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Natural Family Planning

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Self-Efficacy and Intent To Use Condoms Among Entering College Freshmen. A. Joffe & S.M. Radius. *Journal of Adolescent Health* 14 (1993):262-268.

Bandura's self-efficacy theory is based on outcome and efficacy expectations: 1. belief that engaging in a behavior will achieve an outcome (outcome expectations) and 2. confidence in one's ability to engage in and execute the behavior (efficacy expectations). This theory was related to condom use among adolescents and tested as part of a questionnaire administered to 673 male and 404 female incoming freshmen at Towson State University, Maryland. It was speculated that college students' low levels of self-efficacy contribute to their low rates of condom use and that even though the skills to use condoms exist, the student may not believe that he/she can execute them properly. Eight separate items in the questionnaire dealt with the student's perceived confidence to accomplish the purchase or acquisition of condoms in a store/clinic, putting it on self or partner correctly, talking with a steady partner about using condoms, talking with a potential new partner, keeping condoms available at all times, convincing a sex partner to use them, refusing sex with someone who would not accept condom use, and enjoying sex by using a condom. The mean age of those who completed the sample was 17.8 years. Fifty-six percent (56%) of the males and 38% of the females described themselves as sexually active -- defined as having had intercourse at least once. Sixty-eight percent (68%) were Caucasian, 18% Asian-Pacific, and 7% African-American. The highest self-efficacy scores were achieved by males who were confident of their ability to buy condoms and talk with a steady partner about condom use, while the lowest scores were found among those who did not feel able to talk with a new partner about condom use or to refuse sex to someone who did not want to use it. Sexually active females by contrast, graded themselves as most confident in talking with a steady partner about condom use and refusing sex with a new partner who did not want to use condoms. Their lowest ratings were about keeping condoms available at all times and using them properly. Never sexually active males rated themselves most confident in their ability to enjoy sex by using condoms and to talk with a steady partner about their use, but rated their ability to keep condoms available at all times very low, as well as talking with a new partner about their use. Never sexually active females rated themselves highest in their ability to refuse sex with a new partner who did not want to use condoms, and ability to convince a partner to use them; their lowest ratings were on keeping condoms available and using them properly. Two hundred one (201) of the 512 males were never active sexually nor were 111 of 236 females, yet the researchers conclude that it is important to build skills to increase perceived self-efficacy in condom use among college students. *[Most researchers distinguish between ever active and currently active persons. Currently active persons report intercourse within the last three months. One also wonders what incoming freshmen think when a college expects them to be sexually active as soon as they get installed. Sixty percent of the males and 53% of the females had sexual contact prior to entering. Ed.]*

Contraceptive Self-efficacy in College Women. L.B. Heinrich. *Journal of Adolescent Health* 14 (1993):269-276.

Self-efficacy theory and its effect on contraceptive use in a white female sexually active college population was tested by a written survey questionnaire with 356 subjects, but the study sample was limited to 250 female subjects who were unmarried, aged 17-25, and sexually active. Contraceptive self-efficacy was the most important predictor of contraceptive use for this sample. Lack of barriers to contraception, knowledge, and length of time of sexual activity were also included in the model. Demographic and future orientation variables were not significantly associated with effective use while sexual experience and personal attitudes and perceptions about birth control were. When alcohol use was present it interfered with contraceptive use.

The most frequently used family planning methods were oral contraceptives - 57% and condom -38%. Abstention - 6%; rhythm - 3%. The sample was predominantly white; these were 20.6% Catholics, 42.2% Protestants, and 16.7% with no religion. Seventy-five percent (75%) attended religious services sometimes or regularly.

Contraceptive use and contraceptive self-efficacy were highly correlated. Barriers identified to contraceptive use were mostly attitudinal and involved fears about the birth control method itself, fears about interference with romance and spontaneity, or being perceived as planning for intercourse. The major interpersonal issue was fear of parents' opinion, some embarassment about going to acquire the materials, and recognition of the widespread problem of acquaintance rape and alcohol/drug use in college. When intercourse was not planned prior to alcohol use, 82% of participants did not use contraceptives, but 75% of the subject sample reported that alcohol/drug use did not interfere with their use of birth control. Most of them used non coital methods. [*This would have no affect on STD transmission. Ed.*]

Detecting and Treating HPV Infection. L.J. Cibley. *Clinical Advances in the Treatment of Infections* 7 (1993):1-3 and 10-12, September.

Human papillomavirus infections (HPV) include 65 subtypes of the virus. More than 1.5 million new cases are reported annually making it the most common sexually transmitted disease. The virus involves the basal layer of the epithelial cells and reproduces only within fully differentiated cells. It can remain latent for many years and can bring about local changes in epithelial cell immunology. Causative factors include smoking.

HPV is not the sole cause of genital tract carcinoma but is probably an important cofactor. High risk male partners, human immuno deficiency virus (HIV), oral contraceptives, other immuno deficient states, and other sexually transmitted diseases are considered cofactors. Incubation can vary from 3 weeks to 8 months. Viral types 16 and 18 are most frequently associated with carcinoma of the cervix, vulva, and vagina in the female, but other types have been identified. Males can also have condylomatous lesions not only of the penis but of the scrotum as well. Under those circumstances, condoms will not prevent genital transmission. Florid condyloma of the penis has been known since antiquity and its precancerous tendency is well recognized. Cancer of the penis is also associated with HPV type 16 and to a lesser degree with type 18, while most of the genital and anal warts in men are caused by benign types HPV 6 or 11. Local treatment with podophyllin is still the first line for external lesions but cannot be used in the vagina or cervix because it is absorbed from the mucosa and is toxic. Other treatments include trichloroacetic acid (TCA), 5-Fluorouracil (5-FU) and various lasers. Interferon has also shown good results.

Contraceptive Practice and Attitudes in Former Soviet Women. A.Ph Visser et al. *Advances in Contraception* 9 (March 1993):13-23.

