Nutrition and Health

Nutrients are classified as macronutrients and micronutrients, based on the amounts we require from the diet. Some nutrients can be stored e.g., glucose as glycogen in the liver, fat-soluble vitamins in fat reserves while others are required more or less continuously. There are also differences between individuals, meaning some may require specific nutrients more frequently (e.g., iron), and it is challenging to determine whether individuals have adequate levels of most nutrients because levels in the blood offer only a crude measure of cell and organ status.

Body muscles need for a broad spectrum of non-nutrients, phytochemicals, has also been recognized. These no nutrients are not essential for life in ways that macro- or micronutrients are, but nonetheless have putative health benefits and, whether acting directly or indirectly, diets rich in these compounds significantly reduce our risk of chronic disease, including cancer and cardiovascular disease. We also require dietary fiber, no digestible materials, such as cellulose, to support gut function (mechanical) and a healthy microbial population. A lack of nutrients or bioactive, or an excess of these, can cause poor health. Where once poverty led to malnutrition because of a lack of food (energy or specific nutrients), poverty of knowledge and cheap foods high in fat, sugar, and salt are leading to weight gain and obesity as well as specific deficiencies e.g., vitamin D.

Macronutrients There are three macronutrients – carbohydrates, fats, and proteins. They provide structural materials. e.g., amino acids, lipids) and energy. When necessary, or as a result of disease, proteins can be broken down to generate energy, but carbohydrates and fats are used preferentially for energy.

Carbohydrates

Carbohydrates and fats consist of carbon, hydrogen, and

oxygen. Carbohydrates range from simple monosaccharide's (e.g., glucose, fructose, GA lactose) through a range of saccharides, depending on the number of sugars present (e.g., disaccharides such as sucrose or table sugar) to highly complex polysaccharides (starch). Carbohydrates are found mainly in starchy foods (e.g., grain and potatoes), fruits, milk, and yogurt. Other foods such as vegetables, beans, nuts, and seeds also contain carbohydrates, but in smaller amounts. Simple carbohydrates were thought to raise blood glucose levels more rapidly than complex carbohydrates. In fact, some simple carbohydrates (e.g., fructose) follow different metabolic pathways (e.g., fructolysis), which result in only partial conversion to glucose, while many complex carbohydrates (e.g., potato starches). High glycemic index (GI) or high glucose loading (GL) foods are digested at the same rate as simple carbohydrates. Glucose stimulates the production of insulin by beta cells in the pancreas, driving uptake by the muscles.

Fats

Fats (triglycerides) consist of fatty acid monomers, some of which are essential, bound to a glycerol backbone. They are classified as saturated or unsaturated, depending on the detailed structure present, specifically the number of double bonds. Although saturated fats from animal sources and, for example, coconut have been a staple food for millennia, unsaturated fats (e.g., vegetable oil) are still considered to be healthier, despite recent evidence suggesting saturated fats might not be as detrimental as previously thought. Most saturated fats are solid at room temperature while unsaturated fats are typically liquids (e.g., olive or rapeseed oils).

Trans fats are unsaturated with one or more trans-isomer bond; these are rare in nature and typically created during industrial processing, specifically hydrogenation.

Unsaturated fats can be classified as monounsaturated (one double-bond) or polyunsaturated (many double-bonds). Depending on the location of the double bonds, unsaturated fatty acids may be classified as omega-3 or omega-6 fatty acids.

Protein

Proteins contain nitrogen and, in the case of methionine and cysteine, also sulfur. Proteins are structural molecules as well as enzymes. The body cannot store amino acids and requires a continuous source to produce new, and replace damaged, proteins. Of the 20 amino acids utilized by humans, 9 are essential (histamine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine) and must be sourced from the diet, as the body cannot synthesize them de novo. Complete protein sources contain all the essential amino acids while an incomplete protein source lacks one or more of the essential amino acids. In combination, incomplete sources of protein may provide all the essential amino acids. Micronutrients are, generally, minerals and vitamins. Dietary minerals are inorganic elements, besides carbon, hydrogen, nitrogen, and oxygen, which are present in most organic molecules. Some minerals are absorbed much more readily as salts (ionic form), and some foods are fortified with minerals to increase uptakes (e.g., iodine in salt, iron in breakfast cereals).

