

June 2009 -An Overview of Contraception

Control of reproduction is the essence of women's empowerment. In the Third World 4,500 women die from childbirth related complications EVERY THREE MINUTES. In most Western countries contraceptive choice is readily available, relatively inexpensive, effective, and reversible in most cases when sterilization is not the option.

In ancient times it was not immediately known that sexual union was the cause of conception. Eventually when, what now seems obvious, became widely known to cause pregnancy, the actual mechanism was unclear. There was a theory known as "Ex Ovum Omnia" that roughly translated "from the egg comes everything" and held that the female egg only needed to be touched by a sperm for conception. The idea of genetics was not born yet. A competing idea was the "homunculus theory" that maintained that inside a sperm cell was a little person that only needed to gain entry into the uterus to expand and grow. In any event feeble attempts to prevent conception began to take shape. The Romans fashioned condoms out of lambskin and the ladies of the time made a roll of elephant dung and honey to be inserted vaginally. This was copied after an ancient Egyptian recipe using crocodile dung and camphor. How infection was avoided remains a mystery but the likely odor of these devices would seem to have precluded sexual union. Arab traders crossing the Sahara and Mongols crossing the Gobi desert along the Silk Road inserted stones into the uteri of camels to prevent pregnancy- a prelude to the modern intrauterine device (iud). Through the middle ages there were vague tales of contraceptive potions and unguents of uncertain efficacy. Plain old abstinence, while not popular, was effective. So, big families were the rule for centuries but children were needed to till the field and work in the guild halls and many succumbed to childhood diseases that have been eliminated today. Hence contraception was not much in demand and, in fact, was proscribed by the Church.

The biggest breakthrough in contraception came in the late 1950's with the invention of the birth control pill ("the pill"). Taken daily it prevented pregnancy 96% of the time, had few side effects and when ceased, fertility returned. Then, as now, it prevents pregnancy by blocking ovulation and thickening the cervical mucus. The side effects are minimal: occasional weight gain, moodiness, change in sexual urges, and rarely increase in the tendency of blood to clot resulting in heart disease and/or stroke. Collectively the risks from the pill are less than the risks of pregnancy. The pill is thought to reduce breast and uterine cancer, neutral to ovarian cancer and widely regarded as having drastically reduced cervical cancer because women need to come to the office every year for an exam before the pill can be renewed and this exam includes a pap smear that is still the best screen for cervical cancer. Today, the dosage of the pill is much less thanks to newer hormones so the side effects are reduced but is still contraindicated for women who are over 35 and smoke. Some pills are even used to reduce heavy periods, decrease premenstrual dysphoric disorder. Other pills can be taken to allow periods every three months and there are now new ones that allow a yearly period. For those that have trouble swallowing pills, there is even a chewable variety.

The Intrauterine Device (iud) has been around since the previously mentioned Arabs and the camels but has only been used for human contraception since the early twentieth century. They come in different sizes and shapes and are inserted into the uterus through the cervix by a physician in the office. The exact mechanism of action is unclear but probably prevents the sperm from reaching the egg. The early devices were large and caused cramping and bleeding but the newer ones today are good for ten or five years respectively and can actually reduce menstrual flow. For those who cannot remember to take a pill it is an ideal method of contraception but is ill advised for a woman who has not had children since there is a risk of infection that could result in sterility. Once removed by having the doctor pull on the string, fertility returns within two months.

Depo-Provera is a shot given every three months that contains only progesterone so is convenient and safe even for women who smoke but can cause weight gain and osteoporosis if taken long enough.

There is a relatively new method in which a hormonal implant is inserted into the upper arm and fertility returns upon removal. The side effects are minimal and are as effective as the pill.

Most other methods are known as “barrier methods” that involve a device that holds a spermicide against the cervix. The diaphragm, now rarely used, held contraceptive gel against the cervix and then a list of sponges, foams, and inserts that roughly did the same thing. As with condoms, the efficacy is dependent upon the user following the manufacturer’s guidelines.

A word here about a new male contraceptive that uses a shot of testosterone that is in early testing and promises to have few side effects and promises to be reversible. More to come as this appears on the market.

Lastly, permanent contraception is available to couples who are 100% sure that they do not want more children as there are no reversals of these procedures. Males can opt for a vasectomy that cuts the tube that carries sperm under a general anesthetic or under local anesthesia as an outpatient. Women generally have two choices when considering a tubal ligation: a laparoscopic procedure done under general anesthesia as an outpatient: a camera is inserted into the belly button and another instrument through an abdominal puncture wound used to either burn the tubes closed or to place a ring or clip on the tubes. Both procedures have a 1/2,000 failure rate. A new method utilizes a small coil that is placed in the fallopian tubes utilizing a scope inserted into the uterus visualizing the tubal opening. No incisions are necessary. However, a conventional contraceptive must be used for three months before an x-ray is taken to insure that the tubes have been blocked. There is a movement underway to do this procedure in a doctor’s office but it must be as well equipped as a hospital operating room to deal with any potential complications.

In conclusion, the choices are many and should be discussed in detail with your doctor. A hasty decision is usually regretted especially concerning sterilization and this decision should be made after much thought and careful weighing of the pros and cons.