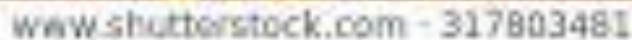




Human Health & Sex Education


Open Course –V Semester

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Introduction

- Human population is population is soaring to high peaks, crossing all restrictions and shattering all resistances.
- This amazingly rapid booming of mankind is known as *population explosion*.



Grave problems that may result from are population explosion

- Shortage of land for habitation and cultivation
- Shortage of food and other essential commodities.
- Exhaustion of non-renewable natural resources (coal, petroleum, minerals, etc.)
- Global environmental pollution.
- Damages to life-supporting natural systems through thoughtless human interference with nature.

Birth Control / Fertility Control

Birth control, or fertility control, is the only effective measure by which the eruptive growth of human population can be brought under some control.

It, in turn, involves the following measures:

- Prevention of the formation and release of gametes.
- Prevention of fertilization.
- Prevention of the implantation of the zygote.
- Pregnancy termination or abortion.

Birth Control Measures

- Birth control measures fall under two major groups,
 - Contraception or prevention of pregnancy
 - Abortion or termination of pregnancy

CONTRACEPTION

- Contraception is the prevention of fertilization and pregnancy by physical, mechanical, chemical, hormonal and surgical methods, without affecting the fertility of the individual.
- It allows intercourse, but prevents conception in one of the three ways, namely
 - (i) by venting the production of sperms and ova
 - (ii) by destroying the sperms
 - (iii) by preventing the sperms from reaching the ovum.

CONTRACEPTION

- The contraceptive methods used in birth control are extremely diverse.
- Usually, they are grouped under five categories
 - natural or physical methods,
 - mechanical methods,
 - chemical or barrier methods,
 - hormonal methods,
 - surgical methods.

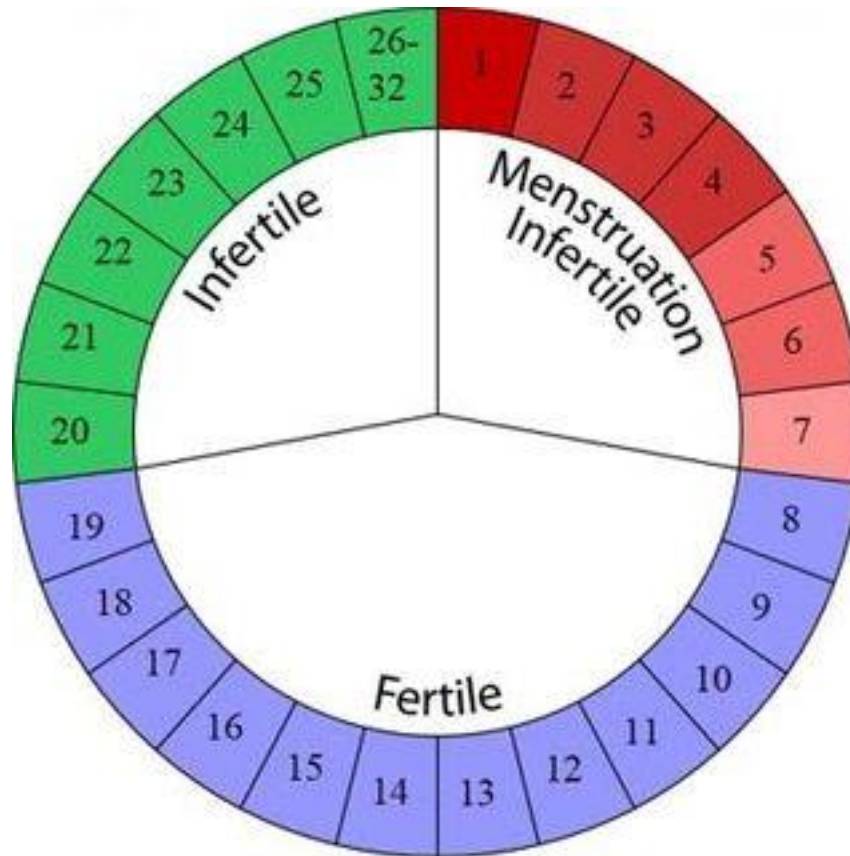
Natural or physical methods

- Physical methods are adopted to prevent fertilization.
- The commonest physical methods of birth control include
 - coitus interruptus
 - complete abstinence
 - period abstinence or rhythm system

Period Abstinence or Rhythm System

- 1. 2. 3. 4. 5. 6. 7. 8. 9 - **Safe period**
- 10, 11, 12, 13, 14, 15, 16, 17- **Risk period**
- 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28 - **Safe period**

Period Abstinence or Rhythm System





Mechanical methods (barrier methods)

- They are employed to prevent fertilization, while the others are applied to prevent implantation.
- The commonest mechanical methods include the use of condoms, diaphragm and intrauterine devices

Condom

- Perhaps the most popular and the highly reliable contraceptive.
- Device employed by the male is the use of condom (rubber sheath).
- It is placed around the erect penis prior to insertion and semen is collected in it.
- It has no side effects at all.
- Gives some protection from sexually transmissible diseases.