Over 8,000 women answered a survey questionnaire circulated in Russia and the Ukraine in 1991. Calendar rhythm was used by 40% of the respondents. The most common motive was safety for health reasons. Twenty-two percent (22%) reported use of condoms, 13% vaginal douching, 18% coitus interruptus. Nearly all women perceived pregnancy termination to be more dangerous than pregnancy prevention. While the younger women tended to increase in preference towards IUDs and barrier methods, they also preferred natural methods overall. [*Clearly Russian women should be given accurate information about natural methods before the propaganda for artificial methods inundates them. Ed.*]

A Multicenter Clinical Trial in Nigeria With a Low-Dose Oral Contraceptive, Marvelon. B.V. Dierendonck. *Advances in Contraception* 9 (March 1993):25-32.

Marvelon has been widely used in Europe as a monophasic oral contraceptive. It contains desorgestrel, a synthetic progestin which is thought to have less of the androgenic properties than norgestrel or norethindrone. Reportedly it has good cycle control, contraceptive reliability, no incidence of side effects, and does not alter blood pressure or body weight. The drug was tested in 408 women in Nigeria over 3102 cycles. After 12 months, 43.1% of the acceptors were still using the drug. The investigators conclude that the drug is excellent and holds out much promise. [*More than half the women discontinued the use of the method. This hardly qualifies as a very effective approach. Nevertheless, desorgestrel is now introduced in the US market. Ed.*]

Introductory Trial of the Once-A-Month Injectable Contraceptive, Cyclofem, in Indonesia. S.P. Pandi et al. *Advances in Contraception* 9 (March 1993):33-40.

The coercive fertility reduction program of the Indonesian Government has achieved 49.7% contraceptive prevalence, and the total fertility rate is 3 per woman. A need for wider choices of methods has become evident even to the BKKBN,

the National Family Planning Coordinating Board of Indonesia. Hence the trial of a new once-a-month injectable contraceptive, Cyclofem, which contains 25 mg medroxyprogesterone acetate (DMPA) and 5 mg of estradiol cypionate. It is produced by Upjohn in Mexico City and is designed as a once-a-month contraceptive for young women of low parity who wish to delay or space pregnancy. The 337 complaints listed are said to have come from only 6% of the 835 women, mostly in months 2 to 6 of drug use with a second increase between 17 and 19 months. Dizziness and nausea were most commonly reported, followed by bleeding problems, vomiting, migraine headaches, and amenorrhea. Hypertension and allergies were reported less often. Despite the glowing report, 139 women discontinued the method, a total life-table discontinuation rate of 33%. Medical discontinuations and personal reasons made up 3/4 of the discontinuations while desire for pregnancy accounted for 15%. The investigators are not sure whether Cyclofem will be acceptable to Indonesian women.

Immediate Postpartum Intrauterine Device Insertion - A Report on the Chinese Experience. J-X. Xu et al. *Advances in Contraception* 8 (December 1992): 281-290.

Because Chinese women have a tendency to "procrastinate" after the birth of a child, the Chinese have inserted IUDs postpartum since the late 1960's. A study of immediate postpartum insertions of either a stainless steel ring, Delta loop, copper devices, or plastic metal ring in 5,225 women is reported. The IUD's, usually steel rings, were inserted either by hand or with a ring forceps right after the placenta was delivered. When inserted after Caesarian section, they were often sutured into the uterine fundus before the uterine incision was closed. The incidence of infections in the postpartum period was less than 1% while postpartum bleeding averaged 26-32 days longer. Heavy menses were slightly fewer than among control subjects (5% versus 6%) while lower abdominal pain was reported by 4% of the study and 2% of the control population. More significant were the one-year cummulated life-table events which averaged 15% pregnancy with the IUD in situ, expulsions ranging from 7-24% and continuation rates ranging from 54%-68% for various vaginally inserted devices and 84% for those inserted at Caesarian section. The overall postpartum pregnancy rate of 7% was considered a good outcome as compared to 14% of the general population. [*China's coercive birth control policy is well documented in this article, even though the article states that all women gave informed consent. It cannot but help raise concerns about the doctor as an instrument of social policy rather than an advocate of the patient. Ed.*]

The Possible Relationship Between Menorrhagia and Occult Hypothyroidism in IUD Wearing Women. M. Blum & B. Blum. *Advances in Contraception* 8 (December 1992:313-17.

Occult (meaning not obvious) hypothyroidism has been reported in menorrhagic women who wear IUDs. The thyroid function studies of 14 women who wore IUDs and suffered from menstrual bleeding (6 days or more, or containing significant amount of blood clots) showed that free thyroxin (FT) and thyroid stimulating hormone (TSH) hormone were not abnormal, but the TSH levels were signficantly higher in the study group compared with the control group. They remained at the upper limits of the normal range. Thyrotropin-releasing hormone (TRH) tests were consistent with occult hyperthyroidism. After treatment with L-thyroxin, all had significant improvement in their bleeding within three months of treatment. Women who have heavy menstrual bleeding in the presence of IUDs should be evaluated for occult hypothyroidism. They will not respond to conventional treatment like prostaglandin synthetase inhibitors (PGSI) or antifibrinolytics.

Efficacy of Thermoplastic Elastomer and Latex Condoms as Viral Barriers. J. Kettering et al. *Contraception* 47 (June 1993):559-567.

Because latex condoms often deteriorate in heat and for long storage, the barrier efficacy of a thermoplastic elastomer (TPE) - Tactylon brand condoms, which does not contain the additives or allergens of latex, was tested against three conventional latex condoms. Challenge materials were bacteriophage T-7 (100 nm) and polio-viruses type 1 (27 nm) which correspond to the reputed size of the HIV virus 80-120 nm, and the hepatitis virus (42nm). Passive and active challenges were simulated and the TPE condom was found not to leak either viruses or fluid. As more and more people become allergic to latex, other materials for condoms are being sought.

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.*

Luteal Phase Defects. B. Bopp & D. Shoupe. *Journal of Reproductive Medicine* 38 (May 1993):348-356.

