

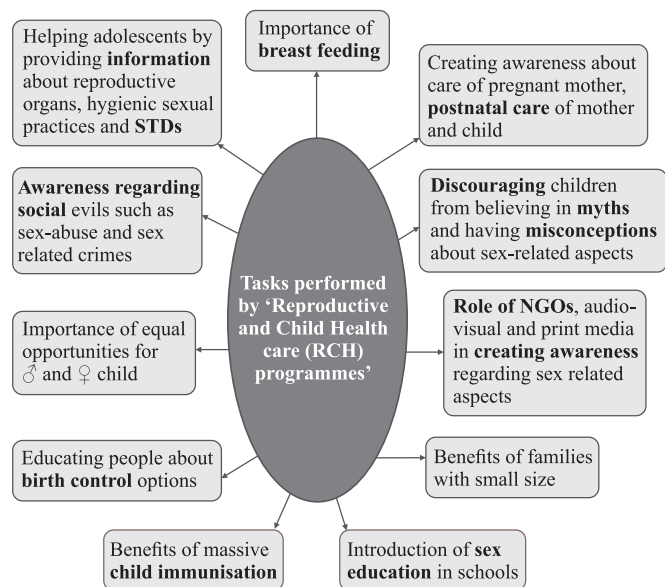
Reproductive Health

Introduction

According to WHO, reproductive health means a total well being in all aspects of reproduction i.e., physical, emotional, social and behavioural.

Problems and Strategies

India was amongst first countries in the world to initiate action plans at a national level to attain total reproductive health such as family planning programmes in 1951.



Population Stabilisation

According to 2001 census, our population growth rate was around 1.7 per cent – 17/1000/year.

Year POPn	1900	1947	2000	2011
World	2 billion		6 billion	7.2 billion
India		approx: 350 million	close to 1 billion	crossed 1.2 billion

Reasons for Increase in Population Size:

- ❖ Decline in death rate
- ❖ Rapid decline in maternal mortality rate (MMR)
- ❖ Decrease in infant mortality rate (IMR)

- ❖ Increase in number of people in reproducible age
- ❖ Increase in health facilities

Measures Taken by Government to Check Population

- ❖ Motivate smaller families for using various contraceptive methods and by slogans “Hum do Hamare do”, in advertisements and posters.
- ❖ Urban couples adopting: “**One child norm**”.
- ❖ Statutory raising of marriageable age:
 - + Female-18 years
 - + Male-21 years
- ❖ Incentives given to couples with small families.

Birth Control/Contraception

Features of an ideal contraceptive:

- ❖ User-friendly
- ❖ Easily available
- ❖ Effective
- ❖ Reversible
- ❖ No/least side-effects
- ❖ No interference with libido or act of coitus

Two principle methods of birth control:

- ❖ Natural methods
- ❖ Artificial methods

Natural/Traditional Methods

- ❖ Based on the principle of avoiding physical meeting of the egg and sperms.
- ❖ Chances of failure are high.

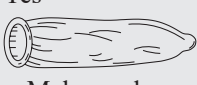

Method	Mode of Action
Periodic abstinence	Couples abstain from coitus from day 10 to 17 of the menstrual cycle i.e., fertile period.
Withdrawal method/ Coitus interruptus	Insemination is avoided as the male partner withdraws his penis from the vagina just prior to ejaculation.
Lactational amenorrhea	Absence of menstruation upto 6 months during period of intense lactation following parturition.

Artificial Methods

- ❖ Barrier methods
- ❖ Spermicidal jellies
- ❖ IUDs
- ❖ Oral pills
- ❖ Injections and implants
- ❖ Emergency contraceptives
- ❖ Surgical methods

I. Barrier Methods

- ❖ Prevent ovum and sperm from physically meeting.
 - (a) **Condoms and its Types:** Made up of rubber and latex sheath. Self-inserted and offer privacy to the user.

