

Introduction

Adolescence is a crucial stage marked by growth and maturation. Adolescents often feel confused as they try to make sense of the changes in their physical appearance, as well as to establish their identity. It is the period when young people develop the knowledge, attitudes and skills they require to become sexually healthy. As they grow and mature, they need access to correct information about sexuality.

Human sexuality is a very important aspect of an individual's life. Therefore, it is the responsibility of parents, teachers and the society at large to provide appropriate information to adolescents about sexuality. This chapter deals with some important health issues like sexuality, family life education, prevention of STIs, prevention & control of HIV/AIDS, and universal safety precautions for control of HIV/AIDS. It also includes safer sex, planned parenthood and family planning.

Objectives

After reading this chapter you will be able to:

- Understand human sexuality and family life education
- Know about sexually transmitted infections, their prevention and control
- Know about HIV/AIDS, its prevention and control
- Describe universal precautions for prevention and control of HIV/AIDS
- Define safe sex, safer sex options
- Explain planned parenthood, family planning and family planning methods



8.1 Sexuality

Sexuality refers to the total sexual makeup of a person. It is the function of one's complete personality that is lifelong, beginning from the time of birth. It is always growing and changing. It is the way an individual thinks, feels and behaves. It is not just talking about sex, as is commonly believed. It includes *body image* (how you feel about yourself), *relationships* (how you get along with members of the opposite sex), *sexual preferences and orientations* (whether a person is emotionally and sexually attracted to a person of the same sex, opposite sex or both) and *self esteem*. It also includes *feelings* (how you feel about being a male or female), *attitudes, values* (what are right and wrong for you) and preferences. *Sexuality is more than sexual intercourse*.

8.2 Family Life Education

Family Life Education provides knowledge and attitudes to adolescents that will raise the standards of home life and help them live constructively. It is not a one time activity. It is a life long process of acquiring knowledge and forming attitudes, beliefs and values. It is a multi-faceted approach which takes into account, development of an individual during adolescence and onwards in the context of overall development of a family and society. It uses informatory participatory activities to help adolescents grow up into confident, caring and responsible adults.

Aims of Family life education

- To help adolescents relate the problem of overpopulation of the country to the need for planned parenthood.
- To help them become more sensitive and responsive to social roles and relationships.
- To help adolescents gain more self confidence and take right decision about marriage, family size and family life.

8.3 Prevention of Sexually Transmitted Infections (STIs)

Sexually transmitted Infections (STIs) are infections which are mostly acquired by having sex with an infected person. Some STIs may also be passed on by an infected woman to her baby during pregnancy (e.g. syphilis and HIV) and at childbirth (e.g. gonorrhoea, Chlamydia, HIV). Some STIs can infect the reproductive organs of the person, giving rise to Reproductive Tract Infections (RTIs). There are more than 25 infections that can be transmitted through sexual activity. Evidence shows that almost 70 % of STI patients are in the age group of 15 to 24 years.

Some common STIs and their causative organisms

Bacterial

- Syphilis Treponema pallidum
- Gonorrhoea Neisseria gonorrhoeae
- Chancroid Haemophylis ducreyi
- Granuloma inguinale Klebsiella granulomatis (Donovan bodies)
- Lympho-granuloma venerium Chlamydia trachomatis

Viral

- Genital Warts Human Papilloma virus (HPV)
- Hepatitis Hepatitis B and Hepatitis C virus
- Acquired Immune Deficiency Syndrome (AIDS) Human immunodeficiency Virus (HIV)
- Herpes Simplex Herpes simplex virus 1 and 2

Parasitic

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- Trichomoniasis Trichomoniasis vaginalis
- Candidiasis Candida albicans

Hepatitis B and HIV can also spread by infected blood and by sharing of needles.

Reproductive Tract Infections

Reproductive Tract Infections (RTIs) are infections of the reproductive tract. They can affect any sex; male or female. Agents of infection can be bacteria, viruses or protozoa. All RTIs are not sexually transmitted. Some RTIs may develop due to imbalance of the normal bacteria in the reproductive tract e.g. Bacterial vaginosis or Candidiasis. Similarly, **Pelvic Inflammatory Disease** (PID), a RTI, is caused by iatrogenic infections (infections acquired during a gynecological procedure such as pelvic examination). PID has been discussed at the end of this section.

Common ways of contracting RTIs are **poor genital hygiene** and **unsterile techniques** practiced by service providers during delivery, abortion, pelvic examination or IUD insertion.