Between 3-4% of infertile couples are estimated to have luteal phase defect (LPD). LPD may either be a short luteal phase - less than 11-16 days from LH surge with production of adequate amounts of progesterone, or may be of normal length, with lower than normal progesterone production. Less than 10ng/mL plasma progesterone is considered diagnostic of inadequate luteal phase, although the sampling levels of variations of 6-35ng/mL in a single subject have been seen. Some authors therefore argue that any level above 6 ng/mL should be used as an exclusionary criterion. The causes of LPD may be in the hypothalamopituitary axis, resulting in abnormal FSH or LH production and leading to an inadequate ovarian response which in turn will affect the endometrium. Hyperproloctinemia when present is also a cause of corpus luteum dysfunction leading to diminished progesterone production. Low levels of FSH secretion or abnormal LH pulse patterns have been linked to aberrant folliculogenesis, abnormal corpus luteum function, and resultant low levels of progesterone. Sometimes the endometrial progesterone receptors may be faulty.

Actually growth of the resting primordial follicle begins in the fetus and ends at menopause. The process appears not to be affected by pregnancy or amenorrhea and is independent of gonadotropin stimulation. Once growth is started the process is irreversible and continues until the follicle undergoes either ovulation or atresia. However, during the late luteal phase, and early follicular phase, increases in FSH "rescue" a cohort of growing primordial follicles and save them from atresia. Continued development of the follicle depends heavily on pituitary gonadotropin stimulation. The preantral follicle must develop FSH receptors in the granulosa cells in order to survive. Under FSH stimulation, androgens are aromatized to estrogen while FSH and estrogen synergistically promote the production of antral fluid. By day 7 the dominant follicle is selected based on its ability to maximize FSH receptors in spite of falling gonadotropins. Rising LH levels in the late follicular phase act on newly formed LH receptors in the granulosa cells, initiate the process of luteinization. Progesterone levels which increase 24-48 hours prior to ovulation augment the mid-cycle LH/FSH surge. The mid-cycle LH surge initiates the structural transformation of the follicle into a corpus luteum provided it has adequate numbers of LH receptors. Continuous pulsatile secretion of small amounts of LH are necessary to maintain adequate corpus luteum function and progesterone secretion. When LH support is withdrawn too early, the corpus luteum ceases.

When hyperproloctinemia is the cause of LPD, treatment with bromocryptine lowers prolactin and allows the normal FSH/LH sequence to occur. When the defect is in the hypothalamo pituitary axis, the easiest treatment and the treatment which is tried first, is clomiphine citrate. Clomiphine is a weak antiestrogen which stimulates increased gonadotropin secretion, thereby probably correcting the underlying problem, to achieve pregnancy rates between 21 and 77%. It has also been used successfully when midcycle serum progesterone levels were below 15ng/mL. Other treatments include progesterone by vaginal suppository or intramuscular injection, and hMG (human menopausal gonadotropin) which has been reported to improve follicular recruitment and development and to improve luteal phase function.

Ovulation Induction. C.M. March. *Journal of Reproductive Medicine* 38 (May 1993):335-346.

Drugs are used in infertile women with oligomenorrhea or amenorrhea without ovarian failure and for those with luteal phase defects. Clomiphine citrate, a synthetic weak estrogen is the treatment of choice. When the drug is administered, serum FSH, LH, and estradiol rise. The estrogen rise in turn produces negative feedback and FSH and LH fall. Ultimately estrogen then leads to positive feedback and ovulation. Basal body temperature readings are utilized to provide evidence of ovulation during clomiphine treatment cycles as an alternative to serum progesterone tests. The author considers a single reading of 3 ng/mL of progesterone to correlate well with the finding of secretory endometrium on endometrial biopsy but points out that that does not in itself diagnose ovulation because the follicle may become luteinized in the absence of oocyte release. Tests to predict ovulation by measuring urinary LH have become popular. The urinary LH peak usually precedes ovulation by one day. These have been correlated with ultrasound, but finding LH in the urine is not a guarantee that ovulation will follow. With clomiphine ingestion, large amounts of LH are released. Therefore urinary testing during or immediately after stopping clomiphine could yield false positive results. At least two days must elapse between the last treatment day and the initiation of testing. Rates of abortion, still birth, and ectopic pregnancy were similar to those following spontaneous ovulation, the rate of twinning is 5%-10%, and the rate of congenital anomalies 2.4%, similar to that after unassisted (normal) conception. Ovulation is induced with clomiphene in graduated doses of 50mg/day for five days starting days 3-5

after spontaneous or induced menses. If ovulation occurs but the patient does not conceive, the dose is continued in subsequent cycles. After three cycles, the dose is doubled. In the absence of ovulation, it is gradually increased up to 250 mg/day for 5 days. Should this not cause ovulation, human chorionic gonadotropin (HCG) is added. HCG is administered following a rise in the patient's cervical score (a score which includes cervical mucus, color of the cervical mucousa, and dilatation of the canal). A score of 8 is reached when the estradiol level exceeds 400 pg/mL or when one follicle is at least 22 ml in diameter.

Prior to initiating any medication, semen analysis and prolactin are studied. Women who are amenorrheic should receive an initial challenge of progesterone to document presence or absence of withdrawal bleeding. Clomiphine citrate may act to inhibit the action of estrogen on the cervical mucus. At initial postcoital test, nearly 11% of women had poor cervical mucus. Given the large number of conceptions following clomiphine treatment, it is unlikely that its effect on the cervical mucus is a serious barrier to conception.

Role of Cigarette Smoking on the Postmenopausal Endometrium During Sequential Estrogen and Progestogen Therapy. I. Byrjalsen et al. *Obstetrics & Gynecology* 91 (June 1993):1016-1021.

In assessing the effect of several combinations of estradiol and levonorgestrel or desorgestrel or medroxyprogesterone acetate in hormonal replacement therapy for postmenopausal women, it was found that smoking seriously interfered with the action of estrogen on the endometrium. Smokers were far more likely to have an atrophic endometrium in spite of hormonal treatment. The effect of smoking is not fully understood since it reduces serum placental protein 14 by 38%, but this does not explain the rest of the reduction. If hormonal replacement treatment is prescribed for smokers, a higher dose of estrogen is essential.

