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In response to several requests from the Free U. community, I have put together some fundamental facts and guidelines concerning the practice of birth control. Most currently practiced birth control methods involve the female and her reproductive organs; this is what I will concentrate on.

To begin with, here's a simple and (I hope) clear description of the female anatomy and physiology. The first part of the birth canal is the vagina, a tube-like structure, opening between the urethra and anus, and extending backwards and upwards at about a 45° angle (when standing). The inner end of the vaginal tube dead-ends, and the birth canal continues through the uterus, which resembles a large pear, turned upside down and stuck into the roof of the vagina at its inner end. The uterus is placed behind the bladder, and extends upwards and forward at a 90° angle from the direction of the vagina. The smaller end of the uterus is the cervix, or neck, and can be felt at the end of the vagina as a small, rounded structure. From either side of the larger end of the uterus, the uterine, or Fallopian tubes extend out and then curve back to come in conjunction with the ovaries, which lie slightly above and behind the upper end of the uterus. The ovaries are small oval bodies where the female egg develops. The female reproductive cycle is regulated by blood borne hormones, some secreted by the reproductive organs themselves and some secreted by the pituitary gland, located on the floor of the brain. The average cycle is 28 days long, but can vary greatly with the individual. Menstruation is caused by the shedding of the inner wall of the uterus, and is usually considered to signal the beginning of a new cycle. At this point, a new egg begins to ripen in the ovary. For the first 14 days of the cycle, estrogenic hormones, secreted by the ovary, cause the egg and its surrounding cells to grow, as well as causing the inner walls of the uterus to proliferate and thus become ready to receive the egg. At about the fourteenth day of the cycle (plus or minus 2 days), ovulation occurs. The egg is released from the ovary and travels slowly down the uterine tubes to the uterus. The egg lives for 12-24 hours after ovulation, and during this time may be fertilized by a sperm, which has traveled upwards through the cervix, and may meet the egg at any place between there and the ovary; from the point of conception, the fertilized egg is implanted in the uterus. The sperm lives for 24-48 hours, and therefore the "fertile period" is 48-72 hours. Whether or not fertilization, or conception, occurs, the estrogenic hormones greatly decrease at the time of ovulation, and the progestational hormones begin to increase. The proges-

terones make the uterus into a suitable environment for an implanted egg. If an egg has been implanted in the uterus, estrogenic and progestational hormones continue to be secreted in increasing quantities throughout pregnancy. If no egg is implanted, the progestational hormones begin to decrease at about the 22nd day of the cycle, and the walls of the uterus subsequently are shed.

Now, about birth control itself: there are a variety of methods available. Each has its own advantages and risks. Whatever method you choose to use, it is extremely important to consult a physician before using any sort of contraception and generally a good practice to have a pelvic examination once a year. Remember: particularly if you are female, the state of your reproductive organs has a great effect, both physically and psychologically, on your everyday life, and I urge you to keep yourself checked up. There is no sure-fire method of contraception except total abstinence, but who digs that? For the various methods, these are the statistical percentages of effectiveness: pills, 97-100% effective; intrauterine contraceptive devices (coils, etc.), 94-99%; jellies and creams, 62-92%; diaphragm, 67-92%; condom, 72-89%; douche, 64-82%; coitus interruptus, 62-97%; rhythm method, 65-86%.

There are two types of oral contraceptives (pills), combination and sequential. The combination type (e.g. Enovid) contains both estrogen and progesterone, and prevents conception by preventing ovulation from taking place. The sequential type (e.g. Sequens) involves taking doses of estrogen for about 20 days, and progesterone for 5 days. Thus ovulation occurs at a time when the uterus is not ready for implantation. The combination type is stronger and almost 100% effective, but has more undesirable side effects than the sequential type, which more closely mimics the normal hormone cycle and is about 97% effective. If you take pills, pay close attention to your physical state, especially for the first several months. There are many possible side effects, including weight gain, nausea, cardiovascular accidents, liver impairment, etc. Of course, these are the same side effects that one might have during pregnancy. If you miss a day with sequentials, there is a greatly increased risk of conception, but with the combination type, there is almost no problem with missing a day. Whatever kind of pill you use, it is probably a good idea to stop using them for a while every several years, in order to insure normal functioning in the future.

Intrauterine devices are especially shaped pieces of metal or plastic that are inserted by the physician into the cervix and uterus. It is not known exactly how they prevent conception. The advantages of an IUD are that it can be inserted and left in for an indefinite period of time, usually with no permanent change in the reproductive function, since it can be taken out by a physician. The problems associated with the IUD are possible bleeding, pains in the abdomen, possible inflammatory disease of the uterus, and frequent spontaneous expulsion of the device.

The other methods of contraception that I mention above do not have as many risks of side effects, but neither are they as effective. Their effectiveness generally depends upon how thorough and responsible the individual is.

As a final remark, I want to reassert the importance of consulting a physician whom you trust for any type of contraception involves a significant alteration in your body functioning and requires some supervision. If you have pertinent questions on this or other medical subjects, feel free to call me at 326-8757 evenings and weekends, and 321-1200, extension 5353 during the day.