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Factors contributing to high incidence of STIs in India

- Poor knowledge and awareness about STIs
- Inadequate health services
- Under utilization of the services available due to stigma attached to STIs



- Poor personal hygiene
- Urbanization
- People having sex with multiple sex partners
- Homosexuality
- Limited condom use
- Drug abuse

Most STIs can be easily diagnosed and treated by a qualified doctor. But if they are not detected and treated early, they may result in illness, disability, infertility (inability to produce a child) and even death. It is extremely important to have correct knowledge of STIs, how to prevent them and the need for early treatment.

Consequences of untreated STIs

- Chronic pain
- Repeated abortions
- Ectopic pregnancies (pregnancy occurring in fallopian tube)
- Cervical cancer
- Permanent infertility
- Heart and brain damage
- Increased risk of HIV transmission
- Infection passed on to the sexual partner
- Damaging effects on the foetus/newborn Babies born to mothers with STIs may have lower birth weight, be premature, blind, deaf or have congenital defects
- Death

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Relationship between STIs and HIV

- The risk behaviours that predispose for STIs and HIV infection are the same i.e. unprotected sex with an infected partner.
- STIs cause damage to the genital area and mucous membrane. This facilitates the entry of HIV into the body (almost tenfold).

Therefore a person with a STI is at a higher risk for HIV/AIDS, both through the predisposing behaviour, as well as the increased risk associated with STIs themselves.

Signs and Symptoms of STIs

Symptoms vary for different STIs. Some STIs are silent/asymptomatic (show no symptoms at all). That is why many women often may not be aware that they have a STI. This may lead to severe complications like infertility.

Symptoms in men are visible. That is why men become easily aware that they have developed a STI.

Women	Men	Both Women and Men
• Unusual discharge and smell from vagina.	• A drip or discharge from penis.	• Sores, blisters, ulcers on or near the sex organs or mouth.
 Pain in pelvic area (between the navel and sex organs). 		 Pain or burning sensation during urination.
 Bleeding from vagina (which is not regular menstrual flow). 		 Frequent urge to urinate. Coulling in the amoint
 Burning or itching sensation around vagina. 		(area around the sex organs).
 Pain deep inside the vagina when having sex. 		

Prevention of STIs

- Have appropriate knowledge of STIs.
- Maintain good personal hygiene; females to also maintain menstrual hygiene.
- Practice abstinence (refraining from sexual activity).
- Don't ignore any unusual discharge.
- Consult doctor immediately in case of any of the symptoms mentioned.
- Avoid self medication and treatment from quacks.

Diagnosis and Treatment of STIs

- Anyone who suspects having a STI must get diagnosed and treated.
- STIs are diagnosed through medical examination and laboratory tests.
- Once STI is diagnosed, it must be treated completely. Incomplete treatment can make the infection chronic and hence difficult to eradicate.

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- STIs should be treated only by qualified doctors.
- Self medication and treatment by quacks must be avoided.
- Treatment is available at all government hospitals, health centres and clinics.
- It generally involves a course of antibiotics, analgesics, plenty of oral fluids and maintenance of good genital hygiene.
- The sexual partner also should seek medical advice as he/she may be probably infected too and needs to be treated.

Syndromic Care Management of STIs

This approach is being followed in treatment of STI cases. It is based on the assumption that symptoms of STI may be simple and easily recognized. The symptoms may be the result of one or more infection. Based on the patient's chief complaints, detailed history, and clinical examination, a flow chart is prepared. The use of an appropriate flow chart helps in accurate and complete treatment and management of the patients. Syndromic care involves giving antibiotics, analgesics (pain killers) and anti itching drugs to patients with STIs.

Some STIs

Syphilis

Syphilis is not very common nowadays but can be serious, if not treated at early stage. A person with the infection may feel well, but can still infect others. Pregnant woman with syphilis can transmit the infection to her unborn child.

Cause

Syphilis is caused by a bacterium called Treponema pallidum. It penetrates broken skin in the sexual organs, mouth or rectum.

Symptoms

Stage 1

- A hard painless lesion called **chancre** appears on or near the vagina or penis. It appears between one and five weeks after contact with an infected person.
- It disappears in a few days and may not be detected.
- If syphilis is not treated early, it can proceed to stage 2 in two to eight weeks.

Stage 2

- A red rash appears on the body after about six weeks after contact.
- Highly contagious spots on feet, hands or mouth.
- Flue like symptoms such as fever, headache and sore throat.

Like the chancre of stage 1, stage 2 symptoms also disappear in a few weeks (but the disease won't). Stage 2 may also pass undetected.

Stage 3

- This stage may occur many years after infection. Symptoms may have disappeared by this stage but the disease is still present in the body.
- If the earlier stages of the disease have not been treated, the patient may develop serious complications due to permanent damage to the heart, brain, eyes, joints, bones or almost any other part of the body. These days, however, this happens very rarely.