Diaphragm

- Diaphragm is a female device parallel to the condom used by male.
- It is a dome-shaped structure that is inserted into the upper part of the vagina prior to sexual intercourse.
- It fits over the cervix and blocks the vaginal passage.
- This prevents the entry of sperms into the cervix.
- Diaphragm also serves to prevent fertilization.
- It has no side effects, and has high reliability.
- Diaphragm has to be smeared with spermicidal jelly before use.

Cervicaal cap / Diaphragm



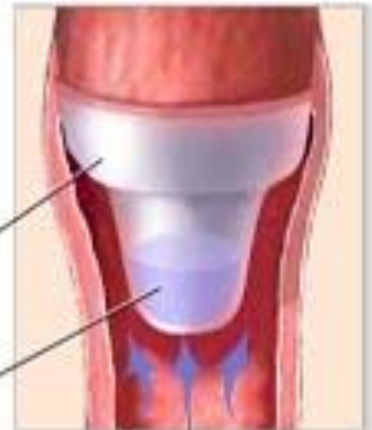
Cervical Cap



Barrier method:
The cervical cap fits
snugly over the
cervix, preventing
sperm from entering
the uterus



Cervical cap
blocks sperm from
entering cervix



Spermicide

Sperm

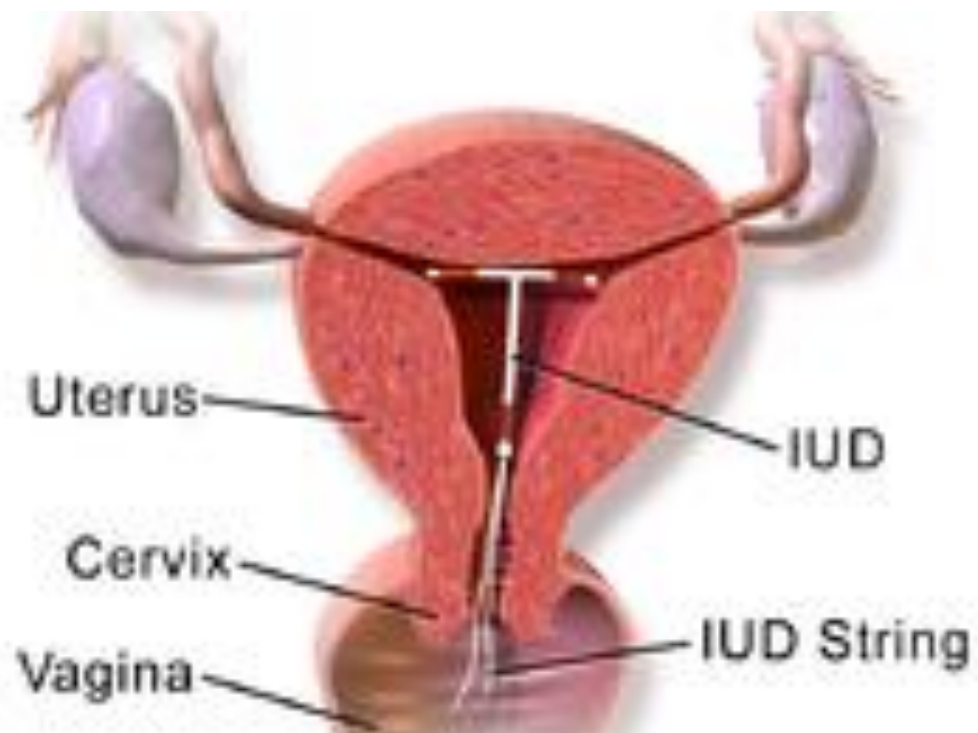


Spermicide inside
diaphragm kills sperm

Intrauterine contraceptive device (IUCD)

