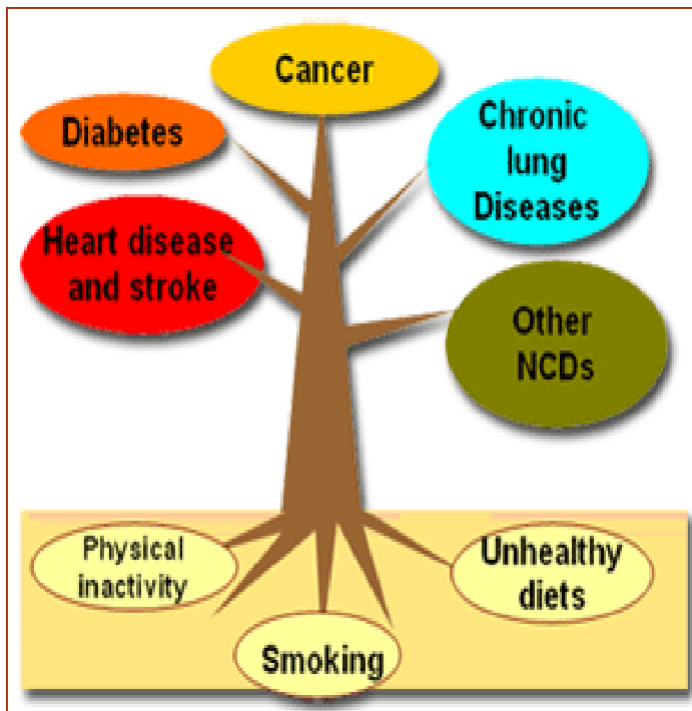


NON - COMMUNICABLE DISEASES



Definition

“Non-communicable diseases is a diseases, caused due to multiple causes and are not passed or transmitted directly or indirectly from person to another by any agency”.

E .g: Cancer etc

“Non-communicable diseases (NCDs), the diseases which are not passed from person to another”.

E .g: Cancer etc

□ **More than nine million of all deaths attributed to noncommunicable diseases (NCDs) occur before the age of 60.**



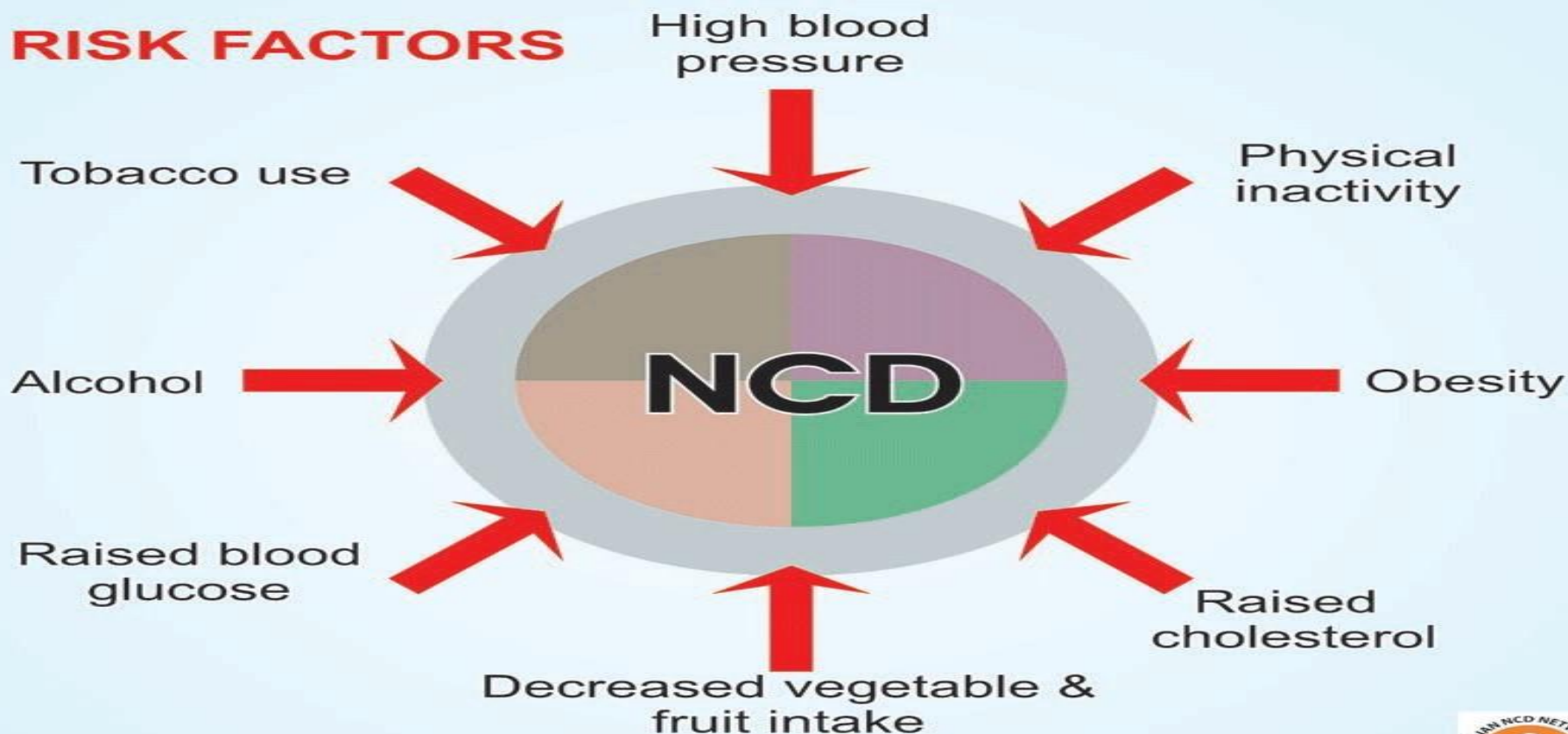
- **Around the world, NCDs affect women and men almost equally.**