Long Term Health Effects of Syphilis

If syphilis is left untreated, it may cause major problems. These include:

- Damage to major organ systems (like cardiovascular, central nervous system, musculoskeletal system) leading to heart problem, blindness, deafness, insanity, disfigurement and death.
- Pregnant woman may pass on syphilis infection to her unborn child causing spontaneous abortion, premature birth, stillbirth or serious birth defects.
- Genital ulcers can increase the risk of HIV acquisition, so patient should be tested for HIV.

Treatment

- Syphilis can be completely cured with antibiotics prescribed by a qualified doctor.
- Patients with syphilis must attend the clinic after treatment to make sure by tests that they have been completely cured.
- Patients receiving syphilis treatment must abstain from sexual contact until the treatment is complete.
- They must ensure that their sexual partners too receive treatment.
- All pregnant women should be tested for syphilis.

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Gonorrhoea

Gonorrhoea is one of the commonest STIs. If left untreated, it can lead to Pelvic Inflammatory Disease (PID) and infertility in women, and prostatitis and sterility in men. Babies can catch gonorrhoea at birth if the mother has the infection.

Cause

It is caused by the bacterium called Neisseria gonorrhoea.

Symptoms

Symptoms appear 3 to 5 days after infection. Most women and some men may have no symptoms at all.

In Women

- Unusual vaginal discharge
- Burning or painful urination
- Pain in lower abdomen (pelvic area)

However, most women with gonorrhoea remain asymptomatic If not adequately treated, 10-40 % women with gonorrhoea may develop PID.

In Men

- Yellow/green discharge from the penis
- Burning pain during urination

Treatment

- Mostly, it gets completely cured with antibiotics prescribed by a qualified doctor.
- The patient must take the full course of treatment.
- Both partners must take the treatment.
- They should avoid sex until the treatment is over.

Risks

- If the infection is not detected and treated, it may spread and cause sterility in both men and women.
- Some strains of gonorrhoea are resistant to certain antibiotics. Hence one must get treated by a qualified doctor to ensure proper treatment.
- Newborn's eyes can get affected during birth.
- Can increase risk of HIV.

Pelvic Inflammatory Disease (PID)

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PID is an infection of the female reproductive tract. It can result in scarring of the fallopian tubes, abnormal pregnancies and infertility.

PID is one of the most serious and common complications of STIs among women. It can also occur as an iatrogenic (physician-induced) infection as a complication of gynecological procedures (e.g. abortion, medical termination of pregnancy, insertion of an intra-uterine device, or child birth).

Cause

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PID occurs when bacteria (gonococci, streptococci, staphylococci or others) invade through the cervix causing infection of the uterine lining (endometritis) followed by infections of the fallopian tubes (salpingitis) and ovaries (oophoritis).

Symptoms

- Vaginal discharge
- pain in lower abdomen
- Fever
- Tenderness on pelvic examination
- In more severe cases, high fever, nausea, vomiting, abdominal tenderness and rapid heart rate.

Treatment

As PID is a severe condition, once diagnosed, the patient should be treated promptly with antibiotics by a specialist.



Fig: Acute Salpingitis (Pelvic Inflammatory Disease).

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8.4 Prevention and Control of HIV/AIDS

HIV/AIDS is one of the most serious public health problems being faced worldwide. Young people are among the most susceptible to the HIV infection. Evidence shows that more than half of those newly infected with the HIV virus are young people. Many of them got infected only because they lacked appropriate information on how to protect themselves from HIV. It is therefore important that we all understand about HIV/AIDS and learn how we can protect ourselves from getting infected with HIV.

Presently over 2.5 to 3 million people in India are infected with the HIV. Of all the sexually transmitted infections, perhaps HIV/AIDS is the most frightening one, since it has no cure. However, the good news is that it is preventable and it is in our own hands to protect ourselves. Getting up-to-date information therefore, is the first step towards protection.

HIV

H - Human

- I Immunodeficiency
- V Virus

HIV is Human Immunodeficiency Virus. It infects and weakens the body's immune system. It survives in body fluids such as blood, semen, vaginal and cervical fluids.

Persons infected with HIV are called HIV positive people. They may look and feel perfectly healthy and can work like normal persons. They may not even know that they are infected and can infect others. PLWHA (People living with HIV/AIDS) is a term commonly used for HIV/AIDS patients.

AIDS

A – Acquired	-	One gets it from somebody infected. It is not hereditary.
I - Immune	-	It affects the immune system of the body.
D - Deficiency	-	Inadequacy of the body's immune system to fight infections.
S – Syndrome	-	A group of diseases or symptoms. It is not just one single disease.