Do Delayed Childbearers Face Increased Risks of Adverse Pregnancy Outcomes After the First Birth? S. Cnattingius et al. *Obstetrics & Gynecology* 81 (April 1993):512-516.

More than 200,000 women are registered with the Swedish Medical Birth Registry. A prospective longitudinal study to contrast the effects of maternal age at first birth on the risk of adverse pregnancy outcome in the first and second successive births found that when women were aged 20-24, they had a far lower odds ratio for a second late fetal death or early neonatal death, compared with women who had their first adverse outcome at age 30-34, while women over 35 had a still higher odds ratio of late fetal death for the first but not the second birth; they also had a higher odds ratio of early neonatal death for the first birth, but less of an increase for the second. While women aged >30 at their first birth have an increased risk of adverse pregnancy outcome in their first birth, there is no age related increase with second births. The risks of low birth weight and pre-term birth were increased and similar for first and second births of delayed childbearers.

Vaginal Douching as a Risk Factor for Acute Pelvic Inflammatory Disease. D. Scholes et al. *Obstetrics & Gynecology* 81 (April 1993) 601-606.

A population based case control study of 131 women aged 18-40 who experienced a first episode of clinically diagnosed acute pelvic inflammatory disease was matched with 294 controls of a concurrent study of ectopic pregnancy. Women who had douched during the previous 3 months had twice the risk of PID after controlling for other measured risk factors. Those women who had douched at least once a week had an even higher estimated risk odds ratio, 3.9, than those who douched less often. The highest risk was in the small group of women who gave infection as a reason for douching. When this group was excluded from the risks, the remainder still had an odds ratio of 3. Presumably, douching may cause ascent of pathogenic organisms in the woman's genital tract. [*Other studies have shown an inconclusive relationship between douching and ectopic pregnancy. Ed.*]

Ectopic Pregnancy in the United States: Economic Consequences and Payment Source Trends. A.E. Washington & P. Katz. *Obstetrics & Gynecology* 81 (February):287-292.

Both the numbers and rates of ectopic pregnancy have increased remarkably since 1970 when the rate was 4.5/1000 pregnancies and has risen to 16.1/1000 in 1989, reflecting a 400% increase in cases and nearly 300% rise in the rate. After an ectopic pregnancy, a woman's chance of conceiving declines from 85%-60% while her risk for another ectopic rises from 1.6%-13%. Although deaths from ectopic pregnancies are rare in the United States, annually 34 women die from this cause. Ectopic pregnancy accounts for 13% of all pregnancy related deaths, making it one of the leading causes of maternal mortality. While the economic costs of ectopic pregnancy are documented extensively in terms of direct and indirect costs, the causes are explored minimally

in this paper. Prior PID accounts for 20%-50% of ectopic pregnancies, a cause which could be reduced, if not eliminated, by the elimination of sexual promiscuity. Costs of the treatment of ectopic pregnancy have been reduced substantially by the use of laparoscopic versus laparotomy treatment.

Factors Associated with Multiple Sex Partners Among Junior High School Students. M. Durbin et al. *Journal of Adolescent Health* 14 (May 1993):202-207.

A questionnaire administered to 1,830 inner city junior high school students found that 21% were sexually active; 31% reported a single lifetime sexual partner; 25% two partners; and 43% reported three or more partners. When sexarche occurred before the age of 13, students were nine times more likely to have had 3 or more partners, compared to those whose first intercourse was at age 15 or 16. Blacks were more likely than non-Hispanic whites to report 3 or more partners and males were 4 times as likely as females to have had 3 or more partners. Age, Asian or Hispanic ethnicity, knowledge of HIV, belief that one can protect oneself from the HIV virus - self-efficacy, condom use, alcohol or drug use were not independently associated with the number of sex partners. Evidently behavior is not affected by knowledge only. [*Since the age of the students in the middle school was no greater than 16, it is possible that multiple partners would also have been found among older students had they been interviewed. Ed.*]

Epidemiology of the Noncontraceptive Effects of Oral Contraceptives. A. Stergachis. *American Journal of Obstetrics and Gynecology* 167 (October 1992):1165-1170.

Meta-analysis of large series of cohort studies of oral contraceptive users compared with non-users yielded mixed results. The overall risk of mortality with oral contraceptive use was increased in the Royal College of General Practitioners Study (RCGP) (1.4) but neither the Oxford Family Planning Association Study nor the Walnut Creek Contraceptive Drug Study showed an increase in overall mortality. A more recent study of women who used lower dose pills, the Puget Sound Study, found no difference in overall mortality between OC users and non-users. Similarly cardiovascular disease risk was found to be increased in the RCGP Study but not in the others. Based on these studies, the estrogen content of the pills was reduced and thus lowered the risk of myocardial infarction and stroke, except in smokers. The overall risk of breast cancer was not found to be changed for oral contraceptives. However, there are subgroups: young women with early and long duration of OC use, women who have never borne children, and those who had a long duration of use before the birth of their first child. Several investigators found increases in relative risk from 1.2-11.8, but others found no increase. The protection against endometrial and ovarian cancer seen with earlier OCs remains to be demonstrated with current formulations.

Contraceptive Efficacy of the Diaphragm, The Sponge and the Cervical Cap. J. Trussell et al. *Family Planning Perspectives* 25 (May/June 1993):100-105.