Bioactive Compounds

Bioactive compounds are those food components that have an effect on the body as a whole or specific tissues or cells. They are distinct from nutrients because bioactive compounds are not essential and, currently, there are no recommended daily intake values. However, it is well

established that a range of compounds from plant and animal sources has a positive influence on human health. These compounds include non-pro-vitamin a carotenoids and polyphenols, phytosterols, fatty acids, and peptides.

Disease

Many compounds have different biological effects within our bodies, and diet and disease are intimately associate. Apart from the diseases associated with malnutrition or an inadequate supply of a specific compound, leading to deficiency, the long-term effects of under nutrition in the developed world are also becoming apparent. Low birth weight infants experience increased rates of CVD in adulthood, and there is increasing evidence to support an association with obesity and metabolic disorders, such as diabetes. Animal and increasingly human studies suggest that malnourished mothers whether deprived of energy or individual nutrients have offspring that are more susceptible to chronic disease. Cancer incidence is significantly higher in subpopulations that consume a greater proportion of animal -derived fats and few if any vegetables, fruits, grains, and cereal. Nutritional disorders in Europe are typical of affluent societies, but age-related chronic diseases occur less frequently and later in life in the populations of Mediterranean countries

Chronic Diseases Life-stage, lifestyle, and genetics affect our risk of developing chronic diseases. As we age, our bodies are less effective at avoiding disease. The resulting breakdown in structure and function leads to an increased risk of chronic disease including cancer, CVD, type II diabetes, cataract and macular degeneration, arthritis, etc. Poor diet can accelerate this process while 80% of case-controlled studies support the hypothesis that a diet rich in fruits and vegetables, or more specifically bioactive

compounds, can reduce the risk. Diet has a role in the maintenance of health and development of disease. Understanding this relationship has proven very difficult, and what is obvious is that the benefits of some dietary choices are not the same for everyone. Maintaining an appropriate weight for height, moderating consumption of alcohol, not smoking, and taking regular exercise determine whether the majority of the population is at high or low risk of developing chronic disease. However, individual genetic differences in response to diet have been evident for years, e.g., cholesterol and saturated fat intake, salt intake, and hypertension. Some genetic diseases have no association with diet (e.g., sickle cell disease) while others may create specific dietary needs (e.g., cystic fibrosis, phenylketonuria) or may be exacerbated by some foods (e.g., lactose intolerance, celiac and food allergy). Others carry a high risk of developing disease (e.g., BRCA1/2 and breast cancer), which may or may not be affected by diet or other lifestyle choices. Nutrigenetics examines single gene/single food compound interaction. One of the best-described examples is the relationship between folate and the gene for MTHFR5,10-methylenetetrahydrofolate reeducates.

Nutrigenomics, on the other hand, aims to examine the response of individuals and populations to food/food components using post genomics technologies. The huge advantage in this approach is that the studies can examine people (i.e., populations, subpopulations – based on genes or disease – and individuals), food, life-stage, and lifestyle. For example, to understand the role of vitamin E in the prevention of CVD, nutrigenomics enables researchers to examine lipid and lipoprotein genotypes; glucose metabolism (i.e., the insulin– glucagon regulatory mechanism); triglyceride regulation (which retinoids and, therefore, some carotenoids, may act on); and fatty acid

metabolism simultaneously. The various techniques, however, also reveal genes, proteins, and metabolites, which might not have predicted as relevant.

FIRST AID

The aim of the first-aid treatment or management of Health Extension Package is to give life saving treatment and to prevent accident as well as emergency illness at community setting or environment.

Purpose of first aid treatment:

To keep the injured or ill person alive.
To prevent the injured condition from becoming worse.
To help him/her to recover To sustains life

Steps in giving emergency care:

Look at the general situation of the causality quickly Decide what is wrong and how severe or dangerous the injury is Give the appropriate first aid.

Shock

Definition: The reaction of the body to the failure of the circulatory system to provide enough blood to all-the vital origins of the body.

Cause:-
-Trauma
-Heart failures
-Sever bleeding
-Loss of plasma

Symptoms of shock
- General body weakness – the most significant symptoms
- Nausea with possible vomiting
- Thirst
- Dizziness
- Restlessens, and fear /sign of shock

• Fast breathing and shallow
• Pulse – rapid and weak
• Pupils - dilated
• Face – pale
• Restlessness, become unresponsive • Skin- cool and clammy- eyes- lack luster • Breathing – rapid and shallow First aid management of shock - Have the patient lie down and stay at rest - Keep the air way open and preventing the forward tilting of the head - Control External bleeding - Keep the patient warm by covering with blanket or sheet - Properly position the patient - Open air way and alert for vomiting If there is no spinal injuries use one of the following positions - Elevate the lower extremities, place patient place patient-flat, face up, and elevate the legs 8 to 12 inches - Do not tilt the patient's body - Don not elevate any fractured limb unless they have been properly splinted - Do not elevate the leg if there are fractures to the pelvic - Nothing by mouth (NPO) - Monitor the patient vital signs - Refer the patient to Hospital

Fracture

Fracture: Description: Is a brakage of bone tissue or discontinuation of bone tissue due to different causes or accidents.