Effect of HIV on Immune System

A healthy person is well protected by the body's immune system which fights off harmful infections. White Blood Corpuscles (WBCs) present in our blood are a very important part

of this defense. They fight and destroy the infection causing micro-organisms (such as bacteria, virus) by producing specific substances called antibodies.

HIV enters the body's WBCs. The virus begins to live and reproduce in the WBCs. It rapidly multiplies until there are millions of viruses present. Gradually the number of WBCs is reduced and they can no longer protect the body from infections. The immune system gets paralyzed to the extent that tuberculosis, pneumonia, cancer and other infections occur in the body. This is the stage when we say that the person has AIDS.

HIV and Young People

Some factors that put young people at risk of HIV are:

- Curiosity about sexual matters
- Limited information on reproductive issues
- Weakening of traditional value systems and social control
- Experimentation with alcohol and drugs especially injecting drug use
- Migration
- Youth take risks and perceive themselves as non susceptible to HIV

Women are More Vulnerable

Women are more vulnerable to HIV infection because of the following reasons:

- Limited access to information and educational messages.
- Biological vulnerability large vaginal area and delicate vaginal membrane allow the virus to pass through easily.
- Increased risk of infection from man to woman Higher concentration of virus in the semen; HIV transmission from man to woman is more rapid rather than in the reverse direction.
- Many women suffer from asymptomatic STIs which facilitates HIV transmission.
- Poor access to healthcare services.
- Lower literacy rates.
- Lower socio-economic status women often economically dependent on men.
- Passive attitude of women towards sexual issues.
- Different social norms most societies male dominated; women having no say in matters of sexual relationships.
- Women often require blood transfusion (during childbirth or for treating anemia) and face the risk of infection due to the possibility of infected blood transfusion.
- Lesser social support when infected.

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Modes of HIV Transmission

Four main ways or routes of transmission of HIV are:

- By transfusion of infected blood or blood products
- Having unprotected (without a condom) sex with HIV infected person
- By infected needles, syringes and other instruments
- By an infected mother to her unborn child during pregnancy or childbirth

Ways in which HIV is Not Transmitted

HIV is not spread through:

- Casual contacts such as shaking hands, hugging, eating or drinking from the same utensils, etc.
- Traveling together
- Donating blood
- Mosquito bites (the virus doesn't survive in mosquito's body)
- Normal use of toilets and urinals
- Coughing, sneezing (not an air borne disease)
- Caring for people living with HIV/AIDS

Progression of HIV in the Body



The length of time it takes from HIV infection to develop into AIDS widely differs from person to person. The various factors that contribute to this are:

- Individual differences in immune responses.
- Poor lifestyle: lack of sufficient rest, poor diet, lack of exercise, overexertion, unhygienic conditions.
- Risky health behaviours such as drug abuse.

Testing for HIV

A person infected with HIV may not have any signs and symptoms of the infection for years. The only way to find out if a person has HIV is through a blood test. The following tests are available for detection of HIV:

- Rapid test/Spot test
- ELISA (Enzyme Linked Immunosorbent Assay)
- Western Blot
- PCR DNA test

Rapid test/Spot test and ELISA are screening tests and need to be confirmed by Western Blot Test. They detect antibodies to HIV and not HIV itself. The test may sometimes show false negative. It is because of the window period in which the presence of the antibodies is not detected in the test.

The PCR – DNA test is the only test that detects the virus. However this test is expensive and is not yet routinely available in our country.

Window Period

The antibodies against HIV appear in adequate concentration in the body only after about 12 weeks of infection. Hence some HIV infected persons may test negative as their bodies have not produced antibodies at that stage. This period between the entry of the HIV into the body and production of antibodies is called as window period. During this period, the infected person can pass on the virus to others i.e. he/she is infective to others.

Where to Get Tested for HIV

A person can get tested at any hospital, Integrated Counseling and Testing Centre (ICTC) or any medical centre which provides such facilities. Testing must always be accompanied by pre- and post-test counseling by trained counselors. This is done to help the person



understand the need for testing and the test results. Whatever is discussed between the patient/client and the counselor is kept confidential.

VOLUNTARY COUNSELLING & TESTING CENTER

Fig: Integrated Counseling and Testing Centre is a place where a person is counseled and tested for HIV on his/her own free will or when advised by a medical provider.

Signs and Symptoms of AIDS

When the person's immune system due to HIV infection gets damaged, signs and symptoms of AIDS appear. These include:

- Weight loss more than 10 % of body weight
- Fever for longer than 1 month
- Diarrhoea for longer than 1 month
- Persistent severe fatigue
- Repeated infections

Since these symptoms may also occur in some patients who do not have HIV infection, proper investigations need to be done before labeling any person as AIDS patient.

