HIV/AIDS AND OTHER ENDEMIC DISEASES

LEVEL 100

The meaning and modes of transmission of HIV/AIDS

- HIV stands for:
- Human : Human means the virus is mainly found in humans.
- Immunodeficiency: Immunodeficiency means a lack of protection against disease.
- Virus: Virus means the germ that causes HIV

A. I. D. S

- **Acquired**: Acquired because one gets it from somewhere else. Your own body does not make this disease. It comes from outside your body.
- **Immune**: Immune because it refers to the body's ability to fight sickness. Every person has some immunity to sickness inside his/her body. This helps the person fight diseases and stays healthy.
- **Deficiency: Deficiency** because the body lacks something or compromises something. In a person with AIDS, the body's immune system can no longer work. It cannot fight off even the weakest disease germ. A person with AIDS therefore catches many illnesses. These illnesses are what kill him or her.
- **Syndrome:** Syndrome because of the group of sickness that occur together. People with AIDS get many of the same kinds of infections and sicknesses, such as cough, diarrhoea, shingles, etc.

DIFFERENCE BETWEEN HIV AND AIDS

- Therefore the different between HIV and AIDS is that the Virus that causes AIDS is **HIV.** When a person becomes infected with HIV, the body produces antibodies against the infection.
- The virus lives in the body and can be passed to other people, even though the infected person has no outward signs or symptoms. In other words, a person carrying HIV can look very healthy. It is not yet outward signs or symptoms. In other words, a person can remain a symptomless carrier of HIV, although it is estimated to be between two to ten years or even longer. There is currently no way to remove the HIV virus from the body.

Difference cont.

- Eventually the HIV(virus) damages the **immune system** beyond the body's ability to repair it then the person develops signs and symptoms of the illness and these appear as disease called AIDS. While progress is being made in treatment approaches ,there is no cure for AIDS**.**

MODE OF HIV TRANSMISSIN(how HIV is carried and spread)

- The Human Immunodeficiency Virus(HIV) can be carried in:
- Human Blood,
- Semen
- Vagina fluid (discharge or secretion)
- Breast Milk and
- Saliva(all body fluids)
- **NOTE that 80% of all infection is through unprotected sex,15% from Mother to child and 5% through transfusion of infected blood and other means.**

Mode of transmission cont.

- The Human Immunodeficiency Virus(HIV) can be spread through:

➢1. SEXUAL MODES OF TRANSMISSION: There are various modes of HIV/AIDS Transmission or ways of getting infected with HIV but Heterosexual and Homosexual are the routes by which most people become infected with HIV/AIDS worldwide. Examples:

- Penile-Vaginal intercourse-Having unprotected vaginal intercourse with an infected person.
- Penile-Anal Intercourse- Engaging in **anal intercourse** with an infected person.
- Oral- Genital Intercourse- Having **Oral sex** with an infected person (Fellatio,Cunniligus and Anillingus).

Mode of transmission cont.

- Through cuts or lesions in the vagina, penis and the rectum.
- Intercourse with multiple sexual partners.
- Intercourse with a prostitute.
- Intercourse with an Injection Drug User.
- Engaging in any activities that allow infected semen, vaginal fluid or blood to enter the mouth, anus, vagina or open cuts or sores.

2.NON SEXUAL MODE OF TRANSMISSION

- Needles, knives and other sharp instruments transmit HIV. Sharing Skin-piercing /Cutting Instruments with an infected person or sharing intravenous needles and other sharp objects with an infected person.
- Any instrument that cuts or punctures the skin can retain small amounts of blood that can be passed on to the next user if it is not sterilised first.
- Avoid tattooing, ear piercing, acupuncture, blood-letting ceremonies or sharing razors unless you are sure that the instruments being used were sterilised or boiled in water prior to your use.
- Small amount of blood remain in a needle or syringe after use, meaning it can be unwillingly injected into the bloodstream of the next user.
- If the first user was HIV-positive, the second user may become infected.
- Only a very small amount of blood is needed for transmission. Sharing needles or syringes for any person. Only a very small amount of blood is needed for transmission.
- Sharing needles or syringes for any reason-medicines, heroin, cocaine, amphetamines and even water – can spread HIV. It is not what is put into the syringe that transmit HIV, but the blood that remains in the needle and syringe after use.

OTHER MODES OF TRANSMISSION

- 2.Receiving a transfusion of infected blood
- 3.Having a Blood Covenant/Pact with an Infected person
- 4.Trasnmission of Contaminated (Infected) Blood.
- 5.Transplant of an Infected Organ/Tissue.
- 6.HIV Transmission from infected contact sports person where bleeding may occur.
- 7.Mother –To-Child- Transmission(MTCT). MTCT or vertical transmission is the principal cause of HIV/AIDS in children under five years. Although approximately 60% of MTCT cases occur during delivery, an HIV positive mother can pass the virus to the child during pregnancy, during delivery or through breast feeding.

COMMON MISCONCEPTIONS OF HIV AND AIDS AND HOW THEY CAN BE CORRECTED

- Misconception is an erroneous act of conceiving or mistaken notion. Misconception in HIV/AIDS is divided into two:

1. Misconception of infection(Spread of HIV) and

2. Misconception of Prevention(Not spread of HIV).

Misconception of infection(Spreading the virus)

- 1. HIV/AIDS does not exist at all.
- 2.HIV/AIDS is punishment from God.
- 3.HIV/AIDS is curse from the ancestors(gods).
- 4. Witches are those causing HIV/AIDS.
- 5. It is the sickness of the Ghost.
- 6. Wash genitals immediately after sex in order to avoid being infected.
- 7. Take antibiotics immediately after sex.
- 8.Herbalists and spiritualists have a cure for HIV/AIDS.
- 9. HIV is manufactured by the whites purposely to eliminate the black race.

Misconception of infection(Spreading the virus) cont….

- Condoms are infected with HIV in order to reduce the population in Africa.
- If HIV patient sleeps with a virgin he or she would be cured.
- If HIV/AIDS patient sleeps with many partners he/she would be cured.
- Bad women insist on condom use with their sex partners.
- Everybody has an amount of the HIV in him/her etc.

Misconception of prevention(not spread of the virus)

1 When one holds hands with HIV patient the person will be infected with the HIV.

2. Wearing clothes or using articles that belong to a person living with HIV/AIDS(eg towels, beddings or toilet articles).

3. Living with or sleeping in the same room with PLWHA(HIV is air-borne disease).

4.Hugging or playing with a child or a baby who is living with HIV/AIDS.

5.Caring for the children or an adult who is PLWHA.

6.Swimming in a pool river or waterhole with a PLWHA.

