

# NCERT Solutions For Class 12 Biology Chapter 4- Reproductive Health

## EXERCISE

PAGE NO.66

### 1. What do you think is the significance of reproductive health in a society?

#### Solution:

Reproductive health can be termed as the total well-being in possibly all the aspects of reproduction including emotional, physical, behavioral and the social well-being. Some diseases can be transferred from one individual to another through sexual contact, for example gonorrhoea, AIDS etc. They are referred to as sexually transmitted diseases. Sexual contact can also lead to unwanted pregnancies and further complications in case sexually transmitted diseases are contracted. Therefore, it is important to create an awareness amongst people, the youth in particular, in the context of different topics related to reproduction. The youth is the future of the country. They are most susceptible to acquire sexually transmitted diseases. Hence, some preventive measures that can be adapted are – creating awareness about different birth control methods available, sexually transmitted diseases & their preventive measures, importance of gender equality. These steps will greatly impact in bringing up a socially conscious healthy family. Also, creating awareness about the uncontrolled population growth and social evils that still exist in the society will promote the concept of bringing up a reproductively healthy society.

### 2. Suggest the aspects of reproductive health which need to be given special attention in the present scenario.

#### Solution:

Reproductive health can be termed as the total well-being in possibly all the aspects of reproduction including emotional, physical, behavioral and the social well-being. The different aspects that require special attention are as follows:

- Awareness needs to be created in the reproductive and child healthcare
- Creating awareness amongst people by counselling about reproductive organs, adolescence, hygienic and safe sexual practices, different sexually transmitted diseases such as AIDS etc.
- Sex education needs to be introduced in schools. This helps in eradicating misconception and myths in the context of sex-related topics.
- People should be educated about the different birth control options that are available, care of pregnant mothers, post-natal care of the mother and the newborn, significance of breast-feeding
- Professional expertise, strong infrastructural facilities, material support to provide medical assistance and care for the patients facing reproductive issues, issues because of uncontrolled population growth, awareness about family planning, social evils such as sex abuse and sex-related crime.

# NCERT Solutions For Class 12 Biology Chapter 4- Reproductive Health

### 3. Is sex education necessary in schools? Why?

#### **Solution:**

Yes, sex education is necessary in schools. It is because of the following reasons:

- To impart apt and necessary information to students in order to save them from misconceptions and myths about sex-related topics
- Provides appropriate knowledge about adolescence, reproductive organs and related concepts
- Creates awareness amongst students about the need for hygienic and safe sexual practices, sexually transmitted diseases. This helps students, specifically those in adolescence to lead a healthy, reproductive life

### 4. Do you think that reproductive health in our country has improved in the past 50 years? If yes, mention some such areas of improvement.

#### **Solution:**

Yes, there has certainly been enormous improvement in reproductive health in the past 50 years. Listed below are the areas of improvement:

- The decrease in the infant mortality rate can be attributed to the Massive child immunization programme
- Drastic decrease due to better post-natal care can be attributed to Maternal and infant mortality rate
- The awareness created through the Family planning programmes has seen people opting for smaller families
- Decrease in the rate of sexually transmitted diseases and unwanted pregnancies due to use of contraceptives

### 5. What are the suggested reasons for population explosion?

#### **Solution:**

Population explosion can be used to refer to the sudden, large increase in the size of a population. There is an increase in the population every day, leading to population explosion. Two of the major reasons are as follows:

- Increase in the birth rate and the longevity
- Decrease in the death rate

In the last 50 years, the death rate has decreased evidently. Decrease in the death rate and increase in the birth rate can be attributed to the various measures that have been adapted such as diseases-control, measures taken to create awareness and spreading knowledge of importance of reproductive health, measures taken to introduce sex-education topics at school level, better medical facilities, ensuring food supply and medical assistance during emergency times and so on. These reasons have also led to an increase in the longevity of people.

## **NCERT Solutions For Class 12 Biology Chapter 4- Reproductive Health**

**6. Is the use of contraceptives justified? Give reasons.**

**Solution:**

Yes, the use of contraceptives is completely justified.

Human population is increasing exponentially. In order to regulate this population growth, keeping a check on the process of reproduction has become the need of the hour. For this, different contraceptive devices have been circulated for use so as to reduce unwanted pregnancies which has helped to lessen the recorded count of birth rate thereby regulating the process of population explosion.

**7. Removal of gonads cannot be considered as a contraceptive option. Why?**

**Solution:**

Contraceptives are used in order to prevent unforeseen, unwanted pregnancies, to prevent spreading of sexually transmitted diseases. Some other alternatives to prevent unwanted pregnancies are oral, barrier, natural and surgical methods. But, a complete removal of gonads cannot be contraceptive option as it will lead to infertility and make several hormones unavailable which are crucial for the normal functioning of accessory reproductive parts. Contraception is used to prevent any chance of fertilization and not make a person infertile for life as removal of gonads would do.