Possible cause: 1. accident / trauma
2. pathological due to bone infection
3. tumor of the bone

Types of Fracture
• closed
• open
• compound/complicated

Sings and symptoms of fracture:
- Pain

- protruding of the parts
- Swelling
- mispositions
-Deformity
- Unable to function -Numbness or tingling sensation - Patient may shout due to -Discoloration severe pain Complications Immediate complications - Hemorrhage/ bleeding - Severe pain - Hypotension (shock) due to bleeding Late complications • Disability • Disfiguring • Deformity • Malunion • Delay in union

General First aid management of Fracture
• Assess carefully but by fast • Check respiratory condition • Check bleeding / hemorrhage • Consider the amount of loss • Determine and arrange referral • Asphyxia, bleeding, and severe wounds must be dealt with before treating any fracture • Support the injured part with supporting device, immobilize the fracture, bandaging and use splints • Refer the patient to hospital urgently.

Burn

Burn of the Body Fire is an accident that causes great damage to life and properties. Children are the most vulnerable to burn. Burns that occur around the mouth and nose and in general in the face are more dangerous and can cause death.

Causes of burns: • Fire, boiled water, steam, boiled oil and milk etc; • Sun-rays; • Electric and thunder accidents; and • Different chemicals; Effects/hazards of the burn accident:- Immediate effects/hazards:- • Burns and wounds of the body; • Severe pain; • Oozing and reduction of body fluid from the wound; • Difficulty in breathing because of suffocation from smoke, severe burns around the throat and face; and •

Drowziness, restlessness and unconsciousness.

Delayed effects/hazards: • Infections of the wound, septicemia, and high fever; • Disability; • Scar; • Contracture; and • Tetanus infection

Classification of burns: Burns are usually classified in three levels based on the depth or degree of skin damage. These are:-
• First degree burn; • Second degree burn, and • Third degree burn. 1st degree burn: • Redness or discoloration; • Mild swelling and pain; and • Rapid healing.

2nd degree burn: • Greater depth than first degree burns; • Redness and mottled appearance; • Blisters; • Severe pain; • Swelling; and • Prone to infection.

3rd degree burn: • Deep tissue distraction; • White appearance; • No pain and blisters; and • Complete loss of all layers of skin.

Measures for 1st degree burn:
• Apply cold water application or submerge the burned area in cold water; • If the wound is minor and small, clean daily the area with boiled cold water cover it with clean cloth to prevent contact with flies, if the wound located is in a joint, immobilize the joint area until the wound is cured; • If the wound is from boiled water, chemical (acid), take out his/her dress and cover it with clean cloth.

2nd and 3rd degree burn:-
• Cover the wound with clean cloth; • If the victim is conscious, his/her respiratory parts such as mouth, nose and throat are free from burn injury and give him/her frequently plenty of liquid such as ORS or similar solution

(prepare the solution from eight tea spoons of sugar, one spoon salt in one liter of boiled cold water). If the victim is a child below two years old give it one spoon every two minutes and if the child is over two years give it with a cup or glass in small amount every two minutes; • Advise the victim or his family to get tetanus toxoid vaccine; • Refer the victim to the nearest health facility.

Poison

Definition: Any substance that, if taken in to the body in sufficient quantity, can cause temporary or permanent damage. Note: get the poisoned to the hospital or health center immediately. The extent of danger depends upon: The amount and type of poison The age of the person Whether the person vomits Where the accident takes place

There are different types of poisons: - Acids - Insecticides - Alkalis - Drugs given for allergy (antihistamines) -Aspirin over dose in children - sleeping pills (sedatives) - Iron - mercury - lead - paraffin, petrol (Gasoline)

