

# Modern Technology in Contraception

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Before a new baby is born, a complicated chain of events had been occurred from the beginning of fertilization when a male sperm is fused with a ripped ovum of a woman which eventually leads to the development of an embryo. The embryo will differentiate and grow in the uterus until term and get a delivery.

However, this process is not that simple in human. Traditionally women need to find their love ones and get married before allowing their partners for sexual intercourses. 300-400 million sperm are released in each ejaculation and swim traveling along a long tract of woman reproductive organ to find the ovum and just only one healthy sperm can penetrate and accomplish for the fusion. What's an incredible task!

Timing of fertilization is crucial for the success. During the woman lifetime, only less than 500 ova (eggs) will actually be released, average one egg about 28 days. An egg must be fertilized within 48 hours of its release. After that, the egg begins to break down and will dissolve in the uterus.

Despite of that, the human population is still overcrowded especially in some parts of the world and needed to be controlled both in term of quantity and quality of life.

To have a birth control, one can do things (contraception) to ensure that pregnancy only happens if and when you want to.

Contraception is a mean to prevent the fertilization of an egg by a sperm (conception) or the attachment of the fertilized egg to the uterus (implantation).

There are several methods of contraception either reversible or permanent. None of reversible method is completely effective, but some are far more reliable than others.

Choice of method depends on a person's lifestyle and preference. However, basic factors for making the selection include effective birth control, safe and less side effects, retract-ability or easy to return to fertility again, cancer risk, method of use, cost and one's age and health condition. Thorough physical examination and consultation for self-care with your gynecologist is recommended before use.

According to Dr. Manopchai Thamkhantho, Division of Family Planning and Reproductive Health, Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, hormonal contraceptions are widely used for birth control recently with very effective and less side effects and can be used in many forms including oral pills, skin patches vaginal rings, implants, or injections.

Ultra-low dose contraceptive pill is now available in the markets with minimal side effects such as weight gain, acne, spotting or bleeding between period and nausea. However, one needs to take everyday which sometimes may be forgotten.

Taking oral contraceptives can also reduce to risk of developing of several types of cancer including uterine (endometrial) cancer, ovarian, colon, and rectal cancers. The risk is reduced for many years after the oral contraceptives are discontinued. However, both breast and cervical cancers are slightly more likely to be diagnosed particularly when one use for more than five years.

Skin patches are now popular and optional among teenagers and young working girls. The skin patch is used for 3 of 4 weeks only spared in the fourth week to allow the menstrual period to occur. Each patch is left in place for one week and then removed and a new patch is placed on a different area of the skin. Spotting is uncommon.

Contraceptive injections are also available. Its use is very effective and convenient since the hormone is injected every 1 to 3 months. However, it is not suitable for women who need to resume fertile rapidly after the injection is discontinued.

Dr. Manopchai also adds that intrauterine contraceptive device (IUCD) is another non hormonal method of contraception. The copper T IUD is approved for 10 years of use and the progesterone-releasing IUCD (Mirena) is approved for 5 years. It is safe and reliable only if it is properly placed in the uterus by gynecologists and the infection rate is rare. The ideal candidates are among women who have contraindications for hormonal use including those with history of venous thromboembolism (blood clot), severe blood lipid problems, liver disease, estrogen dependent tumors, poorly controlled hypertension, and even smokers over age 35. Contraindications include current and recent pelvic infection, and all immune compromising diseases.

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