Misconception of prevention(not spread of the virus cont..

- 7.Travelling on crowded buses with a person or people living with HIV/AIDS.
- 8.Being nearby when a PLWHA coughs or sneezes(HIV is air-borne disease)
- 9.Sharing food, cups and plates with a PLWHA.
- 10.Giving first aid when good safety practices are needed.
- 11.Donating blood if you are not HIV-positive
- 12.Using a common bathroom.
- 13.Feeding a person with AIDS.
- 14.visiting a person infected with the AIDS virus
- 15.Being bitten by mosquitoes and other insects.

HOW HIV and AIDS WAS FIRST DETECTED

- Circa 1900 started the history of AIDS from Monkeys to Human. AIDS is caused by the Human Immunodeficiency Virus(HIV),which originated in a virus called SIV(simian immunodeficiency virus)found in non-human primates(chimpanzee) in sub-Saharan Africa ad was transferred to humans during the late 19th or early 20th century.
- It is believed that a hunter got the AIDS virus(HIV) from a Pan Troglodytes Chimpanzee between 1884 and 1924,somewhere near modern-day Kinshasa in West Central Africa. It was reported that the hunter killed a chimpanzee and in the process, some of the animal's blood entered the hunter's body, possibly through an open wound. The blood carried the virus SIV which is naturally harmless to the chimp but deadly to humans when it entered his body. The virus in the human body later came to be called HIV.
- The virus spread as colonial cities sprout up, but deaths were ignorantly blamed on other causes.

HOW HIV and AIDS WAS FIRST DETECTED cont.

- In the early years of the epidemic HIV was an unknown and feared virus that was untreatable and often fatal. However, as research, investment and commitment into understanding HIV and AIDS increased, so the outcome of people living with HIV improved around the world. Key historical moments in the history of HIV and AIDS can be explored through the HIV and AIDS timeline, such as the development of highly-effective **antiretroviral drugs** for the treatment of HIV.
- Some time in 1978 Gay men in U.S.A and Sweden and heterosexuals in Tanzania and Haiti began showing signs of a strange disease that was later known and called AIDS. Early 1980,more gay men diagnosed of a disease that was similar to what was detected earlier. The Centre for Disease Control (CDC,U.S.A) linked the new disease to blood. The term AIDS was used for the first time on July,27$^{th.}$

HOW HIV and AIDS WAS FIRST DETECTED cont.

- HIV was identified in 1983 by groups of scientists in France under the direction of Luc Montagnier, and in the United States under the direction of Robert Gallo. Since that time ,researchers have been working on numerous theories about the origins and transmission of HIV, and while many theories have been proposed and researched, a number of facts are now undisputed.
- In May 2006,an international group of researchers under the leadership of Dr. Beatrice Hahn of the University of Alabama-Birmingham in the United States has provided the most conclusive evidence about the origins of HIV-1 M. After collection and analysing waste samples from wild chimpanzees in terms of the molecular similarities between SIV and HIV-1 M this group of researchers concluded that chimpanzees un West-Central Africa(especially in present day Cameroon) were the source of the most widespread form of HIV.
- NB: Questions about how the virus jumped from chimpanzees to humans still remain unknown.

THE TYPES OF HIV

- There are two species of the virus,HIV-1 and HIV-2.HIV-1 came froma Simian Immunodeficiency Virus (SIV) found in chimpanzees,and HIV-2 came from the Sooty Mangaby monkey found in parts of Sub-Saharan West Africa. The overwhelming majority of infections around the globe (approximately 90%) are strain of HIV-1,while HIV-2 remains primarily confined to West Africa.HIV-1 has been classified into three groups (M.O.N.): “**M**” for “Major”;”**O**” for “Outline”; “**N**” for “New”. The majority of infections are HIV-1 M.

THE THEORIES OF HIV

- The " **Hunter" or " Bush Meat Trade" Theory**

➢ It suggests that hunters who killed and butchered chimpanzees and monkeys were necessarily exposed to SIV through the animals' blood and the cuts bites sustained while doing their work**.**

➢ As well consumption of this type of bush meat would also expose humans to SIV.

➢ In 2004,an article published in the Medical Journal **The Luncet,** showed that viral transfer from monkeys and chimpanzees to hunters was still common in Cameroon (Wolfe, Swintzer and Carr,2004;cited in Kumasi and Allen,2005). Since the early 1990s(see Report gall's study, **Virus Hunting,**1991),the prevailing theory had been transmission from monkeys to humans in West- Central Africa

OPV (Oral Polio Vaccine)AIDS Theory

- The only other theory of Scientific substance has been the OPV Theory. It was detailed in the 1999 book, **The River; A journey to the source of HIV and AIDS** by Edward Hooper.
- According to Hooper, almost a million people were given OPVs between 1957 and 1960 in the then Belgian Congo, Rwanda and Burundi. He argued that polio vaccines, were made in a lab in Kisangani from cells of infected chimpanzees, and the vaccines, which contained SIVs, jumped to humans through OPVs, today, most researchers do not support this theory for a few reasons:

- First the original phial of polio` vaccine and subsequent testing of that vaccine found no trace of the virus.
- Second, research scientists strongly believe that all evidence points to the facts that the virus predates forms the African Polio Vaccination program(started in 1957) by many years.

NOTE

- It is important to note that HIV is quite old, and research scientists believe that the virus jumped from the chimpanzees of Cameroon to humans at some point before 1931. The oldest known HIV sample dates 1959 and was taken by Dr. Arlo Motulsky at that time during research on malaria in the former Belgian Congo. Dr. Motulsky sent back to his lab at the University of Washington in Seattle 672 of over a 1000 blood samples taken to his research team from Emory University in Atlanta contacted Dr. Motulsky for consent to examine his 1959 sample-and one sample,the team found HIV

THE CONTAMINATED NEEDLE THEORY

- Owing to poverty a needle which was contaminated with SIV was used on people in Africa which made them infected

THE COLONIALISM THEORY

- From the 19th and 20th centuries, colonialism was intensive which made people to be put in labour camps. They worked greatly, consequently weakened their bodies and out of hunger fed on SIV infected monkeys and also with few women and cross sexing also developed and spread the virus.

