Learning Objectives

- At the end of this session participants are expected to be able to:
  - Define cardiovascular diseases
  - Describe burden of cardiovascular diseases
  - Explain risk factors and causes for cardiovascular diseases
  - Describe prevention of cardiovascular diseases

# Activity: Brainstorming

- What is Cardiovascular diseases

Definition of Cardiovascular Diseases (1)

- Cardiovascular diseases (CVDs) are disorders predominantly affecting the heart and blood vessels and include:
  - Coronary heart disease – disease of the blood vessels supplying the heart muscle
  - Cerebrovascular disease - disease of the blood vessels supplying the brain
  - Peripheral arterial disease – disease of blood vessels supplying the arms and legs
  - Disease of the heart valve – rheumatic heart disease (RHD), and congenital heart disease

Activity: Buzzing

- What is the burden of cardiovascular diseases?
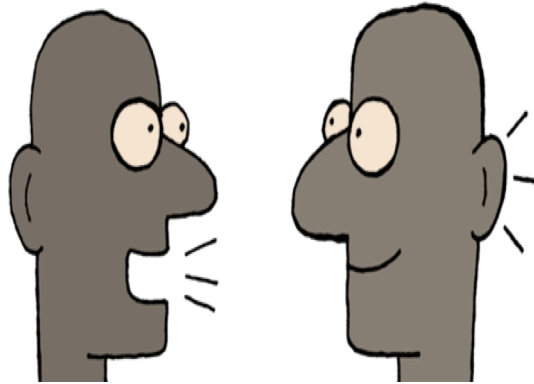
Burden of Cardiovascular Diseases

- Cardiovascular diseases (CVDs) are the number one cause of death globally
- An estimated 17.9 million people died from CVDs in 2016, representing 31% of all global deaths. Of these deaths, 85% are due to heart attack and stroke
- Out of the 17 million premature deaths (under the age of 70) due to noncommunicable diseases in 2015, 82% are in low- and middle-income countries, and 37% are caused by CVDs(1,2)
- By 2030, almost 23.6 million people will die from CVDs, mainly from heart disease and stroke and are projected to remain the single leading causes of death

