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# Current Medical Research

Hanna Klaus, M.D.



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## Natural Family Planning Diocesan Activity Report

### SUPPLEMENT

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**Please Note:**

The Doctors Billings will **NOT** come to Washington in December to attend the meeting of the Institute for International Studies in Natural Family Planning as stated in the previous US OM News. They are expected to attend the Human Life International Meeting, April 3-7, 1991 in Santa Clara to be followed by talks in the Santa Rosa area, April 7-15. They will also attend the Billings Ovulation Method Association Meeting at St. Mary's University, San Antonio, Texas, July 25-28, and lead the faculty in the Teacher Training Course, July 29-August 1.

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**Reminder:** *The Washington Post* (October 31, 1990) writes that the Federal Drug Administration (FDA) is preparing to clear Norplant, a 5-year implant of levo-norgestrel for use in the U.S. Six silastic capsules of this synthetic long-acting progesterone are inserted below the skin of the arm. They release levo-norgestrel at a constant rate. The level is sufficiently high to abolish the LH surge for the first two to three years of use, while permitting ovulation for the remainder of the 5-year span. [The FDA hearings of April 27, 1989 were summarized in our May 1989 *Science Notes*.]

A summary of current data of norplant is presented by Donna Shoupe in "*Endocrine and Fertility Forum*" Vol. 13, No. 3 in *Fertility News* 24. There were 0.6 pregnancies/100 women reported during the first year of use. The cumulative rate is 1.5 pregnancies over five years. Blood levels of levo-norgestrel are 400 pg/ml in the first year and 300 pg/ml after the third year. Fourteen percent of cycles show elevated progesterone values indicating possible ovula-

tion during the first year of use. This rises to 40% and over after three to four years of use. Data from other investigators show that up to one-third of the cycles are ovulatory, but many are followed by inadequate luteal phase, so that no clinical pregnancies could ensue.

Norplant therefore operates by: 1.) suppressing ovulation - at best - 80% of the time; 2.) preventing the mucus from becoming penetrable to sperm; and 3.) its effect on the endometrium. Endometrial biopsies have consistently shown progesterational effect and suggest an unreceptive endometrium for embryonic implantation should conception occur.

Removal of implants is more difficult than insertion, and can pose problems. Ovulation is found within one to four weeks of removal. The pregnancy rate in women discontinuing in order to conceive is 50% at three months and 86% after one year. While disruption of bleeding patterns is common in the first year, those women who have regular menses and may be presumed to continue to ovulate are at highest risk for ectopic pregnancy. Since norplant is more successful in preventing intrauterine than tubal pregnancies, these must be looked for in any woman who has had regular menses and then skips a period. When women who use norplant have a positive pregnancy test, the chances of an ectopic pregnancy are 20%. The summary denies any significant metabolic effects of the effect of norgestrel. But Roy S. et. al. "**Elucidation of Carbohydrate Metabolic Status during Norgestrel-Containing Oral Contraceptive Therapy**" which appears in the same issue, show that short-acting norgestrel at the higher

dose found in the oral combination pill is associated with an increase in insulin resistance and a decrease in glucose-effectiveness. While the researchers did not extend their study to the clinical implications, it is clear that diabetes mellitus can be expected from the oral tablets.

Similar conclusions to Roy's were reached by Godsland, et. al. from the Wynn Institute in London. [Godsland, I. et. al., "**The Effects of Different Formulations of Oral Contraceptive Agents on Lipid and Carbohydrate Metabolism**," *The New England Journal of Medicine* November 1990, 323:1375-1381.] They found that the oral formulations also raised LDL and lowered HDL cholesterol sufficiently to raise the question of increased risk of coronary heart disease later on. Nevertheless, the dosage in the implant is so much lower that no metabolic effects were found.

[The effect of norplant on young girls who have not settled down to regular ovulation has not been investigated, yet it is being blithely recommended for adolescents. There is no reason to think that it will be any less harmful than oral contraceptives under those circumstances. Women who were not ovulating regularly before OC's sometimes require ovulation induction before ovulation returns. The effect of continued drug exposure on the immature cervix has also not been investigated. Destruction of the S mucus-bearing units similar to that described by Odeblad with oral contraceptives may well be found with the implants. Ed.]

Ahmed, G., et. al. "Characteristics of Condom Use and Associated Problems: Experience in Bangladesh," *Contraception*, November 1990, 42:523-533.

