

## CHAPTER - 4

# REPRODUCTIVE HEALTH

### INTRODUCTION

**HEALTH:** The World Health Organisation (WHO) defines health as total well being in the physical, mental, behavioural and social aspects.

**REPRODUCTIVELY HEALTHY SOCIETY:** It is the society with people having physically and functionally normal reproductive organs and normal emotional and behavioural interactions among them in all sex related aspects.

### REPRODUCTIVE HEALTH – PROBLEMS AND STRATEGIES

#### **REPRODUCTIVE HEALTH PROBLEMS:**

There is a little knowledge of personal hygiene and hygiene of reproductive organs. This causes sexually transmitted diseases (STD).

Early marriages lead to high maternal and infant mortality rates.

Due to lack of awareness, there has been rapid increase in population size.

People encourage beliefs in myths and misconceptions about sex related issues.

#### **Factors that can lead to reproductively healthy life:**

Proper information about reproductive organs.

Adolescence and related Changes.

Safe and hygienic sexual practices.

Knowledge about sexually transmitted disease.

#### **REPRODUCTIVE HEALTH STRATEGIES:**

India is first country to initiate action – plans or programmes at the national level to attain total reproductive health : these programmes were called **family planning programmes** and were initiated in **1951**, later they have been improved to include more reproduction related areas and are currently called **reproductive and child health care (RCH)**.

**RCH** programme was launched in 1997 for:

Creating awareness among people about various reproduction related aspects.

Providing facilities and support for building up a reproductively healthy society.

The other different ways in which people can be made aware of the significance of reproductive health and reproductively healthy society are as follows:

Audio visual and print media give information about the nutrition for pregnant women lactating mothers and importance of breast feeding the infants.

Governmental and non governmental agencies have taken various steps to create awareness about the measures to be taken during pregnancy, immunization programmes.

Sex education in schools has a major role in giving right information about reproduction related problems.

Health workers in villages also create awareness about the parental care for pregnant women and the importance of post natal care and medically aided deliveries.

Awareness of problems due to uncontrolled population growth and social evils like sex abuse and sex related crimes, safe and hygienic sexual practices and STDs, etc.

Statutory ban on **Amniocentesis**: A foetal sex determination test based on chromosomal pattern in the amniotic fluid surrounding the developing embryo.

A statutory ban on amniocentesis for sex determination to legally check **increasing female foeticides, massive child immunization.**

Encouraging research on various reproduction related areas and support from governmental and non governmental agencies. **Saheli**: a new oral contraceptive for the females was developed by scientists at Central drug Research Institute (CDRI), Lucknow is one of such achievements.

### **Indications of improved reproductive health of the society:**

Better awareness about sex related matters.

Increased number of medical assisted deliveries.

Better post natal care leading to decrease maternal and infant mortality rate.

Increase number of couples with small families.

Better detection and cure of STDs.

Overall increased medical facilities for all sex related problems.

Successful implementation of various action plans to attain reproductive health requires strong infra structural facilities, professional expertise and material support.

### **POPULATION EXPLOSION AND CONTROL**

The tremendous increase in size and growth rate of population is called population explosion.

The world population was about 2 billion in 1900 and it was 6 billion in 2000.

Population of India at the time of independence was about 350 million and it crossed 1 billion in May 2001.

According to 2001 census report, the population growth rate in India is around 1.7%, i.e., 17/1000/year and at this rate, the population is expected to double in 33 years.

#### **Reasons for high population growth:**

Rapid decline in death rate.

Decline in maternal mortality rate (MMR).

Decline in infant mortality rate (IMR).

Increase in number of people in reproductive age.

#### **Consequences of over population:**

Absolute scarcity of even basic requirements i.e., food, shelter and clothing.

#### **Steps to curb population growth:**

The most important step to control population growth is to **motivate smaller families by using contraceptives methods.**

Other step includes:

Raising of marriageable age to 18 for females and 21 males.

Advertisements in the media and posters showing a happy couple with two children with a slogan '*Hum Do, Hamare Do*'

Incentives given to couples with small families.

**BIRTH CONTROL METHODS**

The most important step to control population growth is to motivate smaller families by using various contraceptive methods.