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Preventive Measures

Preventive measures to be taken for protection from HIV include:

- Having appropriate information about HIV/AIDS, and skills to make correct choices
- Making sure the blood is tested before transfusion
- Abstaining from sex
- Resisting negative peer pressure
- Avoiding alcohol and drugs
- Not having unprotected sex
- Having a mutually faithful sexual relationship with an uninfected person
- Practicing safer sex
- Not injecting drugs
- Not sharing needles and syringes with anyone
- Pregnant women to get tested for HIV
- Taking universal safety precautions

How Young People can contribute

- Learn and understand basic facts about HIV and its prevention.
- Develop life skills to protect themselves and others.
- Assess personal risk for HIV infection.
- Share information.
- Dispel myths.
- Tackle stigma in school and in the community.
- Avoid alcohol and use of drugs that may affect judgment.
- Treat PLWHA with compassion, not discrimination.
- Practice abstinence (not having sex with anyone).

Anti Retroviral Therapy (ART)

There is no cure for HIV/AIDS yet. However, now Anti Retro Viral (ARV) drugs are available which stop people with HIV from becoming ill for many years. ARV Treatment for HIV or ART consists of drugs that have to be taken by HIV person for the rest of his/ her life.

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ART increases the person's ability to fight the disease. The drugs control the reproduction of the HIV virus, thereby reducing HIV levels in blood and semen. They reduce symptoms and delay the onset of AIDS. In other words, ART converts HIV infection from a fatal disease to a chronic disease. But they do not cure HIV infection.

Since the virus tends to develop resistance to the drugs rather quickly, now, Highly Active Anti Retroviral Therapy (HAART) is the recommended treatment for HIV. This therapy combines three or more anti-HIV drugs in a daily regimen.

However, these drugs are expensive, have severe side effects and are beyond the reach of many people in our country. Once started, the treatment has to be taken life long. If stopped, the person living with HIV/AIDS will become ill in a few months.

Post Exposure Prophylaxis (PEP)

Healthcare providers may get exposed to HIV infection while handling the patients. To handle such situations, PEP is practiced. The term PEP refers to comprehensive medical management to minimize the risk of infection among healthcare personnel following potential exposure to blood borne pathogens. This includes counseling, risk assessment, relevant laboratory investigations, first aid and provision of short-term antiretroviral drugs with follow up and support. The National AIDS Control Organization (NACO) has arranged for providing ARV drugs as treatment for occupational exposures free of cost.

Occupational Exposure Protocol

- Never put the injured part in mouth or squeeze it. Remain calm.
- Wash the area thoroughly with soap and water.
- Dispose of the sharp instruments properly.
- Report the exposure to the appropriate authority.
- Seek counseling for PEP and baseline test for HIV.
- Start PEP within 2 hours and not later than 72 hours of exposure.
- Follow up HIV testing to be done at 6 weeks, 3 months, 6 months and 1 year.
- Follow up counseling and care as advised.

8.5 Universal Safety Precautions for Control of HIV/AIDS

Healthcare providers run a greater risk of getting infected accidentally by HIV if they come into contact with patient's blood and other body fluids. They can also transmit the virus to an uninfected patient, if they themselves are infected with HIV. These risks can be avoided by following standard Universal Safety Precautions (USPs), at all times with all patients.

Universal Precautions as defined by CDC, are universal precautions designed to prevent transmission of Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV) and other blood borne pathogens when providing first aid or healthcare.

These precautions must be taken by all healthcare providers in any health setting, in order to protect themselves as well as their patients. Precautions to be taken for control of HIV infection include:

- 1. Hand hygiene
- 2. Handling of sharps and needles
- 3. Biomedical waste management
- 4. Use of Personal Protective Equipment (PPE)
- 5. Disinfection and Sterilization
- 6. Safe disposal of dead body

1. Hand Hygiene

All healthcare providers must follow the simple hand washing procedure (already dealt with in Chapter 6).

2. Handling and Disposal of Sharps and Needles

Accidental exposure to sharp objects (needles, glasses etc.) is the most common way through which healthcare providers are exposed to HIV. This can be avoided by *proper handling and disposal of sharps (scissors, scalpel, blades and other sharp instruments) and needles.* It should be assumed that all used injection equipment is contaminated and ensured that they are not exposed to risk of infection or needle stick injuries. A sterile syringe and needle should be used for giving injection. Reuse of a needle/syringe between patients without proper sterilization is the most harmful practice. It can cause cross infection and put patients at risk. After giving injection, sharps must be discarded in a safety box/puncture proof container for proper disposal.

All patients' blood, body fluids, substances, secretions and excretions must be treated as potentially infected as we do not know who is infected with HIV until their blood is tested for it.



