Current Medical Research

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Natural Family Planning

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NFP RELATED RESEARCH

Cumulative Pregnancy Rates in Patients with Apparently Normal Fertility and Fertility-Focused Intercourse. T.W. Hilgers, K.D. Daly, A.M. Prebil, and S.K. Hilgers. *Journal of Reproductive Medicine* 37 (October 1992): 864-866.

Fifty women who had previously been taught the Creighton Model Natural Family Planning System to avoid pregnancy elected to try to achieve pregnancy. The women were all familiar with their mucus patterns and had all identified peak day. Fifty-four percent had had at least one previous pregnancy. Their age range was from 22-38 years with a mean of 28.9. They had used the method for 5.7 cycles on the average to avoid pregnancy prior to changing their intention. The 23 women who had had no prior pregnancy appeared to be in normal good health, and presented no apparent reason why they shou'd not be able to achieve pregnancy.

When intercourse was focused on the fertile phase, 71.4% of previously gravid* and 80.9% of the nully gravid group became pregnant. By the fourth use cycle, 89.3% of the previously pregnant (multi-gravid) group and 100% of the nulligravid group had achieved pregnancy. Hilgers had shown in a previous study that 95.4% women ovulated + or - two days of peak day. Barrett and Marshall using basal body temperatures for identifying the shift found that the highest probability of conception occurred two days before the shift in temperature (30%). The probability varied with the frequency of intercourse; with daily intercourse, the probability rose to 68%. This is similar to WHO's figure of 66.7%. Hilgers' group shows a higher incidence, but does not report the number of acts of intercourse during the fertile phase. *[Since 98% of the clients had achieved pregnancy by the 6th cycle, the need for waiting 12 months to commence an infertility work-up can be raised. Ed.]*

Society for the Advancement of Contraception, Eighth Annual Meeting, in Barcelona, Spain, October 28-31, 1992. *Advances in Contraception 8* (September 1992): 167-274. Abstracts. The two sessions on Natural Family Planning include the following:

1. **Ladycomp as an Aid in Natural Family Planning.** G. Freundl et al. *Abstract 22* (p. 184).

   A computerized thermometer "Ladycomp" was found to be adequate in determing the end of the fertile phase. It did not elucidate the period of preovulatory infertility.

2. **Analysis of the Computer-Thermometer 'Cyclo-test D' to be Used for Natural Family Planning (NFP).** M. Bremme et al. *Abstract 72* (p. 221).

   Another computerized thermometer was combined with an algorithm* to compute the beginning as well as the end of the fertile phase. The combination of temperature computation and algorithm was useful in 75% of the cycles. The presence of ovulation was verified by ultrasound and LH assays. *[It is curious that this German Natural Family Planning group made no use of the mucus sign for this study. Ed.]*

3. **Major Research Issues in Natural Family Planning.** V. Jennings. *Abstract 23* (p.185).

   Dr. Jennings, Project Director for the Institute for Reproductive Health at Georgetown University, summarizes research issues about: effectiveness; safety; indications and contraindications; advantages; disadvantages (and how these might be minimized); level of demand; approaches to audiences; measurement of impact; provision of services; types of training required; how NFP services should be structured; and how NFP methods can be simplified to increase acceptability, continuation, and effective use.

4. **Assessing Safety in Natural Family Planning Users.** J.L. Simpson et al. *Abstract 24* (p. 185).

   A prior report has described the methodology for assessing conception data and pregnancy outcomes. So far over 700 pregnancies have

been analyzed. Ninety percent of subjects practiced sympto-thermal or mucus methods. Clinical pregnancy losses were 7.9% (are not different from the general population.) There was a trend toward fewer pregnancy losses when intercourse was + or - 1 day of mucus peak, compared to those compared with 2 or more days after the mucus peak. A larger number of subjects is required in order to assess the relationship between the timing of conception and congenital anomalies. So far there has been no correlation with birth length, birth weight, or head circumference, and the time of conception.