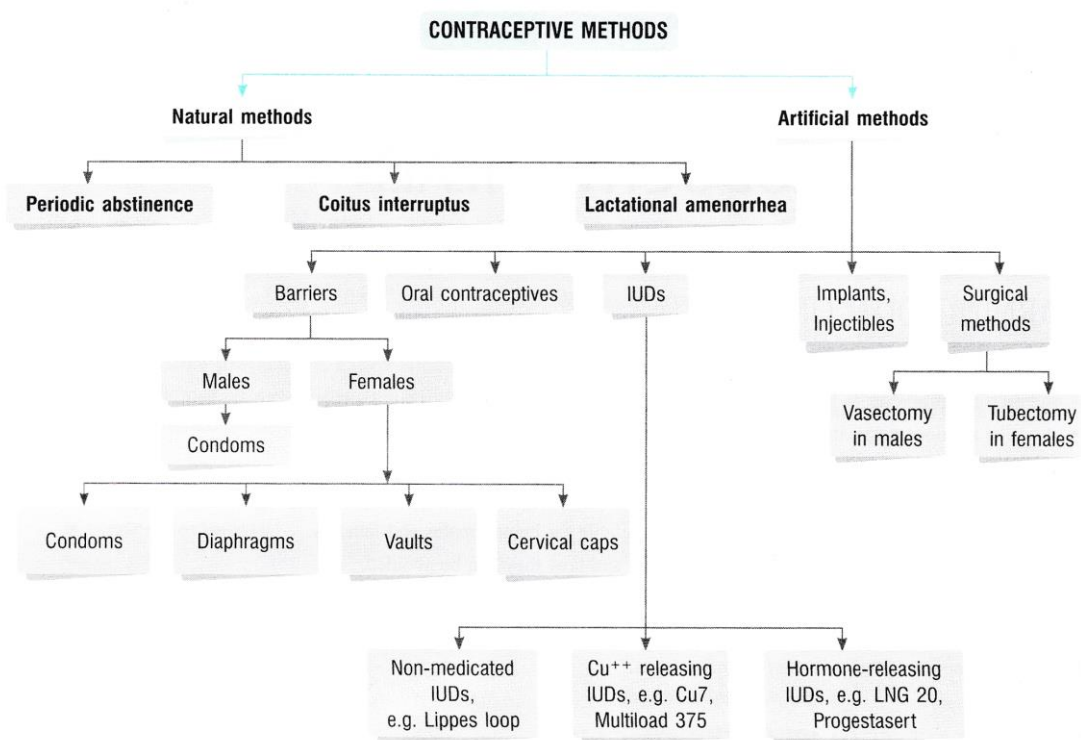
**An ideal contraceptive should be:**

User friendly.

Easily available.

Effective and reversible with no or least side effects.

Non interfering with the sexual desire/drive and /or the sexual act of the user.



**METHODS OF BIRTH CONTROL:**

**Natural methods:**

These are natural methods that work on the principle of avoiding the meeting of ovum and sperm.

**Periodic abstinence:**

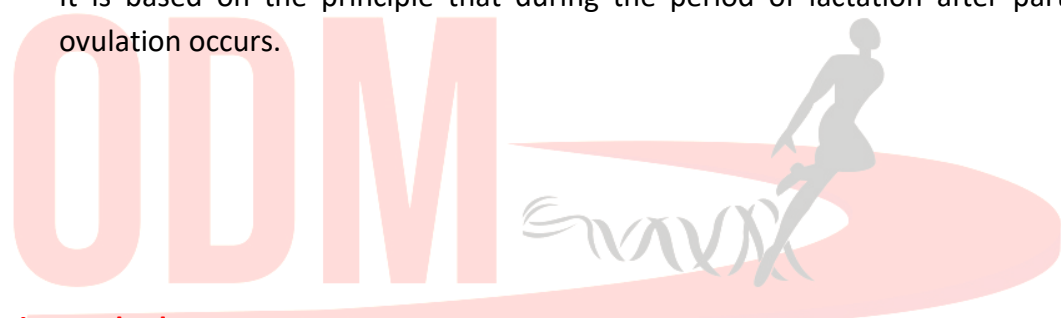
It is a method in which a couple avoids or abstains from coitus from day 10-17 of the menstrual cycle, when ovulation is expected to occur.

**Coitus interrupts or withdrawal:**

It is a method in which male partner withdraws his penis from the vagina just before ejaculation so as to avoid insemination.