Distribution of Global NCDs by Cause of Death
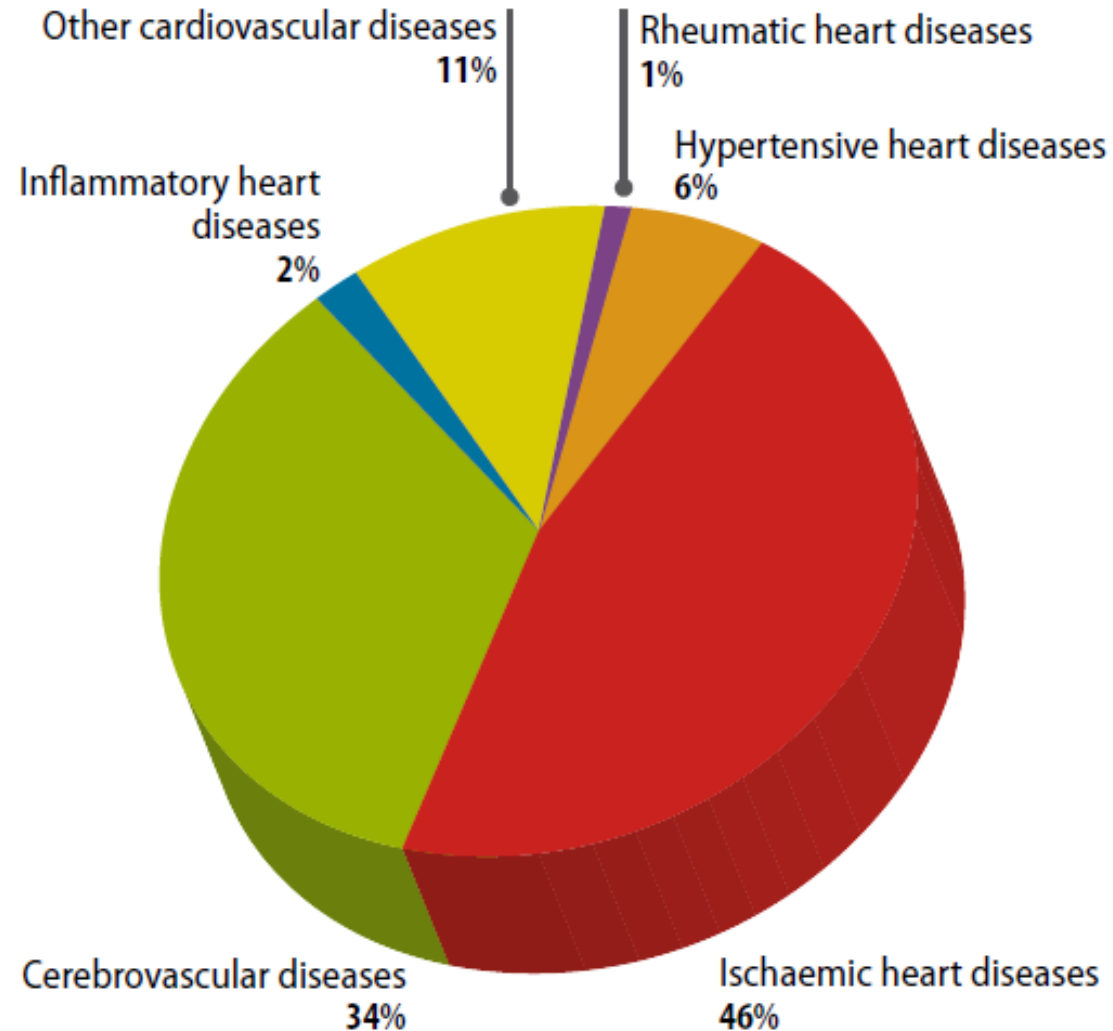
Distribution of Major Causes of Death Including CVDs
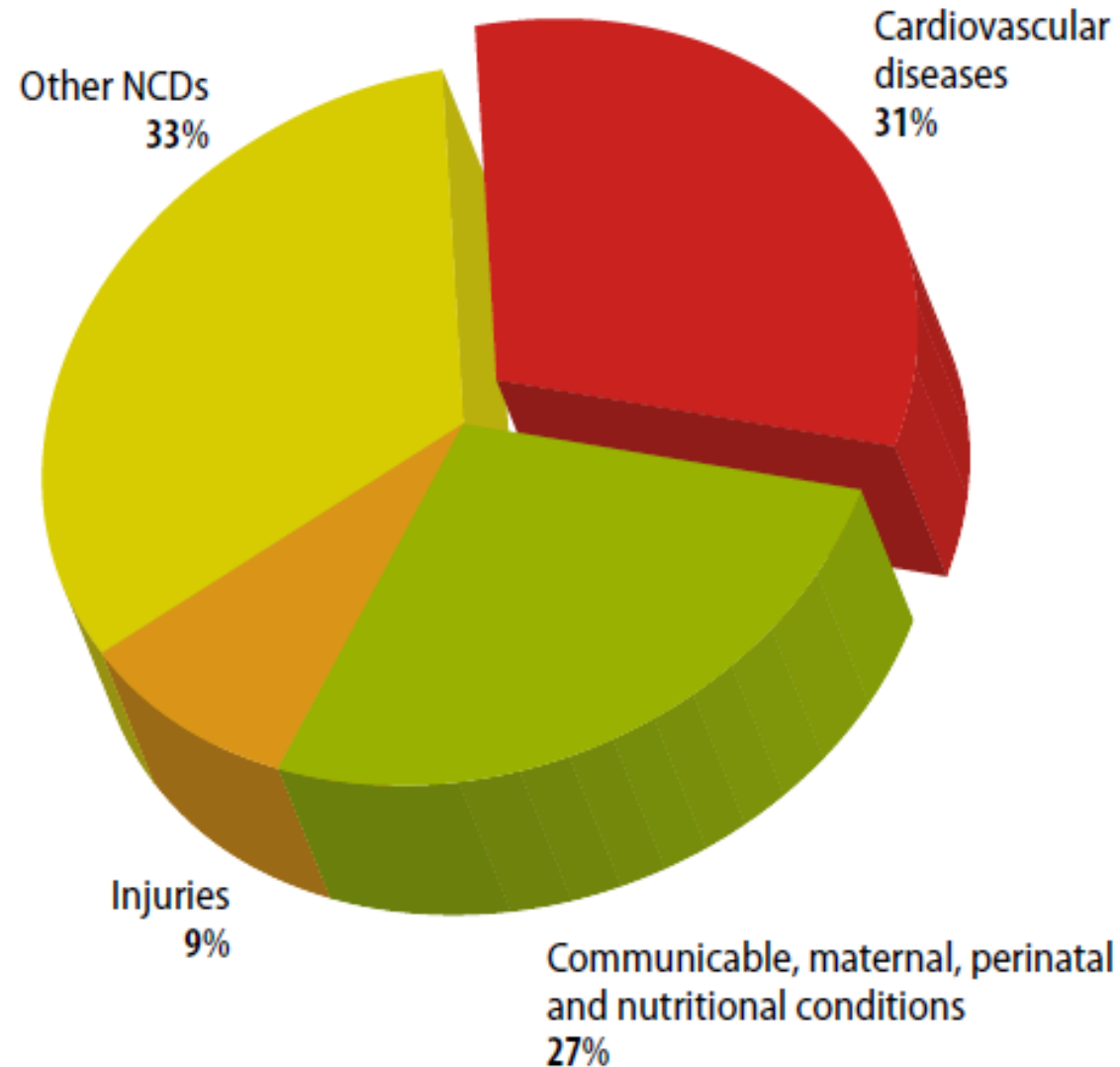
Distribution of Global NCD by Cause of Death