**8. Amniocentesis for sex determination is banned in our country. Is this ban necessary? Comment.**

**Solution:**

Amniocentesis is a pre-natal diagnostic technique which is used to determine the sex and the metabolic ailments of the developing foetus in the uterus of the mother which is carried out by observing chromosomal patterns. The method was deployed to determine the presence of any genetic disorder in the foetus. But unfortunately, this procedure has been misused for gender detection before the birth of the child hence leading to female foeticide. Hence, to prevent this practice, ban on the usage of amniocentesis for sex determination is necessary.

**9. Suggest some methods to assist infertile couples to have children.**

**Solution:**

The inability of a couple to produce a baby inspite of unprotected sexual intercourse is termed as infertility which can arise due to congenital diseases, physical, psychological and immunological factors. The diagnostic and corrective measures of few of these disorders can be carried out in specialized health care units, infertility clinics. Assisted reproductive technologies (ART) are the special techniques that can assist infertile couples to bear children.

Listed below are some methods assisting infertile couples to have children

## NCERT Solutions For Class 12 Biology Chapter 4- Reproductive Health

- In vitro fertilization – Embryo transfer(IVF – ET)  
In this method, the donor's egg is removed and fertilized in vitro by the sperm of the donor under a sterile environment in a culture medium. This fertilized embryo is then transferred to the body of the donor for the complete development. Deployment of this method has induced a success rate of less than 20%. IVF – ET is of two types: IUT & ZIFT
  - ➔ IUT (intra uterine transfer)  
The fertilized egg arrives at the 8-celled stage (blastomere). It is then transferred to the fallopian tube for further stages of development.
  - ➔ ZIFT(zygote intra fallopian transfer)  
In this method, the fertilized egg arrives at the 32celled stage (advanced stages to the 8blastomere stage) and is then transferred to the uterus for further stages.
- In vitro fertilization – surrogacy  
In this method, embryo is formed in a fertile female which is then transferred to the body of an infertile female who is not able to conceive. The success rate of this procedure is nearly 65%
- Gamete intrafallopian transfer (GIFT)  
In this method, the unfertilized oocytes and the sperm are collected and transferred to the fallopian tube of another female who is unable to produce eggs but is able to offer a suitable ambience for fertilization and development. The success rate of this procedure is around 30%.
- Intracytoplasmic sperm injection (ICSI)  
Carried out in laboratory. Direct injection of sperms in to the ovum for the formation of an embryo. The success rate of this procedure is nearly 60-70%.
- Artificial insemination (AI)  
In this method, semen that is collected either from a healthy donor or husband is introduced either into the uterus of the female or her vagina. The success rate of this procedure is about 20-40%.

### 10. What are the measures one has to take to prevent from contracting STDs?

#### Solution:

Listed below are the measures to be taken to avoid contraction of STDs

- Blood transfusion from an infected person or drug abuser must be avoided
- Sharing surgical instruments and injection needles must be totally avoided
- Having sexual intercourse with an unknown or multiple partners must be avoided
- Always use precautions(condoms) during intercourse
- In case of any doubt, early detection and cure must be taken through medical assistance from a qualified doctor

## NCERT Solutions For Class 12 Biology Chapter 4- Reproductive Health

### 11. State True/False with explanation

- (a) Abortions could happen spontaneously too. (True/False)
- (b) Infertility is defined as the inability to produce a viable offspring and is always due to abnormalities/defects in the female partner. (True/False)
- (c) Complete lactation could help as a natural method of contraception. (True/False)
- (d) Creating awareness about sex related aspects is an effective method to improve reproductive health of the people. (True/False)

#### Solution:

- (a) True
- (b) False  
Infertility is defined as the inability to produce a viable offspring and can be due to abnormalities in either the male or the female partner.
- (c) False  
Lactational amenorrhea or complete lactation can help as a natural method of contraception. But it is limited until the completion of lactational period only which is until six months after parturition.
- (d) True

### 12. Correct the following statements:

- (a) Surgical methods of contraception prevent gamete formation.
- (b) All sexually transmitted diseases are completely curable.
- (c) Oral pills are very popular contraceptives among the rural women.
- (d) In E. T. techniques, embryos are always transferred into the uterus.

#### Solution:

- (a) Surgical methods of contraception prevent gamete flow during the act of intercourse
- (b) Some STDs can be cured if detected early and treated appropriately. But AIDS still remains to be incurable.
- (c) Oral pills are very popular contraceptives among urban women
- (d) In embryo transfer (E.T.) techniques, the 8-celled embryos are transferred into the fallopian tube. Whereas more than 8-celled embryos are directly transferred to the uterus.