5. **The Reliability of Technological Methods to Determine Fertility.** A.M. Flynn. *Abstract 25* (p. 185).

   Dr. Flynn has devised a scoring system to assess the reliability and usefulness of technological devices which have been offered to those couples who found the usual indicators of fertility - mucus, cervical palpation, or BBT - incompatible with their lifestyle. Analysis was based upon published data of various devices and assessment of smaller studies. While no names or products are mentioned in the abstract, it appears that their value has not been finally assessed.

6. **Biophysic Bases of Salivary Ferning Test.** M. Guida, et al. *Abstract 73* (p. 222); **A New Technology to Detect Fertile and Infertile Days of the Woman's Cycle.** M. Barbato et al. *Abstract 74* (p. 222); **The Possibility of Natural Family Planning by Means of Estrogen Peak Evaluation in Saliva.** V. Jordan et al. *Abstract 75* (p. 223).

   These three papers explored the value of the ferning of saliva: one from Milan, one from Naples, Italy, one from Masaryk, Czechoslovakia. None were more reliable than the self-detection of cervical mucus.

7. **Fertility Control by Natural Methods. Analysis of 218 Cycles.** M.C. Mestre and E.B. Castillo. *Abstract 76* (p. 224) and **Natural Family Planning in Granada, Spain.** E. Barranco et al. *Abstract 78* (p. 225) discuss beginning programs in Spain.

8. **Lactional Amenorrhea in an Italian Population as an NFP Method.** E. Pagano and M. Barbato. *Abstract 77* (p. 225).

   The lactational amenorrhea method was investigated by comparing it with mucus and basal temperature, cervical palpation, suckling diary, and supplemental food. One woman who was breastfeeding fully at 12 weeks had a temperature shift and conceived, resulting in an unplanned pregnancy rate (Pearl index) of 2.9 for 414 cycles. In the postpartum period Lactational amenorrhea ensured infertility for 12 weeks after delivery. *[The Bellagio consensus is based on six months amenorrhea. Ed.]*

9. **Breastfeeding to Control Return of Fertility after Childbirth.** M.C. Mestre et al. *Abstract 79* (p. 226).

   This describes the beginning program of offering women information about their return to fertility and encouraged prolonged breast-feeding. There has been a 30% participation by new mothers in the postpartum course. This has enhanced desire to breastfeed and reduced the need for unnecessary pregnancy tests.

10. **Patterns of Contraceptive Use in the USA: Recent Survey Data.** R.J. Derman. *Abstract 80* (p. 227).

    The U.S. population tends to delay childbearing in favor of career development. Contraceptive use trends by methods are changing and show a "significant under utilization of the IUD and over dependence on sterilization." Unintended pregnancies vary from 50% for married women to as high as 80% for teenagers, resulting in a high prevalence of abortion.

NFP SUMMIT *ROME 1992*

Since your editor was privileged to participate in ***The Summit Meeting on the Natural Regulation of Fertility: The Authentic Alternative****, convened by the Pontifical Council for the Family in Rome, December 9-11, 1992, I have summarized the scientific presentations. For the most part, scientific developments which have been reported in previous issues of* ***Current Medical Research*** *are summarized briefly, while works not previously reported here are reported more extensively. For an overview of the agenda of the Summit see NFP: Diocesan Activity Report (Winter 1993). The Proceedings of the Conference will be available from the Pontificial Council on the Family, sometime in 1993.*

Major Scientific Addresses: Summary of the World Health Organization NFP Initiatives by Dr. E. Wilson; The Field Trial of Ovulation Method, the NFP Learning Package (BLAT Institute); a Seven Country Study of Breastfeeding Practices in relation to Lactational Amenorrhea [Method] (LAM) and Infertility, in collaboration with the Institute for Reproductive Health (IRH), Georgetown University, Washington, D.C., is in process with nearly 4000 mother-infant pairs. Publication of first results is expected in 1994.

