

# بسم الله الرحمن الرحيم

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# **Epidemiology of Non-Communicable Diseases**

# Chronic diseases have been defined as :

Chronic illnesses.

- Non-Communicable.
- Degenerative.

# Characteristics:

- Uncertain etiology.
- multiple risk factors.
- long latency period .
- Prolonged course of illness.
- non- contagious origin.
- functional disability and sometimes incurability .

- **Latency period** is the period between contact of the causative agent with susceptible host to the onset of first sign a symptoms.
- The cause of many chronic diseases remains obscure, but risk factors identified for some of the leading chronic diseases. The most important among these risk factor is Tobacco use especially in COPD .

# Strategies for the prevention

- Approach to prevention of chronic diseases can be considered under three headings :

- 1-Primordial prevention: prevention or avoiding the development of risk factors in the community to prevent the disease in the population and as such protects the individuals. This involves the avoidance of risk behaviors.

- prevention of disease occurrence by altering susceptibility of the host or reducing exposure of susceptible persons to the risk factors
- Examples : immunization , good nutrition , health education ,
- counseling, environmental sanitation, purification of water , protection against accidents at work place and seat belts.

- Requires : accurate knowledge of causative agent and process of disease.

- 2-Primary prevention : Modifying or reducing the risk factors associated with the development of a disease in individuals with or without the use of interventions, It involves modification of established risk behavior and risk factors with specific interventions to prevent clinically manifest disease

- That is by early detection , screening by examinations altering the course of disease
- Examples : high blood pressure , T.B. Diabetes , Cancer of the breast , Cancer of the cervix colo-rectal cancers, lung cancer etc.

- 3- Secondary prevention : Modifying the risk factors in the presence of the manifested disease by changes in lifestyle and/or use of drugs.

- 4- Tertiary Prevention : alleviation and limitation of disability improvement of quality of life , Rehabilitation and follow up.

- Non communicable diseases are usually thought of as chronic conditions that do not result from an acute infectious process.

- These conditions cause death, dysfunction, or impairment in the quality of life, and they usually develop over relatively long periods—at first without causing symptoms; but after disease manifestations develop, there may be a protracted period of impaired health.

- Generally, these conditions or diseases result from prolonged exposure to causative agents, many associated with personal behaviors and environmental factors.

# The major non communicable diseases are :

- Cardiovascular Diseases.
- Chronic Obstructive Pulmonary Disease
- Diabetes
- Hypertension
- Cancers
- Accidents in its different types

- Non communicable diseases also include injuries, which have an acute onset, but may be followed by prolonged convalescence and impaired function, as well as chronic mental diseases.

- Non communicable diseases are the leading cause of functional impairment and death worldwide. These conditions have been the leading cause of death in the United States and other high-income countries over the last fifty years, and they are emerging as a leading cause of death in low-to middle-income countries.

- The leading causes of death worldwide showing that non communicable diseases and injuries account for over **two-thirds of deaths**. In addition, these diseases cause pain, disability, loss of income, disruption of family stability, and an impaired quality of life.

- Out of all non-communicable illnesses,
- Cardiovascular disease (CVD) (coronary heart disease, stroke) is the leading cause of morbidity and mortality worldwide, and is increasing alarmingly in developing countries. Currently, CVD is responsible for about 30% of all deaths worldwide, and is projected to cause 24 million deaths by 2020 .

- While the developing world bears most of the burden of these deaths, there are still no signs of success in halting the CVD epidemic there . Moreover, deaths from CVD in developing countries occur at a younger age compared to developed ones, further hindering their social and economic development

- Noncommunicable diseases (NCDs) are a global challenge. During the next several decades, NCDs will govern the health care needs of populations in most low- and middle-income countries because of declines in communicable diseases, conditions related to childbirth and nutrition, changes in lifestyle factors (eg, smoking), and population aging .

- We examined the burden of NCDs in the Hashemite Kingdom of Jordan. We computed the projected prevalence of diabetes, hypertension, and high blood cholesterol. All of these risk factors are associated with an increased risk of cardiovascular disease (CVD) — the leading cause of death in Jordan — and increased health care use.

- In 2005, Jordan's population was approximately 5.5 million. By 2050, the population is expected to increase to between 8.5 and 14.8 million people. The proportion of older people (aged 60 years or older) is expected to be 15.6% (or approximately 1.8 million people) in 2050, more than 5 times that in 2000 .

- During 2005, NCDs accounted for more than 50% of all deaths in Jordan. Heart disease and stroke (International Statistical Classification of Diseases, 10th Revision, codes I00-I99) accounted for 35% of all deaths; malignant neoplasms (C00-C97) were responsible for 13% of deaths .

- Nearly 60% of deaths from malignant neoplasms occurred among people younger than 65 years, and approximately one-third of those who died from CVD were aged 65 or younger

- During 2004, approximately 400,000 (15%) Jordanian adults had diabetes (an increase from 7% in 1996), and an estimated 350,000 (12%) had impaired fasting glucose . Approximately 15% of adults reported hypertension, and roughly 23% had high blood cholesterol — an increase from 9% in 1996.

- The proportion of all deaths attributable to NCDs in the World Health Organization's Eastern Mediterranean Region is projected to increase from 51% during 2005 to 66% by 2030.

- Programs to monitor and control risk factors, clinical services, and a robust health care system will be important to successfully improve NCD outcomes and reduce the burden of disease.

- Cancer is a growing health problem in developing countries also, where more than half of the global total of six million deaths occur.