Parameter	Males	Females
Region covered	Penis	Vagina and cervix
Provides protection from STDs	Yes  Male condom (Nirodh)	Yes  Female condom

(b) Diaphragms, cervical caps, vaults

- + Rubber barriers that cover the cervix during coitus.
- + Reusable.
- + Do not protect from STDs.

IV. Oral Contraceptive Pills (OCP) or Tablets

Parameter	Non-steroidal	Steroidal
Example of Composition	SAHELI (Centchroman)	Progestogens alone or combination of progesterone and estrogens.
Mode of action	Interferes with implantation.	Inhibit ovulation and implantation, also alter the quality of cervical mucus to retard entry of sperms.
Dosage	'Once a week' pill.	Pills have to be taken daily for a period of 21 days starting preferably within first 5 days of menstrual cycle
Effectiveness	High contraceptive value.	Pills are very effective with lesser side effects and well accepted by females.
<i>Saheli</i> was developed at CDRI, Lucknow, Uttar Pradesh		

V. Implants

- ❖ Placed under skin
- ❖ Effective periods are much longer
- ❖ **Composition:** Progestogens alone/Combination of Progestogens and Estrogens
- ❖ Mode of Action
 - + Inhibit ovulation and implantation.
 - + Alter the quality of cervical mucus to retard entry of sperms.

VI. Emergency Contraceptives

Types

- ❖ Progestogens alone
- ❖ Combination of Progestogen + Estrogen
- ❖ IUDs

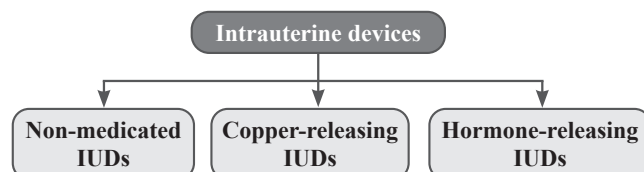
- + Used by female only.

II. Spermicidal Jellies, Foams and Creams

- ❖ Kill the sperms by acidic pH.
- ❖ Used along with barrier methods to increase their efficiency.

III. Intra-uterine devices (IUDs)

- ❖ Inserted by doctors or expert nurses in the uterus.
- ❖ IUDs are one of the most widely accepted methods of contraception in India.



- ❖ e.g., Lippes loop
- ❖ e.g., CuT, Cu7 Multiload 375
- ❖ Progestasert, LNG-20

- ❖ **Mechanism of action of IUDs:** They increase **phagocytosis of sperms** within the uterus and the Cu ions released **suppress sperm motility and the fertilising capacity of sperms**. The hormone-releasing IUDs, in addition, make the **uterus unsuitable for implantation and the cervix hostile to the sperms**.

Characteristics

- ❖ Effective within 72 hrs of coitus.
- ❖ Used to prevent conception resulting from rape or unprotected intercourse.

VII. Surgical/Sterilization Methods

- ❖ Poor reversibility but highly effective
- ❖ Mode of action – Blocks gamete transport

Types	
Tubectomy	Vasectomy
In females	In males
Cut and tie fallopian tubes	Cut and tie vas deferens
Incision in abdomen or through vagina	Small incision on the scrotum

Medical Termination Of Pregnancy (MTP)/Induced Abortion

- ❖ **MTP:** Intentional or voluntary termination of pregnancy before full term.
- ❖ MTP was legalized in India in 1971.
- ❖ 40–50 million MTPs are performed every year.
- ❖ 1/5th of the total number of conceived pregnancies.

When can MTP be Performed?

- ❖ Unwanted pregnancy due to rape, failure of contraception, casual unprotected intercourse.
- ❖ If continuation of pregnancy could harm the mother or foetus or both.
- ❖ Intention behind MTP amendment act 2017, (Government of India)
 - + Reducing the incidence of illegal abortion.
 - + Decrease consequent maternal mortality and morbidity.
 - + MTPs are safe upto 12 weeks but riskier in 2nd trimester yet both are legal.
 - + Amniocentesis and MTPs have been misused in context of female foeticide.