**Lactational amenorrhea:**

It is based on the principle that during the period of lactation after parturition, ovulation occurs.



**Barrier methods:**

These methods prevent the contact of sperm and ovum with the help of barriers. Such methods are available for both male and females.

**Condoms:** These are the barriers made of thin rubber/latex sheath used to cover the penis in the male or vagina and cervix in females. It prevents deposition of ejaculated semen into the vagina of the female.



Condom for male



Condom for female

**Diaphragms, cervical caps and vaults:** These are the barriers made of rubber that are inserted into the female reproductive tract to cover cervix during coitus. They prevent the entry of sperms through cervix.

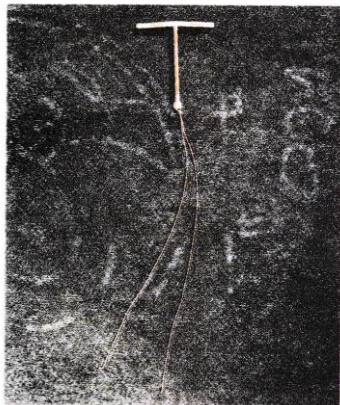
**Spermicidal creams, jellies and foams:** these are used along with these barriers to increase their contraceptive efficiency.

**Intra uterine devices (IUDs):**

These devices are inserted by doctors in the uterus through vagina.

There are three types of IUDs available.

**Non medicated IUDs:** These increase phagocytosis of sperm within the uterus, e.g., Lippes loop.



Copper T (CuT)

**Copper releasing IUDs:** Along with phagocytosis of sperms, the copper ions released suppress sperm motility and fertilizing capacity of sperms, e.g., CuT, Cu7, Multiload 375.

**Hormone releasing IUDs:** These make the uterus unsuitable for implantation and the cervix hostile to sperm, e.g., Progestasert, LNG-20.

**Oral contraceptives:**

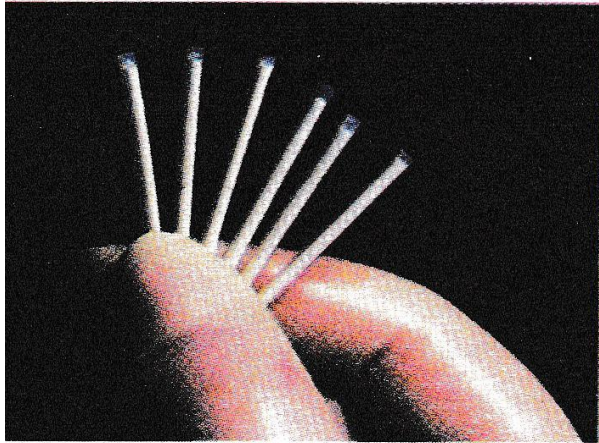
This method involves uptake of hormonal preparations of either progesterons or progestogen-estrogen combinations in the form of pills by females.

They inhibit ovulation and implantation as well as alter the quality of cervical mucus to prevent entry of sperms.

**Saheli**, an oral contraceptive for females containing a non steroidal preparation was developed by scientists at Central Drug Research Institute (**CDRI**) in **Lucknow**.

**Injections and implants:**

Progestogens or progestogen-estrogen combination can also be used by females as injections or implants under the skin.



