

Reproductive Health

1 INTRODUCTION

Definition

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

3 POPULATION STABILISATION

- According to 2011 census, our population growth rate was **less than 2 percent i.e 20/1000/year**

Year	World Population	Indian Population
1900	2 billion	350 million
2000	6 billion	1 billion
2011	7.2 billion	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 reproductive age
- Increase in health facilities

Measures Taken By Government To Check Population Growth Rate:

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

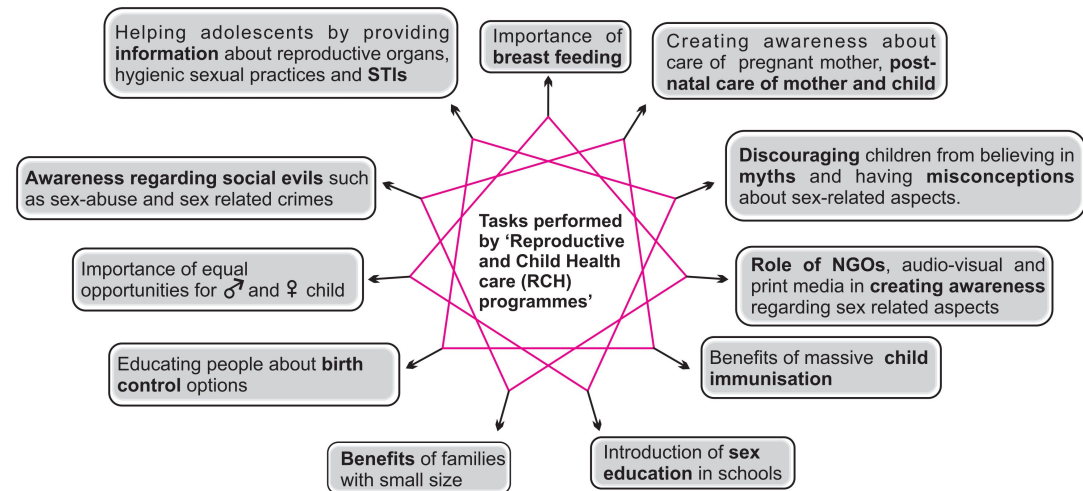
4 BIRTH CONTROL/CONTRACEPTION

Features of an ideal contraceptive:

- User-friendly
- Easily available
- Effective
- Reversible
- No/least side-effects
- No interference with libido or act of coitus
- There are two principle methods of birth control:**
 - Natural methods
 - Artificial methods

2 REPRODUCTIVE HEALTH : PROBLEMS AND STRATEGIES

- India was amongst first countries in the world to initiate action plans to attain reproductive health such as **family planning programmes (FPP) in 1951**



5 NATURAL/TRADITIONAL METHODS

- Principle of avoiding physical meeting of the egg and sperms
- Chances of failure are high

Method

- Periodic abstinence**
- Withdrawal method/ Coitus interruptus**
- Lactational amenorrhea**

Mode of Action (MoA)

- Couples abstain from coitus from day 10 to 17 of the menstrual cycle i.e. fertile period
- Insemination is avoided as the male partner withdraws his penis from the vagina just prior to ejaculation
- Absence of menstruation upto 6 months during period of intense lactation following parturition

6 ARTIFICIAL METHODS

The various methods of contraception are enlisted below:

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

7 ARTIFICIAL METHODS


(I). Barrier methods

- Prevent ovum and sperm from physically meeting
- Self inserted and offer privacy to user


(a) Condoms & its types

Made up of rubber and thin latex

Parameter	Males	Females
Region covered	Penis	Vagina and cervix
Provides protection from STIs	Yes	Yes



Male condom
(Nirodh)



Female condom

(b) Diaphragms, cervical caps, vaults

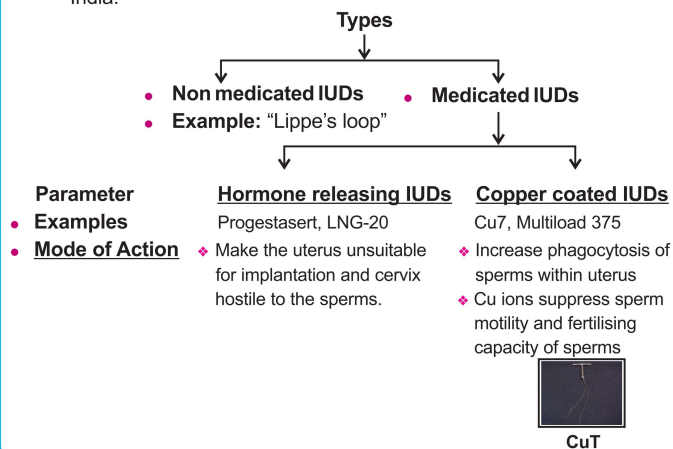
- Rubber barriers that **cover** the **cervix** during coitus
- Reusable
- Do not protect from STIs**
- Used by females only