All health staff need to be well trained to use properly sterilized sharps and needles, prevent needle stick injuries, and to safely dispose of sharps and needles. They also need to understand the risks to patient, to themselves, to waste handlers and to the community when they come in contact with used/contaminated sharps and needles.

Precautions while handling sharps and needles

- Cover any cuts/abrasions on your hands.
- Wash hands before handling clean sharps and needles.
- Always use sterile syringes and needles for giving injections.
- Prevent cuts in your hands.
- Prevent needle stick injuries.
- Avoid recapping needles.
- Do not re-use the disposable sharps and needles.
- See that they are immediately contained in a sharps container after use without recapping or manually mutilating/handling the sharps and needles.
- Collect used syringes and needles in a sharps container which is **puncture proof and leak proof**.
- Seal the container when it is three-quarters full.
- Once closed and sealed, the container should not be reopened or reused.
- Dispose the sharps waste in an efficient, safe and environment friendly way to protect people from any exposure to used sharps and needles.
- Some hospitals may use incinerators or burning methods for this purpose.

Certain options for safe disposal of sharps waste

- Disposal pit
- Cutting the needle and shredding the plastic barrel
- Incinerator
- Metal drum

Sharps container

Sharps containers are used for proper disposal of sharps and needles in hospitals. If there are no sharps containers available e.g. in a health facility in a village or a small town, we can use an alternative container. We can use a cardboard box with rigid sides and enough room to hold a number of sharps and needles used in one session. The box can be sealed and disposed after use/stored in a safe place until the next session.

3. Biomedical Waste Management

The hospital waste may be household waste (non infectious), infected waste and infected plastic waste. The table below depicts how to deal with hospital waste.

a.	 Household waste (non infectious) Leftover food, fruit peels,vegetables. Waste paper, packing material, empty boxes 	Use black drum/bag.	This waste should be sent to municipal authorities for final disposal.
b.	and bags, etc. Infected waste • Human anatomical waste-Organs, blood, body fluids etc.	Use yellow drum/bag.	This waste should be sent for incineration.
C.	 Solid waste – Used cotton gauze, dressings, plaster cast etc. Infected plastic waste 	Use blue drum/bag.	This waste is autoclaved
	• Used disposable syringes and needles, sharps, blades, etc.	, 0	to make it non-infectious followed by shredding before its final disposal.
	• Plastic items – IV sets, Ryle's tube, catheters, etc.		

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4. Use of Personal Protective Equipment (PPE)

PPE is meant to protect healthcare providers from workplace injuries or illnesses occurring due to contact with chemical, radiological, physical, mechanical or any other workplace hazards. These equipments are used, based on risk of procedure. They include:

- Gloves Use gloves before handling blood or specimens, and before carrying out any clinical procedure.
- Masks They help to prevent the spread of respiratory infections. Wash hands before putting on mask. Cover mouth and nose with mask. Always use a fresh mask having at least four layers.
- Eyewear Goggles, face shield
- Gowns and Aprons Wash hands before wearing and after removing gown/apron.
- Caps Wash hands before putting on cap. After use, discard it in appropriate place.
- Footwear Wear clean and appropriate footwear.



Fig: Use of personal protective equipment gives protection to healthcare providers from workplace injuries and illnesses.

5. Disinfection and Sterilization

HIV is a delicate virus and easily gets destroyed by simple methods such as boiling for one second or using chemicals (like 70% ethanol, 0.5 % lysol solution, 3% hydrogen peroxide solution). USPs are meant to isolate the HIV and body fluids, and not the patient.

6. Disposal of Dead Body

- Plug all orifices well.
- Cover open wounds with water proof dressing.
- Place body in double plastic sheets and with bleaching powder.
- Tie the body bag well.
- Label the body, the sheet covering the dead body, and the bag in which the body is kept.
- Suggest the relatives of the dead not to open the body bag, once it is closed.
- Cremation is the best procedure for disposal of the dead. However, deep burial may be suggested in cases where cremation is not practiced, due to religious or some other reasons.

8.6 Safe Sex

Sexual activity which completely eliminates the risk of infection is termed as safe sex. Any sexual activity between two uninfected individuals is safe. Similarly, a sexual activity which does not involve the entry of blood, vaginal fluids or semen into the body is safe.

Safer Sex

It is the way of adapting one's sex life to minimize the risk of getting or transmitting HIV infection/STIs. Safer sex is anything a person does during sex to reduce his/her risk of acquiring a STI. For those sexually active people who care about their own and their partner's health, safer sex is a responsibility. It protects them and their partners from getting a STI. It embraces the whole range of sexual practices, making minimum changes necessary to make them safer.