Implants

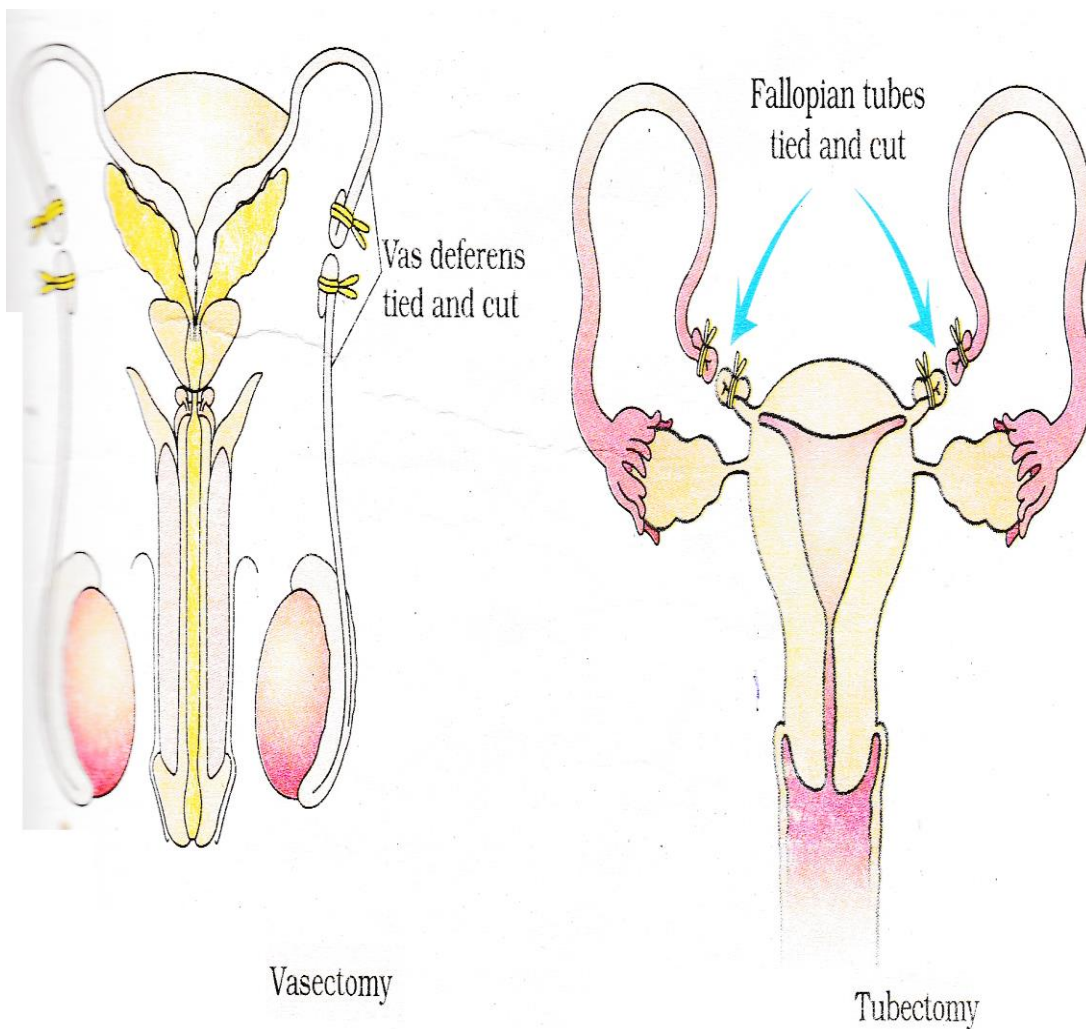
Their mode of action is similar to that of pills but their effective periods are longer.

**Surgical methods:**

These are terminal and permanent methods which block the transport of gametes, thereby preventing conception.