Amniocentesis

- ❖ Analyse foetal cells and dissolved substances from amniotic fluids.
- ❖ Technique used to check for genetic disorders such as Down's syndrome, sickle-cell anemia, etc.
- ❖ Statutory ban on this technique in India to prevent female foeticide.

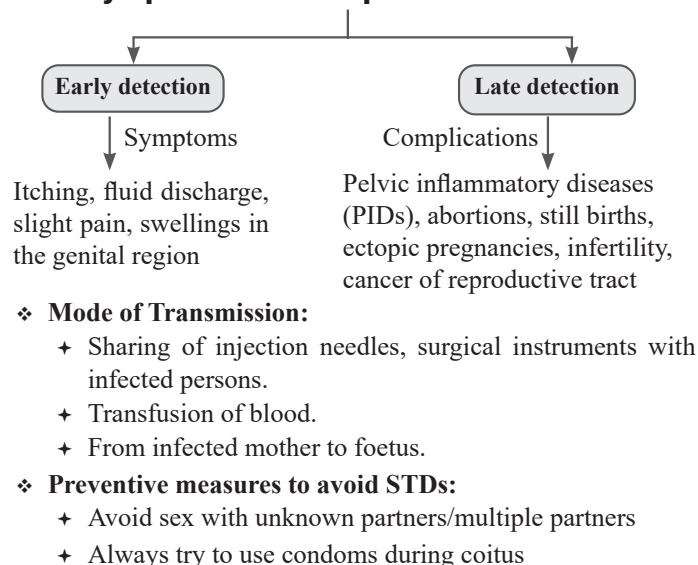
Sexually Transmitted Diseases (STDs)

- ❖ **Alternate names:** Venereal diseases (VD) or reproductive tract infections (RTIs).
- ❖ **High vulnerability/risk group:** 15-24 years.
- ❖ **Mode of transmission:** Sexual intercourse.

Category	Disease
Bacterial	Gonorrhea, Syphilis, Chlamydisias
Protozoan	Trichomoniasis
Viral	Genital herpes, Hepatitis-B, Genital warts, AIDS

- ❖ Bacterial and protozoan diseases are completely curable if detected early and treated properly.

Symptoms and Complications of STDs



Infertility

Unable to produce children inspite of unprotected sexual co-habitation.

Reasons:

- ❖ Physical
- ❖ Psychological
- ❖ Immunological
- ❖ Infertility as a problem could be with either the male or female partner.
- ❖ In India, female is blamed often than male for the couple being childless.
- ❖ Diseases
- ❖ Congenital
- ❖ Abortions

Assisted Reproductive Technologies (ART)

Parameter	<i>In-vitro</i> fertilization	<i>In-vivo</i> fertilization	Other details of ART involved:
Site of fertilization	Outside the body in simulated conditions in laboratory	In the female reproductive tract	
Embryo transfer	Yes	No	
Example of techniques	ZIFT, IUT, ICSI	GIFT, AI, IUI	

- ❖ **ICSI:** Intra cytoplasmic sperm injection
 - + Sperm injected directly into the egg
- + **Artificial Insemination (AI):**
 - + Semen introduced in vagina or uterus
 - + Low sperm count or inability of male to inseminate the female
 - + IUI: Intra uterine insemination
- + **GIFT:** Gamete intra fallopian transfer
 - + Female can provide conditions for fertilization and further development

Site of Embryo Transfer (ET) based on number of blastomeres

Parameter	Upto 8 blastomeres	More than 8 blastomeres
Location	In fallopain tube	In uterus
Technique	ZIFT: Zygote Intra fallopian transfer	IUT: Intra uterine transfer
Test tube baby programme involves techniques with <i>in-vitro</i> fertilization.		