THE CONSPIRACY THEORY

- It is conspired that, the Americans deliberately developed this virus and used to inject people in the strongholds of African-Americans to cut off the number of African-Americans in support of the CIA **(Central Intelligence Agency-responsible for collecting secret info. On behalf of govt**) activities modes of Transmission

THE HISTORY OF HIV/AIDS IN USA

- Some time in 1978 Gay men in U.S.A and Sweden and heterosexuals in Tanzania and Haiti began showing signs of a strange disease that was later known and called AIDS.
- Early 1980,more gay men diagnosed of a disease that was similar to what was detected earlier. The Centre for Disease Control (CDC,U.S.A) linked the new disease to blood. The term AIDS was used for the first time on July,27th.
- There was no reaction or mention of the word by any America State Official including the US president Ronal Reagan. CDC(USA) warned blood banks of possible problem with blood supply. The little information individual had about the virus and the disease led to negative and hostile reaction towards those infected ,for example in the San Francisco
- Area, the police department equipped patrol officers with special masks and gloves for use when dealing with what the police called “a **suspected AIDS patient”** and in New York: **Landlords have evicted individuals with AIDS and the social security administration is interviewing patients by phone rather than face to face (Dr. David Spencer, Commissioners of Health, New York City, cited in Enlow,1984.**

THE HISTORY OF HIV/AIDS IN USA cont.....

- In June 1981,the Central for Disease Control(CDC) publishes a report from Los Angeles for five young homosexuals men with fatal or life-threatening Phencyclidine (PCP)pneumonia**(Phencyclidine is a white crystalline power that is readily soluble in water and alcohol. It is sedative and anaesthetic agent; calming**).
- Almost never seen in people with intact immune systems, PCP turns out to be one of the major “opportunistic” infections” that kill people with AIDS. On the 4th of July, the CDC reports that an unusual skin caner-Kaposi’s sarcoma or KS – is killing young, previously healthy men in New York City and California.
- In 1985,the US food and Drug Agency(FDA) approved the first antibody test. Blood products began to be tested in the US and Japan. The first international conference was held in Atlanta(US).
- By 1985,the beginning of the second year of the Regan administration, however, the president and his government were still distance from the disease. The president did not mention the word **AID**S until September 1985.By that time, almost 16,000cases of AIDS in the US were reported to the WHO.

THE HISTORY OF HIV/AIDS IN USA cont.....

- At a press conference on September 17,in reaction to a question whether he (Regan)would send his children to school with a child who has AIDS, the president provided an answer that shocked scientists and activists alike.
- Despite scientific and medical research to the country, Regan cast doubt on the fact that HIV cannot be transmitted by casual contact.
- A young man called Rayn White in 1985 became a symbol of the intolerance of society towards AIDS victims on the United States of America.
- Once it became known that White, a haemophiliac, had contracted the disease from a tainted blood transfusion, school officials banned him from class(Time magazine,1990 and Kusmer,1990).

THE HISTORY OF HIV/AIDS IN USA cont.....

- In October, the actor Rook Hudson died of AIDS. He became the first high profile person known to have died of AIDS. In the Wall Street Journal it was noted that America considered AIDS the “gay plaque” until 1985,when Rock Hudson’s death made AIDS a household word. Polls showed that 51% of Americans favoured quarantine of those with AIDS.
- 1986-1990- Regan’s second term administration continued to treat AIDS more as a moral issue rather than a public health issue.
- In 1987,Senator Jesse Helms was so offended by a brochure on safe sex produced by the Gay Men’s Health Crisis in New York(the brochure despite a gay sex encounter)that he pushed for a ban on all federal funding’s that dealt with homosexuals activities.
- The ban is still in effect today. In the late 1980s the Government pursued stringent measures to restrict immigrants and travellers found to be HIV- positive from travelling to the US,AZT, a drug first synthesized in 1964 to treat cancer, was approved for use against HIV/AIDS in 1987,and used as a preventive treatment in 1990.

THE HISTORY OF HIV/AIDS IN USA cont.....

- 1991-2006 this period is characterised by major intervention attempts through the search for a cure for the disease, and the stigma and discrimination reduction.
- The approval of drugs for HIV-positive persons, the massive investment in the dissemination of information on the virus and the disease, and the public disclosure of high profiled individuals in the arts and sports have reduced considerably the stigma and discrimination that characterised the disease in the early 1980s.
- US president after Roland Regan have all taken an interest in the fight against the disease by devoting funds to Research, support and global AIDS initiatives.

HISTORY OF HIV/AIDS IN GHANA

- HIV/AIDS is present in Ghana just like in other countries world wide. As of 2004,an estimated 404,000 people infected with the virus. HIV prevalence is highest in the Eastern Region of Ghana and lowest in the northern regions of the country.
- In response, the government has established the Ghana AIDS Commission which coordinates efforts amongst NGO's, international organizations and other parties to support the education about and treatment of AIDS throughout Ghana.
- United States, European nations and the United Nations have supplied aid to help alleviate HIV/AIDS issues in Ghana.
- The Social History of HIV/AIDS in Ghana begins by recounting the stories of origin in HIV/AIDS in the world. This is following when, where, and how it was first detected in Ghana the diffusion of the disease in the country, the history of public reaction and intervention and its current profile.

HISTORY OF HIV/AIDS IN GHANA cont.....

When, Where and How HIV/AIDS was First detected in Ghana

- The first AIDS cases were reported in Ghana in 1986. A more detailed report on AIDS in Ghana in 1991 noted that 107 HIV cases were documented in 1987.

- By March 1988,333 cases were identified, and by April 1990,there were 2,744 cases of HIV reported

History of HIV in Ghana cont….

Diffusion of HIV/AIDS in Ghana

- Various theories have been applied to the spread of HIV/AIDS in both developed and developing countries.
- One theory of prominence is that of diffusion.
- Diffusion is the spontaneous spreading of something such as ideas or innovation, particles, heat or momentum. When a drop of coloured water is added to clear water, the colour of the water changes as the coloured water spreads. In relation to HIV/AIDS, diffusion could be described as the spread of the disease from a region of high concentration to regions of lower concentration and among different socio-economic groups.

History of HIV in Ghana cont

Types of diffusion which are critical to the spread of HIV/AIDS in Ghana

- **Expansion/Contagious Diffusion -** this is a process in which items being diffused remain and often intensify in the origin area as new area are being affected.
- **Relocation /Migration Diffusion –** a process in which items being diffused leave the originating areas as they move to new areas**.**
- **Hierarchical Diffusion –** a process where an idea, innovation or disease spreads by moving from larger to smaller places, often with little regard to the distance between places.
- **Spatial Diffusion** – the spread of some phenomenon over space and through time from a limited number of origins.

HISTORY OF HIV IN GHANA CONT….

- In Ghana, studies have shown that the spread of HIV has been through various forms of diffusion, including diffusion related to urbanization, migration, commercial sex practices, traditional practices such as cutting, and a wide range of sexual contacts.
- Early studies(Anarfi 1993,and Konotey-Ahulu 1989); cited in Anarfi,1993) suggested that most of the AIDS cases had a history of originating outside the country and almost of the females infected had been involved in prostitution in another country, or in border regions.
- The majority of these women came from the Eastern Region which has the highest prevalence rate in the country, in Agormenya, the prevalence rate was 9.2% in 2003 and 7.4% in 2004 the highest in the country.