Signs and symptoms

Nausea Vomiting Abdominal pain Change in consciousness Change in vital signs Change in pupils Poisons enter the body either accidentally or intentionally through Ingestion (through the mouth) Inhalation (by breathing in) Absorption (through the skin) through contact with poisonous sprays, pesticide, and insecticides Injection into the skin as the result of bites from some animal, insects, poisonous fish or by syringe Steps to treatment of poison: Remove the poison from the body Give the patient the antidote Treat symptoms Give comfort and confidence First Aid Management and Accident Prevention 48 How to remove the poison from the body Make the victim vomit it

Give plenty of tape water. If it is a child give them syrup or water. Repeat the procedure Refer the victim if it is not improving NB. Do not make patient vomit if the poison e.g. parafin or kerosene

Snake Bite

Snake Bite Signs and symptoms

Disturbed vision Feel nauseated or vomiting One or two small puncture wounds with sharp pain and local swelling Symptoms and sign of shock Sweating and salivation in advanced stages of venom reaction.

First aid management Lay the victim down and advise not to move Calm the victim Immobilized the affected part and keep it below the level of the heart Wipe the wound of venom Apply firm cord just above the bite This must be removed in 15 minutes if you are sure that anti venoum has been injected and you can not get the victim to hospital in time. If there is no antivenoum do the following: Tie a cord tightly around the limb just above the bite First Aid Management and Accident Prevention 50 Using a razor blade or a clean knife make a cut 1 cm deep Suck the liquid which is coming out of the wound Continue to suck and dispose for 5-10 minutes Loosen the cord around the patients limb Disinfect the wound Refer to hospital for anti- venom injection

Environment and healthy

Pollution is the process of making land, water, air or other parts of the environment dirty and not safe or suitable to use. This can be done through the introduction of a contaminant into a natural environment, but the contaminant doesn't need to be tangible. Things as simple as light, sound and temperature can be considered pollutants when introduced artificially into an environment.

Toxic pollution affects more than 200 million people worldwide, according to Pure Earth, a non-profit environmental organization. In some of the world's worst polluted places, babies are born with birth defects, children have lost 30 to 40 IQ points, and life expectancy may be as low as 45 years because of cancers and other diseases. Read on to find out more about specific types of pollution.

Land pollution

Land can become polluted by household garbage and by industrial waste. In 2014, Americans produced about 258 million tons of solid waste, according to the U.S. Environmental Protection Agency. A little over half of the waste — 136 million tons— was gathered in landfills. Only about 34% was recycled or composted.

Organic material was the largest component of the garbage generated, the EPA said. Paper and paperboard accounted for more than 26%; food was 15% and yard trimmings were 13%. Plastics comprised about 13% of the solid waste, while rubber, leather and textiles made up 9.5% and metals 9%. Wood contributed to 6.2% of the garbage; glass was 4.4% and other miscellaneous materials made up about 3%.

Commercial or industrial waste is a significant portion of solid waste. According to the University of Utah, industries use 4 million pounds of materials in order to provide the average American family with needed products for one year. Much of it is classified as non-hazardous, such as construction material (wood, concrete, bricks, glass, etc.) and medical waste (bandages, surgical gloves, surgical instruments, discarded needles, etc.). Hazardous waste is any liquid, solid or sludge waste that contain properties that are dangerous of potentially harmful to human health or the environment. Industries generate hazardous waste from mining, petroleum refining, pesticide manufacturing and other chemical production. Households generate hazardous waste as well, including paints and solvents, motor oil, fluorescent lights, aerosol cans and ammunition.

Water pollution

Water pollution happens when chemicals or dangerous foreign substances are introduced to water, including chemicals, sewage, pesticides and fertilizers from agricultural runoff, or metals like lead or mercury. According to the Environmental Protection Agency (EPA), 44% of assessed stream miles, 64% of lakes and 30% of bay and estuarine areas are not clean enough for fishing and swimming. The EPA also states that the United State's most common contaminants are bacteria, mercury, phosphorus and nitrogen. These come from the most common sources of contaminates, that include agricultural runoff, air

deposition, water diversions and channelization of streams.
Water pollution isn't just a problem for the United States. According to United Nations, 783 million people do not have access to clean water and around 2.5 billion do not have access to adequate sanitation. Adequate sanitation helps to keep sewage and other contaminants from entering the water supply.
According to National Oceanic and Atmospheric Administration (NOAA), 80% of pollution in marine environment comes from the land through sources like runoff. Water pollution can also severely affect marine life. For example, sewage causes pathogens to grow, while organic and inorganic compounds in water can change the composition of the precious resource. According to the EPA, low levels of dissolved oxygen in the water are also considered a pollutant. Dissolved is caused by the decomposition of organic materials, such as sewage introduced into the water.
Warming water can also be harmful. The artificial warming of water is called thermal pollution. It can happen when a factory or power plant that is using water to cool its operations ends up discharging hot water. This makes the water hold less oxygen, which can kill fish and wildlife. The sudden change of temperature in the body of water can also kill fish. According to the University of Georgia, it is estimated that around half of the water withdrawn from water systems in the United States each year is used for cooling electric power plants.