Other indices of the fertile period which have been previously

reported include a study of cervical-vaginal fluid volume and development or testing of various indicators for urinary steroid gucuronides. The best known of these is Dr. Brown's Ovarian Monitor. WHO is also assessing modifications of the existing NFP methods, among others, the Modified Mucus Method. The modifications are designed not only to be simpler, but to accommodate the fact that "all the NFP methods seem to be unforgiving of breaches of the rules for periodic abstinence."

The Sympto-Thermal Method has been used to study women approaching menopause, comparing their findings with hormonal assays (Dr. Anna Flynn, Birmingham, UK). Risk-taking by couples while using NFP methods is being studied in Germany (G. Freundl et al.). Because the calendar method is still the most commonly used natural method, it is now being investigated more scientifically in collaboration with IRH, Georgetown. Initial surveys to determine what methods are used will be followed by efficacy studies.

Besides collaborating with IRH, the task force also collaborates within WHO with the Maternal and Child Health and Family Planning Program of the division of Family Health and has published a ***Guide to the Provision of NFP Services*** in English, French, and Spanish (1988).

The International Federation for Family Life Promotion (IFFLP) has NGO status with WHO. The Special Programme has also collaborated with three Roman University Medical Schools and two Pontifical Universities in a Symposium on Natural Family Planning.

Drs. Victoria Jennings and Miriam Labbok reviewed the contributions of IRH, Georgetown and the Lactational Amenorrhea Method programs. The Drs. John and Evelyn Billings presented the current status of the Ovulation Method including Erik Odeblad's most recent work. Dr. Joseph Roetzer presented up-to-date information on the Sympto-Thermal Method, as well as a historical review. He presented a recent investigation of the return to fertility of more than 2000 postpartum women and was able to confirm infertility of at least 12 weeks while breastfeeding at intervals of no longer than 6 hours, preferably with at least one night feed. Two women who suckled, but not exclusively, recorded peak day on Day 80 and 83 respectively.

Lactation as a Marker of Infertility was discussed in greater detail by Drs. M. Labbok and E. Giacchi from the Sacred Heart University in Rome, and under the title "Human Population Ecology" by H. William Taylor, Ph.D., New Mexico Highlands University, Las Vegas, New Mexico.

RELATED MEDICAL RESEARCH

"Contraceptive Failure," *Annual Report 1991-1992 International Planned Parenthood Federation*, London, (p. 29 & 12).

When used correctly, most contraceptive methods in use today are highly effective: less than 1% pregnancies per year. "Even traditional methods such as withdrawal had fewer than 10% pregnancies when used correctly." However in real life, typical pregnancy rates with the oral contraceptive are 3-6% per year. The discontinuation rate among those women who intended to use a contraceptive is even more telling: IUD -11-29% removals within one year; oral contraceptives - 50% discontinuations; implants - 20% removals within one year. The report considers all such discontinuations as failures and invites the world community to continue to search for contraceptive methods which are closer to the user's ideals: "inexpensive, easy to begin using, easy to continue without unpleasant side effects, and failsafe." While the rest of the report mentions Natural Family Planning, it considers it only under the heading of "periodic abstinence" and treats it disdainfully; "in the Philippines, 45% of currently married women using contraception, only 22% are using modern methods." If one turns this around, that means that 23% or roughly 50% of all women who use any method of family planning are using natural methods. IPPF regrets this because they ascribe a 33% unplanned pregnancy rate to traditional methods, including withdrawal and calendar rhythm.

Comparison of Female to Male and Male to Female Transmission of HIV in 563 Stable Couples. I. de Vincenzi et al. *British Medical Journal 304* (28 March 1992): 809-813.

