

# CONCEPT OF HEALTH AND DISEASE

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# CONCEPT OF HEALTH

- Health is evolved over the centuries as a concept from individual concern to world wide social goal and encompasses the whole quality of life.

Changing concept of health till now are:

- Biomedical concept
- Ecological concept
- Psychosocial concept
- Holistic concept

# BIOMEDICAL CONCEPT

- Traditionally, health has been viewed as an “absence of disease”, and if one was free from disease, then the person was considered healthy.
- This concept has the basis in the “germ theory of disease”.
- The medical profession viewed the human body as a machine, disease as a consequence of the breakdown of the machine and one of the doctor’s task as repair of the machine.



# ECOLOGICAL CONCEPT

- Form ecological point of view; health is viewed as a dynamic equilibrium between human being and environment, and disease a maladjustment of the human organism to environment.
- According to Dubos “Health implies the relative absence of pain and discomfort and a continuous adaptation and adjustment to the environment to ensure optimal function.”
- The ecological concept raises two issues, viz. imperfect man and imperfect environment.

# PSYCHOSOCIAL CONCEPT

- According to psychosocial concept “health is not only biomedical phenomenon, but is influenced by social, psychological, cultural, economic and political factors of the people concerned.”





# HOLISTIC CONCEPT

- This concept is the synthesis of all the above concepts.
- It recognizes the strength of social, economic, political and environmental influences on health.
- It described health as a unified or multi dimensional process involving the wellbeing of whole person in context of his environment .

# DEFINITIONS OF HEALTH

- “The condition of being sound in body, mind or spirit especially freedom from physical disease or pain.” - Webster
- “Soundness of body or mind that condition in which its are duly and efficiently discharged .” - Oxford English Dictionary





# DEFINITIONS OF HEALTH

- “Health is a state of complete physical, mental, social well-being and not merely the absence of disease or infirmity.”
  - World Health Organization
- In recent years, this definition has been amplified to include “the ability to lead socially and economically productive life”.





# DEFINITIONS OF HEALTH

- The WHO definition of health has been criticized as being too broad. Some argue that can not be defined as a “state” at all, but must be seen as a process of continuous adjustment to the changing demands of living and of the changing meaning we give to life. It is dynamic concept. It helps people live well, work well and enjoy themselves.

# DEFINITIONS OF HEALTH

- It refers to a situation that may exist in some individuals but not in everyone all the time, it is not usually observed in a groups of human beings and in communities. Some consider it irrelevant to everyday demands, as nobody qualifies as healthy, i.e., perfect biological, psychological and social functioning. That is, if we accept the WHO definition, we are all sick.



# OPERATIONAL DEFINITION



- The WHO definition of health is not an “operational” definition, i.e. it does not lend itself to direct measurement, studies of epidemiology of health have been hampered because of our inability to measure health and wellbeing directly.

# OPERATIONAL DEFINITION

- **Broad Sense:** Health can be seen as “A condition or quality of human organism expressing the adequate functioning of the organism in given condition, genetic or environmental.”
- **Narrow sense:** There is no obvious evidence of disease, and that a person is functioning normally. Several organs of the body are functioning adequately in themselves and in relation to one another, which implies a kind of equilibrium or homeostasis.



# NEW PHILOSOPHY OF HEALTH

- Health is a fundamental human right.
- Health is essence of productive life.
- Health is inter- sectoral.
- Health is integral part of development.
- Health is central to quality of life.
- Health involves individuals, state and international responsibility.
- Health and its maintenance is major social investment.
- Health is world-wide social goal.

# DIMENSIONS OF HEALTH

- Health is multidimensional.
- World Health Organization explained health in three dimensional perspectives: physical, mental, social and spiritual.
- Besides these many more may be cited, e.g. emotional, vocational, political, philosophical, cultural, socioeconomic, environmental, educational, nutritional, curative and preventive..



# PHYSICAL DIMENSION

- Physical dimension views health from physiological perspective.
- It conceptualizes health that as biologically a state in which each and every organ even a cell is functioning at their optimum capacity and in perfect harmony with the rest of body.
- Physical health can be assessed at community level by the measurement of morbidity and mortality rates.



# MENTAL DIMENSION



- Ability to think clearly and coherently. This deals with sound socialization in communities.
- Mental health is a state of balance between the individual and the surrounding world, a state of harmony between oneself and others, coexistence between the relatives of the self and that of other people and that of the environment.
- Mental health is not merely an absence of mental illness.



# Features of mentally healthy person

- Free from internal conflicts.
- Well – adjusted in the external environment.
- Searches for one's identity.
- Strong sense of self-esteem.
- Knows himself: his mind, problems and goal.
- Have good self-controls-balances.
- Faces problems and tries to solve them intellectually.