Light Pollution

Light pollution refers to the large amount of light produced by most urban and other heavily-populated areas. Light pollution prevents citizens from seeing features of the night sky and has also been shown to impede the migration patterns of birds and the activities of nocturnal animals.

Noise Pollution

Noise pollution typically refers to human-made noises that are either very loud or disruptive in manner. This type of pollution has been shown to impact the movement of sea mammals, such as dolphins and whales and also impacts the nesting success of birds.

Solid waste management

Solid waste management is a term that is used to refer to the process of collecting and treating solid wastes. It also offers solutions for recycling items that do not belong to garbage or trash. As long as people have been living in settlements and residential areas, garbage or solid waste has been an issue. Waste management is all about how solid waste can be changed and used as a valuable resource. Solid waste management should be embraced by each and every household including the business owners across the world. Industrialization has brought a lot of good things and bad things as well. One of the negative effects of industrialization is the creation of solid waste.

Various Sources of Solid Waste

Everyday, tonnes of solid waste is disposed off at various landfill sites. This waste comes from homes, offices, industries and various other agricultural related activities. These landfill sites produce foul smell if waste is not stored and treated properly. It can pollute the surrounding air and can seriously affect the health of humans, wildlife and our environment. The following are major sources of solid waste:

Residential

Residences and homes where people live are some of the major sources of solid waste. Garbage from these places include food wastes, plastics, paper, glass, leather, cardboard, metals, yard wastes, ashes and special wastes like bulky household items like electronics, tires, batteries, old mattresses and used oil. Most homes have garbage bins where they can throw away their solid wastes in and later the bin is emptied by a garbage collecting firm or person for treatment.

Industrial

Industries are known to be one of the biggest contributors of solid waste. They include light and heavy manufacturing industries, construction sites, fabrication plants, canning plants, power and chemical plants. These industries produce solid waste in form of housekeeping wastes, food wastes, packaging wastes, ashes, construction and demolition materials, special wastes, medical wastes as well as other hazardous wastes.

Commercial

Commercial facilities and buildings are yet another source of solid waste today. Commercial buildings and facilities in this case refer to hotels, markets, restaurants, go downs, stores and office buildings. Some of the solid wastes generated from these places include plastics, food wastes, metals, paper, glass, wood, cardboard materials, special wastes and other hazardous wastes.

Construction and Demolition Areas

Construction sites and demolition sites also contribute to the solid waste problem. Construction sites include new construction sites for buildings and roads, road repair sites, building renovation sites and building demolition sites. Some of the solid wastes produced in these places include steel materials, concrete, wood, plastics, rubber, copper wires, dirt and glass.

Municipal services

The urban centers also contribute immensely to the solid waste crisis in most countries today. Some of the solid waste brought about by the municipal services include, street cleaning, wastes from parks and beaches, wastewater

treatment plants, landscaping wastes and wastes from recreational areas including sludge.

Treatment Plants and Sites

Heavy and light manufacturing plants also produce solid waste. They include refineries, power plants, processing plants, mineral extraction plants and chemicals plants. Among the wastes produced by these plants include, industrial process wastes, unwanted specification products, plastics, metal parts just to mention but a few.

Effects of Poor Solid Waste Management

Due to improper waste disposal systems particularly by municipal waste management teams, wastes heap up and become a problem. People clean their homes and places of work and litter their surroundings which affects the environment and the community.

This type of dumping of waste materials forces biodegradable materials to rot and decompose under improper, unhygienic and uncontrolled conditions. After a few days of decomposition, a foul smell is produced and it becomes a breeding ground for different types of disease causing insects as well as infectious organisms. On top of that, it also spoils the aesthetic value of the area.

Solid wastes from industries are a source of toxic metals, hazardous wastes, and chemicals. When released to the environment, the solid wastes can cause biological and physicochemical problems to the environment and may affect or alter the productivity of the soils in that particular area.

Toxic materials and chemicals may seep into the soil and pollute the ground water. During the process of collecting solid waste, the hazardous wastes usually mix with ordinary garbage and other flammable wastes making the disposal process even harder and risky.