NON COMMUNICABLE DISEASES (NCDs)

NON COMMUNICABLE DISEASES INCLUDE

- **Cardiovascular disease (CVD)**
- **Diabetes Mellitus (DM)**
- **Chronic obstructive pulmonary disease (COPD)**
- **Cancer**

RISK FACTORS



Risk factors

1. Smoking
2. Consumption of alcohol
3. Bad Life style pattern
(E.g.: Diet, Physical activity etc)
4. Insufficient health services
5. Environmental factors
(E.g.: air & water pollution, etc)
6. Stress conditions

Cardiovascular diseases

- Cardiovascular disease is caused by disorders of the heart and blood vessels, and includes coronary heart disease (heart attacks), cerebrovascular disease (stroke), raised blood pressure (hypertension), peripheral artery disease, rheumatic heart disease, congenital heart disease and heart failure.
- Although heart attacks and strokes are major killers in all parts of the world, 80% of premature deaths from these causes could be avoided by controlling the main risk factors: tobacco, unhealthy diet and physical inactivity.

80% of premature heart disease and stroke is preventable

Cardiovascular diseases: Contributing factors

- ❑ **A person's genetic make-up**
- ❑ **The foundations of adult health are laid in early life**
- ❑ **Socioeconomic group**
- ❑ **Mental health**
- ❑ **Diet**
- ❑ **Overweight and obesity**
- ❑ **Inactivity**
- ❑ **Tobacco**
- ❑ **Alcohol**
- ❑ **Diabetes**
- ❑ **Globalization and urbanization**

Cardiovascular diseases: Prevention

- **Focusing on a combination of risk factors for cardiovascular disease**
- **Implementing medical screening for individuals at risk**
- **Providing effective and affordable treatment to those who require it**

Cancer

- **Cancer is the uncontrolled growth and spread of cells that arises from a change in one single cell. The change may be started by external agents and inherited genetic factors and can affect almost any part of the body. The transformation from a normal cell into a tumour cell is a multistage process where growths often invade surrounding tissue and can metastasize to distant sites.**

Cancer: Interaction between a person's genetic factors and any of three categories of external agents

- **physical carcinogens, such as ultraviolet and ionizing radiation or asbestos;**
- **chemical carcinogens, such as vinyl chloride, or betnaphthylamine (both rated by the International Agency for Research into Cancer as carcinogenic), components of tobacco smoke, aflatoxin (a food contaminant) and arsenic (a drinking-water contaminant); and**
- **biological carcinogens, such as infections from certain viruses, bacteria or parasites.**

Most chemicals to which people are exposed in everyday life have not been tested for their long-term impact on human health.