# SOCIAL DIMENSION



- It refers to the ability to make and maintain relationships with other people or communities.
- It states that harmony and integration within and between each individual and other members of the society.
- Social dimension of health includes the level of social skills one possesses, social functioning and the ability to see oneself as a member of a larger society.



# SPIRITUAL DIMENSION

- Spiritual health is connected with religious beliefs and practices. It also deals with personal creeds, principles of behavior and ways of achieving peace of mind and being at peace with oneself.
- It is intangible “something” that transcends physiology and psychology.
- It includes integrity, principle and ethics, the purpose of life, commitment to some higher being, belief in the concepts that are not subject to “state of art” explanation.

# CONCEPT OF DISEASE

- Webster defines disease as “a condition in which body health is impaired, a departure from a state of health, an alteration of the human body interrupting the performance of vital functions”.
- The oxford English Dictionary defines disease as “a condition of the body or some part or organ of the body in which its functions are disturbed or deranged”.



# CONCEPT OF DISEASE



- Ecological point of view disease is defined as “a maladjustment of the human organism to the environment.”
- The simplest definition is that disease is just the opposite of health: i.e. any deviation from normal functioning or state of complete physical or mental well-being.

# Distinction between Disease, Illness and Sickness

- The term disease literally means “without ease” (uneasiness), when something is wrong with bodily function.
- Illness refers to the presence of a specific disease, and also to the individual’s perceptions and behavior in response to the disease, as well as the impact of that disease on the psychosocial environment.
- Sickness refers to a state of social dysfunction.



# Distinction between Disease, Illness and Sickness

- Disease is a physiological/psychological dysfunction.
- Illness is a subjective state of the person who feels aware of not being well.
- Sickness is a state of social dysfunction i.e. a role that the individual assumes when ill (sickness role).

# CONCEPT OF WELLBEING

- Wellbeing of an individual or group of individuals have several components and has been expressed in various ways, such as 'standard of living' or 'level of living' and quality of live'.





# STANDARD OF LIVING



- Income and occupation, standards of housing, sanitation and nutrition, the level of provision of health, educational, recreational and other services all be used individually as measures of socioeconomic status, and collectively as an index of the standard of living.

# LEVEL OF LIVING

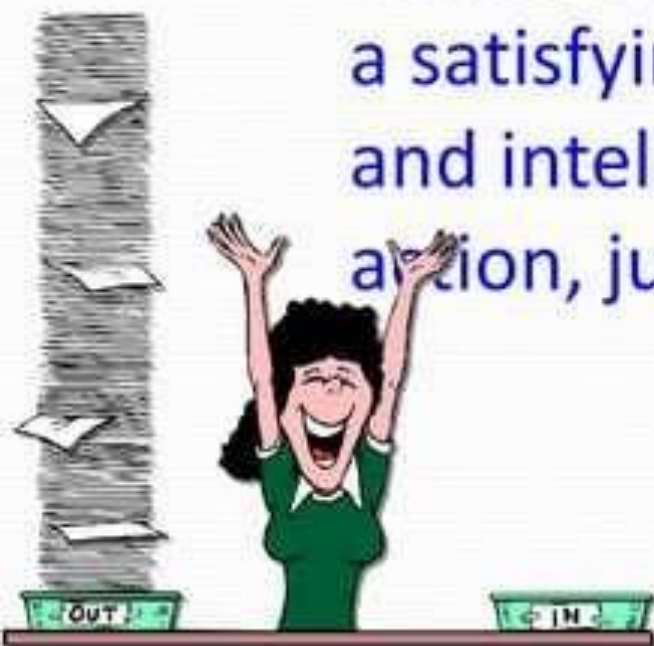
- It consists of nine components : health, food consumption, education, occupation and working conditions, housing, social security, clothing, recreation and leisure human rights.
- These objective characteristics are believed to influence human wellbeing. It is considered that health is the most important component of the level of living because its impairment always means impairment of the level of living.



# QUALITY OF LIFE

- The condition of life resulting from the combination of the effects of the complete range of factors such as those determining health, happiness (including comfort in the physical environment and a satisfying occupation), education, social and intellectual attainments, freedom of action, justice and freedom of expression.

- WHO (1976)



# QUALITY OF LIFE

- A composite measure of physical, mental and social wellbeing as perceived by each individual or by group of individuals- that is to say, happiness, satisfaction and gratification as it is expressed in such life concerns as health, marriage, family work, financial situation, educational opportunities, self-esteem, creativity, belongingness, and trust in others.



# WELLBEING

- Wellbeing of an individual or group of individuals have objective (standard of living or level of living) and subjective (quality of life) components.
- Thus, a distinction is drawn between the concept of 'level of living' consisting of objective criteria and of 'quality of life' comprising the individual's own subjective evaluation of these.