When hazardous wastes like pesticides, batteries containing lead, mercury or zinc, cleaning solvents, radioactive materials, e-waste and plastics are mixed up with paper and other scraps are burned they produce dioxins and gasses. These toxic gases have a potential of causing various diseases including cancer.

Methods of Solid Waste Management

There are different methods of solid waste management. The following are some of the recognized methods:

Sanitary Landfill

This is the most popular solid waste disposal method used today. Garbage is basically spread out in thin layers, compressed and covered with soil or plastic

foam. Modern landfills are designed in such a way that the bottom of the landfill is covered with an impervious liner which is usually made of several layers of thick plastic and sand. This liner protects the ground water from being contaminated because of leaching or percolation. When the landfill is full, it is covered with layers of sand, clay, top soil and gravel to prevent seepage of water.

Incineration

This method involves burning of solid wastes at high temperatures until the wastes are turned into ashes. Incinerators are made in such a way that they do not give off extreme amounts of heat when burning solid wastes. This method of solid waste management can be done by individuals, municipalities and even institutions. The good thing about this method is the fact that it reduces the volume of waste up to 20 or 30% of the original volume.

Recovery and Recycling

Recycling or recovery of resources is the process of taking useful but discarded items for next use. Traditionally, these items are processed and cleaned before they are recycled. The process aims at reducing energy loss, consumption of new material and reduction of landfills.

Composting

Due to lack of adequate space for landfills, biodegradable yard waste is allowed to decompose in a medium designed for the purpose. Only biodegradable waste materials are used in composting. Good quality environmentally friendly manure is formed from the compost and can be used for agricultural purposes.

Pyrolysis

This is method of solid waste management whereby solid wastes are chemically decomposed by heat without presence of oxygen. This usually occurs under pressure and at temperatures of up to 430 degrees Celsius. The solid wastes are changed into gasses, solid residue and small quantities of liquid.

Concept of Health

Introduction :
Health is difficult term to define Absence of disease Basis for all health care Health is not perceived the same way Introduction

Changing concepts :
Biomedical concepts Ecological concepts Psychosocial concepts Holistic concepts Changing concepts

Biomedical concepts :
Absence of disease Free from disease Medical profession viewed human body as a machine Biomedical concepts

Ecological concepts :
Health as a dynamic equilibrium between man and his environment and disease a maladjustment of the human organism to environment Ecological concepts

Psychosocial concepts :
health is influenced by social, psychological , cultural , economic and political factors Psychosocial concepts

Holistic concepts :
All sectors of society have an effect on health The emphasis is on the promotion and protection of Health Holistic concepts

Health
Health is a state of complete physical, mental and social wellbeing and not merely an absence of disease or infirmity. The ability to lead a socially and economically productive life.
Fundamental human right Essence of productive life ,not the result of increasing expenditure on medical care Intersectoral An integral part of development Central to the concept quality of life Health involves Individual, State and international responsibility World wide social goal New philosophy of health

Physical dimension :
The state of physical health implies the notion of perfect functioning

of the body Every cell and every organ functioning at optimum capacity and perfect harmony with the rest of the body. Physical dimension

Sign of physical health :
A good complexion Clean skin bright eyes lustrous hairs body with firm flush not too fat Sweet breath Sign of physical health. Good appetite Sound sleep Regular activity of bowel and bladder Smooth easily coordinated bodily movements All organs of normal size and functioning normally Pulse rate, BP exercise tolerance within normal ranges Signs of physical health

Evaluation of physical health :
Self assessment of overall health Inquiry into symptom of ill health risk factors Inquiry into Medication Inquiry into Fitness Inquiry into Medical services Standardized questionnaire for CVD, RD Clinical examination Nutrition & dietary assessment Evaluation of physical health

Mental dimension :
Mental health is not mere absence of mental illness Ability to respond to varied experiences of life " a state of balance between the individual and surrounding world, a state of harmony between oneself and others Mental dimension

Mental well being :
Characteristics of Mentally healthy person : Free from internal conflicts Well adjusted Searches for identity Strong sense of self-esteem Knows himself, his needs, problems and goals Good self control Coping with stress and anxiety Mental well being

Social Dimension :
Harmony and integration a) within the individual b) between each individual and other members of the society c) between individuals and world in which they live Definition :- Quantity and quality of an individual's interpersonal ties and the extent of involvement with the community Social Dimension