HISTORY OF HIV IN GHANA CONT.

- In 2004,the sentinel report indicated that the epicentre of the disease has not changed significantly.it was still concentrated around centres where there was migration.
- In Ho, the capital of the Volta Region, which is closed to the bordering Togo in the east,5.8% of people tested were HIV-positive.
- Similarly, Eikwe close to the that Ghana – La Cote d'voire area also has a high prevalence rate because of its high human traffic due to trans-border trading activities(Ministry of Heath,2003).
- Literature shows that although initially the disease was associated with sex workers, there has been a significant shift in the spread.
- In 1999, a survey of sex workers in Tema and Accra found a HIV prevalence of 74.2% among the "**seater"-based sex workers**, and 27.2% among home-based "roamer workers", findings similar to those observed in 1997/98.

HISTORY OF HIV IN GHANA CONT....

- In Kumasi, prevalence among sex workers was very high (82%) in 1999(Cote, et al 2004;cited in Ghana Health Services/Ghana AIDS commission,2004).
- Diffusion through heterosexual sex has led to the spread of the disease among deferent socio-economic groups. The distance is no more associated with the sex trade and people with a history of having travelled outside the country (Ghana Health Services/Ghana AIDS commission,2004).
- By 1994,an estimated 118,000 Ghanaians were living with HIV and the number tripled to about 404,000 in 2004(ibid).
- Ghana's history of HIV/AIDS diffusion shows that through a higher percentage of those found among the high risks group are sex workers, other groups such as person who engage in transactional sex (older men having sex with younger girls),those with multiple sex partners and the youth have gradually been identified as high risks groups.

STAGES OF INFECTION OF HIV AND AIDS

- The stages of infection from the moment a person contracted the HIV till the last Stage of Acquired Immune Deficiency Syndrome(AIDS) is an individual's progression from HIV infection to AIDS which comprises of **SIX** stages. These stages are as follow:
- **Stage 1 Point of infection:** The first stage is point of infection where the virus enters the body. All this stage no sign and symptom of the Virus is shown.
- **Stage 2. Window Period**: This is the period between point of infection and the body's detection of the virus. The person has no signs or symptoms of the virus. The body has just started producing antibodies to the virus, but there are not yet enough present to be detected. Therefore an HIV test examining the blood for antibodies will return though the person is infected and can infect others. This period can last 2-3 months or more.
- **Stage 3.Sero-Conversion:** this is the point at which the body produces detectable levels of antibodies to the virus. An HIV test examining the blood for antibodies will now return positive**.** Some people may experience short illness at this point(fever, skin rash, etc.).

STAGES OF INFECTION OF HIV AND AIDS cont….

- **Stage 4.Asymptomatic Sero- Positive Phase:** During this period, an individual remains free from any illnesses associated with the virus. This is a critical stage, because positive health choices made during this period can prolong it, meaning the infected person can stay productive and live illness free. This stage can last from several months to several years.
- **Stage 5.Clinical Illness Insufficient for a Diagnosis of AIDS:** This a is the period during which infected individuals suffer intermittent bouts of illness, for which they may receive treatment. Signs and symptoms can include fever, diarrhoea, weight-loss, fatigue, night sweat, thrush, and herpes zoster(this collection of illnesses referred to as the AIDS Related Complex, or ARC).
- **Stage 6.Clinical Illness Sufficiency for Diagnosis AIDS:** During this later stage, an infected person's health further deteriorates. "Syndrome" implies multiple illnesses; individuals often suffer from simultaneous opportunistic infections during this stage.

Different Between Window of Hope and Window Period

- **Window of Hope** refers to the age group of 5-14 year olds who have not yet been infected by the HIV(or the AIDS Virus).As National AIDS/STI control programme believes that if these children can be taught to protect themselves from HIV infection before they become sexually active they can remain free of HIV for their entire lives.
- **Window of Hope** is the period between the point of infection and when the body's detection of the virus. The body has just started producing antibodies to the Virus. At this stage the person has no signs or symptoms of the Virus because there are not yet enough antibodies present to be detected.

SIGNS AND SYMPTOMS OF HIV/AIDS

- The signs and symptoms of AIDS have been **divided into two main** categories, **Major and minor**. These symptoms may be present all the time or recurrent(meaning that they come and go).
- **The Major Signs and Symptoms of HIV/AIDS are:**
  - Diarrhoea for more than one month
  - Persistent fever more than one month
  - Weight loss more than 10% of the body weight

SIGNS AND SYMPTOMS OF HIV/AIDS cont....

❖**The Minor Signs and Symptoms of HIV/AIDS are:**

- Night sweat
- General Lymph gland enlargement
- Persistent weakness
- Attacks of shingles(Ananse)
- Herpes simplex infections
- Amenorrhea(Premature cessation of menstruation in young girls)

CLINICAL DEFINITION of AIDS(OR CRITERIA to DIAGNOSE HIV PATIENT

❖In order to diagnose someone as HIV/AIDS Patient, the Health Officials use the following 2 Criteria.

- Two major signs, plus one minor signs, plus a confirmed HIV antibody test OR

- Three major signs, plus a confirmed HIV antibody test

SOME TYPES OF ENDEMIC DISEASES

- Diabetes
- Ebola
- Hepatitis B
- Cholera

DIABETES
Origin of diabetes mellitus:

- Diabetes comes from Greek, and it means a “siphon”. Aretus the Cappadocian, a Greek physician during the second century A.D., named the condition *diabainein*. He described patients who were passing too much water (polyuria) - like a siphon. The word became “diabetes” from the English adoption of the Medieval Latin diabetes. In 1675, Thomas Willis added mellitus to the term, although it is commonly referred to simply as diabetes. *Mel* in Latin means “honey”; the urine and blood of people with diabetes has excess glucose, and glucose is sweet like honey. Diabetes mellitus could literally mean “siphoning off sweet water”.

MEANING AND TYPES

- Diabetes **mellitus refers** to a group of diseases that affect how your body uses **blood sugar** (glucose). Glucose is vital to your health because it's an important source of energy for the cells that make up your muscles and tissues. It's also your brain's main source of fuel. OR
- Diabetes, often referred to by doctors as diabetes mellitus, describes a group of metabolic diseases in which the person has **high blood glucose** (blood sugar), either because insulin production is inadequate, or because the body’s cells do not respond properly to insulin, or both. Patients with high blood sugar will typically experience polyuria (frequent urination), they will become increasingly thirsty (polydipsia)and hungry (polyphagia).