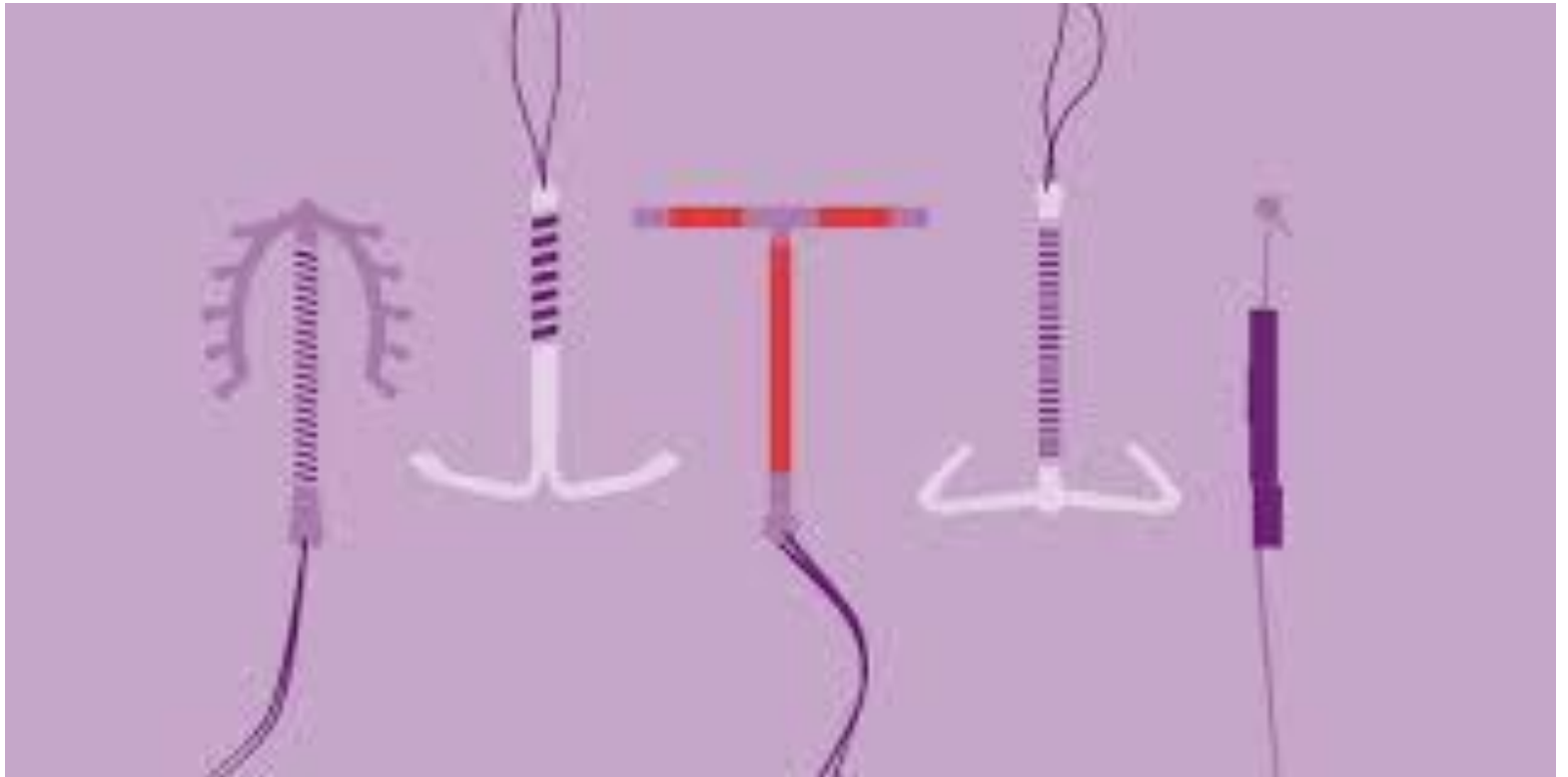
- This is a female method.
- It involves the deposition of a small, loop-like, coiled, T-shaped, or 7-shaped object, made up of plastic, copper, or stainless steel, inside the uterus.
- The commonly used devices are Luppe loop, Saf-T coil, copper-7, copper-T 200, copper-T 380, progestasert (T-shaped device, loaded with progesterone), etc.
- The device is introduced into the uterus by an expert with the help of an insertion tube.
- This method serves to prevent implantation.
- Although it has several severe side effects, it is a fairly reliable contraceptive device

IUCD



Intrauterine Device (IUD)

IUCD Devices



Chemical methods

- Chemical methods of contraception include the use of chemicals spermicides, such as foams, jellies, creams and douches.
- These are injected into the vaginal passage prior to coitus.
- They may kill sperms and thus prevent fertilization.
- Even though chemical spermicides have no side effects, they are not that much reliable

Hormonal methods

- Hormonal methods of contraception consist of the use of oral contraceptive pills.
- Pills are mostly preparations of the synthetic hormones – progesterone and oestrogen.
- They suppress ovulation and thereby prevent pregnancy.
- They are highly effective, though they have some side effects

Hormonal methods

- Hormonal pills – 3 types
 - combination pills
 - sequential pills
 - mini pills.
- Combination pills - mixture of Oestrogen and progesterone. They are taken daily for 21 days from the 5th to the 25th day of the menstrual cycle.
- Sequential pills - only oestrogen for the first 14 days, and a mixture of oestrogen and progesterone for the next 7 days.
- Mini pills - only progesterone. They are taken daily throughout the year.