"Perfect use" and "imperfect use" criteria were employed in a reanalysis of two studies of women who were randomly assigned to use either the contraceptive sponge or the diaphragm (1439 women) and a study comparing random use of cervical cap and diaphragm (1394 women). Women who had given birth had a significantly higher unplanned pregnancy rate with the sponge and cervical cap. With "perfect" use, the overall probability of failure (unplanned pregnancy) in the first year was 11-12% for the sponge, 10-13% for the cervical cap, and 4-8% for the diaphragm. Parous women had 19-21% failures with the sponge, and 26-27% with the cervical cap, compared to women who had not given birth: 9-10% for the sponge, 8-10% for the cap. While parity overall did not affect diaphragm effectiveness, low coital frequency yielded a 3.4% pregnancy rate, while high coital frequency found 9.7%. Similarly, with low education, 17.4% of diaphragm users became unintentionally pregnant in the first year, while highly educated women had only 5.1% unplanned pregnancies. [*"Perfect use" means correct and consistent use of a method; "imperfect use" means incorrect or inconsistent use. Ed.*]

Change in Adolescent Males' Use of And Attitudes Toward Condoms, 1988-1991. J.H. Pleck et al. *Family Planning Perspectives* 25 (May/June 1993):106-110.

A follow-up study of the more than 1000 sexually active young males who had been interviewed for the 1988 National Survey of Adolescent Males aged 15-19 was conducted in 1990-1991 when these men were aged 17-22. As the respondents grew older their condom use declined, even though their attitudes about the effects of condoms on pregnancy risk, partner appreciation, sexual pleasure, and embarrassment became more favorable towards condom use over time, but their degree of worry about AIDS and their perceived likelihood of acquiring AIDS declined. Decreased worry about AIDS and increased denial of the seriousness of AIDS

was modestly associated with the decline in condom use. The perceived reduction in sexual pleasure and attitude of and about the female partner also contributed to the decline.

The Sexual Behavior of Men in the United States. J.O.G. Billy et al. *Family Planning Perspectives* 25 (March/April 1993):52-60.

The sexual behavior of a nationally representative sample of men aged 20-39 in the U.S. found that 95% of men have had vaginal intercourse. Among them, 23% have had 20 or more vaginal sex partners in their lifetime. Twenty percent (20%) have never married and formerly married men had four or more partners within the last 18 months. However, 41% of never married men and 32% of formerly married men had no coitus during the four weeks preceeding the interview. Only 20% of men had ever engaged in anal intercourse. Of those, 90% had not done so during the previous four weeks, nor 51% in the previous 18 months. Seventy-five percent (75%) of men have performed oral sex and 79% received oral sex, although fewer than half had done so in the four weeks preceeding the interview, and only 11% had done so six or more times. Only 2% of sexually active men aged 20-39 have had any same gender sexual activity during the last 10 years, and only 1% reported being exclusively being homosexual during this interval.

Menstrual Complaints Rise with Increasing Years Since Tubal Sterilization. L.W. Wilcox et al. "Menstrual Function After Tubal Sterilization," *American Journal of Epidemiology* 135 (1992):1368-1381. *Digest, Family Planning Perspectives* 25 (March/April):95-96.

A longitudinal study of women 5 years after tubal sterilization found that 35% of the participants reported a high level of dysmenorrhea (painful menses), 49% had heavy or very heavy menstrual flow, and 10% spotted between periods. This was considerably higher than the complaints reported one year after sterilization. More than 8000 women were enrolled in the study. Women were interviewed once a year, and were drawn from 12 medical centers. Breakdown by method of sterilization found unipolar coagulation led to the longest cycles, while the spring clip was associated with the shortest cycles and increased bleeding the first three days of menstruation. Those who had undergone thermocoagulation were most likely to have irregular cycles. Black women reported less spotting and irregular cycles and fewer days of bleeding than white women. Women who were older at time of surgery experienced less pain and more regular menstruation after age 40 than those who were younger. Women who had more pregnancies prior to surgery had less pain and shorter cycles than those with fewer. Women who had used an IUD prior to sterilization had fewer days of bleeding than those who had used no contraceptive method. Since menstrual bleeding normally becomes heavier as women approach menopause, comparison with nonsterilized women should be performed.

Patterns of Contraceptive Use and Pregnancy Among Young Hispanic Women on the Texas-Mexico Border. A.Y. Russell et al. *Journal of Adolescent Health* 14 (July 1993):373-379.

Young Hispanics who lived in El Paso were compared with an equal number who lived in Juarez and were interviewed about knowledge, attitudes, and experiences with respect to birth control, pregnancy, maternal and child health, and health services. Knowledge and usage pattern varied considerably between the two groups as did their attitudes towards child bearing and their use of birth control. The Juarez women were significantly more favorable toward child bearing; 19% had heard of the Billings Method vs. 5.3% in El Paso; 73.6% of Juarez women had heard of rhythm compared to 36.4% of El Paso women; 6.3% of Juarez women were using the Bilings Method at time of interview, none in El Paso; 26.4% of Juarez women were using rhythm compared to 5.4% in El Paso. The pill was the most frequently used method in El Paso while 21.2% of Juarez women were wearing IUDs. The questionnaire on attitudes failed to distinguish marital from nonmarital status and brought out that most women in both groups felt that "public health clinics make women use birth control even if they don't want it." [*While the investigators from the University of Texas Medical Branch at Galveston were seeking better ways of promoting birth control, highly significant data such as marital status or desire for children was considered unimportant. Ed.*]

Oral Contraception in the Former Czech and Slovak Federal Republic: Attitudes and Use. E. Ketting et al. *Advances in Contraception* 9 (June 1993):141-152.

While this paper seeks to remove barriers to pill use in the former Czech and Slovak Federal Republic (only 7% of women at risk for unplanned pregnancy are current users of the pill; 32% of women were using Natural Family Planning methods) although the article considers these traditional and divides them between rhythm and withdrawal. Nevertheless, the greatly favored natural methods were used because they did not interfere with the couples' sex life,

and because there were no risks to health. Religious reasons were very low. Two-thirds of all women interviewed also thought the natural methods were highly reliable. A total of 1072 women were interviewed.

Family Planning in Italy. A. Spinelli et al. *Advances in Contraception* 9 (June 1993):153-160.