Cancer:

the majority of cancer deaths

- **Lung, breast, colorectal, stomach and liver cancers**
- **In high-income countries, the leading causes of cancer deaths are lung cancer among men and breast cancer among women.**
- **In low- and middle-income countries cancer levels vary according to the prevailing underlying risks. In sub-Saharan Africa, for example, cervical cancer is the leading cause of cancer death among women.**

Cancer:

risk factors for cancer

- tobacco use
- unhealthy diet
- insufficient physical activity
- the harmful use of alcohol
- Infections (hepatitis B, hepatitis C (liver cancer), human papillomavirus (HPV; cervical cancer), *Helicobacter pylori* (stomach cancer))
- Radiation
- variety of environmental and occupational exposures of varying importance

Cancer: policy

WHO's approach to cancer has four pillars:

- prevention,
- early detection,
- screening,
- treatment
- palliative care.

Chronic respiratory diseases: Quick facts and figures

- **According to the WHO Global Status Report on NCDs 2010, smoking is estimated to cause about 71% of all lung cancer deaths and 42% of chronic respiratory disease worldwide. .**

Survey data from 2016 indicate that over half of all children aged 13–15 years in many countries are exposed to second-hand tobacco smoke at home. Second-hand smoke causes severe respiratory health problems in children, such as asthma and reduced lung function; and asthma is now the most common chronic disease among children.

Chronic respiratory diseases: Quick facts and figures

- **12% of infant deaths in the world are due to respiratory diseases.**
- **Indoor air pollution from biological agents related to damp and mould increases the risk of respiratory disease in children and adults. Children are particularly susceptible to the health effects of damp, which include respiratory disorders such as irritation of the respiratory tract, allergies and exacerbation of asthma. Damp is often associated with poor housing and social conditions, poor indoor air quality and inadequate housing hygiene.**

Diabetes

- **Diabetes is a chronic disease that occurs when the pancreas does not produce enough insulin (a hormone that regulates blood sugar) or alternatively, when the body cannot effectively use the insulin it produces. The overall risk of dying among people with diabetes is at least double the risk of their peers without diabetes.**

Diabetes: Quick facts and figures

- About 347 million people worldwide have diabetes.
- There is an emerging global epidemic of diabetes that can be traced back to rapid increases in overweight, obesity and physical inactivity.



Diabetes: Quick facts and figures

- **Diabetes is predicted to become the seventh leading cause of death in the world by the year 2030.**
- **Total deaths from diabetes are projected to rise by more than 50% in the next 10 years.**



Diabetes: Health implications

Elevated blood sugar is a common effect of uncontrolled diabetes, and over time can damage the heart, blood vessels, eyes, kidneys, and nerves.

Some health complications from diabetes include:

- Diabetic retinopathy**
- Diabetic neuropathy**
- Diabetes is among the leading causes of kidney failure; 10-20% of people with diabetes die of kidney failure.**
- Diabetes increases the risk of heart disease and stroke; 50% of people with diabetes die of cardiovascular disease (primarily heart disease and stroke).**

Diabetes: Prevention

Without urgent action, diabetes-related deaths will increase by more than 50% in the next 10 years. To help prevent type 2 diabetes and its complications, people should:

- Achieve and maintain healthy body weight.**
- Be physically active - at least 30 minutes of regular, moderate-intensity activity on most days.**
- Early diagnosis can be accomplished through relatively inexpensive blood testing.**
- Treatment of diabetes involves lowering blood sugar and the levels of other known risk factors that damage blood vessels.**
- Tobacco cessation is also important to avoid complications.**

Diabetes: Control

- People with type 1 diabetes require insulin; people with type 2 diabetes can be treated with oral medication, but may also require insulin.
- Blood pressure control
- Foot care

Other cost saving interventions include:

- Screening and treatment for retinopathy (which causes blindness);
- Blood lipid control (to regulate cholesterol levels);
- Screening for early signs of diabetes-related kidney disease and treatment.