Surgical methods

- Surgical methods include the removal of sex organs and sterilization.
- (i) Removal of sex organs
- (ii) Sterilization

Removal of sex organs

- Surgical removal of sex organs is an absolute contraceptive measure.
 - Castration (removal of testes)
 - Oophorectomy (removal of ovaries)
 - Hysterectomy (removal of uterus).
- Once performed, these operations cannot be reversed.
- So, there is no chance of producing a child any further.
- Apart from this, the removal of testis and ovaries cause hormonal imbalances and problems

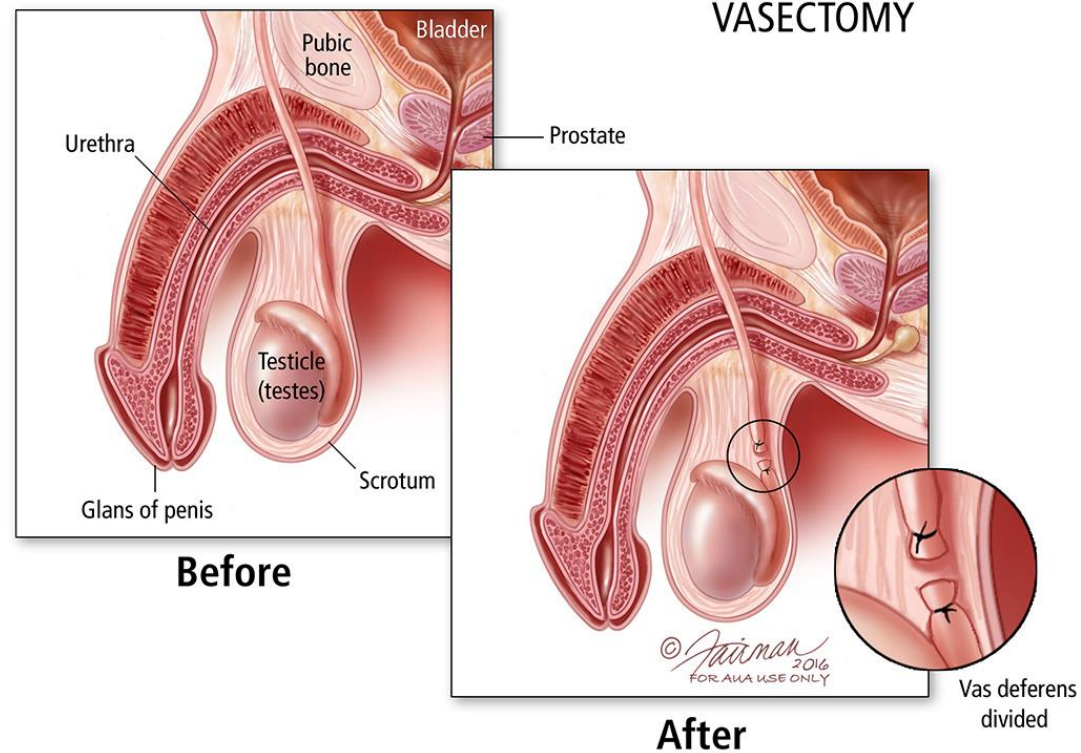
Surgical sterilization

- Sterilization is the process by which an individual is made impotent, incapable of reproduction.
- Voluntary sterilization
- Surgical sterilization in males is known as vasectomy
- Surgical sterilization of females is called tubectomy or tubal ligation.

