive Surgeons. He and his wife, Susan, served for five years on the Pontifical Council for the Family, and in 1994, Dr. Hilgers was appointed to full membership in the Pontifical Academy for Life.

This textbook is a valuable reference for physicians and couples—and also for the mothers of young daughters—although its price (at more than \$200) puts it out of the reach of ordinary people. Combined with the CrMS, NPT provides a sensitive health tool for the prevention, diagnosis, and treatment of reproductive disorders that can help women avoid months and sometimes years of needless suffering.

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