Distribution of Global CVD Deaths - Males

Other cardiovascular diseases 11%

Rheumatic heart diseases 1%

Inflammatory heart diseases 2%

Hypertensive heart diseases 6%

Cerebrovascular diseases 34%

Ischaemic heart diseases 46%
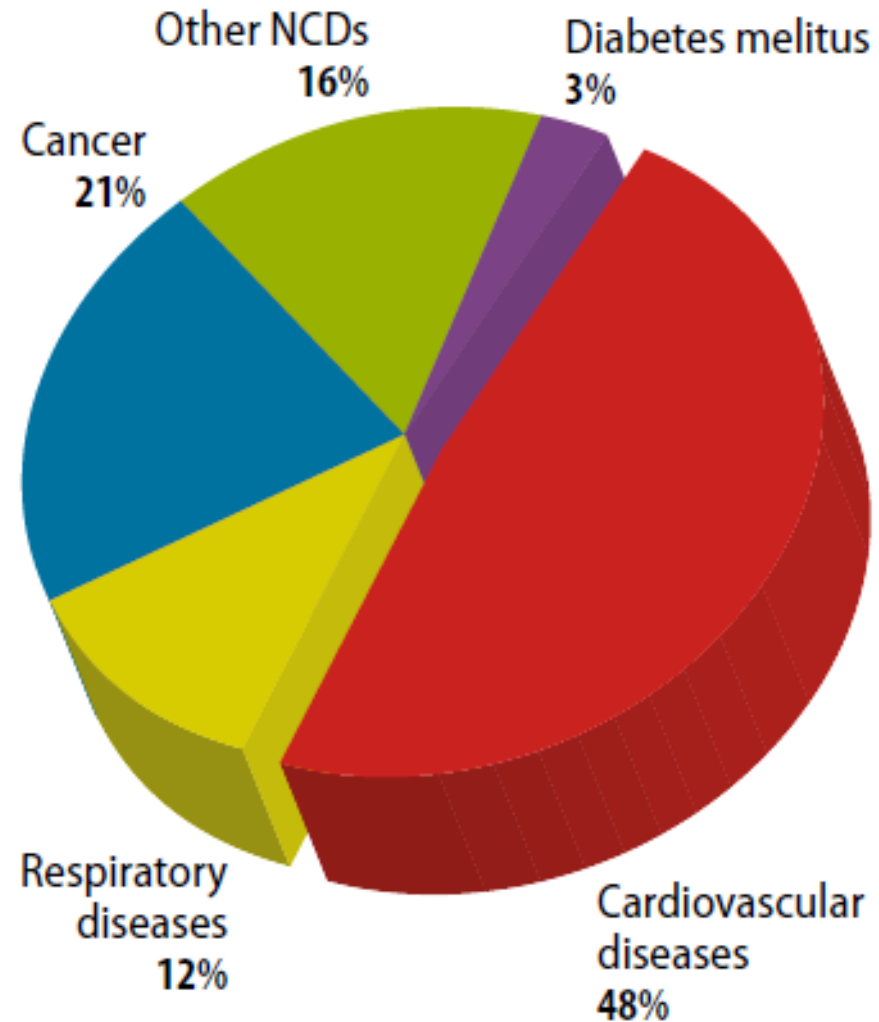
Distribution of Global CVD Deaths - Females

