

Maternal Health, Population Control & Family Welfare

Reproductive Health

- According to the World Health Organisation (WHO) the reproductive health means a total well being in physical, emotional, behavioural and social aspects in reproduction.
- Reproductive health problems include population explosion, low birth weight, preterm birth, reduced fertility, impotency, menstrual disorder and sexually transmitted diseases.

STRATEGIES FOR REPRODUCTIVE HEALTH PROBLEMS

- Government of India undertook a number of programmes to attain total well being of reproductive health as a social goal.
- '**Family Planning programmes**' were initiated in 1951 and were periodically assessed over the past decades.
- Improved programmes covering wider reproduction – related areas are currently in operation under the popular name '**Reproductive and Child Health Care (RCH) Programmes**'.
- **Sex education** should be introduced in schools to provide right information about sex-related aspects.
- Statutory ban on amniocentesis for sex-determination to legally check increasing female feticides, massive immunisation of children etc., are some appreciable steps.

POPULATION EXPLOSION

- Human population is increasing at a very fast rate over a relatively short period of time. Such a rapid or exponential increase in population is termed as **population explosion**.
- Increased health facilities along with better living conditions has an explosive impact on the growth of population.
- In 2016, the population of India was reported as 1.32 billion (May 15, 2016), second to China with 1.37 billion people. According to most recent UN data, population of India is 1.35 billion (2018).
- Over population leads to a number of problems which exert adverse impact on a nation.
- It increases poverty, unemployment, scarcity of food, water, natural resources, home, etc. It also causes eco-degradation, energy crisis etc. So, **over population must be checked to maintain continuity of human race.**

Reasons for population explosion

- Early marriage
- Religious orthodoxy against family planning
- Increased health facilities
- Better food storage and transportation facilities
- Increased sanitation and life amenities
- Better means of protection from natural calamities
- Reduced death rate particularly IMR and MMR
- Desire of male child
- Increased agricultural production
- Lack of social awareness
- Advanced postnatal care

BIRTH CONTROL METHODS

- The regulation of conception by various preventive methods or devices to limit the number of offspring is called **birth control** or **contraception**.
- Contraceptive methods can be broadly grouped into two groups: temporary and permanent method.

Birth control
methods act
by

Preventing sperm transport to ovum

Preventing ovulation

Preventing implantation of early embryo in uterus

Temporary Methods

- Temporary methods include natural methods, barrier methods, chemical methods, IUDs, oral contraceptive pills, subcutaneous implants and hormone injections.
- **Natural methods** avoid meeting of sperm and ovum by following ways:
 - (i) **Periodic abstinence or rhythm method** : The couples avoid or abstain from coitus from day 10 to 17 of the menstrual cycle because ovulation can occur during this period. The effectiveness of this method is limited.
 - (ii) **Coitus interruptus or withdrawal method** : It involves withdrawal of penis from vagina by the male just before ejaculation. Effectiveness is moderate.
 - (iii) **Lactational amenorrhea method** : This method is based on the fact that ovulation and therefore the menstrual cycle does not occur during the period of intense lactation following parturition. It can be effective only upto a maximum period of six months after child birth.

- **Barrier methods** prevent the meeting of sperm and ovum by use of following barriers:
 - (i) **Condoms** are made of thin rubber/latex sheath used to cover penis in male or vagina and cervix in female just before coitus. Condom is also a safeguard against AIDS and other sexually transmitted diseases. Female condoms are called **femidoms**.
 - (ii) **Diaphragms, Cervical caps** and **Vaults** are also made of rubber and are inserted into the female reproductive tract to cover the cervix before coitus.
- **Chemical methods** include foam tablets, creams, jellies and pastes that are inserted in the vagina before intercourse. These contain spermicides such as lactic acid, citric acid, boric acid, zinc sulphate and potassium permanganate which kill sperms.
- **Intrauterine devices** are plastic or metal objects which are inserted by doctors in the uterus through vagina. These are available as **non-medicated IUDs** (e.g., Lippes loop), **copper releasing IUDs** (CuT, Cu7, Multiload 375) and **hormone releasing IUDs** (Progestasert, LNG-20). IUDs increase phagocytosis of sperms within the uterus and the Cu^{2+} ions released suppress sperm motility and fertilising capacity of sperms. The hormone releasing IUDs make the uterus unsuitable for implantation and the cervix hostile to the sperms.
- **Oral contraceptives** are physiological contraceptives used in the form of pills. These are of two types:
 - (i) **Combined pills** are most commonly used oral contraceptive pills which contain synthetic progesterone and estrogen to check ovulation.
 - (ii) **Mini pills** contain progestin (progesterone like synthetic hormone) only.
 - **Saheli**, a new oral contraceptive pill for female contains a **non-steroidal** preparation called **centchroman** which is taken once in a week after an initial intake of twice a week dose for three months.

- **Morning after pills** are also known as **emergency contraceptives**. These pills can prevent pregnancy when taken within 72 hours after unprotected intercourse. It is not a regular contraceptive method.
- Hormonal pills act in four ways: (i) Inhibition of ovulation. (ii) Inhibition of motility and secretory action of oviducts. (iii) Impairing cervix's ability to allow sperm passage and transport. (iv) Alteration in uterine endometrium making it unsuitable for implantation.
- **Subcutaneous implants** or **norplant** is a six matchstick-sized capsule containing steroid which is inserted under the skin of the inner arm above the elbow. The capsules slowly release the synthetic progesterone for about five years. It is very safe, convenient, effective and long-lasting.
- **Hormone injections** are progesterone derivative injections which are given once every three months.

Permanent Methods

- These include sterilisation by surgery, surgical methods block gamete transport and prevent fertilisation. It is effective but **reversibility is very poor**. It includes:
 - (i) **Vasectomy** is the sterilisation procedure in males. In this method, a small part of vas deferens is removed or tied up through a small cut on the scrotum.
 - (ii) **Tubectomy** is the sterilisation procedure in females. In this method, a small part of the Fallopian tube is removed or tied up through a small cut in the abdomen or through vagina.



Vasectomy



Tubectomy

Questions

1. What is reproductive health?
2. What are the factors responsible for the population explosion in India?
3. How does Cu-T act as an effective contraceptive for human females?
4. Why do some women use Saheli pills?
5. What is lactational amenorrhoea?
6. Name any two copper-releasing Intra Uterine Devices (IUDs). List two reasons that make them effective contraceptives.
7. How do surgical procedures prevent conception in human? Mention the way it is achieved in human males.