

CHAPTER 4

REPRODUCTIVE HEALTH

POINTS TO REMEMBER

Amniocentesis : Diagnostic technique to detect genetic disorder in the foetus.

Infertility : Inability to produce children in spite of unprotected sexual cohabitation of a couple.

Mortality : Death rate (number of persons removed from a population by death) at a given time.

Sterilization : A permanent method of birth control through surgery in male or female.

IUCD : Intra Uterine Contraceptive Device

RCH : Reproductive and Child Health care

STD : Sexually Transmitted Disease

CDRI : Central Drug Research Institute

MMR : Maternal Mortality Rate

MTP : Medical Termination of Pregnancy

VD : Venereal Disease

RTI : Reproductive Tract Infection

PID : Pelvic Inflammatory Disease

ART : Assisted Reproductive Technologies

IVF : In Vitro Fertilisation

ZIFT : Zygote Intra Fallopian Transfer

Reasons for Infertility

- (i) Physical
- (ii) Congenital diseases
- (iii) Drugs
- (iv) Immunological reaction

The couple can be assisted to have children through certain special techniques commonly known as assisted reproductive technologies (ART).

- (i) **In Vitro Fertilisation (IVF)** : Fertilization outside the body in almost similar conditions as that in the body, followed by embryo transfer (E.T.).

Test Tube baby Programme : Ova from the wife/donor female and sperm from husband/donor male are allowed to fuse under simulated condition in the laboratory.

ZIFT : Zygote intra fallopian transfer – Zygote or early embryo upto Eight blastomeres is transferred into the fallopian tube.

IUT : Intra Uterine Transfer – Embryo with more than eight blasomeres are transferred.

- (ii) **Gamete intra fallopian transfer (GIFT)** : Transfer of an ovum collected from a donor to fallopian tube of another female who can not produce ova, but can provide suitable conditions for fertilization and further development of the foetus upto parturition,
- (iii) **Intra Cytoplasmic sperm injection (ICSI)** : The sperm is directly injected into the ovum to form an embryo in the laboratory and then embryo transfer is carried out.
- (iv) **Artificial Insemination** : This method is used in cases where infertility is due to the inability of the male partner to inseminate the female or due to very low sperm counts in the ejaculates. In this method, the semen collected from the husband or a healthy donor is artifactally introduced into the vagina or into the uterus (IUI-Intra uterine insemination).

Method of Birth Control

- (i) Natural Methods : Periodic abstinence
 Coitus interruptus
 Lactational amenorrhea.
- (ii) Barrier methods : Condom, Diaphragms, Cervical cap.
- (iii) Intra uterine devices : Non – medicated e.g. Lippes loop
 Copper releasing e.g., Cu-T, multiload 375
 Hormone releasing e.g. LNG–20, progestasert
- (iv) Oral contraceptives : Pills / Saheli
 Small doses of either progestogens or
 Progestogen – estrogen combination
- (v) Surgical (Sterilisation) : (1) Tubectomy; (2) Vasectomy

QUESTIONS

VSA (1 MARK)

1. Give the term for prenatal diagnostic technique aimed to know the sex of developing foetus and to detect congenital disorders.
2. After a successful in vitro fertilisation, the fertilised egg begins to divide. Where is this egg transferred before it reaches the 8-celled stage and what is this technique called?
3. Give the term for rapid population growth.
4. Name the fluid from which foetal cells are extracted for chromosomal analysis.
5. Give technical name of female used to bring up in vitro fertilized egg to maturity.
6. Name the oral contraceptive developed by CDRI, Lucknow.

SA-II (2 MARKS)

7. Lactational Amenorrhea is a method of contraception. Justify. What is the maximum effectiveness of this method in terms of period/duration?
8. How are non medicated IUD'S different from hormone releasing IUD'S? Give examples.
9. What are implants? How do they help in preventing fertilisation?
10. Briefly explain two natural barriers for birth control.
11. Enlist any four possible reasons for infertility in human beings.

SA-1 (3 MARKS)

12. Give another name for sexually transmitted diseases. Name two sexually transmitted diseases which are curable and two diseases which are not curable.
13. Differentiate between Vasectomy and Tubectomy.
14. Name the techniques which are employed in following cases :
 - (a) Transfer of an ovum collected from a donor into the fallopian tube of another female who cannot produce ova but can provide suitable environment for fertilisation and development.

- (b) Embryo is formed in laboratory in which sperm is directly injected into ovum.
 - (c) Semen collected either from husband or a healthy donor is artificially introduced either into vagina or uterus.
15. Mention the various precautions one has to take in order to protect himself/herself from STDs.
16. What are the disturbing trends observed regarding MTP?

LA (5 MARKS)

17. Briefly explain the various reproductive technologies to assist an infertile couple to have children.

ANSWERS

VSA (1 MARKS)

- 1. Amniocentesis.
- 2. Fallopian tube; Zygote intra fallopian transfer (ZIFT)
- 3. Population explosion.
- 4. Amniotic fluid.
- 5. Surrogate mother.
- 6. Saheli

SA-II (2 MARKS)

7. (a) Ovulation and menstrual cycle do not occur during the period of intense lactation following parturition. Therefore, as the mother breast feeds, chances of conception are nil.
- (b) It is effective only upto a maximum period of six months following parturition.
8. (a) Non medicated IUDs = Lippes loop, Copper releasing IUD'S (CuT, Multiload 375) → These increase phagocytosis of sperms within uterus and release copper ions which suppress sperm motility and fertilising capacity of sperm.
- (b) Hormone releasing IUDs – Progestasert, LNG-20 – These makes uterus unsuitable for implantation and the cervix hostile to sperms.
9. The structures which contain hormones like progesterone and estrogen and are placed under the skin.

10. Periodic abstinence – couple should avoid coitus from 10th to 17th day of menstrual cycle.

Coitus interruptus – Male partner withdraws his penis from the vagina just before ejaculation of semen.

11. Physical, congenital disease, Drugs, Immunological and even psychological (any four).

SA-I (3 MARKS)

12. Venereal disease (VD)/Reproductive tract infection (RTI)

Curable : Syphilis, Gonorrhoea

Non Curable : Hepatitis B, AIDS, Genital herpes

- 13.

<i>Vasectomy</i>	<i>Tubectomy</i>
1. Method of sterilisation in males	1. Method of sterilisation in females.
2. Vasa deferentia of both sides are cut and tied	2. Fallopian tube of both sides are cut and tied.
3. Prevents movement of sperms at cut end.	3. Prevent movement of egg at cut end.

14. (a) Gamete intra fallopian transfer.
(b) Intra cytoplasmic sperm injection
(c) Intra uterine insemination.
15. (i) Avoid blood transfusion from an infected person.
(ii) Avoid sex with an unknown partner or multiple partners.
(iii) Always use condom.
(iv) Avoid sharing of injections needles and syringes and surgical instruments.
16. Majority MTP's performed illegally by unqualified quacks, missuse for female foeticide.

LA (5 MARKS)

17. Refer page no. 64, NCERT textbook for class XII/Points to remember in this