# TWO ASPECTS OF HEALTH

- Subjective: It is formed by sensations and feelings of a person suffering from disease.
- Objective: Its basis is formed by objective parameters obtained by measurement of structures and functions of a person during disease.
- The quality of life can be evaluated by assessing the persons subjective feeling of happiness or unhappiness about the various life concerns.





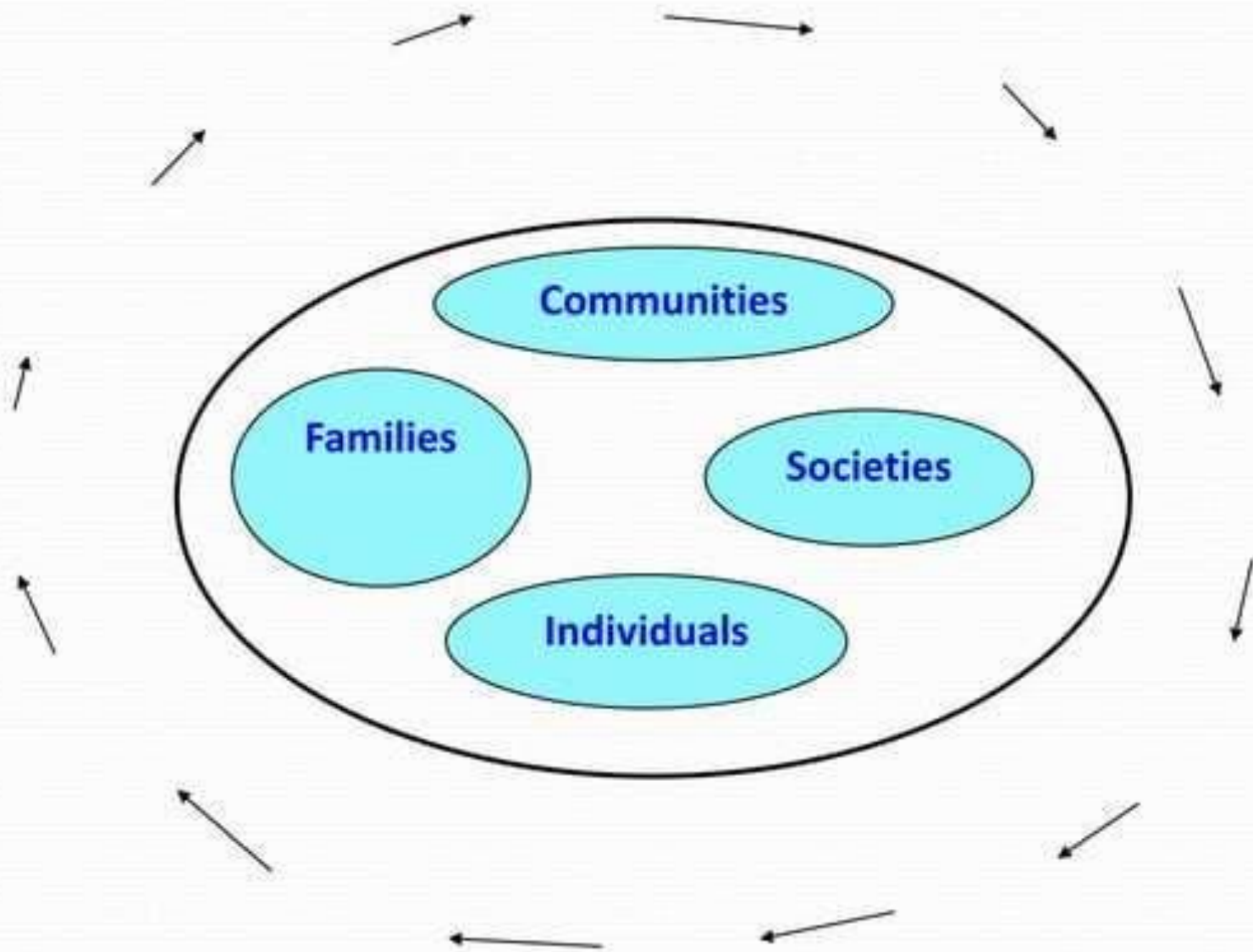
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# DETERMINANTS OF HEALTH

- Health is determined by multiple factors.
- The health of an individual and community is influenced by: individual (internal) and external factors.
- The individual factors include by his own genetic factors and the external factors include environmental factors.
- These factors interact and these interactions may be health promoting or deleterious.
- Thus, the health of individuals and whole communities may be considered to be the result of many interactions.