Other cardiovascular diseases 14%

Inflammatory heart diseases 2%

Rheumatic heart diseases 1%

Hypertensive heart diseases 7%

Cerebrovascular diseases 37%

Ischaemic heart diseases 38%
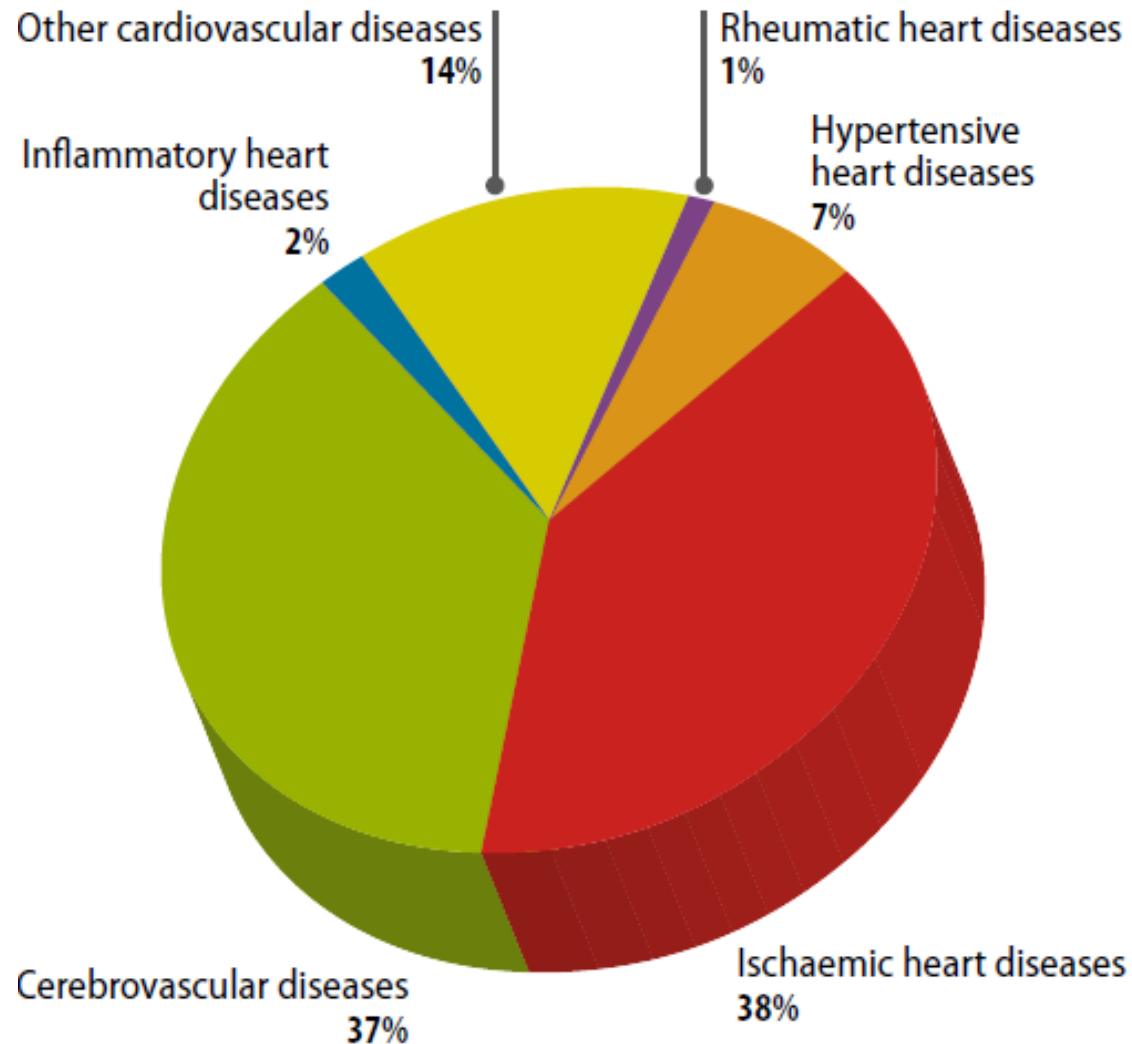
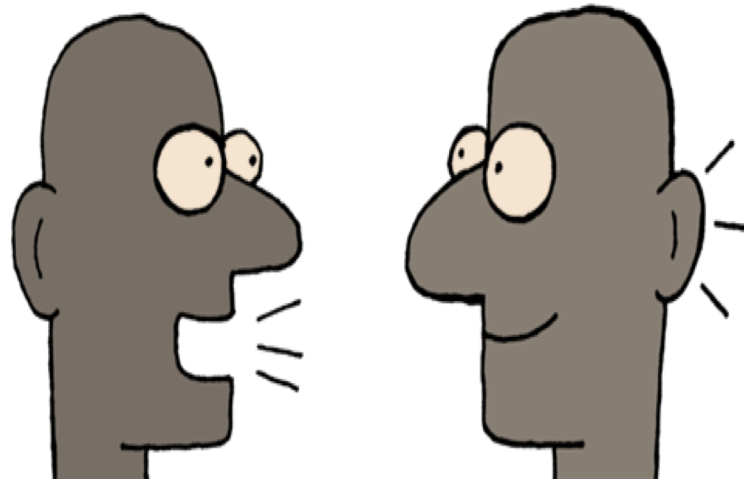# Current Status of CVD and NCDs in Tanzania
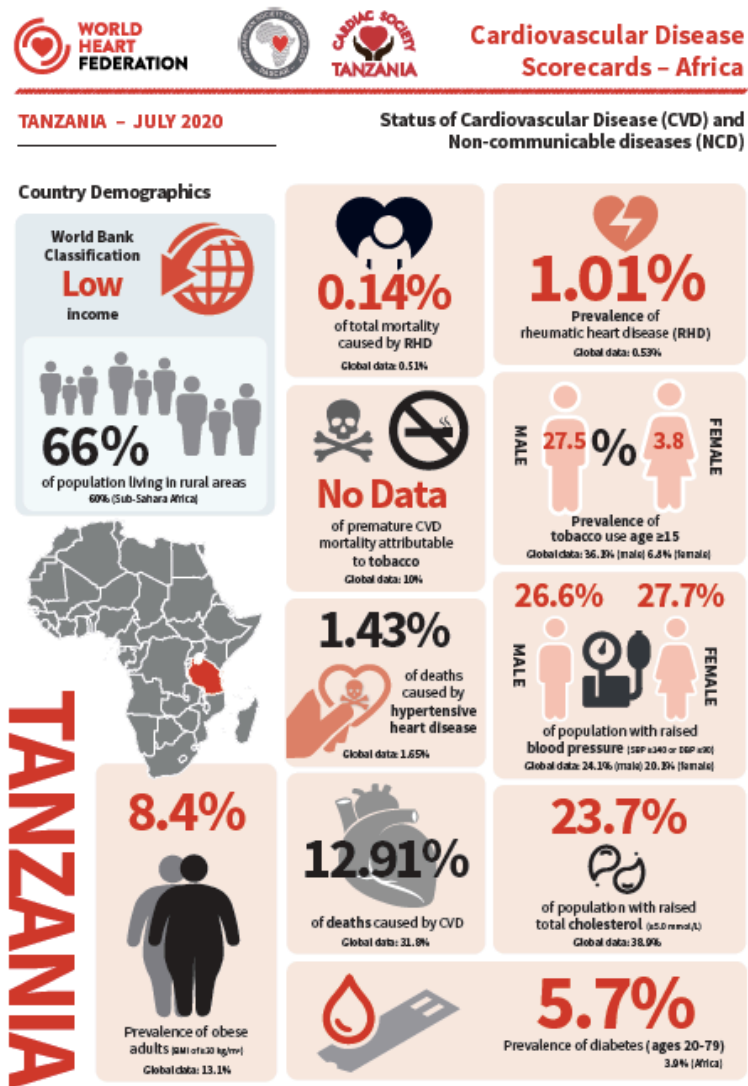
Activity: Buzzing