CAUSES OF DIABETES

- To understand diabetes, first you must understand how glucose is normally processed in the body.

How insulin works

Insulin is a hormone that comes from a gland situated behind and below the stomach (pancreas).

- The pancreas secretes insulin into the bloodstream.
- The insulin circulates, enabling sugar to enter your cells.
- Insulin lowers the amount of sugar in your bloodstream.
- As your blood sugar level drops, so does the secretion of insulin from your pancreas.

The role of glucose

- Glucose — a sugar — is a source of energy for the cells that make up muscles and other tissues.
- Glucose comes from two major sources: food and your liver.
- Sugar is absorbed into the bloodstream, where it enters cells with the help of insulin.
- Your liver stores and makes glucose.
- When your glucose levels are low, such as when you haven't eaten in a while, the liver breaks down stored glycogen into glucose to keep your glucose level within a normal range.

Causes of type 1 diabetes

- The exact cause of **type 1 diabetes** is unknown. What is known is that your immune system — which normally fights harmful bacteria or viruses — attacks and destroys your insulin-producing cells in the pancreas. This leaves you with little or no insulin. Instead of being transported into your cells, sugar builds up in your bloodstream.
- **Type 1** is thought to be caused by a combination of genetic susceptibility and environmental factors, though exactly what those factors are is still unclear. **Weight** is not believed to be a factor in type 1 diabetes.

Causes of prediabetes and type 2 diabetes

What is prediabetes?: This is where the cells in the body are becoming resistant to insulin.

- In prediabetes — which can lead to type 2 diabetes — and in type 2 diabetes, your cells become resistant to the action of insulin, and your pancreas is unable to make enough insulin to overcome this resistance. Instead of moving into your cells where it's needed for energy, sugar builds up in your bloodstream.
- Exactly why this happens is uncertain, although it's believed that genetic and environmental factors play a role in the development of type 2 diabetes too. Being overweight is strongly linked to the development of type 2 diabetes, but not everyone with type 2 is overweight.

Causes of gestational diabetes

- During pregnancy, the placenta produces hormones to sustain a woman’s pregnancy. These hormones make her cells more resistant to insulin.
- Normally, the woman’s pancreas responds by producing enough extra insulin to overcome this resistance. But sometimes her pancreas can't keep up. When this happens, too little glucose gets into your cells and too much stays in her blood, resulting in gestational diabetes.

Risk factors

- Risk factors for diabetes depend on the type of diabetes
- **Risk factors for type 1 diabetes.** Although the exact cause of type 1 diabetes is unknown, factors that may signal an increased risk include:
- **Family history.** Your risk increases if a parent or sibling has type 1 diabetes.
- **Environmental factors.** Circumstances such as exposure to a viral illness likely play some role in type 1 diabetes.
- **The presence of damaging immune system cells (autoantibodies).** Sometimes family members of people with type 1 diabetes are tested for the presence of diabetes autoantibodies. If you have these autoantibodies, you have an increased risk of developing type 1 diabetes. But not everyone who has these autoantibodies develops diabetes.
- **Geography.** Certain countries, such as Finland and Sweden, have higher rates of type 1 diabetes.

Risk factors for prediabetes and type 2 diabetes

❖Researchers don't fully understand why some people develop prediabetes and type 2 diabetes and others don't. It's clear that certain factors increase the risk including:

- **Weight.** The more fatty tissue you have, the more resistant your cells become to insulin.
- **Inactivity.** The less active you are, the greater your risk. Physical activity helps you control your weight, uses up glucose as energy and makes your cells more sensitive to insulin.
- **Family history.** Your risk increases if a parent or sibling has type 2 diabetes.
- **Race.** Although it's unclear why, people of certain races — including black people, Hispanics, American Indians and Asian-Americans — are at higher risk.
- **Age.** Your risk increases as you get older. This may be because you tend to exercise less, lose muscle mass and gain weight as you age. But type 2 diabetes is also increasing among children, adolescents and younger adults.

Risk factors for prediabetes and type 2 diabetes cont.

- **Gestational diabetes.** If you developed gestational diabetes when you were pregnant, your risk of developing prediabetes and type 2 diabetes later increases. If you gave birth to a baby weighing more than 9 pounds (4 kilograms), you're also at risk of type 2 diabetes.
- **Polycystic ovary syndrome.** For women, having polycystic ovary syndrome — a common condition characterized by irregular menstrual periods, excess hair growth and obesity — increases the risk of diabetes.
- **High blood pressure.** Having blood pressure over 140/90 millimeters of mercury (mm Hg) is linked to an increased risk of type 2 diabetes.
- **Abnormal cholesterol and triglyceride levels.** If you have low levels of high-density lipoprotein (HDL), or "good," cholesterol, your risk of type 2 diabetes is higher. Triglycerides are another type of fat carried in the blood. People with high levels of triglycerides have an increased risk of type 2 diabetes. Your doctor can let you know what your cholesterol and triglyceride levels are

Risk factors for gestational diabetes

❖Any pregnant woman can develop gestational diabetes, but some women are at greater risk than are others. Risk factors for gestational diabetes include:

- **Age.** Women older than age 25 are at increased risk.
- **Family or personal history.** Your risk increases if you have prediabetes — a precursor to type 2 diabetes — or if a close family member, such as a parent or sibling, has type 2 diabetes. You're also at greater risk if you had gestational diabetes during a previous pregnancy, if you delivered a very large baby or if you had an unexplained stillbirth.
- **Weight.** Being overweight before pregnancy increases your risk.
- **Race.** For reasons that aren't clear, women who are black, Hispanic, American Indian or Asian are more likely to develop gestational diabetes

SIGNS AND SYMPTOMS OF TYPE 1 AND TWO DIABETES

Some of the signs and symptoms of type 1 and type 2 diabetes are:

- Increased urination: A child with type 2 diabetes might urinate more frequently than they did before the condition developed. When there is an excess of sugar in the blood, the body excretes some of it in the urine, and excess water follows it. This might result in a child urinating more often.
- Increased thirst: Children with type 2 diabetes might start expressing a need to drink more than usual. More urination can cause dehydration and may lead a child to feel especially thirsty.
- Fatigue: When the body does not use blood sugar effectively, fatigue might develop. The emotional and physical discomfort of living with the more severe effects of diabetes might also cause persistent feelings of fatigue.
- Blurred vision: High blood sugar levels can draw fluid from the lenses of the eyes, making it harder to focus.

Symptoms of diabetes cont.

