



## **NCERT Class 12 Biology Exercise Solutions**

### **Chapter 3 – Reproductive Health**

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

**Ans:** Reproductive health holds profound significance in society, encompassing various aspects that impact the well-being of individuals and communities. It goes beyond the narrow confines of reproductive processes and encompasses a holistic approach to sexual and reproductive well-being. Reproductive health in a society is significant because the people are aware of

- (i) birth control methods and advantages of small family,
- (ii) sexually transmitted diseases and methods to avoid them,
- (iii) importance breast feeding and post-natal care of the mother and baby and
- (iv) equal opportunities for the male and female children.

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

**Ans:** The aspects of reproductive health which need to be given special attention are :

- Introduction of sex education in schools to give right information to the young minds about reproductive organs, accessory organs of reproduction, secondary sexual characters, adolescence and related changes, safe and hygienic sexual practices, STDs etc.
- Providing knowledge about available birth control methods, care of pregnant mothers, post-natal care of the mother and child, importance of breast feeding etc.
- Creating awareness about consequences of uncontrolled population growth and social evils (sex abuses and sex-related crimes, use of drugs, tobacco and alcohol etc.) among young people.

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

**Ans:** Yes, sex education is necessary in school. Because introduction of sex education in school encourage to provide the right or correct information to the young people's so as to discourage children from believing in myths & having misconceptions about sex related aspects. Proper information about reproductive organs, safe & hygienic sexual practices, STDs etc. would help people, those in the adolescent age group to lead a healthy reproductive life. In many countries, sexual education raises much contentious debate. Chief among the controversial points is whether covering child sexuality is valuable or detrimental; the use of birth control such as condoms and hormonal contraception, and the impact of such use on pregnancy, outside marriage, teenage pregnancy, and the

transmission of STDs. Increasing support for abstinence – only sex education by conservative groups has been one of the primary causes of the controversies.

**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**

**Ans:** Yes, there has certainly been an 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 immunisation programme.
- Drastic decrease due to better post-natal care can be attributed to the 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 the use of contraceptives.

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

**Ans:** (i) Increased health facilities along with better living conditions had an explosive impact on the growth of population.

(ii) Decline in Death rate

(iii) Decline in Maternal Mortality Rate

(iv) Decline in Infant Mortality Rate

(v) Increase in the number of people in the reproductive age.

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

**Ans:** Population in India is increasing at a very fast rate and such a growth necessitated intense use of contraceptive methods to bring all the fertile couples under its cover. It will help in bringing the birth rate down and consequently check the population growth. Therefore, the use of contraceptives is justified. It is essential to mention here that the selection of a suitable contraceptive method should be practiced in consultation with qualified doctors. The government provides these facilities free at the family planning centres. Contraceptives are given free or at nominal prices at these centres to the couples of reproductive ages desirous of preventing conception.

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

**Ans:** Removal of gonads or its parts is a surgical method, of sterilization. Vasectomy and tubectomy are carried out in males and females respectively. It will lead to infertility & both male and female will be dependent on hormones in their remaining life to regulate functioning of reproductive organs. These are very effective but their irreversibility is very poor, so they are not good options for contraception.

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

**Comment**

**Ans:** Since Amniocentesis is misused to find out the sex of the foetus leading to female foeticides, it is necessary. It is the prenatal diagnostic technique, that helps to find out chromosomal (genetic) disorders, metabolic disorders of the foetus; in extreme cases where the foetus is found to be suffering from an incurable disorder Medical Termination of Pregnancy (MTP) is banned. The solution to the problem is not 'passing more laws, such as banning sex determination ultrasounds but raising the social & economic status of women,

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

**Ans:** ART (Assisted Reproductive Technologies) is a term that describes several different methods used to help infertile couples. ART involves removing eggs from a woman's body, mixing them with sperm in the laboratory and putting the embryos back into a woman's body.

Success rates vary depending on many factors. Something that affects the success rate of ART includes age of the partners, reason for infertility, type of ART, if the egg is fresh or frozen. Various methods are now available to help such couples are — in vitro fertilization, gamete intra fallopian transfer, intracytoplasmic sperm injection & artificial insemination.

**(i) In vitro fertilization** – Patient's egg & her partner's sperm are collected & mixed together in a laboratory to achieve fertilization outside the body. The embryo produced may then be transferred into the female patient. It is commonly known as test tube baby programme.

**(ii) Gamete Intra Fallopian Transfer (GIFT)** – A procedure in which eggs are retrieved from a woman, mixed with sperm & immediately replaced in one or other of the women's fallopian tubes so that they fertilize inside the body (in vivo).

**(iii) Intra Cytoplasmic Sperm Injection (ICSI)**– In this method, sperm & eggs are retrieved from both the parents. A single sperm is injected directly into an egg, then the fertilized egg is implanted into the woman's uterus.

(iv) Artificial insemination – In this technique, the semen is collected either from husband or a healthy donor & is artificially introduced either into the vagina or into the uterus of the female (IUI-Intra uterine insemination).

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

**Ans:** (i) Avoiding sex with unknown partner /multiple partners.

(ii) Always use condoms during intercourse.

(iii) In case of doubt, go for medical professional for early detection and get complete treatment if diagnosed with disease.

(iv) Education & counselling of persons at risk on ways to adopt safer sexual behaviour.

**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)**

**Ans:** (a) True. Due to internal factors like incompatibility, abortion could happen spontaneously.

(b) False. It is due to abnormalities/defects in either male or female or both the partners.

(c) True, but it is limited to period up to six months after parturition.

(d) True. Creating awareness about sex-related aspects removes the myths and misconceptions about these problems.

**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.**

**Ans:** (a) Surgical methods of contraception prevent gamete transport & thereby prevent conception.

(b) Except for hepatitis-B, genital herpes, and HIV infections, other STD diseases are completely curable if detected early and treated properly.

(c) Oral pill are very popular contraceptives among the educated urban women.

(d) In E.T. techniques, embryos with 8 blastomeres are transferred into fallopian tube and more than 8 blastomeres are transferred into the uterus.