

FAQs for PCPNDT

Ques 1: How is sex biologically decided?

Ans 1: In our society, the birth of a girl is usually blamed on the woman – fact, fiction and legend all over India are rampant with stories of women who have been mistreated or abandoned for not being able to give birth to a boy. It is seen as her fault. Biological science tells us a very different story. The sex chromosomes in men and women are different. There are two kinds of sex chromosomes: 'X' and 'Y'. The egg gamete of the woman contains the XX pair in the sex chromosome and the sperm gamete in the man contains the XY pair in the sex chromosome. During fertilisation two possibilities can occur. The woman contributes the X part of the chromosomal pair and the man contributes either X or Y. If the man contributes X it is female and if he contributes Y it is male. Hence the contribution from the man determines what the sex of the fertilised egg will be. It is only the sex chromosome from the man, which determines the sex of the child.

Ques 2: What is sex selection?

Ans 2: Sex selection is any act of identifying the sex of the foetus and elimination of the foetus if it is of the unwanted sex by using (or rather misusing) any method. Sometimes, Doctors and Technicians continue to communicate the sex of the foetus. Communication whether verbal, non- verbal, direct or indirect regarding the sex of the foetus to the pregnant woman, her friends or relatives or any person is prohibited and punishable under the law. (Sec 5(2))

Ques 3: What is sex ratio?

Ans 3: Sex ratio is the ratio of males to female in any population. In Indian census and other population data it shows up as the number of females per 1000 males. In any discussion on sex selection, the sex ratio in 0-6 age group or the child sex ratio is of critical relevance, since it is the measure that gives us a comparison of the number of boys and girls and indicates any prevalence of sex selective elimination.

3a. How does a sex ratio statistic become proof of sex selection and elimination of the foetus of a particular sex? The biological or natural norm of sex ratio at birth is 105 or 106 boys to 100 girls at birth. Ideally, the child sex ratio should be around 950 girls per 1000 boys. Indian child sex ratio seemed normal till 1981, after which there has been a significant decline – at the all-India level (from 945 in 1991 to 927 in 2001) and in the individual states too.

Ques 4. What is the social impact of a declining child sex ratio?

Ans 4: A declining sex ratio reflects gross discrimination against one sex within society. In India it confirms what is common knowledge – girls are less wanted or unwanted. One of the main reasons for this seems to be a practice that demeans women – the need to pay dowry to get them married. Daughters are seen as a burden because of the dowry to be paid for them and because any investment in them – for their nutrition, education, health, general well-being – will not help the natal family's future security. The increasing deficit of girls is creating a social imbalance within society. We have pockets in the country where very few girls are born. Since this means that there are no brides for the burgeoning son population, they are likely to import girls from other regions of the country. This has created another social problem – the purchase of young girls from poor regions. Women are thus treated as commodities, contributing to the further fall in their status in society. This can only lead to further exploitation and abuse of women,

more violence against them, increased trafficking and sex trade, and reemergence of practices like polyandry (one woman married to more than one man).

Ques 5: What are pre-natal diagnostic techniques or procedures?

Ans 5: “Pre-natal” means before birth. Techniques used for the detection or diagnosis of any physical or mental conditions in a foetus are known as pre-natal diagnostic techniques or procedures or tests. These techniques involve the study of any body fluid, blood, cells or any tissue from a pregnant woman or the foetus. This can also be done through a visual image, as is done in ultrasonography.

Uses of Pre-natal and Pre-conception Genetic Testing Pre-natal diagnosis of medical disorders can detect a potential threat for the mother and the foetus, thereby equipping the healthcare provider with information in case medical intervention is required. It also empowers the parents to make an informed choice of continuing the pregnancy or not in case of such a threat to the life of the mother or the child.

For example, knowing the Rh status (a blood grouping system) of the foetus in case of an Rh- negative mother is important to take steps in preventing damage to the red blood cells, liver and brain of the foetus.