Nine European countries contributed to the study of heterosexual transmission of HIV. Of 563 couples, 156 females and 400 males were HIV positive. The mean duration of their relationship was 3 years ranging from 2 weeks to over 20 years. Mean frequency of sexual contact was three times a week; a detailed sexual history including frequency of contact, contraceptive behavior, use of condoms, sexual practices before and after diagnosis of HIV infection in the index patient was obtained. Overall, 19% (12 male partners) and 82% (20 female partners) became infected with HIV: male to female transmission is 1.9 times more likely than female to male transmission. The risk of female to male transmission rises when the female index patient is in a more advanced stage of infection (risk = 17.6), and with sexual intercourse

during menses (risk = 3.4). Male to female transmission risk was also affected by the stage of infection (2.7), anal sex (5.1), and if the female partner was more than 45 years of age (3.9). At the conclusion of the study, none of the 24 partners who had used condoms systematically since the first sexual contact was infected.

Characteristics and Attitudes of Early Contraceptive Implant Acceptors in Texas. M.L. Frank et al. *Family Planning Perspectives* 24 (Sept/Oct 1992): 208-213.

A prospective survey of 762 women who requested the norplant system from providers, who had been especially trained to insert the device, is presented. Providers ranged from clinic, to HMO, to private practice physicians. Acceptors characteristically were in their late teens or 20's; two-thirds were unmarried; half were white; one-quarter black; one-quarter Hispanic; 77% were poor; one-quarter had less than 10 years of school. Only 15% had never been pregnant; one-third had had an abortion. The majority chose this method because they had difficulty remembering to use the pill or the condom previously. Only 20% of married and 25% of unmarried women said that they would use condoms in the future. The author suggests that for women at risk of unintended pregnancy as well as STDs, "the positive impact of the implant in reducing the incidence of abortion may be offset by the increased potential for transmission of an STD." *[Editorial Note: Norplant systems are administered in silastic capsules which must be removed at the end of 5 years for Norplant I and 3 years for Norplant II. The FDA has recently put a cautionary ban on silastic breast implants. Ed.]*

Clinical and Metabolic Effects of a Triphasic Pill Containing Gestodene. F. Fruzzetti et al. *Contraception 46* (October 1992): 335-347.

The new low-dose triphasic oral contraceptive containing gestodene was investigated in 42 healthy women in Pisa, Italy over six months of treatment. There were no pregnancies and no severe side effects. The pill exerted good cycle control with a very low incidence of irregular bleeding. Minimal changes in coagulation and modest changes in lipid fractions were observed. Total cholesterol (LDL cholesterol) and HDL2 cholesterol were unchanged while serum trigly-cerides (HDL-CH) and HDL3-CH were significatly higher at the end of the treatment. *[Evidentally, gestodene is not totally free of metabolic effects. Ed.]*

Endometrial Decidual Changes in a Postmenopausal Woman Treated with Tamoxifen and Megestrol Acetate. I. Cohen et al. *British Journal of Obstetrics and Gynaecology 99* (September 1992): 773-774.

Tamoxifen is used extensively for post-menopausal women who have had breast cancer and who have positive estrogen receptors. A case of a 41 year-old woman is reported who had been treated with surgery, chemotherapy, and radiation for breast cancer at age 34. Menses ceased at that point; she wasgiven tamoxifen and megestrol (long-acting provera). During follow-up, an increased thickness of the endometrium was discovered on ultrasound and an endometrial polyp removed by curettage. The polyp showed decidual-like changes characteristic of high dose progesterone treatment. This had never been reported previously when women had also received tamoxifen which has a profound antiestrogen effect. Others have found estrogen-like effects in postmenopausal women who are treated with tamoxifen for breast cancer. Several groups have observed an increased incidence of endometrial cancer in women with breast cancer who were treated with tamoxifen without concomittant progesterone. *[In view of the prospective tamoxifen study now being initiated by the National Institutes of Health, study participants and their physicians must be alert to the possible development of endometrial carcinoma. Ed.]*

Chromosome Status of Untransferred (spare) Embryos and Probability of Pregnancy after In-vitro Fertilization. M.T. Zenzes et al. *The Lancet 340* (August 15, 1992): 391-394.