# DETERMINANTS OF HEALTH



# BIOLOGICAL DETERMINANTS

- The health of an individual partly depends on the genetic constitutions.
- A number of diseases e.g. chromosomal anomalies, inborn error of metabolism, mental retardation and some types of diabetes are some extent due to genetic origin.



# ENVIRONMENTAL FACTORS

- **Biological:** disease producing agent (e.g. bacteria, virus, fungi), intermediate host (e.g. mosquito, sand fly), vector (e.g. house fly), reservoir (e.g. pig in JE).
- **Physical:**  
Air, water, light, noise, soil, climate, altitude, radiation housing, waste etc.
- **Psychosocial:** psychological make up of individual and structure and functioning of society. E.g. habit, beliefs, culture, custom, religion etc.

# LIFE STYLE

- Behavioral pattern and life long habits e.g. smoking and alcohol consumption, food habit, personal hygiene, rest and physical exercise, bowel and sleeping patterns, sexual behavior





# SOCIO-ECONOMIC CONDITIONS

- It consist of education, occupation and income.
- The world map of illiteracy closely coincides with the maps of poverty, malnutrition, ill health, high infant and child mortality rates.
- The very state of being employed in productive work promotes health, because the unemployed usually show a higher incidence of ill-health and deaths.
- There can be no doubt that economic progress has positive impact factor in reducing morbidity, increasing life expectancy and improving the quality of life.

# Availability of health and family welfare Service

- Health and family welfare services cover a wide spectrum of personal and community services for treatment of diseases, prevention of disease and promotion of health.
- The purpose of health services is to improve the health status of population.
- For example, immunization of children can influence the incidence/prevalence of particular disease. Provision of safe water can prevent mortality and morbidity from water-borne diseases.



# Aging of the population

- By the year 2020, the world will have more than one billion people aged sixty or over and more than two-thirds of them living in developing countries.
- A major concern of rapid population aging is the increased prevalence of chronic diseases and disabilities both being condition that tend to accompany the aging process and deserve special attention.

# OTHER DETERMINANTS OF HEALTH

- Except above discussed determinants, there are many more determinates of health and disease of an individual and community. These include:
  - Science and technology
  - Information and communication
  - Gender
  - Equity and social justice
  - Human rights etc.



# RESPONSIBILITY FOR HEALTH

- **Individual responsibility:** self care for maintaining their own health.
- **Community responsibility:** health care for the people to the health care by the people.
- **State responsibility:** constitutional rights.
- **International responsibility:** Health for All through PHC.

# INDICATORS OF HEALTH

- A variable which helps to measure changes , directly or indirectly (WHO,1981).
- A statistic of direct normative interest which facilitates concise , comprehensive, and balanced judgments about conditions of major aspects of the society (H.E.W./USA,1969).
- The health indicators are defined as those variables which measures the health status of an individual and community.



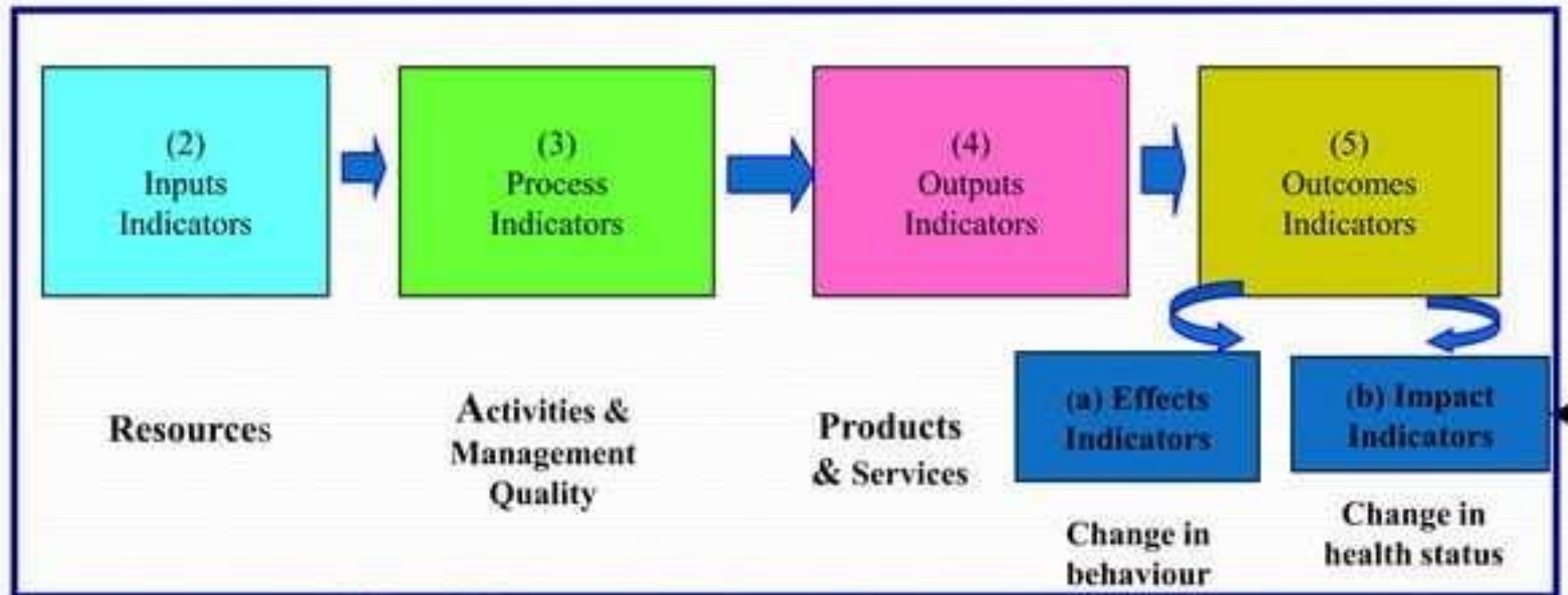
**National Socio-Cultural, Economic, Demographic and Environment Indicators**