Genetic disorders detected pre-natally include Down’s Syndrome (a leading cause of mental retardation); blood disorders like Thalassemia, Hemophilia, and Sickle Cell Anemia; some degenerative muscular diseases; and metabolic disorders leading to mental retardation. In many cases, genetic counselors can provide information and guidance regarding inheritance patterns, recurrence risk and medical consequences before the parents plan the pregnancy.

Genetic counseling should be considered in the following situations:

- Family history of late onset disorders with genetic component (e.g. Neuro-degenerative disorders like Huntington’s disease, mental illnesses like schizophrenia)
- History of the birth of a child with a birth defect or genetic disorder
- History of a relative with a birth defect or genetic disorder.
- History of stillborn infant
- Exposure to chemicals, drugs or other agents known to cause birth defects
- Mothers above the age of 35

Commonly used diagnostic techniques which have potential for misuse in sex selection

Amniocentesis; After conception, the foetus in the womb is suspended in a sac filled with a liquid. This liquid is called amniotic fluid. Amniocentesis involves the removal of a small amount of amniotic fluid from inside the sac with the help of a long needle inserted into the abdomen. The fluid contains cells belonging to the foetus that are then separated from the fluid. These cells are taken for chromosomal analysis (a study of chromosomes) through which any genetic abnormalities can be identified. The sex chromosomes are also present and hence it is possible to identify the sex of the foetus.

Chorionic villi biopsy: This technique involves the removal of a part of the elongated tissue (chorionic villi) surrounding the foetus through the lower opening of the uterus. This tissue is then tested for genetic defects; it can also reveal the sex of the foetus. It enables sex determination very early — between the 6th and the 13th week of pregnancy. Though detection is possible in the first trimester itself, this technique carries a risk of bleeding, pain and spontaneous abortion.

Ultrasonography: Sonography, as it is popularly known, is one of the most widely and commonly used diagnostic technique. The medical fraternity – doctors as well as technicians – use it for a variety of health problems. During pregnancy it is used for the detection of any problems with the foetus and to generally monitor its growth. Sonography has become a part of the routine check up done during the course of pregnancy. It basically uses sound waves not audible to the human ear to get a visual image of the foetus on a screen. The sex is determined based on the presence of the male genitalia, which may be visible on the screen after the fourth month, depending on the position of the foetus. Since sex detection is possible only in a later stage in pregnancy, abortion can be very risky and may lead to infertility.

Ericsson Method: This technique, used for pre-conception sex selection, involves the separation of X-chromosome bearing sperms and Y-chromosome bearing sperms through a filtration process. The ovum is then fertilized with a high concentration of the sperm bearing the desired chromosome.

Pre-implantation Genetic Diagnosis: This is one of the latest technologies that have potential for misuse for sex-selection. It involves the removal of a few early divided cells from a test tube embryo that are then tested directly by chromosomal analysis to identify the sex of the embryo.

Ques 6: Is there a law against sex selection?

Ans 6: Yes. A law was enacted in 1994 called the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act No. 57 of 1994. This law was amended in 2003 (amended vide Act 14 of 2003, effective 14-2-2003), now called The Pre-Conception and PreNatal Diagnostic Techniques (Prohibition of sex selection) Act.

Ques 7. What are the legal purposes for which pre-conceptual and pre-natal diagnostic techniques can be conducted?

