

BIOLOGY

CLASS NOTES FOR CBSE

Chapter 04. Reproductive Health

01. Introduction

Reproductive health refers to healthy reproductive organs with normal functions. However, it has a broader perspective as it involves well-being reproductive health means well being in physical emotional behavioral and social aspects of reproduction. Therefore, reproductively, to a healthy society of people having physically and functionally normal reproductive organs and normal emotional and behavioral interactions and among them in all sex-related aspects.

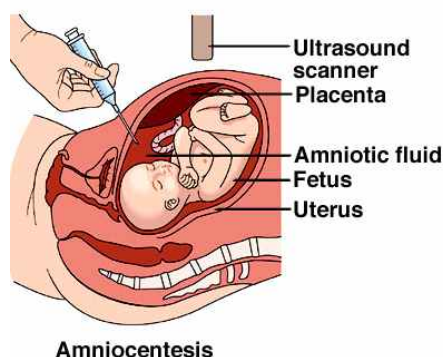
Reproductive Health Problems and Strategies

- (i) **Over population** : The main problem of India is its excessive population is directly connected with reproductive health To achieve total reproductive health, some plans and programs were started Family planning program was started in 1951 in India and was periodically assessed over The major tasks carried out under these programs are to provide facilities and support for building up a reproductively healthy society.
- (ii) **Awareness about reproduction** : Audio-visual and print middle government and non-governmental agencies are doing a good job to create awareness among people about reproduction in humans.
- (iii) **Sex Education** : Sex education in schools should also be introduced and encouraged to provide right information about myths and misconceptions about sex-related aspects.
- (iv) **knowledge of growth of reproductive organs and STDs** : proper information about reproductive organs, adolescence (period of rapid growth between childhood and adulthood), safe and hygienic sexual practices sexually transmitted diseases (STDs), e.g., Aids etc., would help to lead a reproductively healthy life.
- (v) **Birth control devices and care of mother and child** : Fertile couples and people of marriageable age group should know about available birth control devices, care of pregnant mothers, postnatal (after birth) care of the mother and child, importance of breast feeding, equal importance for the male and female child, etc.
- (vi) **Prevention of sex abuse and sex related crimes** : Awareness of problems due to uncontrolled population growth, social evils like sex abuse and sex-related crimes, etc. need to be created so that people should think and take up necessary steps to prevent them and thereby build up a reproductively healthy society.
- (vii) **Amniocentesis – Meaning and use** : Amniocentesis is a foetal sex and disorder determination test based on the chromosomal pattern of the embryo's cells in the amniotic fluid surrounding the developing embryo.



MISOSTUDY.COM

The Best Online Coaching for IIT-JEE | NEET Medical | CBSE INQUIRY +91 8929 803 804



Procedure : Amniotic fluid contains cells from the skin of the foetus and others sources. These cells can be used to determine the sex of the infant, to identify some abnormalities. in the number of chromosomes and to detect certain biochemicals and enzymatic abnormalities. If it is established that the child is likely to suffer from a serious incurable congenital defect, the mother should get the foetus aborted.

Misuse of Amniocentesis : it is being misused to know the sex of unborn baby followed by medical termination of foetus, in case its female.

NOTE Recent studies have discovered that amniotic fluid can be a rich sources of multipotent mesenchymal, hematopoietic, neural, epithelial and endothelial stem cells.

- (viii) **A Research in reproductive health area :** it should be encouraged and supported to find out new methods. “Saheli” a new oral contraceptive for the females was by our scientists at central Drug Research Institute (CDRI) in Lucknow, India.
- (ix) **Medical facilities :** Better awareness about sex related problems, prenatal care of mother, medically assisted deliveries and post natal care of mother and infant decrease maternal and infant mortality. Small families, better detection and cure of sexually transmitted diseases (STDs) and increased medical facilities for sex-related problems, etc. indicate improved reproductive health of male and female individuals and children.

Measures to Control Over Population

- (a) **Education :** people, particularly those in the reproductive age group, should be educated about the advantage of a small family. Mass media and educational institutions can an play important role in this campaign.
- (b) **Marriageable Age :** Raising of the age of marriage is a more effective means to control the population (now marriageable age of female is 18 years and that of male is 21 years).
- (c) **Incentives :** Couples with small families should be given incentives.
- (d) **Family planning :** There are many birth control measures which can check birth rate.



MISOSTUDY.COM

The Best Online Coaching for IIT-JEE | NEET Medical | CBSE INQUIRY +91 8929 803 804

02. Human Population Growth

Human population growth is measured as the annual average growth rate which is calculated as follows:

$$\text{Average annual growth rate (in percent)} = \left[\frac{P_2 - P_1}{P_1 \times N} \right] \times 100$$

where, P_1 is population size in the previous census;

P_2 is population size in the present census; and

N is numbers of years between two census.

Census gives information about the number of individuals present in a given region at a given time. The time required for a population to double itself is called the **doubling time**.

The present growth rate of approximately 1.7 percent per year (individuals per 1000 of population) for india is smaller then the peak of about 2.1 percent per year during 1965-1970.

Population growth rate is indicated by

- (i) the annual average growth rate and
- (ii) the doubling time.

Growth rate depends on birth (fertility) rate, death (mortality) rate, migration and age sex ratio.

- (i) **Fertility (Natality)** : Fertility is the ability of the reproductivity active individuals to produce babies. Birth rate is the number of babies produced per thousand individuals. It differs form the population growth rate as it is never negative while the growth rate can be negative. **Total fertility rate (TFR)** is the average number of children that can born to a women during her lifetime. The more developing countries have lower fertility rate than the less developed countries. Fertility is mainly controlled by economics and human aspirations. **Replacement level (RL)** is the number of children a couple must produce to replace themselves so as to maintain the population at zero growth level. RL is sightly higher then **2.0** because some children die before reaching reproductive age. RL is **2.1** in devolved countries and **2.7** in developing countries due to a higher death rate at immature age.
- (ii) **Mortality** : Mortality is the death rate per thousand individuals. death rete has fallen in most countries. It is due to improve personal hygiene, sanitation and morden medicines. Demographers generally use crude birth rate and crude death rate. Crude birth rate is the numbers of live births per thousand persons in the middle of a given year (i.e., on July 07) The difference between the numbers of births and that of deaths is called the rate of natural increase. If birth and death were equal a zero population growth rate would result is known as demographic transition.



MISOSTUDY.COM

The Best Online Coaching for IIT-JEE | NEET Medical | CBSE INQUIRY +91 8929 803 804