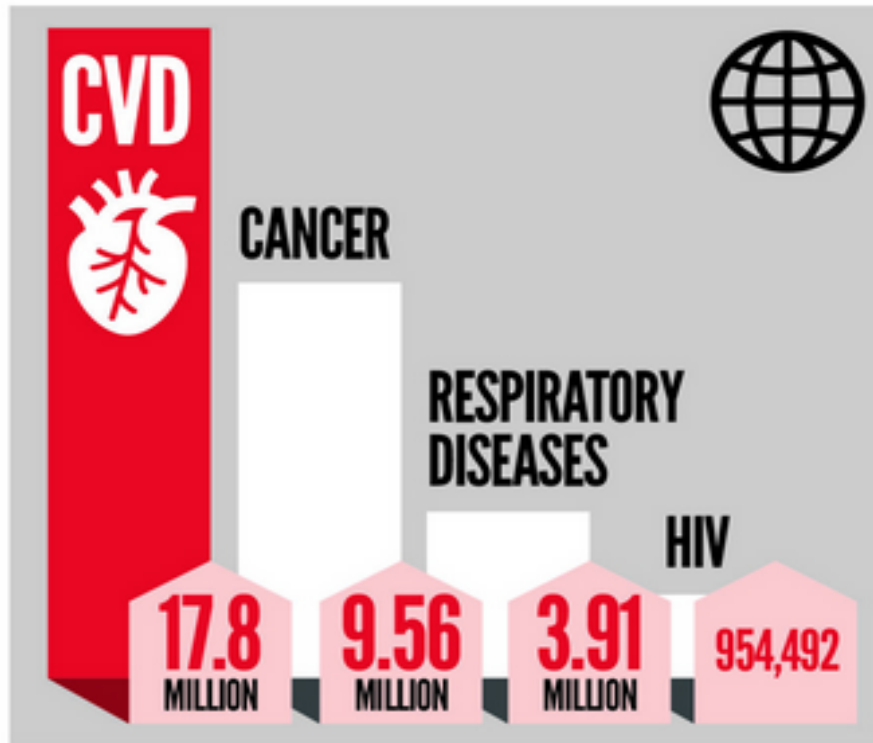• What are the risk factors for cardiovascular diseases?