Artificial contraceptive methods were not introduced widely in Italy before 1973. In 1989, a knowledge, attitude, and use study of contraceptive methods showed that overall 63% of women could identify the fertile phase of their cycle correctly while roughly 12% were said to be current users of "rhythm." Abortion is still high in Italy: 13/1000 women aged 15-44 reportedly. This figure may be too low if the illegal abortions which are presumed to occur are added, the rate would be 18/1000.

A Prospective Study of the Intake of Vitamins C, E, and A and the Risk of Breast Cancer. D.J. Hunter et al. *New England Journal of Medicine* 329 (July 22, 1993):234-240.

The antioxidant vitamins C, E, and A are hypothesized to reduce the risk of breast cancer. A prospective study of 89,494 women aged 34-59 years old began in 1980. Their intakes of the Vitamin C, E, and A from foods and supplements were assessed at baseline and in 1984. Fourteen hundred thirty-nine (1439) women developed breast cancer during the 8 years of follow-up. The relative risk for development of cancer with high Vitamin C intake was 1.03, for Vitamin E, .99. On the other hand, those women who had a low intake of Vitamin A were thought to benefit from consuming supplements which would raise their intake to normal levels. Excessive doses are of no benefit.

'Female Condom' Approved. *FDA Medical Bulletin* (23 June 1993) p. 4.

The FDA approved the Reality™ Vaginal Pouch as a female condom. Data on effectiveness for STD protection are limited and there is a 26% pregnancy rate. Product labelling emphasizes the need for concurrent use of latex condoms for men.

New Labeling to Provide Information About Contraceptives and STDs. *FDA Medical Bulletin* (23 June 1993) p. 4.

Oral contraceptives, intrauterine devices, implantable and injectable contraceptives, and natural membrane condoms must include the label: "This product is intended to prevent pregnancy. It does not protect against HIV infection (AIDS) and other sexually transmitted diseases." Additional labelling for the natural membrane condom is added: "In order to help reduce the risk of transmission of many STDs, including HIV infection (AIDS), use a latex condom." For latex condoms, the labeling reads: "If used properly, latex condoms will help to reduce the risk of transmission of HIV infection (AIDS) and many other sexually transmitted diseases." A change in labelling for spermicide, cervical caps, and diaphragms is under review.

Characteristics and Determinants of Postpartum Ovarian Function in Women in the United States. O.M.R. Campbell & R.H. Gray. *American Journal of Obstetrics & Gynecology* 169 (July 1993):55-60.

The influence of breastfeeding on ovarian hormones was compared with detailed menstrual and baby feeding diaries in 60 breast-feeding and 22 non-breastfeeding women. Daily first morning urine samples were assayed for estrogen, pregnanediol and LH permitting determination of the length of the luteal phase. The diary included detailed information on suckling episodes, demand vs. schedule feeding, the number of nights they slept with their infants, breastfeeding, breast pumping, bottlefeeding, cup feeding and solid supplements. The table shows the timing of first ovular menses in both groups.

Percent (%) Ovular Menses Postpartum

Lactating N=55	Non-lactating N=22
> 12 weeks	45% 100%
13-24 wks	67%
25-48 wks	75%
49-72 wks	100%

Regular or heavy bleeding was usually post-ovulatory and usually followed a normal length luteal phase. Both breastfeeding frequency and average suckling duration were significant in delaying ovulation. While solid supplements did not interfere with length of suckling at the breast, obviously bottle feeding did.

Relation of Tubal Infertility to History of Sexually Transmitted Diseases. F. Grodstein et al. *American Journal of Epidemiology* 137 (May 1993):577-584.

The history of sexually transmitted disease provided by 283 nulliparous women who were diagnosed with infertility due to tubal adhesions or blockage was studied and compared with a much larger group of women who were admitted for delivery. Women who had a prior gonorrheal infection had a 2.4% increase in risk for tubal infertility. However, the risk for infertility was nearly as high, 1.9% for women who recalled a previous trichomonas infection. Greater

numbers of episodes due to either gonorrhea or trichomonas increased the risk of infertility. Trichomonas vaginalis has not been previously identified as a possible cause of tubal infertility.

The Effects of Attitudes on Teenage Premarital Pregnancy and its Resolution. R.D. Plotnick. *American Sociological Review* 57 (December 1992):800-811.

Sociologists hold that premarital pregnancy and child care are associated with low self-esteem hence are characterized as deviant behavior. If a woman with low self-esteem becomes pregnant, she is less likely to abort and less likely to marry if she carries her pregnancy to term. When the locus of control is already internal, they are expected to be able to resist pressure to engage in sexual intercourse, and if they do have intercourse, to be more effective contraceptors. Therefore, the probability of pregnancy is reduced and the likelihood of terminating the pregnancy increased, especially if the pregnancy is not wanted. Western religions generally proscribe premarital intercourse, especially casual sexual relations and premarital child bearing. Therefore religiosity and attendance at religious services would affect sexual behaviors. Since different religions have different views about the morality of abortion the correlation depends on religious affiliation. Analysis of women's first premarital pregnancy was performed on a sample of 12,686 women aged 14-21 from the National Longitudinal Survey of Youth interviewed in 1979, followed by reinterview in 1988. Underreporting for abortions was particuarly high among blacks precluding their inclusion in the data set. Similarly the number of Hispanics were too small for valid analysis. The final sample of 1142 non-Hispanic white females showed a 20% teen pregnancy rate with 9% spontaneous abortion or still birth; of the pregnancies that continued, 39% were aborted, 29% were born to unmarried women, and 32% were born to women who married between conception and birth, yielding a net of 5% unwed mother rate. Extensive analysis of attitudes, including self-esteem, locus of control, family/gender attitudes, attitudes towards school, educational expectations, educational attendance, religious attendance, as well as family background characteristics were examined in a nested logit model. The probability of becoming pregnant before marriage was significantly related to each attitude except self-esteem. High locus of control scores tended to preclude premarital pregnancies, while a more egalitarian attitude on women's family roles related positively. Hence, these attitudes correllated with increased sexual activity and encouraged better contraceptive use. Among Catholics, more regular attendees were less likely to become pregnant. When pregnancy occurred resolution by abortion was related to high self-esteem and high educational expectations, but there were significant differences between Catholics and non-Catholics. Poor Church attenders were more likely to resort to abortion than regular attendees but were also associated with higher rate of marriage. [*In analyzing Teen STAR data, Dr. Weed found that more than 99% of students believe that life begins at conception and rejected abortion as an option for crisis pregnancy. Despite the prevailing opinion among the professionals, Pro-Life education is effective and appropriate. Ed.*]

Mifepristone (RU 486) -- A Modulator of Progestin and Glucocorticoid Action: A review. I.M. Spitz & C.W. Bardin. *New England Journal of Medicine* 329 (August 5, 1993):404-412.