Data from the 1983 Bangladesh condom user survey were analyzed for patterns of condom use and problems directly influencing their effectiveness. A previous survey had found an apparent gap between reports of the numbers of condoms distributed compared to the numbers of users. 1983 survey data was analyzed from behavioral and managerial perspectives to identify factors influencing utilization hoping to improve both family planning and AIDS/STD prevention services. Patterns of use were related to differences in source of supply - free and public or privately priced systems, whether the user was urban or semi-rural and to perceptual differences of men and women of the list of complications voiced at interviews. The greatest problem identified was breakage which was reported by 45% of males, three to five times over the past two to three years. This meant that the average regular user could expect 0.7 to 1.1 condom breaks per year. Failure of the method was not listed among the complications, but lack of sexual satisfaction, uncomfortable feeling, unpleasant odor, dislike by spouse, slippage, burning sensation, and allergic conditions were all listed. Often women had more complaints than men. It is curious that "the AIDS epidemic" has greatly increased interest in the use of condoms and in their effectiveness. The authors state that "information on condom use is needed more for AIDS/STD prevention than for contraception, because consequences of method failure are more serious and consistent use is essential. A condom must be used only during the fertile period for contraception, and substitution of other methods provides equal protection." Evidently, at least 60% of the Bangladeshi men were "irregular users" of condoms. [Since failure of the method was not one of the reported complications, one is left free to speculate about the lack of failure. Ed.]

DiGiovanni, M., Vasilenko, P., and Beksky, D. "Laparoscopic Tubal Sterilization: The Potential for Thermal Bowel Injury," *Journal of Reproductive Medicine*, October 1990, 35:951-954.

Experiments were conducted on rabbits in an attempt to solve the controversy whether the intestine could be injured indirectly at times of laparoscopic tubal sterilization. They demonstrated that neither the hot tube (hot after coagulation with an electric current) or touching the intestine with a hot, recently used forceps, could cause injuries to the peritoneal surface of the bowel. Only direct coagulation of the intestine caused injury, and sometimes perforation, in the rabbit. However, the potential for adhesions caused by the hot tube touching other structures in the abdomen is very real. This may affect both future fertility - should the woman desire reversal of her operation - and may also bring about pelvic pain due to adhesions. The extent of post-operative morbidity is not listed, but the authors suggest considering some form of treatment to prevent the formation of adhesions.

Snow, R., Schneider, J., and Barbieri, R. "High Dietary Fiber and Low Saturated Fat Intake Among Oligomenorrheic Undergraduates," *Fertility and Sterility*, October 1990, 54:632-637.

Fifty-six (56) non-athletic college undergraduates of varying menstrual cycle lengths were studied for differences in body composition, nutrient intake, psychological stress, and urinary hormones. Thirty-five (35) women were eumenorrheic with regular cycle lengths from 24-34 days; 11 were mildly oligomenorrheic with cycle lengths > 34-50 days, while 10 were truly oligomenorrheic with cycle lengths 50 days. Curiously, no one assessed the proportion of ovulatory anovulatory cycles by any parameters. Urinary C-peptide was measured because it is associated with insulin deficiency. Insulin deficiency in turn is associated with clinical ovarian hypo-function, while hyper-insulinemia is associated with ovarian hyperstimulation. The significant variable with the mildly or obviously oligomenorrheic women was a much higher intake in crude dietary

fiber and a lower intake of fat. The lower reported intake of saturated fats by oligomenorrheic women, as compared to eumenorrheic women in the study was similar to previous findings among athletes. Vegetarians who eat a diet higher in fiber and lower in percent calories from fat have significantly greater fecal bulk and fecal excretion of estrogen. They also have lower circulating levels of estradiol 17B and estrone. It is suggested that the greater fecal bulk reduces the absorption and recirculation of estrogen through the liver, making less estrogen available to the body. [This could account not only for menstrual pattern, but anovulation, had it been looked for. Ed.]

Church, C.A. and Geller, J. "Lights! Camera! Action! Promoting Family Planning with TV, Video, and Film" *Population Reports*, December 1989, Series J. No. 38.

*Population Reports* is supported by USAID. This issue is an overview of the efforts of television, videotape, and film approaches to disseminate family planning information. In many target countries, local entertainers have been hired to produce songs or dramas, sometimes serials, all of which promote the message of responsible parenthood. For more than a decade, the message of contraception has been equated with responsible parenthood. More and more adolescents are the targets of these promotions, ostensibly because the rate of adolescent sexual behavior is high. How much of earlier sexual debut is the direct result of these promotions can only be speculated. The entire third world in Latin America, Africa, and Asia/Oceania has been targeted. The messages are repeated often. Evaluation suggests that there is always a response, as shown either by family planning acceptors switching to the method advertised or in new acceptors. Nearly all of the local IPPF and AVS (Association for Voluntary Sterilization) affiliates are called *pro-familia* or *pro-pater*. Quite often a relatively modest investment of US funds is matched by contributions in kind from the target country's government or private industry.