Health Supply



Health Policy Development

Health Demand



**Health system**

# INDICATORS OF HEALTH

- **Mortality Indicators:** Crude Death rate, Life Expectancy, Infant mortality rate, Child mortality rate, Under five mortality rate, Maternal mortality ratio, Disease specific mortality, proportional mortality rate etc.
- **Morbidity Indicators:** Incidence and prevalence rate, disease notification rate, OPD attendance rate, Admission, readmission and discharge rate, duration of stay in hospital and spells of sickness or absence from work or school.



# INDICATORS OF HEALTH

- **Disability Indicators:** Sullivan's index, HALE (Health Adjusted Life Expectancy), DALY (Disability Adjusted Life Year).
- **Sullivan's index** is a expectation of life free from disability.
- **HALE** is the equivalent number of years in full health that a newborn can expected to live based on the current rates of ill health and mortality.
- **DALY** expresses the years of life lost to premature death and years lived with disability adjusted for the severity of disability.

# INDICATORS OF HEALTH

- **Nutritional Status Indicators:** Anthropometric measurement of preschool children, Prevalence of low birth weight etc.
- **Health Care Delivery Indicators:** Doctor-population ratio, Bed-nurse ratio, Population-bed ration, Population per health facility etc.
- **Utilization Rates:** immunization coverage, ANC coverage, % of Hospital Delivery, Contraceptives prevalence rate, Bed occupancy rate, average length of stay in hospital and bed turnover rate etc.



# INDICATORS OF HEALTH

- **Indicators of social and mental health:** Rates of suicides, homicides, violence, crimes, RTAs, drug abuse, smoking and alcohol consumption etc.
- **Environmental indicators:** proportion of population having access to safe drinking water and improved sanitation facility, level of air pollution, water pollution, noise pollution etc.
- **Socio Economic Indicators:** rate of population increase, Per capita GNP, Dependency ratio, Level of unemployment, literacy rate, family size etc.

# INDICATORS OF HEALTH

- **Health policy Indicators:** proportion of GNP spent on health services, proportion of GNP spent on health related activities including safe water supply, sanitation, housing, nutrition etc. and proportion of total health resources devoted to primary health care.
- **Indicators of Quality of Life:** PQLI, IMR, Literacy rate, Life Expectancy at age one etc.



Are you satisfied?

No, still I want to learn more.



शुभकामना



बडा दशैंको शुभ उपलक्ष्यमा  
सुखः, शान्ति र समृद्धि  
तथा उत्तरोत्तर प्रगतिको  
हार्दिक मंगलमय

**शुभ-कामना**



Thank You...



# THEORIES OF DISEASES CAUSATION

## 1. Supernatural theory of disease

- Disease is due to super power e.g. gods, evil spirits.

## 2. Tridosha theory of disease

- The *doshas* or humors are: *Vaata* (Wind), *Pitta* (gall), and *Kapha* (mucus).
- Perfect balance of *tridosha* is healthy
- Disturbance in balance is disease

# THEORY OF DISEASES CAUSATION

## 3. Theory of Contagion

- Spreading of disease by being close to or touching other people.

## 4. Miasmatic theory of disease causation

- Disease is due to noxious air and vapors
- These concepts were prevailing before Louis Pasteur (1822-1895).



# THEORY OF DISEASES CAUSATION

## 5. Germ Theory of disease

- In 1860, Louis Pasteur demonstrated the presence of bacteria in air.
- This theory emphasized that the sole cause of disease is microbes.
- The theory generally referred to as one-to-one relationship between disease agent and disease.