An extensive review of the drug Mifepristone (RU 486) enumerates its antiprogestin properties: 1. It blocks the action of progesterone on the receptors, particularly in the endometrium. 2. It also has antiglucocorticoid activity. 3. The antiprogestin effect is used to abort pregnancies of less than 8 weeks' duration from the last menstrual period. 4. When administered to normal women in the early and mid-luteal phases of the menstrual cycle, it disrupts the endometrium and menstrual bleeding begins within 72 hours. If post-menopausal women are treated with estrogen alone, mifepristone paradoxically has biochemical and anatomical effects on the endometrium which are similar to those of progesterone, suggesting that in some cases, it may act like progesterone rather than oppose it. This antiestrogenic action is independent of estrogen receptors. The progestin antagonist action forms the basis of most contraceptive and gynecologic uses, while in the absence of progesterone, it may be beneficial in the treatment of tumors like meningiomas, which possess progesterone receptors but no estrogen receptors. 5. Short term administration of mifepristone decreases LH secretion in both follicular and luteal phases, but when the drug is given for 3 months or more, it increases LH secretion. Its action on the hypothalamus and pituitary are both antagonistic and agonistic, depending on dose and time. In monkeys the administration of RU 486 in the early follicular phase blocks ovulation, but the block is overcome by the administration of LH. 6. During pregnancy, mifepristone blocks the inhibition of progesterone on the myometrium (uterine muscle) permitting normal myometrial contractions to begin. It augments the (normal) action of prostaglandin F2a during labor and helps to soften the

cervix. This property is utilized in inducing abortions and labor. Prostaglandin synthesis is prevented by indomethacin, but uterine contractions proceed after mifepristone is administered after indomethacin, suggesting a pathway other than the normal physiological one. 7. When the dominant follicle has been demonstrated on ultrasound mifepristone will inhibit the LH surge and further follicular growth for a time, but follicular growth resumes later and ovulation occurs. Continuous administration of 2 mg/day of mifepristone for 30 days inhibits ovulation and delays menstruation while prolonged administration results in lower serum estradiol levels; periodic addition of a progestin leads to secretory change in the endometrium. This regimen produces well controlled bleeding, but does not always block ovulation. Administration of mifepristone once weekly does not consistently inhibit ovulation. A most common "contraceptive" use is to administer a single 200 mg dose on the 2nd day after the mid-cycle LH surge. This does not alter the cycle length or serum concentrations of FSH, estradiol, or progesterone, but does prevent imbedding through endometrial disruption. When given at the end of the luteal phase, 17-19% of women had positive pregnancy tests and continuing pregnancies. These figures are similar to the failure rate of mifepristone alone in pregnancies with less than 7 weeks amenorrhea. Mifepristone does not induce menstrual bleeding in anovulatory cycles, but disrupts menstrual rhythm and is not recommended as a contraceptive. 8. Effect on breast cancer. Since mifepristone prevents proliferation of the endometrium, its effect on breast tumors has been explored. Effects on breast cancer cultures are mixed because the drug has both agonist and antagonist actions. Some animals with breast cancer had high rates of tumor remission, but human trials are still preliminary. Meningiomas have no estrogen receptors, but considerable numbers of progesterone receptors, hence mifepristone was tried. Only 1/4 of a small series of 14 had an objective response which did not last very long. 9. By blocking the feedback effect of cortisol on corticotropin secretion, half the patients with Cushings syndrome, caused by ectopic corticotropin secretion or carcinoma of the adrenal cortex, experienced reduction of their clinical signs. However, patients with Cushings disease were unaffected. 10. Untoward effects are rare with the single dose abortifacient regime, but include heavy bleeding, nausea, vomiting, abdominal pain, and fatigue. Animals were studied for teratogenic effects when abortion was not produced. Rats and monkeys did not exhibit any, but rabbits showed skull deformities that were attributed to mechanical effects due to uterine contractions resulting from the decrease in progesterone activity. Since prostaglandins are usually given together with mifepristone, women should be warned of the possibility of teratogenic effects. Three women, all smokers, experienced cardio-vascular complications, including one fatal mycocardial infarction. If candidates for the combination drugs are smokers, or more than 35 years of age, mysoprostol, a stable prostaglandin E_1 analog which is used in the prevention of gastric ulcer, is recommended as an effective substitute. In comparing side effects of medical and surgical methods of pregnancy termination, the skill of the operator is clearly a large factor. The authors recommend the combination drugs highly, especially for developing countries where the deaths for legal abortions are 10 times higher than in the United States. The authors are employed by the Center for Biomedical Research, the Population Council, N.Y. The work was supported by the George J. Hecht Fund, the Andrew W. Mellon Foundation, the Rockefeller Foundation, the Fred H. Bixby Foundation, the Buffett Foundation, the Charitable Trust of Mrs. Abby R. Mauze, the Educational Foundation of America, the Moore-White Foundation, the Edward John Noble Foundation, the Playboy Foundation, Mrs. John D. Rockefeller III, and the Swedish International Development Authority (Government of Sweden).

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.