It is termed as 'safer sex' (rather than safe sex) as it involves **minimizing risks**, rather than totally eliminating them.

Safer Sex Options

- Abstinence (refraining from sex).
- Mutually faithful relationship with an uninfected partner.



- Practicing sexual activities that involve no contact with blood, semen or vaginal fluids (such as kissing, hugging, body caressing).
- Having protected sex using a condom correctly.
- Avoiding multiple sexual partners.

8.7 Planned Parenthood

Preparation for future is something which every young person needs to think and work on. For this, they seek information and guidance from various sources like parents, teachers, peers, society, media etc. An issue central to their preparation for a fulfilled adult life is planned and responsible parenthood.

Young people must understand the negative consequences of early parenthood and avoid such practice. Although they now possess the equipment to create a new life, they may not be mature enough and ready to deal with the consequences of having a child at an early age. Having a baby is a great responsibility. It is an expensive affair in terms of time, energy, attention, health, education or money. Therefore every couple needs to consider very carefully when they should start their family.

When a woman and a man decide to have children only when they are mentally, economically and physically ready for the same, it is called *Planned Parenthood*. The couple must understand that a baby is created by two adults who have love and respect for each other. They should make sure that babies are produced by choice and not by chance. Quite often young people may feel that 'they are in love' but they must accept that it requires more than just strong feelings for a happy and long lasting relationship.

In our country the legal age for marriage is 18 years for females and 21 for males.

Effects of Early Parenthood

- Poor health of the mother
- Child having lower birth weight
- Abortion, premature birth or stillbirth
- Death of the mother during pregnancy or childbirth
- Financial problems in the family
- Conflicts/fights between the couple
- Malnourished child
- Mental problems such as stress, depression

8.8 Family Planning

Family planning (FP), according to WHO, is a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of the country.

WHO has also given another descriptive definition of FP. According to this, FP refers to practices that help individuals or couples to:

- Limit family size
- Avoid unwanted birth
- Bring about wanted birth
- Regulate the intervals between pregnancies
- Control the time at which births occur in relation to the ages of the parents, and
- Determine the number of children in the family.

Family planning is a basic human right of each and every individual. Everyone has a right to get information pertaining to family planning and then decide freely and responsibly the number and spacing of their children.



Fig: Small family is a happy family! But most families have not yet learnt how to optimally space child births. *Healthcare persons* should take this work as their *occupational, social* & *national responsibility*; and educate people of *reproductive age group* (RAG).

Contraception

Contraception refers to preventive methods to help women avoid unwanted pregnancies. It is the intentional prevention of conception by artificial or natural means. There are specific methods meant to be used by men and women. Each method has its own advantages and disadvantages. The users are free to choose any method out of various FP methods available (Cafeteria Approach) according to their needs and preferences. Contraceptive methods can be divided into two groups:

I. Temporary/Spacing Methods

- 1) Barrier Methods
- 2) Intrauterine devices
- 3) Hormonal methods
- 4) Miscellaneous

II. Permanent/Terminal Methods

- 1) Vasectomy in males
- 2) Tubectomy in females

A brief description of some of the family planning methods is presented below:

I. Spacing Methods

1) Barrier Methods

(a) Condom: It's a fine sheath of latex or rubber which is used by men during the sexual act. It acts as a physical barrier preventing the semen from entering the vagina. It is generally known by its trade name 'Nirodh' which is Sanskrit word meaning prevention. Condoms are provided free at government hospitals, dispensaries, primary health centers, sub centres etc.

Advantages

- Condom is safe, effective and cheap.
- Easily available.
- Easy to carry, use and dispose.
- No side effects.
- Available in a variety of shapes, sizes and textures.

• In addition to preventing pregnancy, condom also protects against HIV and other sexually transmitted infections.

However, condom must be used correctly and consistently every time during sexual act.

- (b) Diaphragm: It is a barrier method used by the females. It is a small rubber cup that is placed inside the vagina at the cervix before sexual act. It blocks the sperms from entering the uterus. However this method is not commonly used.
- (c) Female Condom: It is made of a thin plastic material called polyurethane. This material is different from rubber or latex. It is placed in the vagina by the user herself. The flexible ring present at both ends keeps the condom in place. Instructions on the package for using female condoms need to be followed.

Advantages

- It gives women a sense of freedom and more control over their bodies.
- No prescription required.

Disadvantages

- It is more expensive than male condom.
- It needs practice to use the condom correctly.
- It is large and odd looking.
- It does not protect against STIs/HIV.
- Available only at select pharmacies.