- Darkened skin: Insulin resistance might lead to the development of a skin condition called acanthosis nigricans. This can cause areas of skin to darken. It often affects the armpits and the back of the neck.
- Slow wound healing: High blood sugar levels can lead to longer healing times for sores and skin infections.

POSSIBLE COMPLICATONS

- **Eye complications** - glaucoma, cataracts, diabetic retinopathy, and some others.
- **Foot complications** - neuropathy, ulcers, and

sometimes gangrene which may require that the foot be amputated

- **Skin complications** - people with diabetes are more susceptible to skin infections and skin disorders
- **Heart problems** - such as ischemic heart disease, when the blood supply to the heart muscle is diminished
- **Hypertension** - common in people with diabetes, which can raise the risk of kidney disease, eye problems, heart attack and stroke.

POSSIBLE COMPLICATONS CONT.

- **Nephropathy** - uncontrolled blood pressure can lead to kidney disease
- **PAD (peripheral arterial disease)** - symptoms may include pain in the leg, tingling and sometimes problems walking properly
- **Stroke** - if blood pressure, cholesterol levels, and blood glucose levels are not controlled, the risk of stroke increases significantly
- **Erectile dysfunction** - male impotence.
- **Infections** - people with badly controlled diabetes are much more susceptible to infections
- **Healing of wounds** - cuts and lesions take much longer to heal.

PREVENTION

- **Type 1 diabetes can't be prevented**. However, the same healthy lifestyle choices that help treat prediabetes, type 2 diabetes and gestational diabetes can also help prevent them.
- **Eat healthy foods.** Choose foods lower in fat and calories and higher in fiber. Focus on fruits, vegetables and whole grains. Strive for variety to prevent boredom.
- **Get more physical activity.** Aim for 30 minutes of moderate physical activity a day. Take a brisk daily walk. Ride your bike. Swim laps. If you can't fit in a long workout, break it up into smaller sessions spread throughout the day.
- **Lose excess pounds.** If you're overweight, losing even 7 percent of your body weight — for example, 14 pounds (6.4 kilograms) if you weigh 200 pounds (90.7 kilograms) — can reduce the risk of diabetes.

TREATMENTS

- Sometimes medication is an option as well. Oral diabetes drugs such as metformin (Glucophage, Glumetza, others) may reduce the risk of type 2 diabetes — but healthy lifestyle choices remain essential. Have your blood sugar checked at least once a year to check that you haven't developed type 2 diabetes

https://www.researchgate.net/publication/311562631

HEPATITIS B

- **What is hepatitis B?**

Hepatitis B is an infection of the liver by the hepatitis B virus. It can be acute and self-resolving, or it can be chronic, leading to cirrhosis and liver cancer**.**

Here are some key points about hepatitis B

- Hepatitis B virus (HBV) is a virus that is spread through blood and other bodily fluids.
- Symptoms affect some people for a short time, but others will develop chronic symptoms and complications that can be fatal.
- Up to 2.2 million people in the United States (U.S.) have chronic HBV infection.
- Many cases go unreported or remain undiagnosed until a person shows signs of end-state liver disease.
- HBV can survive for up to 7 days outside the body at room temperature, on environmental surfaces

Here are some key points about Hepatitis B cont.

- Some individuals have no symptoms, some experience only the initial infection, but others remain chronically infected, as the virus continues to attack the liver over time without being detected. Irreversible liver damage can result.
- In 2014, 2953 cases were reported to the Centers for Disease Control and Prevention (CDC), but the actual number of acute cases may have been as high as 19,200.
- Globally, chronic infection due to HBV is thought to affect 240 million people, and around 786,000 people die from HBV-related liver disease each year


HBV :
-
+

CAUSE

- Hepatitis B is caused by infection of the body with the hepatitis B virus (Pathogen).

MODE OF SPREAD OR TRANSMISSION

MODE OF SPREAD

- The hepatitis B virus (**HBV**) is found in blood and bodily fluids.
- It can be transmitted through semen, vaginal fluids, and blood
- It can pass from a mother to a newborn during delivery.
- Sharing needles and having unprotected sex increase the risk.
- People tend to catch HBV when they visit a part of the world in which infection is more common.
- A person can spread the condition without being aware, as it may be symptomless

MODE OF SPREAD OR TRANSMISSION cont..

- Hepatitis B is transmitted when blood, semen, or another bodily fluid from a person infected with the virus enters the body of someone who is not infected. This may be through a puncture in the skin, a shared needle, or the exchange of body fluids.
- **Infection can happen through the following ways ALSO:**
- As an infected mother gives birth
- During sexual activity
- Through sharing needles, syringes, or other drug-injection equipment
- Through unsafe tattoo techniques
- By sharing personal hygiene items such as razors or tooth brushes

NOTE

- Health workers can be at risk if they are exposed to unsafe medical practices, such as reusing medical equipment, not using personal protection, or incorrect disposal of sharps.
- **HBV is not spread through food or water, sharing eating utensils, breastfeeding, hugging, kissing, holding hands, coughing, sneezing, or insects that bite**.
- However, the virus can survive outside the body for at least 7 days. During this time, the virus can still cause infection if it enters the body of a person who is not protected by the vaccine.

SYMPTOMS

- **Most infections occur during infancy or childhood. They are rarely diagnosed, as there may be few obvious symptoms**.
- Symptoms of a new infection may **not be apparent** in children under 5 years of age and adults with a suppressed immune system. Among those aged 5 years and over, between 30 and 50 percent will show initial signs and symptoms. **These include:**
- Fever
- joint pain
- Fatigue
- Nausea
- Vomiting
- Loss of appetite

SYMPTOMS CONT.

- Abdominal pain
- Dark urine
- Clay-colored stools
- Jaundice or a yellowing of the skin and whites of the eyes
- Acute symptoms appear from 60 to 120 days after exposure to the virus, and they can last from several weeks to 6 months.
- A person with chronic HBV infection may have ongoing episodes of abdominal pain, persistent fatigue, and aching joints

PREVENTIVE MEASURES

- A vaccine against HBV has been available since 1982. This is a series of three injections. The first injection is given soon after birth, the second at least 1 month later, and the third dose is given at least 8 weeks after the second dose.
- The CDC recommends that all children receive a birth dose of HBV vaccine and complete the series by 6 to 18 months of age.

PREVNTION CONT.

❖**Others who should receive the vaccine include:**

- Children and adolescents not previously vaccinated
- All health care workers
- Residents and staff of correctional facilities, halfway houses, and community residences
- People who inject drugs
- Those with multiple sexual partners ETC

OTHER PREVENTIVE MEASURES

- Wearing appropriate protective equipment when working in healthcare settings or dealing with medical emergencies
- Not sharing needles
- Following safe sexual practices
- Cleaning any blood spills or dried blood with gloved hands using 1:10 dilution of one part household bleach to 10 parts of water for disinfecting the area

HBV is a significant hazard for health workers around the world, but the vaccine offers effective protection.