These measures should be supported by a healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use.

Obesity

- **Obesity is one of the greatest public health challenges of the 21st century. Its prevalence has tripled in many countries of the WHO European Region since the 1980s, and the numbers of those affected continue to rise at an alarming rate, particularly among children.**
- **In addition to causing various physical disabilities and psychological problems, excess weight drastically increases a person's risk of developing a number of noncommunicable diseases (NCDs), including cardiovascular disease, cancer and diabetes.**
- **The risk of developing more than one of these diseases (co-morbidity) also increases with increasing body weight.**

Obesity

- **Overweight and obesity are defined as "abnormal or excessive fat accumulation that may impair health"**
- **Body mass index (BMI) – the weight in kilograms divided by the square of the height in meters (kg/m²) – is a commonly used index to classify overweight and obesity in adults. WHO defines overweight as a BMI equal to or more than 25, and obesity as a BMI equal to or more than 30.**

BMI classification	
Underweight	< 18.5
Normal range	18.5 - 24.9
Overweight	≥ 25.0
<i>Preobese</i>	25.0 - 29.9
Obese	≥ 30.0
<i>Obese class I</i>	30.0 - 34.9
<i>Obese class II</i>	35.0 - 39.9
<i>Obese class III</i>	≥ 40.0

Noncommunicable diseases: Current status and trends in risk factors

- **Common, preventable risk factors underlie most NCDs.**
These risk factors are a leading cause of the death and disability burden in nearly all countries, regardless of economic development.
- **The leading risk factor globally for mortality is:**
 1. raised blood pressure (responsible for 13% of deaths globally),
 2. followed by tobacco use (9%),
 3. raised blood glucose (6%),
 4. physical inactivity (6%),
 5. overweight and obesity (5%).

Noncommunicable diseases: Current status and trends in risk factors

- The prevalence of these risk factors varied between country income groups, with the pattern of variation differing between risk factors and with gender. *High-, middle- and low-income countries had differing risk profiles.*
- Several risk factors have the highest prevalence in high-income countries. These include:
 1. physical inactivity among women,
 2. total fat consumption,
 3. raised total cholesterol.
- Some risk factors have become more common in middle-income countries. These include:
 1. tobacco use among men,
 2. overweight and obesity.

Noncommunicable diseases: parameters for estimation of behavioural and metabolic risk factors

- **current daily tobacco smoking**: the percentage of the population aged 15 or older who smoke tobacco on a daily basis.
- **physical inactivity**: the percentage of the population aged 15 or older engaging in less than 30 minutes of moderate activity per week or less than 20 minutes of vigorous activity three times per week, or the equivalent.
- **raised blood pressure**: the percentage of the population aged 25 or older having systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg or on medication to lower blood pressure.

Noncommunicable diseases: parameters for estimation of behavioural and metabolic risk factors

- **raised blood glucose**: the percentage of the population aged 25 or older having a fasting plasma glucose value ≥ 7.0 mmol/L (126 mg/dl) or on medication for raised blood glucose.
- **overweight**: the percentage of the population aged 20 or older having a body mass index (BMI) ≥ 25 kg/m².
- **obesity**: the percentage of the population aged 20 or older having a body mass index (BMI) ≥ 30 kg/m².
- **raised cholesterol**: the percentage of the population aged 25 or older having a total cholesterol value ≥ 5.0 mmol/L (190 mg/dl).

Noncommunicable diseases: Prevention and Control of NCDs

- **Millions of deaths can be prevented by stronger implementation of measures that exist today.**
- **These include policies that promote government-wide action against NCDs:**
 - 1. stronger anti-tobacco controls**
 - 2. promoting healthier diets,**
 - 3. physical activity,**
 - 4. reducing harmful use of alcohol;**
 - 5. along with improving people's access to essential health care.**