Characteristic of social health :
Possession of social skills, social functioning Ability to see oneself

as a member of community Focuses on social and economic conditions Characteristic of social health

Emotional Dimension :
The emotional dimension of wellness emphasizes an awareness and acceptance of one's feelings Emotional Dimension

Vocational Dimension : :
Work – fully adapted to human goals, capacities and limitations Work often plays a role in promoting both physical and mental health Sudden loss of Job or after Retirement Vocational Dimension

Positive health :
It is a state of physical , mental ,social and spiritual well being when a person enjoys an equilibrium state with his environment Perfect functioning of bodymind Ability to lead a socially and economically productive life Positive health

Determinants of Health :
All the factors which influences human health by their interactions Biological Behavioral and socio cultural Environment Lifestyle Socioeconomic conditions Health services Determinants of Health

Ecology of health :
Science of mutual relationship between living organism and their environment Ecology of health

Responsibility for Health :
Individual Community State International Responsibility for Health

Self care in health :
Those health generating activities that are under taken by the persons themselves Activities individuals undertake in promoting their own health Observance of simple rules relating to diet ,exercise , alcohol. Personal hygiene Healthy life style, accepting immunization Periodic medical check up Self care in health

Indicators of health :
Health of a community can be assed through measurement of existing health status of people. Indicators of health

Criteria for an ideal indicator :
Valid- actually measure what they are supposed to measure Reliable and Objective- same measurement by different people Sensitive - affected by changes in situation Specific- reflect changes only in the situation concerned Feasible - ability to obtain data needed Criteria for an ideal indicator

Various indicators of health :
Mortality indicators Morbidity indicators Disability rates Nutritional status indicators Health care delivery indicators Utilization rates Indicators of social & mental Health Various indicators of health

Various indicators.
Environmental indicators Socio economic indicators Health policy indicators Indicators of quality of life others Various indicators.

Mortality indicators :
Crude death Rate, Infant Mortality Rate Child mortality rate Maternal Mortality Rate Under 5 MR, Proportional Mortality Rate Dieses specific MR Mortality indicators

Morbidity indicators :
Incidence rate Prevalence rate Notification Rate Hospital attendance rate Admission/discharge rate Average duration of stay in hospital Morbidity indicators

Disability rates :
Bed disability days Work loss days Sullivan index DALY Disability rates

Nutritional status indicators :
Anthropometric measurement Diet survey Clinical examination Nutritional status indicators

Health care delivery indicators :
Doctor population ratio Doctor nurse ratio Population bed ratio Population per primary health centre Health care delivery indicators

Environmental indicators :

Access to safe drinking water/sanitary facility Air/water/ noise pollution Environmental indicators

Social and mental health indicators :
Suicides Homicides smoking Alcoholism/drug abuse Road traffic accidents Housing Literacy rates Per capita GNP Social and mental health indicators

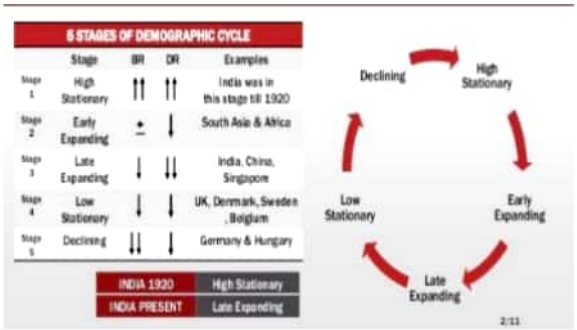
Utilization rates :
Percentage of immunized children/mother % of women using antenatal services % of population using FP technique Bed occupancy rate Utilization rates

Uses of health indicators :
To measure health status of community To compare health status For assessing health care needs For allocation of scarce resources Uses of health indicators.

Demography and family planning

Demography.

Demography is the study of human populations – their size, composition and distribution across space – and the process through which populations change. Births, deaths and migration are the 'big three' of demography, jointly producing population stability or change.



Fertility rate

The total fertility rate (TFR), sometimes also called the fertility rate, absolute/potential natality, period total fertility rate (PTFR), or total period fertility rate (TPFR) of a population is the average number of children that would be born to a woman over her lifetime if:

She was to experience the exact current age-specific fertility rates (ASFRs) through her lifetime, and
She was to survive from birth to the end of her reproductive life.