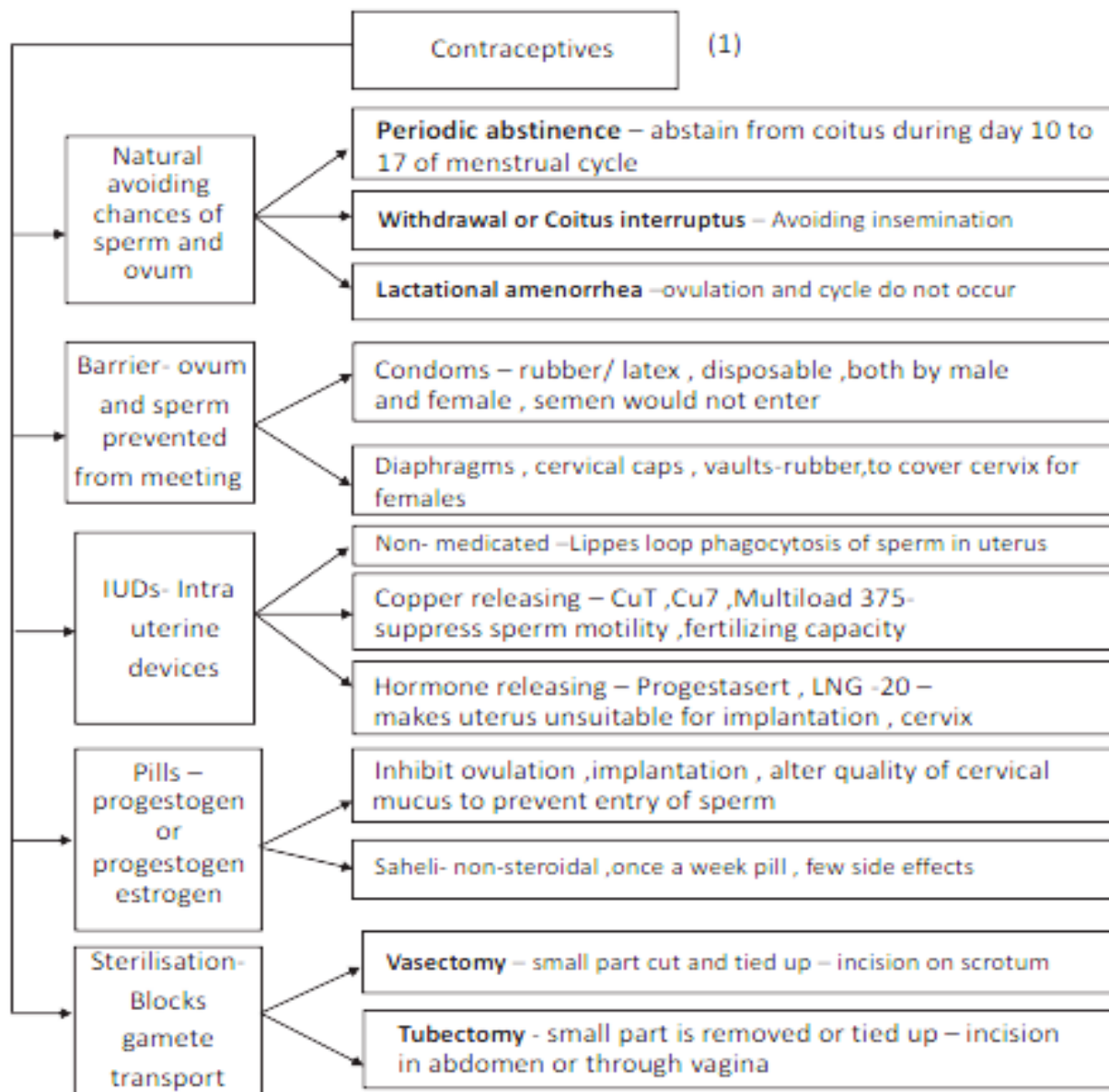
In males, a small part of vas deferens is removed and tied through a small incision on the scrotum. This is **vasectomy**.

In females, a small part of the fallopian tube is removed and tied up through a small incision in the abdomen or vagina. This is called **tubectomy**.



*Changing your Tomorrow*





### MEDICAL TERMINATION OF PREGNANCY (MTP)

**MTP** is defined as intentional or voluntary termination of pregnancy before full term.

MTP was legalized by government of India in **1971** under strict conditions to avoid misuse.

The medical termination of pregnancy (**Amendment**)**Act, 2017** was enacted by the government of India with the intension of reducing the incidence of illegal abortion and consequent maternal mortality and morbidity. According to this Act, a pregnancy may be terminated on certain considered grounds within the **first 12 weeks (first trimester)**, but **fewer than 24 weeks**, two registered medical practitioners must be of the opinion, formed in good faith, that the required ground exist.

**The grounds for such termination of pregnancies are:**

The continuation of pregnancy would involve a risk to the life of the pregnant women or of grave injury physical or mental health.

There is a substantial risk that of the child were born; it would suffer from such physical or mental abnormalities as to be seriously handicapped.

Failure of contraceptive used during coitus or rapes.

**MTP can be avoided by:**

Effective counseling on the need to avoid unprotected coitus and the risk factors involved in illegal abortions as well as providing more health care facilities could reverse the mentioned unhealthy trend.

**SEXUALLY TRANSMITTED INFECTIONS (STDs)**

STDs are the infections or diseases that are transmitted through sexual intercourse are collectively called as sexually transmitted diseases or venereal diseases (VD) or reproductive tract infections (RTI).

These include gonorrhoea, syphilis, genital herpes, chlamydia, genital warts, trichomoniasis, hepatitis-B and AIDS (acquired immune deficiency syndrome).