In Canada, researchers are free to dispose of "spare" embryos obtained by IVF. The authors postulated that since multiple embryos fertilized at one time would be siblings, any inherited chromosomal abnormality would have a 50% probability of appearing in the transferred embryos. Forty-eight couples had donated ova and sperm which produced a total 437 embryos - 1 to 4 per couple. Of these, 76 were successfully analyzed; 16 patients became pregnant and produced a higher proportion of higher chromosomally normal spare embryos - 9/24 (37.5%) than those who did not achieve pregnancy - 1/52 (1.9%). Women who had only normal embryos had a significantly greater potential for achieving clinical pregnancy. Those pregnancies which were lost during pre-clinical and clinical stages had only chromosomally abnormal spare embryos while 50% of spare embryos from patients with ectopic pregnancy were normal. Since these figures

have predictive value, the authors recommend chromosomal analysis of spare embryos prior to normal embryo transfer.

Daily Levels of Salivary Progesterone During Menstrual Cycle in Adolescent Girls. T. Vuorento and I. Huhtaniemi. *Fertility & Sterility 58* (October 1992): 685-690.

Salivary progesterone was studied throughout the menstrual cycle of 65 adolescents aged 14-19 years of age and compared with older women of proven fertility. They were grouped at 1-2, 3-4, and 5-6 years post menarche. The first group had longer cycles and longer follicular phases, but their mean luteal phase length did not differ. Signs of temporary inadequate luteal phases were found transiently in the middle group. Unsurprisingly the adolescents had 25-33% anovulatory cycles. *[It is a pity that the major works on adolescent menstrual cycles by Vollman and Treolar, were not referenced by the authors. Ed.]*

Suppression of 24-hour Cholecystokinin Secretion by Oral Contraceptives*. R. Karlsson et al. *American Journal of Obstetrics & Gynecology 167* (July 1992): 58-59.

Hormonal contraception is often associated with weight gain which is not due to fluid retention. Normally, appetite is regulated by the satiety hormone cholecystokinin. Nine healthy women, mean age 25 years, were evaluated before and 2-3 months after treatment with a monophasic combined oral contraceptive. Cholecystokinin levels were obtained in 24 hour profiles and were significantly lower in all women after contraception. The authors postulate that as the satiety hormone is suppressed by the oral contraceptive, weight gain is a normal consequence.

Delayed Endometrial Maturation Induced by Daily Administration of the Antiprogestin RU 486: A Potential New Contraceptive Strategy. M.C. Batista et al. *American Journal of Obstetrics & Gynecology 167* (July 1992):60-65.

Eleven normally cycling women who used either barrier contraception or refrained from intercourse volunteered to take 1 mg of RU 486 daily to permit evaluation of their menstrual cycle. This double blind* crossover study included measurements of estrodiol progesterone FSH LH and placental protein 14 every three days. An endometrial biopsy was performed on luteal phase day 7-9. RU 486 administration delayed LH surge and ovulation by an average of 6 days. Progesterone rise was delayed and not as high as normal range. Despite the inadequacy of the luteal phase as shown by endometrial biopsy, the length of the luteal phase was 12 days in both study and control subjects. Since women had endometrial biopsy, the author suggests this slight shortening of the luteal phase may be the result of the release of prostaglandins by the biopsy procedure or simply to partial disruption of the endometrium. The rate of estrodiol production was not changed. At a dosage of 1 mg a day of RU 486, ovulation steroidogenesis and the timing of the menstrual cycle are preserved, but endometrial development, and thus potential implantation are inhibited. While no adverse effects were seen during treatment, post treatment menses were shortened.

Oral Contraceptive Use and the Incidence of Cervical Intraepithelial Neoplasia*. I.T. Gram et al. American *Journal of Obstetrics & Gynecology 167* (July 1992): 40-43.

A 10-year prospective study of 6,622 women in Tromso, Norway found that the relative risk for cervical intraepithelial neoplasia was 1.5 for current contraceptive users and 1.4 for past users, even when corrected for smoking, alcohol intoxication, and adjusting for age and marital status.