Family planning

Family planning services are defined as "educational, comprehensive medical or social activities which enable individuals, including minors, to determine freely the number and spacing of their children and to select the means by which this may be achieved".
Family planning may involve consideration of the number of children a woman wishes to have, including the choice to have no children, as well as the age at which she wishes to have them. These matters are influenced by external factors such as marital situation, career considerations, financial position, and any disabilities that may affect their ability to have children and raise them. If sexually active, family planning may involve the use of contraception and other techniques to control the timing of reproduction.

CONTRACEPTION:
There are different methods of contraception, including:

- long-acting reversible contraception, such as the implant or intra uterine device (IUD)
- hormonal contraception, such the pill or the Depo Provera injection
- barrier methods, such as condoms
- emergency contraception
- fertility awareness
- permanent contraception, such as vasectomy and tubal ligation

Population Explosion In India
The fastest rise in the population of India was during the period of 1951 to 1981, in which the population was from 36 crores in 1951 was reached around to 70 crores in 1981. During this period of 30 years, population increased around 34 crores, which is the fastest rise in the history of population statistics. Death rate has become controlled due to modern health and medical facilities and it has reduced to become 15 persons per thousand whereas; birth rate has not got any significant reduction. That is why; this period from 1951 to 1981 is known in India as the period of Population Explosion.

CAUSES OF POPULATION EXPLOSION IN INDIA

Hot Climate
One of the reasons of fast rising population in India is its hot climate. Due to hot climate, maturity comes at early age in boys and girls, due to which they give birth to their children at their early age. This is one of the main reasons for population explosion.

Child Marriage and Multi Marriage System
In India the tradition of child marriage and multi-marriage system is prevalent. Marriage of around 80% girls of the country is took place at their young age of between 15 to 20 years. Thus, the result of long married life comes in the farm of excessive childbirth. Tradition of multi-marriage system increases the rotation of childbirth. Apart from it, the increasing tendency of widow marriage, due to the social reforms is also increasing childbirth up to some extent.

Religious Superstitions
Our religious Gurus say that if a Hindu person does not has son, then who will perform the religious ritual in its absence. Due to this, person remains engage in the continuous process of giving birth, one by one, in search of male baby. In the same manner, in Muslims both male and female child is a boon (gift) sent by Allah, prevention of their birth by using any means of family planning is a sin. Due to these reasons, population is continuously increasing.

Illiteracy and Unawareness
In India around 36% males and 61% females are illiterate. Neither they have full knowledge of family planning nor they know about the consequences of excessive childbirth. This is one of the reasons of rising population and the situation of Population Explosion' is emerged.

Poverty
Due to poverty, population is increased of the poor families of our country. People lives in slum, uses their children as a tool, to earn money, hence they always try to increase the number of children in their families.

Birth Rate
In India the average age for marriage is very low, comparatively other nations of the world. This is also a reason for population explosion.

Death Rate
In India the death rate from the year 1900 to 1910 was around 35 to 50 persons per thousand, which is now reduced to only 7 to 8 persons per thousand. This become 'possible in the country by good and hygienic food, pure drinking water, facilities of hospitals, good cleanness, medical facilities at affordable rates and control over Malnutrition, Pneumonia, Cholera, Epidemic etc. Along with, child death rate has reduced to 69 per thousand, comparatively around 218 per thousand in between the years 1916 to 1920. Due to this also, the position of Population Explosion occurred.

Indifferent towards Family Planning
Illiterate persons and people living in rural areas are indifferent towards family planning. They feel fear even by the name of 'Operation'. They are not interested even in the use of simplest and cheapest means of family planning.

Lack of Social Security
Due to lack of social security system in India, every parent seeks. shelter at the time of crises and for their old age, in childbirth. Whether this would be son or daughter. In the fear of death of their child at childhood, they give birth too many children, so that any of them would be support of their old age.

Arrival of Refugees
Population is very much increased due to continuous arrivals of refugees in India. At the time of division of India and. Pakistan in 1947, more than 1 crore refugees came to India. In 1962 at the time of attack of China, a huge number of Tibetan refugees came to India. Similarly, in 1971, more than 1 crore Bangladeshi refugees, came to India and even today this problem is still continued. Apart from this, continuous arrival of Nepalis, is also still continued. More than 5 lakhs Tamil refugees had come to India due to Sri Lankan Tamil problem. All these are responsible for population explosion.

Other Causes
Apart from the above, following are other causes of population explosion
1- Social compulsion of Marriage
2- Lack of means of entertainment
3- Bhagyawati (fateful) view
4- Ambition of big family
5- Betterment in economic position
6- Joint family system, etc