TREATMENT OF HEPATITIS B

- For chronic HBV infection, the World Health Organization (WHO) recommend treating the individual with an antiviral medication.
- This is not a cure, but it can stop the virus from replicating and prevent its progression into advanced liver disease.
- A person with chronic HBV infection can develop cirrhosis or liver cancer quickly and without warning. In low-income settings, liver cancer can be fatal within months of diagnosis.
- Persons with chronic HBV infection require ongoing medical evaluation and ultrasound of the liver every 6 months to monitor for liver damage or worsening disease

EBOLA

- A BRIEF HISTORY OF EBOLA

➢The first cases of Ebola were reported simultaneously in 1976 in Yambuku, near the Ebola River in Zaire (now the Democratic Republic of the Congo) and in Nzara, Sudan.

➢Since then, eruptions or asymptomatic cases of Ebola in humans and animals have surfaced intermittently in the following locations due to outbreaks, laboratory contamination, and accidents:

HISTORY CONT.

- The Democratic Republic of the Congo (DRC)
- Sudan (South Sudan)
- Senegal
- United Kingdom
- United States (U.S.)
- Philippines
- Italy
- Spain

HISTORY CONT.

- Gabon
- Ivory Coast
- South Africa
- Russia
- Uganda
- Guinea
- Liberia
- Sierra Leone

HISTORY CONT..

- The 2014 Ebola outbreak was the largest in history, primarily affecting Guinea, northern Liberia, and Sierra Leone. The Centers for Disease Control and Prevention (CDC) estimates that the epidemic caused more than 11,000 deaths, with almost all occurring in West Africa.
- In the U.S., reports indicate that there have been two imported cases, including one death, and two locally acquired cases in healthcare workers.
- A small number of cases were reported in Nigeria, Mali, and Senegal, with health authorities able to contain these cases and prevent further spread

EBOLA

- **WHAT IS EBOLA?**

➢ Ebola virus disease is a serious, often fatal condition in humans and nonhuman primates. Ebola is one of several viral hemorrhagic fevers, caused by infection with a virus of the ***Filoviridae*** family, genus ***Ebolavirus*****.**

➢ The fatality rates of Ebola vary depending on the strain. For example, Ebola-Zaire can have a fatality rate of up to 90 percent while Ebola-Reston has never caused a fatality in humans.

➢ Ebola tends to spread quickly through families and friends as they are exposed to infectious secretions when caring for an ill individual. The time interval from infection with Ebola to the onset of symptoms ranges from 2-21 days

SOME FAST FACTS ABOUT EBOLA

- Ebola is considered a zoonotic virus, meaning that it originated in animals and then spread to humans.
- There is currently no vaccine available for Ebola, although several are in development.
- One vaccine, called Ebola ça suffit, was found to be 100 percent effective in a trial involving 4,000 people in Guinea.

RISK FACTORS FOR EBOLA OUTBREAK

- There is a higher risk of becoming infected when:
  - Traveling to areas of Africa where there have been confirmed cases of Ebola.
  - Conducting animal research with monkeys imported from Africa or the Philippines
  - Providing medical or personal care to people who may have been exposed to Ebola.
  - Preparing people for burial who have been infected with Ebola

CAUSES OF EBOLA

- Ebola is caused by viruses in the *Ebolavirus* and *Filoviridae* family. Ebola is considered a zoonosis, meaning that the virus is present in animals and is transmitted to humans.
- How this transmission occurs at the onset of an outbreak in humans is unknown
- In Africa, people have developed Ebola after handling infected animals found ill or dead, including chimpanzees, gorillas, fruit bats, monkeys, forest antelope, and porcupines.
- Person-to-person transmission occurs after someone infected with *Ebolavirus* becomes symptomatic. As it can take between 2 and 21 days for symptoms to develop, a person with Ebola may have been in contact with hundreds of people, which is why an outbreak can be hard to control and may spread rapidly

HOW EBOLA IS TRANSMITTED OR SPREAD

- Direct contact through broken skin and mucous membranes with the blood, secretions, organs, or other body fluids of infected people.
- Indirect contact with environments contaminated with such fluids.
- Exposure to contaminated objects, such as needles.
- Burial ceremonies in which mourners have direct contact with the body of the deceased.
- Exposure to the semen of people with Ebola or who have recovered from the disease - the virus can still be transmitted through semen for up to 7 weeks after recovery from illness.

HOW EBOLA IS TRANSMITTED OR SPREAD cont.

- Exposure to the semen of people with Ebola or who have recovered from the disease - the virus can still be transmitted through semen for up to 7 weeks after recovery from illness.
- Contact with patients with suspected or confirmed EVD - healthcare workers have frequently been infected while treating patients

NOTE

There is no evidence that Ebola can be spread via insect bites.

SYMPTOMS OF EBOLA

- The time interval from infection with Ebola to the onset of symptoms is 2-21 days, although 8-10 days is most common.
- **Signs and symptoms include:**
  - Fever
  - Headache
  - Joint and muscle aches
  - Weakness
  - Diarrhea
  - Vomiting
  - Stomach pain
  - Lack of appetite

EBOLA SYMPTOMS CONT…

Some patients may experience:

- Rash
- Red eyes
- Hiccups
- Cough
- Sore throat
- Chest pain
- Difficulty breathing
- Difficulty swallowing
- Bleeding inside and outside of the body

NOTE

- Laboratory tests may show low white blood cell and platelet counts and elevated liver enzymes. As long as the patient's blood and secretions contain the virus, they are infectious. In fact, Ebola virus was isolated from the semen of an infected man 61 days after the onset of illness.

PREVENTION OF EBOLA

NB. It is still unknown how individuals are infected with Ebola, so stopping infection is still difficult.

❖ Preventing transmission is achieved by:

- Ensuring all healthcare workers wear protective clothing
- Implementing infection-control measures, such as complete equipment sterilization and routine use of disinfectant
- Isolation of Ebola patients from contact with unprotected persons

NOTE

- Thorough sterilization and proper disposal of needles in hospitals are essential in preventing further infection and halting the spread of an outbreak.
- Ebola tends to spread quickly through families and among friends as they are exposed to infectious secretions when caring for an ill individual. The virus can also spread quickly within healthcare settings for the same reason, highlighting the importance of wearing appropriate protective equipment, such as masks, gowns, and gloves

ENDEMIC DISEASES AND GENDER/socio-cultural conditions that lead to spread of endemic diseases among men and women

❖**SOCIAL CONDITIONS**

- Funeral, festival and social gathering
- Handling of infected animals(killing of animals), including chimpanzees, gorillas, fruit bats, monkeys, forest antelope, and porcupines
- Family history
- Environmental factors
- Early sexual activity
- Rape
- Peer pressure
- Truancy and broken homes
- Sexual coercion

SOCIAL CONDITIONS CONT.