FACT SHEET

Action, Effectiveness* and Medical Side-effects of Common Methods of Family Planning

Current Medical Research — *by Hanna Klaus, M.D.* — *Natural Family Planning*

METHOD	ACTION	METHOD RELATED	* INFRMD CHOICE TCHNG RLTD & UNRESLVD PREGS	Reported Range of Unplanned Pregnancies /100 Women Years (%) MEDICAL SIDE EFFECTS AND DISADVANTAGES
FERTILITY ACCEPTANCE METHODS				
Calendar rhythm	Calculates fertile phase from menstrual history.	N/A	20	Still widely used but far less reliable than Ovulation Method and Sympto-Thermal *(see below).*
Post-ovulatory Thermal Rhythm	Relies on post-ovulatory thermal shift.	0-1.2	0.7-19	None but requires abstinence in 2/3 of cycles.
Pre-and Post-ovulatory Thermal Rhythm	Combines thermal shift with calendar calculations.	1.5-5	8-19	None
Sympto-Thermal	Mucus, BBT, calculations, cervix signs.	0-1	0.7-22	None
Ovulation Method	Timing of intercourse by mucus observation.	0-2	0.36-24	None
FERTILITY SUPPRESSION METHODS			ADULTS / ADOLS.	
Withdrawal	Prevents sperm entry into the vagina.	N/A	15-40 / N/A	Frustration of partners.
Condom	Prevents sperm entry into the vagina.	2	12 / 18-26	Aesthetic objections. Latex allergy-uncommon.
Diaphragm with spermicide	Blocks sperm entry into the cervix.	3	18 / 32-44	Aesthetic objections.
Jelly and Foam	Spermicide in vagina.	3	21 / 34-48	Occasional allergies.
Vaginal sponge	Same vehicle, nonoxynol-9, remains in place 24 hours. No data on effect of absorption of agent from vagina.	5-8	18-28 / N/A	No side effects if used correctly. Toxic shock reported when left beyond recommended time.
IUD	1. Destroys gametes before fertilization occurs. 2. Prevents implantation of early embryo if conception occurs.	1	6 / 10-15	Infection of the uterus and tubes leading to infertility: Tubal pregnancy; Increased menstrual bleeding; uterine perforation; septic abortion.
Tubal Ligation	Prevents sperm and egg from uniting in the tube.	0.2	0.4 / N/A	Risks of any surgery; 3-5% menstrual disturbance or pelvic pain; some require hysterectomy.
Vasectomy	Prevents sperm from leaving scrotum.	0.10	0.15 / N/A	Ligation of vas causes extravasation of sperm into scrotum resulting in rise of sperm antibodies which persist in 25% of men, the implications are still in the process of exploration. Increased risk of prostate cancer described in 2 studies; also increase in lung cancer if surgery was over 20 years ago.
"The Pill" *(Birth control pill, oral contraceptives, "o.c.'s")*	1. Prevents ovulation by blocking luteinizing hormone surge. (see • below) 2. Alters cervical mucus to block sperm entry. 3. Alters uterine lining to prevent implantation *(early abortion).* • *One of three cycles with Triphasic pills is ovulatory.*	0.1	2.5 / 11-15	Increases risk of cervical cancer; changes the lipid component of the blood. Very long list for inappropriately selected candidates, chief contraindication: smoking, also high blood pressure. Since problems with blood clotting are due mostly to the estrogen in the pill, pills with lower and lower estrogen levels are being produced in an effort to offset this.
Progesterone-only pill *("mini-pill")*	Alters uterine lining to prevent implantation *(early abortion).*	0.5	4	Same as birth control pill, lower risks of blood clotting, but no menses or constant or unpredictable bleeding; (some) delay in return to fertility until 12 months after injection is stopped. Incidence of ectopic pregnancy same as in untreated population. Patternless bleeding may require addition of estrogen.
Injections *("Depo-Provera" DMPA-depot medroxy progesterone acetate)*		0.5	1-2	
Norplant system *(Levonorgestrel)*	Blocks LH surge first 2 years. As level drops affects only endometrium and Cx. *(Norplant I-Two rods which carry simular drugs to Norplant II, but will only last for two years. Norplant II-implant lasts 5 years.)*	0.5	1-2	Over half the users discontinue, mostly due to irregular bleeding or no menses. Removal of rods is sometimes difficult. Rods are made of silastic. No information yet, but breast implants made of the same material are no longer considered innocuous.

Corrected & given out Sp/Sum 1994

* The effectiveness reported for all methods is based on calculations which categorize unplanned pregnancies according to method or user factors, and divide the number of pregnancies by the total number of exposure cycles or months. Sometimes, Pearl Indices were used, at other times, Life Tables.

Natural Family Planners separate user related pregnancies into:

A) Informed choice: A couple who had previously indicated that they were using the method to avoid pregnancy and opted to have intercourse on a day of recognized fertility.

B) Teaching Related: Misunderstanding of the rules of the method.

C) Unresolved: No or inadequate information to categorize the unplanned pregnancy.

The new thinking is to divide the cycles of perfect use from the cycles of imperfect use in order to correctly assign the role of method or user factors. In that way one can assess the role of chance more accurately. These data are still being compiled and may or may not differ very much from current figures for method or user effectiveness. Robert Kambic, M.P.H., Department of Population Dynamics, Johns Hopkins University, states *"when couples follow all rules always, the number of pregnancies per 100 couples in one year is one to four, while for couples who do not always follow the rules, the number of pregnancies per 100 couples in one year is from 5-25. For couples who do not follow the rules faithfully, the effectiveness rates are similar to those found among couples using barrier methods of contraception such as condom, diaphragm, foam, sponge, and cervical cap." (R. Kambic, personal communication, 1993.)*

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NB: Fertility acceptance methods are morally acceptable according to the Roman Catholic Church's teaching on conjugal love and responsible parenthood. Fertility suppression methods are not morally acceptable according to these same teachings.

The purpose of this Fact Sheet 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. Each item is summarized and references are given. This Fact Sheet may be reproduced in whole without alteration. **Current Medical Research** (1993), DDP for NFP, NCCB, 3211 Fourth St., N.E., Washington, D.C. 20017.