Disease agent → Man → Disease

# THEORY OF DISEASES CAUSATION

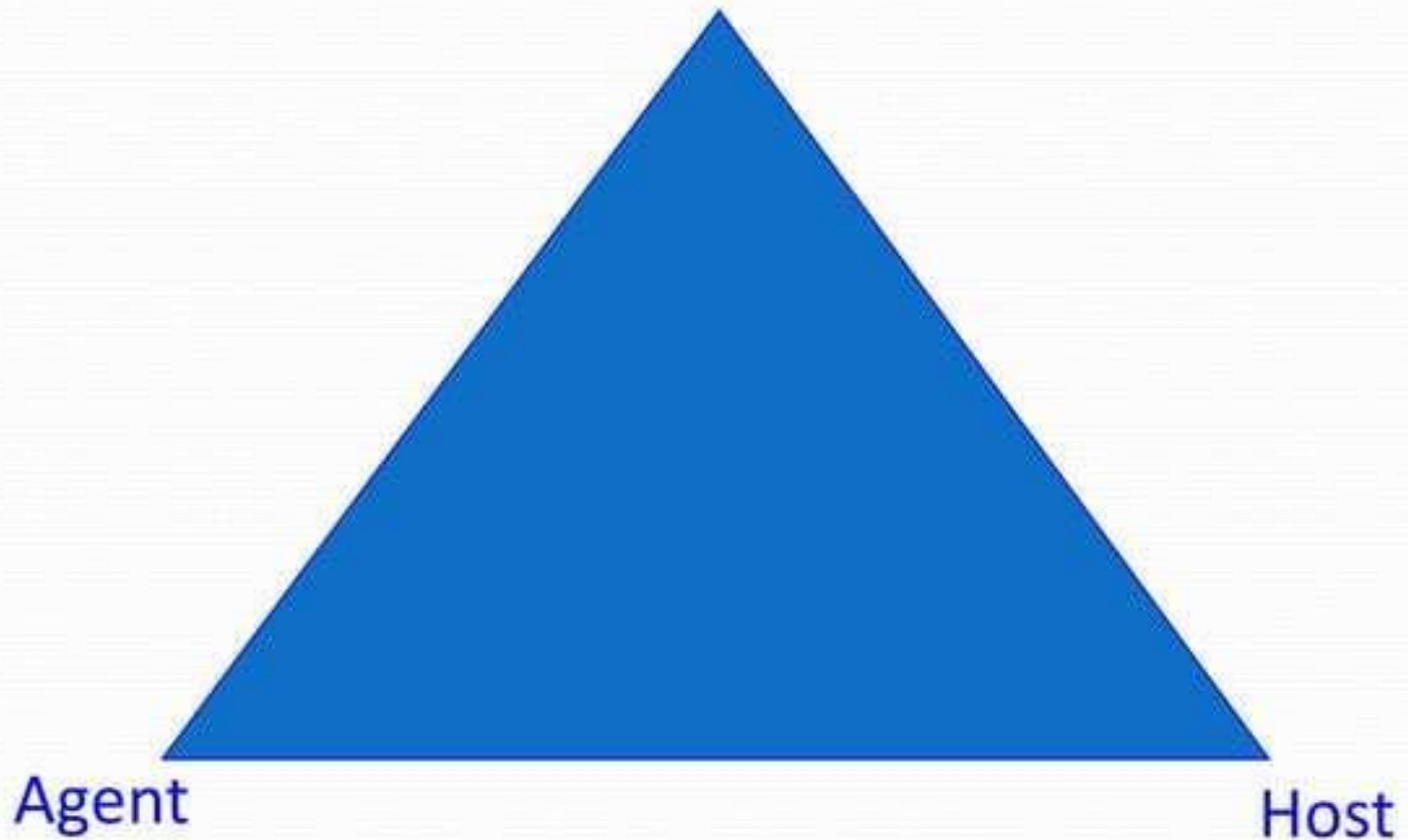
## 6. Epidemiological Triad concept

- The germ theory of disease has many limitations
- For example it is well – known that not all exposed to tuberculosis bacilli develops tuberculosis ,the same condition in an undernourished person may result in clinically manifest.



# Epidemiological Triad

Environment



# MULTI-FACTORIAL ETIOLOGY

- The germ theory of disease or single cause of disease is always not true.
- The germ theory of disease was overshadowed by multi-factorial cause theory in 19th century.
- As a result of advancement in public health, communicable diseases began to decline and are replaced by new type of diseases so called modern disease of civilization.