(II). Spermicidal jellies, foams and creams

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

(III). Intra-uterine devices (IUDs)

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



IV. Oral Contraceptive Pills (OCP) or tablets

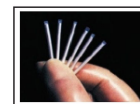
Parameter	Non-steroidal	Steroidal
Example or composition	SAHELI	Progestogens (Prg) alone or combination of Prg and Estrogens (Est)
Mode of action	Interferes with implantation	Inhibit ovulation and implantation; also alter the quality of cervical mucus to retard entry of sperms
Dosage	'Once a week' pill	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 with very few side effects	Pills are very effective with lesser side effects and well accepted by females



SAHELI 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 (MoA)**
 - Inhibit ovulation and implantation
 - Alter the quality of cervical mucus to retard entry of sperms
- Injections usually share similar MoA and composition as implants



VI. Emergency contraceptives

Types	Characteristics
<ul style="list-style-type: none"> Progestogens alone Combination of Prg + Est 	<ul style="list-style-type: none"> Effective with 72 hrs of coitus Used to prevent conception resulting from rape or unprotected intercourse
<ul style="list-style-type: none"> IUDs 	

VII. Surgical/Sterilisation methods

- Poor reversibility but highly effective
- Mode of action**

Blocks gamete transport

Types

Tubectomy	Vasectomy
<ul style="list-style-type: none"> In females Cut and tie fallopian tubes Incision in abdomen or through vagina 	<ul style="list-style-type: none"> In males Cut and tie vas deferens Small incision on the scrotum

8 MEDICAL TERMINATION OF PREGNANCY(MTP)/INDUCED ABORTION

- MTP** : Intentional or voluntary termination of pregnancy before full term
- MTP was legalised in India in **1971**
- 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
 - Permission of how many medical practitioners is needed for MTP depending on duration of gestation?**

1	2
<ul style="list-style-type: none"> less than/up to 12 weeks 	<ul style="list-style-type: none"> More than 12 but less than 24 weeks
<ul style="list-style-type: none"> Intention behind MTP amendment act 2017, (GoI) <ul style="list-style-type: none"> Reducing the incidence of illegal abortion Decrease consequent maternal mortality and morbidity MTPs are safe up to 12 weeks but riskier in 2nd trimester yet both are legal Amniocentesis and MTPs have been misused in context of female foeticide 	

9 AMNIOCENTESIS

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

10 SEXUALLY TRANSMITTED INFECTIONS (STIs)

- Alternately named:** Venereal diseases (VD) or reproductive tract infections (RTIs)
- High vulnerability/risk group:** 15-24 years
- Mode of transmission (MoT):** Sexual intercourse

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

- Bacterial and protozoan diseases are completely curable if detected early and treated properly
- Other MoT for hepatitis-B virus and HIV infection include:**
 - Sharing of injection needles, surgical instruments with infected persons
 - Transfusion of blood
 - From infected mother to foetus

11 INFERTILITY

- Infertile couple:** Unable to produce children inspite of 2 years of unprotected sexual co-habitation
- Reasons for infertility:**

- Physical
- Diseases
- Psychological

- Congenital
- 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

Help For Infertile Couples Comes In The Form of ASSISTED REPRODUCTIVE TECHNOLOGIES (ART)

Parameter

- Site of fertilisation**
- Can female produce ova?**
- Embryo transfer**
- Example of techniques**

in-vitro fertilisation

- Outside the body in simulated conditions in laboratory
- Yes
- Yes
- ZIFT, IUT, ICSI

in-vivo fertilisation

- In the female reproductive tract
- No
- No
- GIFT, AI, IUI

Other details of ART involved :

- 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 female
- IUI** : Intra uterine insemination
- GIFT** : Gamete intra fallopian transfer
 - Female can provide conditions for fertilisation and further development

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

Parameter

- Location**
- Technique**

Upto 8 blastomeres

- in fallopian tube
- ZIFT**: Zygote Intra fallopian transfer

More than 8 blastomeres

- in uterus
- IUT**: Intra uterine transfer

Test tube baby programme involves techniques with in-vitro fertilisation

Symptoms and Complications of STIs

Early detection

Symptoms

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

Late detection

Complications

Pelvic inflammatory diseases (PIDs), abortions, still births, ectopic pregnancies, infertility, cancer of reproductive tract

Preventive measures to avoid STIs :

- Avoid sex with unknown partners/multiple partners
- Always try to use condoms during coitus