Mifepristone (RU 486) Compared with High-Dose Estrogen and Progestogen for Emergency Post-Coital Contraception. A. Glasier et al. *New England Journal of Medicine 327* (October 8, 1992): 1041-1044.

Mifepristone (RU 486) was used for emergency post-coital contraception within 72 hours of intercourse. A sample of 800 women and adolescents were randomly divided into two groups, one of whom received 600 mg of mifepristone after assessment, the other 100 ug of ethinyl estradiol and 1 mg of norgestrel given twice over a 12 hours interval. A careful cycle history to determine whether the index intercourse had occurred during follicular or luteal phase was confirmed with plasma progesterone, or urinary pregnanediol examination. None of the subjects who received mifepristone became pregnant while 4 of those who received standard therapy conceived and had elective abortion performed. Mifepristone tended to delay the next menses by four days, but otherwise was associated with fewer side effects - 40% vs. 60% had nausea. Far fewer vomitted. RU 486 is viewed as a highly effective postcoital contraceptive *[or early abortifacient. Ed.]*

Mifepristone (RU 486) - An Abortifacient to Prevent Abortion? Editorial. D. Grimes and R.J. Cook. *New England Journal of Medicine* 327:1088-1089.

David Grimes, formerly from the Centers of Disease Control and now a professor at the University of Southern California School of Medicine in Los Angeles, is well known for his advocacy of abortion. He writes the editorial accompanying the description of RU 486 as a post-coital contraceptive. Curiously, he commented, "this controversial pill best known as an abortifacient obviated the need for induced abortion among these women." Grimes believes that pregnancy begins when implantation is complete. Grimes opines about the views of the Bush administration and looks forward to the accession of Bill Clinton who spoke about the importance of reducing the rate of abortion through improved contraception. Grimes recognizes that there are still people who believe that pregnancy begins at conception, but he recognizes pregnancy only after implantation. He argues that when a woman has an embryo fertilized in vitro, she cannot claim to be pregnant. *[He does not deny the reality of the growing embryo, but discounts its importance. Ed.]*

Compatibility Between the Spermicide Nonoxynol 9 and Mid-cycle Human Cervical Mucus. E. Chantler et al. *Contraception 46* (September 1992): 289-295 .

Nonoxynol 9 is one of the most frequently used spermicides worldwide. It is usually used as a foam or jelly. It is known that nonoxynol 9 had considerably reduced spermicidal activity when mixed with mid-cycle mucus. Hence the authors studied the entry by diffusion of radio-labelled nonoxynol 9 at mid-cycle into human cervical mucus. Treated and untreated cervical mucus was then exposed to sperm in tubes which permitted measuring the rate of sperm penetration into the mucus. Twenty pairs of tubes were used. Nonoxynol 9 does not enter a normal diffusive entry into mid-cycle human cervical mucus; it appears that the spermicidal activity of nonoxynol 9 is limited to the vagina.

"Religion and Fertility in the United States: New Patterns," W.E. Mosher, L.B. Williams, and D.P. Johnson. *Demography 29* (1992): 199, [Digest by F. Althaus: *Family Planning Perspectives 24* (Sept/Oct 1992): 234-235.]