# MULTI-FACTORIAL ETIOLOGY

- Example: Lung cancer, CHD, Mental illness etc. The disease could not be explained on the basis of germ theory of disease and can not be controlled or prevented on that basis. The realization began that multiple factors are responsible for disease causation where there is no clear single agent.
- The purpose of knowing multiple factors of disease is to quantify and arrange them in priority sequence for modification to prevent particular disease.

# WEB OF CAUSATION

- This model of disease causation was suggested by Mac Mohan and Pugh.
- ]This model is ideally suited in the study of chronic disease where the disease agent is often not known, but is the outcome of interaction of multiple factors.
- The web of causation considers all the predisposing factors of any type and their complex interaction with each other.



# WEB OF CAUSATION

- The basic tenets of epidemiology are to study the clusters of causes and combinations of efforts and how they relate to each other.
- The web of causation does not imply that the disease can not be controlled unless all the multiple causes or chain of causation or at least a number of them are appropriately controlled.
- Sometimes, removal of one link may be sufficient to control disease.

# WEB OF DISEASE CAUSATION

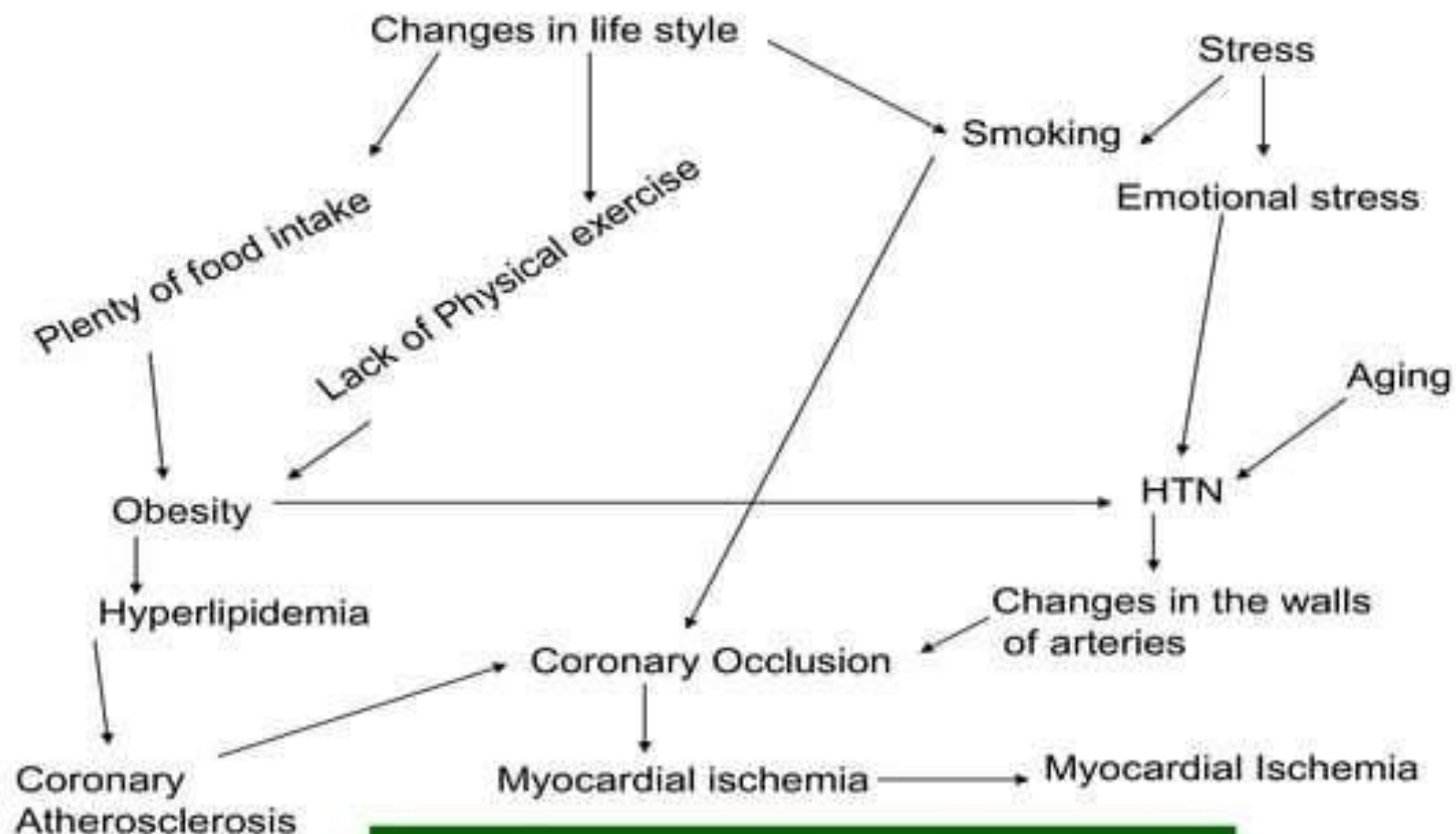


Fig: Web of causation of MI



# CONCEPT OF CONTROL

- **DISEASE CONTROL:** The term disease control refers ongoing operation aimed at reducing:
  - The incidence of disease.
  - The duration of disease and the consequently the risk of transmission.
  - The effect of infection including physical and psychological complication.
  - The financial burden to the community.