- Societal acceptance of polygamy and extramarital affairs for men, leaving women with little or no say as to their sexual health
- Sexual irresponsibility among men and women

Cultural Conditions

- Puberty rites and rituals which can result in early marriage for girls
- Societal acceptance of polygamy
- Traditional belief system that pressure women to marry before a certain age
- Certain window hood rights
- FGM
- Trokosi (slaves to deities
- Betrothals
- Levirate marriage
- Body piercing(tribal mark, tattooing, ear piercing etc)

REASONS WHY BOTH MEN AND WOMEN SHOULD BE INVOLVED IN PREVENTIONS PROGRAMMES

❖**WHY MEN SHOULD GET INLOVED**

- **Men's Responsibilities**: Men have much to offer as fathers, husbands, brothers, sons and friends and need to take greater role in caring for family members with AIDS and other endemic diseases
- **Men's sex risk taking behaviour**: Men take a lot of risks associated with sex. Such risk-taking behaviours increase their chances of contracting and transmitting HIV and other endemic diseases
- **The Use of Condoms**: Promoting the use of condom using men is among the best ways to intervene.
- Men are more likely than women to inject drugs, so there is the need for their involvement in prevention programmes
- **Men have sex with men(MSM**) also have sex with women, including their wives or girlfriends and sometimes

WHY MEN SHOULD GET INLOVED cont..

- **Culture of gender formation**: Change begins with the way boys are brought up. Some cultural attitudes and beliefs encourage risk-taking and discrimination against women, including violence
- Men are more likely to engage in behaviours that put their health at risk, such as drinking or using illegal drugs
- **Men's power to protect:** Men are involved in almost every case of transmission and almost always have the power to protect themselves and their partners
- On average, men have more sexual partners than women e.t.c.

WHY SHOULD WOMEN GET INVOLVED IN PREVENTIONS PROGRAMMES

- Puberty rites and rituals which can result in early marriage for girls
- Practices, such as female circumcision, which many girls vulnerable to infection.
- Prostitution for pleasure and wealth
- Economic dependence on men
- Pressure to have children
- Sexual coercion by men
- Increased exposure of women to transfusion and invasive surgical procedures related to childbirth and women's reproductive health problems
- Undiagnosed STIs or long waits between diagnosis and treatment

WHY SHOULD WOMEN GET INVOLVED IN PREVENTIONS PROGRAMMES cont.

- Refusal to use condoms, seeing it as a sign of mistrust or lack of love
- Chemical and herbal remedies for “improving” sex, leaving women vulnerable to infection
- E.T.C

PRIMARY PREVENTION STRATEGIES IN SPREAD OF HIV

❖**People can avoid STIs and HIV/AIDS by modifying their sexual behaviour following the ABCDs Method as follow:**

- **Abstain from Sex:** Abstaining from sex altogether is the only guaranteed protection
- Be Mutually Faithful: Stay faithful to one sexual partner. However, your partner must also be faithful to you and must be free of any STIs(including HIV/AIDS).It may be necessary for you both to be tested before entering into this agreement, as it is not always possible to tell if a person has STI or HIV/AIDS. Most do not have outward symptoms
- Consistent and Correct use of Condoms: Use a good quality condom correctly every time. To prevent STIs/HIV, be sure to use condoms even when using another family planning method. If possible, use condoms that are pre-lubricated with a spermicide or use a separate spermicide with condoms that are not already pre-lubricated.

PRIMARY PREVENTION STRATEGIES IN SPREAD OF HIV cont.

- DO not Share Sharp or Piercing Instruments such as Blades or Needles with others
- Delay Sex Until You are Mature Enough to Have a Responsible Sexual Life Partner

UNIVERSAL PRECAUTION: Assume that everyone is HIV positive until proven otherwise

STRATEGIES FOR MANAGING HIV

- **Anti-retroviral therapy (ART): This treatment helps in managing HIV among HIV positive people.**It also helps pregnant HIV positive women receive anti-retroviral therapy(Nevaripine) to prevent infecting their babies
- P**roviding the risk of medical care** for the infected mother (both to prevent opportunistic infections and anti-retroviral drugs to reduce the **viral load**) may lower MTCT risks
- **Primary prevention of MTCT** is achieved through the basic HIV/AIDS prevention strategies ,abstinence, mutual faithfulness among uninfected partners, correct and consistent use of condoms, delaying sex till marriage/when one becomes sexually responsible and avoidance of the use of un-sterile hypodermic syringes, needles and other sharp instruments.

Strategies for managing HIV cont..

- **Reducing the risk of transmission during labour** can be achieved by observing strict infection prevention measures(universal precaution) during the delivery eg. Using sterile or high-level disinfected instruments would prevent both mother and baby from range of infections, including HIV
- **Psycho-social support** includes long-term follow-up for families affected by HIV infection
- **Reducing transmission through reduced breast-feeding** may lower MTCT risks, but finding alternatives to breast –feeding can be very problematic. If a mother is infected with HIV and can afford replacement feeding it may be preferable to avoid breast=feedingi.e exclusive for three months

Strategies for managing HIV cont..

❖However, it is important to weigh the ff risks carefully

- Revelation of the mother's HIV status and subsequent stigmatization by the family
- Criticism of the mother for not breastfeeding(particularly by her mother-in law)
- Cost of powdered milk are prohibitive for poor women(some programmes provide free milk)
- Health problems caused by using local water to prepare powdered milk formulas

STRATEGIES FOR MANAGING DIABETES

❖DIABETES

MEDICATION: Oral diabetes drugs such as metformin (Glucophage, Glumetza, others) may reduce the risk of type 2 diabetes — but

➢Healthy lifestyle choices remain essential

➢Have your blood sugar checked at least once a year to check that you haven't developed type 2 diabetes

STRATEGIES FOR MANAGING HEPATITIS B

❖HEPATITIS B

- ➢For chronic HBV infection, the World Health Organization (WHO) recommend treating the individual with an antiviral medication.
- ➢This is not a cure, but it can stop the virus from replicating and prevent its progression into advanced liver disease
- ➢Persons with chronic HBV infection require ongoing medical evaluation and ultrasound of the liver every 6 months to monitor for liver damage or worsening disease