Risk Factors for Cardiovascular Disease (1)

- Behavioural risk factors are responsible for about 80% of coronary heart disease and cerebrovascular disease

  - The most important are unhealthy diet, physical inactivity and tobacco use

Risk Factors for Cardiovascular Disease (2)

GLOBAL CAUSES OF DEATH

CVD
CANCER
RESPIRATORY DISEASES
HIV

17.8 MILLION
9.56 MILLION
3.91 MILLION
954,492

RISK FACTORS FOR CVD

High Blood Pressure
High Cholesterol
Overweight & Obesity
Air Pollution
Physical Inactivity

Unhealthy Diet
Diabetes
Tobacco
Kidney Disease
Harmful use of alcohol

Sources: World Health Organization; IHME, Global Burden of Disease

info@worldheart.org
www.worldheart.org

f /worldheartfederation
/worldheartfed

Risk Factors for Cardiovascular Disease (2)

- Tobacco is the leading global cause of preventable deaths

  - Kills nearly 6 million people each year

  - Kills one in two of its long-term users

  - Cause more deaths than the combined number of deaths from HIV, illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders

Risk Factors for Cardiovascular Disease   (3)

Estimating a 10-year risk of getting a CVD

- From the below chart we can work out one's 10-year risk of heart attack, stroke, or death from cardiovascular disease

- It comprises of age, sex, diabetes history, blood pressure level, and smoking habit

- For instance, a 70 years old male, diabetic, non – hypertensive, smoker has a 20 – 30 % risk

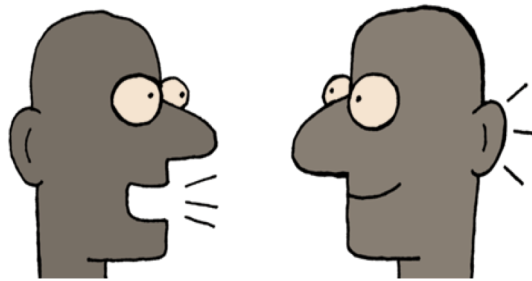# Risk Factors for Cardiovascular Disease   (4)

Activity: Buzzing

- What is the prevention of Cardiovascular Diseases ?

Prevention of Cardiovascular Diseases (1)

- Prevention of CAD can be divided as follows: primodial, primary, secondary and tertiary preventions

- **Primodial prevention** is directed towards discouraging adopting harmful lifestyles such as: smoking, eating pattern, physical exercise, alcoholism

Prevention of Cardiovascular Diseases (2)

- **Primary prevention** is reduction of risk factors of disease, through:
  - Population strategy e.g. dietary changes: consumption of saturated fats should be less than 10% of total energy intake
  - Identifying persons at risk for CAD and providing preventive care
    - Individuals with hypertension are given treatment
    - smokers to give up smoking

Prevention of Cardiovascular Diseases (3)

- **Secondary prevention** is prevention of reoccurrence of CAD by cessation of smoking or other risk factors, or by regularly taking medicines

- **Tertiary prevention** is management of complications to reduce deaths

Prevention of ARF/RHD

- Levels of prevention:
  - **PRIMORDIAL**: Control environmental risk factors

  - **PRIMARY**: Appropriate treatment of acute pharyngitis and if has ARF give Aspirin 80mg/kg, bed rest

  - **SECONDARY**: Monthly Benzanthine penicillin 2.4Mu

  - **TERTIARY**: Management of complications like heart failure, pulmonary hypertension, atrial and ventricular arrythmias, infective endocarditis

Key Points (1)

- Cardiovascular diseases (CVDs) are a group of disorders predominantly affecting the heart and blood vessels

- More people die annually from CVDs than from any other cause

- An estimated 17.9 million people died from CVDs in 2016, representing 31% of all global deaths. Of these deaths, 85% are due to heart attack and stroke

Key Points (2)

- Risk factors of heart disease and stroke include unhealthy diet, physical inactivity and tobacco use

- Prevention of CVD include primordial, primary, secondary prevention

Session Evaluation

- What is the burden of cardiovascular diseases?

- What are the risk factors for cardiovascular diseases?

- How do you prevent cardiovascular diseases?