2) Intra Uterine Device (IUD)

Copper T: It is an IUD which is shaped like the alphabet 'T'. This device is made of polyethylene which has a coil of fine pure copper wire wrapped around its vertical arm. It is inserted by a doctor into the uterus and can be left there for 3 years. It prevents the fertilized egg from attaching to the uterus. It is a convenient method of avoiding pregnancy and of spacing births.



Advantages

- Low failure rate.
- Cheap and independent of sexual act.

Disadvantages

- Some females may have some side effects at the initial stage like abdominal pain or cramps, slight bleeding or increased menstrual flow.
- Chance of ectopic pregnancy.



Fig. Copper T is inserted by a doctor into the uterus; it prevents the fertilized egg from attaching to the uterus.

3) Hormonal Method

(a) Oral pills: Birth control pills such as 'Mala D' are easy, safe, effective and reversible contraceptive for females wanting to delay the first pregnancy or space the next child. These pills contain hormones which suppress the release of egg from the ovaries.



Fig. Tools for planning one's family: Mala D brand of Oral Contraceptive Pills (OCP), "Saheli" (once a week pill) & Condom ("Nirodh" brand of Govt. of India). OCPs are the best method for obtaining optimal time space between two child births. They are safe. They also give additional benefits for the women who use them.

Advantages

- Highly effective against pregnancy when used consistently and correctly under strict medical supervision.
- They reduce the risk of Pelvic Inflammatory Disease.

Disadvantages

- There may be some side effects like breast tenderness, headache, nausea, mood changes etc. in the first few months.
- The pill does not protect against HIV/STIs.
- (b) **Injectables:** Depo-Provera is a contraceptive injection of time release hormones. It, like birth control pills, prevents release of egg(s) from the ovary. One injection prevents pregnancy for 3 months.

Advantages

- It is very effective.
- No one else can tell if someone is using it.

Disadvantages

- There may be changes in menstrual bleeding, decrease in sex desire, mood swings, headache.
- Injection required after every 3 months.
- It does not give protection against STIs/HIV.
- (c) **Emergency contraceptive pills (ECPs)**: ECPs are the use of oral contraceptives within 72 hours of unprotected sex to prevent pregnancy. The earlier ECPs are taken after unprotected sex, the greater the chances that they will be effective. However, it is important to understand that ECPs are for emergencies only. They are not a substitute for a regular contraceptive method. They contain higher amounts of hormones and should be used under strict medical supervision. The government has introduced e-pills, that are available free of cost at family planning centres.

4) Miscellaneous

Abstinence: Avoiding sex is the surest method of contraception for both females and males. It is appropriate for those who have not yet begun sexual activity, as well as those who have. It is the surest way to prevent pregnancy and STIs. It requires high degree of motivation, self control and commitment from both partners. It should be encouraged among young people.

Other ways of demonstrating love and affection, such as holding hands, hugging, etc. can be used.





II. Permanent / Terminal Methods

1) Male Sterilization (Vasectomy)

In vasectomy, about one cm of the vas deferens (a part of the male reproductive system) is cut and tied. It prevents passage of sperms and is 100% effective.

Advantages

- Safe, very effective.
- Easy and simple method.
- Complications are rare.

2) Tubectomy or Tubal Ligation

In females the fallopian tubes are either ligated or cut twice 1 cm apart and ligated. In the case of laparoscopic sterilization, they are burned and sealed with the help of electric current, or occluded with rings or clips.

Advantages

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- Very effective.
- Does not interfere with sex.
- No side effects.

Medical Termination of Pregnancy (MTP)

Therapeutic abortion is carried out under the **MTP Act 1971** when there are specific indications like contraceptive failure, risk to mother's health, on humanitarian grounds such as rape, and risk of foetal abnormalities. In India, the MTP Act allows any female above the age of 18, married or unmarried, to have an abortion. It is legal only up to 20 weeks of pregnancy. Complications such as infection, infertility and even death may occur if MTP is not done by medical experts. MTP is a back up to be used only when contraceptives have failed or it was unplanned and unwanted pregnancy. It is not a family planning method.

MTP is a way of legal and safe abortion by qualified doctors at hospitals, nursing homes approved by the Government. Maternal mortality caused by illegal unsafe and septic abortions can be prevented by MTP services under the MTP Act.

Q

Questions

- 1. What do you understand by sexuality?
- 2. Mention common sexually transmitted infections and their causative organisms.
- 3. Mention common signs and symptoms of sexually transmitted infections.
- 4. Write the modes of HIV transmission.
- 5. Explain what preventive measures should be taken to protect oneself from HIV.
- 6. Mention the universal safety precautions for control of HIV/AIDS.
- 7. List the ill effects of early parenthood.
- 8. Give classification of family planning methods.
- 9. Mention the advantages and disadvantages of using IUD.
- 10. Describe the MTP Act.