Legally these techniques can be used to detect genetic and metabolic disorders, chromosomal abnormality, etc. in the foetus that could arise before birth and could be linked to a family history of any such condition and the sex of the foetus. These techniques however cannot be used for sex selection. They are used for the detection of any genetic conditions (such as haemophilia); chromosomal conditions (like Down's Syndrome); and inborn or congenital conditions (for example, RH incompatibility). They are also used when there are several indicators that point towards a greater risk to the woman – if her age is above 35 years; if she has undergone two or more spontaneous abortions; if she has been exposed to potentially dangerous chemicals, drugs, radiation or infection; if there exists a family history of physical and/or mental challenges such as spasticity or any other genetic disease or any other conditions that have been stated as per the Act. In other words a pre-natal diagnostic test could be legally conducted, if any of the above circumstances exist, posing a risk to the foetus and the pregnant woman. Certain pre-natal diagnostic tests such as sonography are widely used to monitor the growth of the foetus and are now part of the routine ante-natal check up during the course of pregnancy. However, they cannot be used for sex determination or selection. The Act makes it imperative for the medical practitioner carrying out the tests to take the written consent of the pregnant woman for such tests and inform her about their side effects. A copy of the consent obtained must be given to the woman. In case of ultrasound tests, the pregnant woman has to sign a declaration stating that she does not want to undergo the test for the purpose of determining the sex of the foetus

Most importantly, the consent and explanation has to be done in a language that she understands. If the practitioner does not take her consent for such tests and if his/her clinic is not registered, then conducting the test is illegal. The medical practitioner cannot communicate the sex of the child to the parents or anyone else, even if he/she finds it out during these tests.

Ques 8: Who can conduct these tests?

Ans 8: Only the persons specified in the Act and described below can conduct these tests: A medical geneticist – a person who possesses a degree or diploma in genetic science or has experience of not less than two years in such field after obtaining any one of the medical qualifications recognised under the Indian Medical Council Act (102 of 1956) or a post-graduate degree in biological sciences. A gynaecologist – a person who has a post-graduate qualification in gynaecology and obstetrics. A paediatrician – a person who has a post-graduate qualification in paediatrics. Sonologist/radiologist or imaging specialist – a person who possesses any one of the medical qualifications recognised under the Indian Medical Council Act or who possesses a post-graduate qualification in ultrasonography or imaging techniques or radiology.

Ques 9: Where can these tests be conducted?

Ans 9: These tests can be conducted at the following premises provided they are registered under the Act:

- i) Genetic Counselling Centre which means an institute, hospital, nursing home or any place, by whatever name called, which provides for genetic counselling to patients;
- ii) Genetic Clinic which means a clinic, institute, hospital, nursing home or any place, by whatever name called, which is used for conducting pre-natal diagnostic procedures;
- iii) Genetic Laboratory, which means a laboratory and includes a place where facilities are provided for conducting analysis or tests of samples received from Genetic Clinic for pre-natal diagnostic test.

(Explanation: Genetic clinic and laboratory includes any place where ultrasound machine or imaging machine or scanner or other equipment capable of determining the sex of the foetus or a portable equipment which has the potential for detection of sex during pregnancy or selection of sex before conception is used. This includes sonography and imaging centres)

Ques 10: Do the premises have to be registered?

Ans 10: Yes. Genetic Counselling Centres, Genetic Clinics, Genetic Laboratories, and Ultrasound Clinics or Imaging Centres having ultrasound machines or imaging machines capable of sex determination have to be registered. All fertility centres using techniques capable of preconception sex selection have to be registered. Any vehicle using ultrasound techniques has to be registered.

Ques 11: What is the procedure for registration?

Ans 11: An application for registration in Form A has to be made along with the prescribed fee to the Appropriate Authority (AA) – it could be the Ward Health Officer in large cities and District Medical Officers in districts, towns and rural areas. The AA would hold an inquiry into the maintenance of standards of the premise as per the rules under the Act and grant a certificate on fulfilment of all the criteria. This certificate has to be displayed at a conspicuous place at the premise.

Ques 12: Who can be punished for sex selection?

Ans 12: Any medical practitioner as specified under the law – medical geneticist, gynaecologist, sonologist, radiologist, registered medical practitioners – or any one who owns a Genetic Counselling Centre, a Genetic Clinic or Laboratory or is employed in any such place and renders his or her professional services is liable for punishment for violation of provisions of the Act.¹⁶

Any person who seeks the aid of any of the above establishments and professionals for conducting a pre-natal diagnostic technique on any pregnant women for the purpose of sex selection would be punished. Women who of their own volition undergo such a test for the purpose of sex selection are also liable for punishment. Women who are compelled to undergo such a test for the purpose of sex selection would not be punished but the person/s compelling her would be liable for punishment as prescribed under the Act. Any person who advertises techniques capable of sex-selection before or after conception through any sex determination mode is also liable for punishment.