Contrary to expectations, the number of children a woman has and the number of children she intends to have is determined largely by the timing and prevalence of marriage. Analysis of data from the National Center for Health Statistics project that at current rates, white Catholics will have an average of 1.64 lifetime births compared with 1.91 among white Protestants. Religious differences in total fertility among white women were smallest in the Midwest and largest in the Northeast. Except in the Northeast, the differences between Catholics and Protestants disappear when the fertility rates are adjusted for marriage patterns. Among Blacks, the mean number of children ever born to Catholics was 1.41 and to Protestants 1.52 compared to 1.34 to women with no religious affiliations. The mean was slightly higher among Hispanic Catholics than Protestants. Total fertility rate (TFR) for non-Hispanic whites in the U.S. as a whole was 1.76 lifetimes births per woman. At current rates, Protestants are expected to have 1.91 children; Catholics 1.64; Jews 1.54; and women without religious affiliation 1.12. Mormons and Fundamentalist Protestants had the highest TFR's - 3.06 and 1.99 respectively. Fertility among Catholics was not influenced by the frequency of Communion except in the Midwest where those who received Communion weekly had a TFR of 2.10 vs. those who received less often - 1.69. There were not enough Catholics in the South and West to permit reliable estimates. Likewise, Protestants who attended weekly services had a markedly higher TFR (2.24) than those who attended less often (1.75). Education, income, contraceptive use, divorce, family size, women's roles, and minority group status were not found to be significant variables, but marital pattern and timing and prevalence of age were significant.

Placenta Increta Complicating a First-Trimester Abortion: A Case Report. J.L. Ecker et al. *Journal of Reproductive Medicine 37* (October 1992): 893-895.

A 32-year old woman who was 9 weeks from her last menstrual period had an elective abortion. She had one episode of post-coital vaginal bleeding previously and was found to have a 32 mm submucousal fibroid next to the embryonic sac. She bled heavily during the D&C abortion, but recovered after hysterectomy. When the placenta grows into the uterine wall (placenta increta) or through it (placenta percreta), this is a life threatening complication, usually treated by Cesarian section and hysterectomy. Placenta increta has been described as a complication of elective abortion, and occasionally with spontaneous abortion

in the second and occasionally first trimester of pregnancy. Risk factors for development of placenta increta are previous Cesarian delivery, previously uterine curettage*, previous placental abnormality including accreta (very shallow growth of the placenta into the myometrium), placenta previa (the placenta is placed over the cervical canal and begins to detach as the cervix dilates), adherent placenta (requiring manual removal after delivery), submucous fibroids or ad-enomyosis (endometrium extending into the uterine muscle, also called internal endometriosis). Additionally, a combination of cesarian scar and early pregnancy bleeding has been added to the list of risk factors for patients undergoing induced abortion.

Annually 40 million abortions are performed worldwide. Many of these women have had previous D&Cs and/or cesarian sections and may therefore be at significant risk for placenta increta. Their risk is higher if they have had a previous cesarian scar and early bleeding in the current pregnancy. The author suggests a careful obstetric history prior to inducing abortion.

Gender Differences in Knowledge, Intentions and Behaviors Concerning Pregnancy and Sexuality Transmitted Disease Prevention Among Adolescents. N.L. Leland and R.P. Barth, *Journal of Adolescent Health 13* (1992): 589-599.

One thousand thirty-three (1033) students from 13 California high schools, mostly 10th graders aged 15, were studied prior to and after pregnancy prevention skills curriculum and elevation project in California. Pre-test data are reported in this study. At entry, 45% of males and 42% of females were already sexually experienced. Female virgins had avoided intercourse for reasons of fear of STDs/AIDS, were not ready, it was against their values or religion, against their parent's wishes, and other reasons.

Among sexually experienced students, females reported having sex an average of 8.8 times in the last 30 days prior to testing, in contrast with males who averaged 2.1 times. Age of sexual debut averaged 13.8 years for males and almost 14 years for females. Twice as many pregnancy scares were reported by females (252) than males (159). Significant predictors of female's early sexual or abstinent behavior were: having discussed pregnancy with parents (female), or having discussed birth control or abstinence, for males and females, the perception that half of more of their peers were having sex and using birth control correlated with being sexually active and using birth control. Male and female sexually active subjects who had practiced birth control relied most frequently on condoms. The 6, 12, and 18 months follow-up data will be subsequently reported.

Predictors of Condom Use in Sexually Active Adolescents. LK Brown et al. *Journal of Adolescent Health 13* (1992): 651-657.