# CONCEPT OF CONTROL

- In disease control, the disease agent is permitted to persist in the community at a level where it ceases to be a public health problem according to the tolerance of local community. For example Malaria control programme. Disease control activities focus on primary prevention



# CONCEPT OF CONTROL

**ELIMINATION:** Reduction of case transmission to a predetermined very low level or interruption in transmission. E.g. measles, polio, leprosy from the large geographic region or area.

**ERADICATION:** Termination of all transmission of infection by extermination of the infectious agent through surveillance and containment. “All or none phenomenon”. E.g. Small pox

# CONCEPT OF CONTROL

- **MONITORING:** Defined as “the performance and analysis of routine measurement aimed at detecting changes in the environment or health status of population.” e.g. growth monitoring of child, Monitoring of air pollution, monitoring of water quality etc.
- **SURVEILLANCE:** Defined as “the continuous scrutiny of the factors that determine the occurrence and distribution of disease and other conditions of ill health.” E.g. Poliomyelitis surveillance programme of WHO.



# CONCEPT OF PREVENTION

- Primordial prevention
- Primary prevention
- Secondary prevention
- Tertiary Prevention

# LEVELS OF PREVENTION

## **Primordial Prevention :**

- Prevention from Risk Factors.
- Prevention of emergence or development of Risk Factors.
- Discouraging harmful life styles.
- Encouraging or promoting healthy eating habits.



# LEVELS OF PREVENTION

## **Primary Prevention:**

- Pre-pathogenesis Phase of a disease.
- Action taken prior to the onset of the disease:
- Immunization & Chemo-prophylaxis

# LEVELS OF PREVENTION

## Secondary Prevention:

- Halt the progress of a disease at its incipient phase.
- Early diagnosis & Adequate medical treatment.

## Tertiary Prevention:

- Intervention in the late Pathogenesis Phase.
- Reduce impairments, minimize disabilities & suffering.



# MODES OF INTERVENTION

- Intervention is any attempt to intervene or interrupt the usual sequence in the development of disease. Five modes of intervention corresponding to the natural history of any disease are:
  - Health Promotion
  - Specific Protection
  - Early Diagnosis and Adquate Treatment
  - Disability Limitation
  - Rehabilitation

# HEALTH PROMOTION

- It is the process of enabling people to increase control over diseases, and to improve their health. It is not directed against any particular disease but is intended to strengthen the host through a variety of approaches(interventions):
  - Health Education
  - Environmental Modifications
  - Nutritional Interventions
  - Lifestyle and Behavioral Change



# SPECIFIC PROTECTION

- Some of the currently available interventions aimed at specific protection are:
  - Immunization
  - Use of specific Nutrients
  - Chemoprophylaxis
  - Protection against Occupational Hazards
  - Avoidance of Allergens
  - Control of specific hazards in general environment
  - Control of Consumer Product Quality & Safety

# EARLY DIAGNOSIS & TREATMENT

- Though not as effective and economical as 'Primary Prevention', early detection and treatment are the main interventions of disease control, besides being critically important in reducing the high morbidity and mortality in certain diseases like hypertension, cancer cervix, and breast cancer.
- The earlier the disease is diagnosed and treated the better it is from the point of view of prognosis and preventing the occurrence of further cases (secondary cases) or any long term disability.



# DISABILITY LIMITATIONS

- The Objective is to prevent or halt the transition of the disease process from impairment to handicap.

Sequence of events leading to disability & handicap:

- Disease → Impairment → Disability → Handicap

# DISABILITY LIMITATIONS

- Impairment: Loss or abnormality of psychological, physiological/anatomical structure or function.
- Disability: Any restriction or lack of ability to perform an activity in a manner considered normal for one's age, sex, etc.
- Handicap: Any disadvantage that prevents one from fulfilling his role considered normal.



# REHABILITATION

- Rehabilitation has been defined as the ‘combined and coordinated use of medical, social, educational and vocational measures for training and retraining the individual to the highest possible level of functional ability”
- Areas of concern in rehabilitation:
  - Medical Rehabilitation
  - Vocational Rehabilitation
  - Social Rehabilitation
  - Psychological Rehabilitation

Finally we have finished the course.

**Best of Luck!**







Thank You.