Ques 13: What is the punishment?

Ans 13: A medical practitioner may get an imprisonment for a term that may extend to three years and with a fine that may extend up to Rs. 10,000 and on any subsequent conviction, he/she may get an imprisonment that may extend to five years and with a fine that may extend to Rs. 50,000.

The name of the medical practitioner would be reported to the State Medical Council by the Appropriate Authority for taking necessary action, including removal of his/her name from the register of the Council for a period of five years for the first offence and permanently for the subsequent offence. Any person who seeks the aid of any establishments and professionals for conducting a pre-natal diagnostic technique on any pregnant women for the purpose of sex selection would be punishable with imprisonment for a term that may extend to three years and with a fine that may extend to Rs. 50,000 and on subsequent conviction with imprisonment that may extend to five years and with a fine that may extend to Rs. 100,000.

An offence under this law is Cognizable – A police officer may arrest the offender without warrant Non-bailable – Getting bail is not the right of the accused. The courts have discretion to grant bail. Non-compoundable - Parties to the case cannot settle the case out of court and decide not to prosecute.

Who should one approach to lodge a complaint?

A complainant can approach the designated Appropriate Authority of the State or district or sub district. The Appropriate Authority at the State level is a high ranking health department official above the rank of Joint Director of Health and Family Welfare. But there are also officials at local level in rural and urban areas who can be approached – the civil surgeon or the chief medical officer at the district level; the chief health officer or a ward health officer in a city; and the medical superintendent

Ques 14: Can somebody advertise for a sex selection test?

Ans 14: No. This is punishable under the Act. No person, organisation, Genetic Counselling Centre, Genetic Clinic or Genetic Laboratory shall issue, publish or distribute a published advertisement in any manner regarding sex selection.

An advertisement includes electronic or print and in any form such as notice, circular, label, wrapper or other document. This also includes any visible representation made by means of any hoarding, wall painting, signal, light, sound, smoke, gas or through the Internet.

Ques 15: Can those who advertise be punished?

Ans 15. Yes. One could be imprisoned for a period that may extend to three years and with a fine that may extend to Rs. 10,000.

Examples of advertisements

- Balaji Telefilms case- The serial, 'Kyon Ki Saas Bhi Kabhi Thi' had a scene in which one of the characters goes for a sex determination test and the doctor is shown declaring the sex of the child (Complaint to Maharashtra State Women's Commission, February 2002)
- Advertisement on website: "Gender Selection is Reality. An ayurvedic medicine tried tested and approved for more than 10 years." (Complaint to Appropriate Authority, 2003)
- Article in Marathi Magazine 'How to have a baby boy through natural methods' (Complaint to Appropriate Authority, 2005)

Ques 17: How does one lodge a complaint?

Ans 17: A written complaint has to be made to the Appropriate Authority (AA), which has to acknowledge receipt. AA has to take action within 15 days of lodging the complaint.

Ques 18: What action would be taken?

Ans 18: The Appropriate Authority will initiate an investigation. If there is information or a reason to believe that the practice of sex selection is taking place, the premises in question may be searched and examined for any record, register, document etc. Anything that could be furnished as evidence of the offence may be seized and the unit may be sealed. If the AA feels that it is in public interest, it may suspend the registration without issuing any notice.²⁷ A case would then be filed and once the offence has been proved, the guilty would be punished, as per the provisions of the Act.

Ques 19: What if the authorities don't act on the complaint?

Ans 19: If the AA takes no action within 15 days, the complainant can go to Court with the acknowledgment receipt. Alternatively the complainant can also approach a social organisation like an NGO working on women's rights issues in the area or State.