All reproductive tract infections are STDs but all STDs are not RTIs.

**Transmission of hepatitis B and HIV occurs by the following ways:**

Sharing of injection needles or surgical instruments with infected persons

Transfusion of infected blood.

Transfer from infected mother to the foetus through placenta.

Three viral infections, **AIDS, genital herpes and hepatitis B cannot be cured** while the others are curable STDs.

**Early symptoms include:**

Itching, fluid discharge, slight pain and swellings in the genital region.

**Complications due to chronic STDs:**

Pelvic inflammatory diseases (PID), abortions, still births, ectopic pregnancies, infertility, or even cancer of the reproductive tract.

**STDs can be prevented by following simple principles:**

Avoid sex with unknown partners/multiple partners.

Always use condoms during coitus.

Contact a qualified doctor for any doubt, in early stage of infection.

**INFERTILITY**

It is the inability to produce children in spite of sexual cohabitation.

The reasons of infertility could be:

Physical, congenital diseases, drugs, immunological or even psychological.

Specialized health care units called infertility clinics could help in diagnosis and corrective treatment of some of these disorders.

The infertile couples could be assisted through certain special techniques called **assisted reproductive technologies (ART)**, which are given below

**Testtube baby programmes:** *Changing your Tomorrow* ▲

In this method ova from the wife/donor (female) and the sperms from the husband/donor (male) are collected and induced to form zygote under simulated condition in the laboratory. This process is called ***in vitro* fertilization (IVF)**.

The zygote or early embryo with up to 8 blastomeres is transferred into the fallopian tube (process is called **zygote intra fallopian transfer or ZIFT**) and the embryos with more than 8 blastomeres is transferred into the uterus (process is called **intra uterine transfer or IUT**).

In females who cannot conceive, embryo formed by fusion of gametes in another female (called ***in vivo* fertilisation**) is transferred.

**Gamete Intra Fallopian Transfer (GIFT):**

It is the transfer of an ovum collected from a donor into the fallopian tube of another female who cannot produce one, but can provide suitable environment for fertilization and further development of the embryo.

**Intra Cytoplasmic Sperm Injection (ICSI):**

It is a procedure to form an embryo in the laboratory by directly injecting the sperm into an ovum.

**Artificial Insemination (AI):**

In this method, the semen collected either from the husband or a healthy donor is artificially introduced into the vagina or into the uterus (**intra uterine insemination or IUI**).

This technique is used in cases where the male is unable to inseminate sperms in the female reproductive tract or due to very low sperm counts in the ejaculate.

**IMPORTANT TERMS**

1	HEALTH:	The World Health Organisation (WHO) defines health as total well being in the physical, mental, behavioural and social aspects.
2	REPRODUCTIVELY HEALTHY SOCIETY	It is the society with people having physically and functionally normal reproductive organs and normal emotional and behavioural interactions among them in all sex related aspects.
3	AMNIOCENTESIS:	A foetal sex determination test based on chromosomal pattern in the amniotic fluid surrounding the developing embryo
4	POPULATION EXPLOSION:	The tremendous increase in size and growth rate of population is called population explosion.
5	INFERTILITY:	It is the inability to produce children in spite of sexual cohabitation.
6	STDs :	STDs are the infections or diseases that are transmitted through sexual intercourse are collectively called as sexually transmitted diseases or venereal diseases (VD)

		or reproductive tract infections (RTI).
7	MTP	It is defined as intentional or voluntary termination of pregnancy before full term.
8	IVF	fertilisation outside the body followed by embryo transfer, which is commonly called test tube baby program. The ovum from wife/donor and sperms from husband/ donor are collected and induced to fertilize in laboratory conditions.
9	ZIFT-	The zygote or early embryo (8 blastomeres) could be transferred into fallopian tube called ZIFT (zygote infra fallopian transfer)
10	ICSI	- specialized procedure to form an embryo in laboratory in which sperm is directly injected into ovum
11	GIFT	- embryo with more than 8 blastomeres IUT (intra uterine 12transfer) into the uterus to complete the further development.
13	AI -	infertility cases in which male partner is unable to produce healthy sperms are treated by this technique in which semen collected from donor is artificially introduced into vagina or into uterus, IUI ( intra uterine insemination) of the female.