Of 266 teens who recently became sexually active, only 29% reported using condoms consistently. Those males with little history of risk of behavior defined as sex before age of 14, alcohol use before age 18, cigarettes before age 12- were far less likely to use condoms. Fear and anxiety about HIV, attitude about other risks, and other safe behavior intentions were not significantly related to consistent condom use. Perception of condom use by friends correlated positively while generally impulsive attitudes were found to be negative predictors of intention to use condoms.

"Kangaroo Care for Preemie Babies." *National Capital Lactation Center Community Human Milk Bank, Georgetown University Hospital Newsletter* (Winter 1992): XII:4.

Premature babies aged 34-36 weeks at birth are kept in direct skin-to-skin contact with their mothers (or fathers) nestled between usually the mother's breasts and wrapped closely to the mother's chest. The babies were breastfed, began to gain weight without supplementation within 60 hours of birth and could be discharged from the hospital in less than 4 days, compared with a standard hospital stay of 14 days for similar age/weight premature babies. This is called "Kangaroo Care" and is described in a packet by Dr. Gene Cranston Anderson, College of Nursing, Box 10087, University of Florida, Health Science Center, Gainsville FL 32610.

A Cohort Study of the Risk of Cervical Intraepithelial Neoplasia Grade 2 or 3 in Relation to Papillomavirus Infection L.A. Koutsky et al. *The New England Journal of Medicine 327* (October 29, 1992): 1272-1278.

A Prospective study of women who were found to be positive for human papilloma virus (HPV) was initiated with 241 women who presented

with the diagnosis. They were followed every 4 months with cytologic and colposcopic exams as will as testsfor HPV/DNA, and other STDs. At the end of two years, 28% of women with a positive test for HPV and 8% without detectable HPV/DNA were found to have cervical intraepithelial neoplasia grades 2 or 3, confirmed by biopsy. The risk was higher among women with HPV-type 16 or 18. Higher risk was associated with younger age at first intercourse, the presence of serum antibodies for clamydia trachomatis infection, of serum antibodies to cytomegalo virus or gonorrhea.

Questions?

Do you need further information regarding research reported in this Supplement? Have you a specific question which you'd like to ask the Editor? Please direct your letter to the Editor, ***Current Medical Research,*** *DDP/NFP, 3211 Fourth St., N.E., Washington, D.C. 20017. We look forward to hearing from you.*

Glossary

**** For our readers who do not have a backgound in medicine, we offer the following glossary:***

algorithm — A step-by-step precedure for solving a problem or accomplishing some end.

cholecystokinin — A hormone liberated by the upper intestinal mucosa on contact with gastric contents; stimulates the contraction of the gallbladder.

curettage — A scraping of the interior of a cavity with the curette for the removal of new growths or other abnormal tissues, or to obtain material for tissue diagnosis.

double blind — Denoting a manner of conducting an experiment so as to assure statistically reliable results, with neither experimenter nor subjects knowing what is used.

gravid — Pregnant (gravida, A pregnant woman).

intraepithelial neoplasia — Changes in the nuclei of the epithlial cells which make them "atypical." In time, these cells begin to invade blood or lymphatic vessels, are transported to other sites in the body. In other words, intraepithelial neoplasia is the first step on the path of malignancy. When treated at that stage cure is high.

In general, any epithlium canundergo atypicality followed by in situ neoplastic (new growth) changes.

cervical intraepithelial neoplasia — The changes described above takes place in the epithelial cover of the cervix.

In the cervix, when intraepithelial neoplasia is compounded by HPV (human papilloma virus infection), the potential for the early malignant change, meaning invasion, is greatly enhanced.

Current Medical Research, a supplement of the **NFP Diocesan Activity Report,** is published quarterly. Hanna Klaus, M.D. is the editor. The purpose of the supplement is to serve the Roman Catholic diocesan NFP programs of the United States through providing them with up-to-date information on research within the field of fertility, family planning, and related issues. The Diocesan NFP teacher should be equipped to understand the various methods of contraception and be able to explain their incompatibility with the practice of the natural methods of family planning.