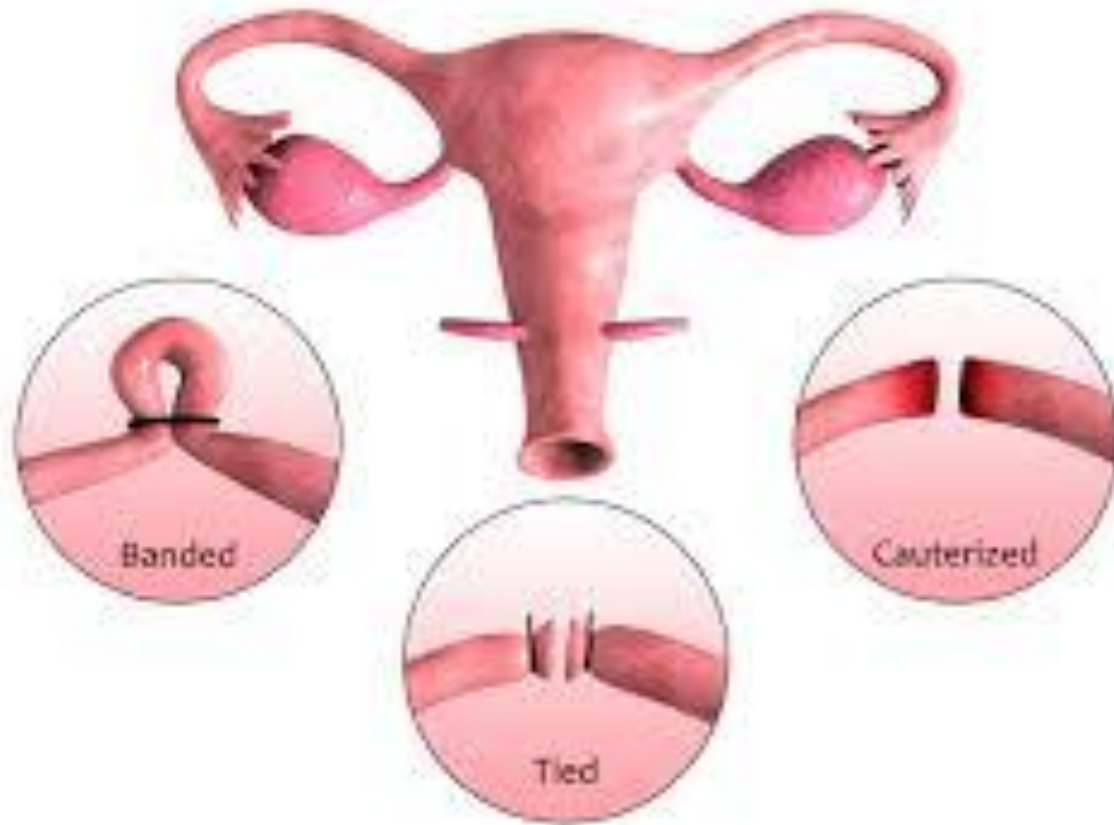
Surgical sterilization

- Vasectomy involves the cutting or blocking of the vas deferens (sperm duct). It blocks the passing out of sperms, and thus prevents fertilization.
- Tubectomy involves the cutting of oviduct blocks sperm entry to the initial part of the oviduct where fertilization takes place. This, in turn, prevents fertilization.
- Surgical sterilization is the most reliable method of birth control.
- But its main draw back is that at present it is permanent and irreversible.

Vasectomy



Tubectomy



Tubectomy



Abortion

- Abortion is the termination of pregnancy, with this death of the embryo or foetus.
- Natural (spontaneous) or artificial (induced)
- Artificial abortion is the deliberately induced and premature medical termination of pregnancy (MTP) with the removal of the embryo or foetus from the uterus by artificial methods.
- Done before the 20th week of gestation, and less usually after 20th week and before the 28th week of gestation.
- For birth control only opted when other methods of contraception have failed
- At present, legalized abortion is a common method of birth control

Abortion

- In birth control, abortions are done in three principal ways
 - Vacuum aspiration
 - Dialation and curettage
 - Laproscopy

Vacuum Aspiration

- Vacuum Aspiration (suction method)
- In suction method, the cervix is dilated first with the help of a dilator
- Then, a suction aspirator is inserted into the uterus and with its help the embryo and the connected structures are evacuated.
- Suction method is employed during the first three months of pregnancy.

Dilation and curettage (D & C)

- Dilation and curettage (D & C)
- In D & C, the cervix is dilated first using a dilator.
- Then, the endometrium (lining of uterus) is scraped out and the implanted embryo is removed with the help of a spoon-like instrument, called curette.
- This also is done during the first three months of pregnancy.

Laparoscopic technique

- In the laparoscopic method, some amount of amniotic fluid is removed first with the help of a needle or syringe.
- Soon, a solution containing salt and prostaglandins (a group of hormones secreted by several tissues) is injected to replace the amniotic fluid taken out.
- Salt solutions kills the foetus within one or two hours.
- Prostaglandins induce the contraction of uterine walls to expel the foetus
- Laproscopic abortion is done in late pregnancies (up to six months).

