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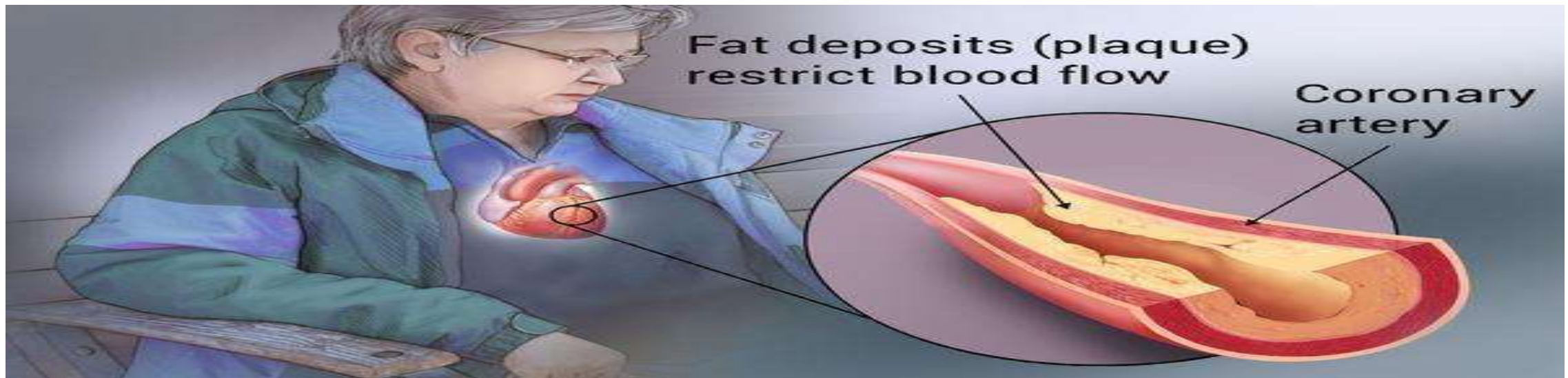
Saravanampatti (po), Coimbatore.



- DEPARTMENT OF NURSING
- COURSE NAME: BSC(NURSING) II YEAR
- SUBJECT :COMMUNITY HEALTH NURSING
- UNIT: V EPIDEMIOLOGY OF NON COMMUNICABLE DISEASE
- TOPIC : CORONARY HEART DISEASE

INTRODUCTION

- Coronary heart disease is a type of heart disease where the arteries of the heart cannot deliver enough oxygen-rich blood to the heart.





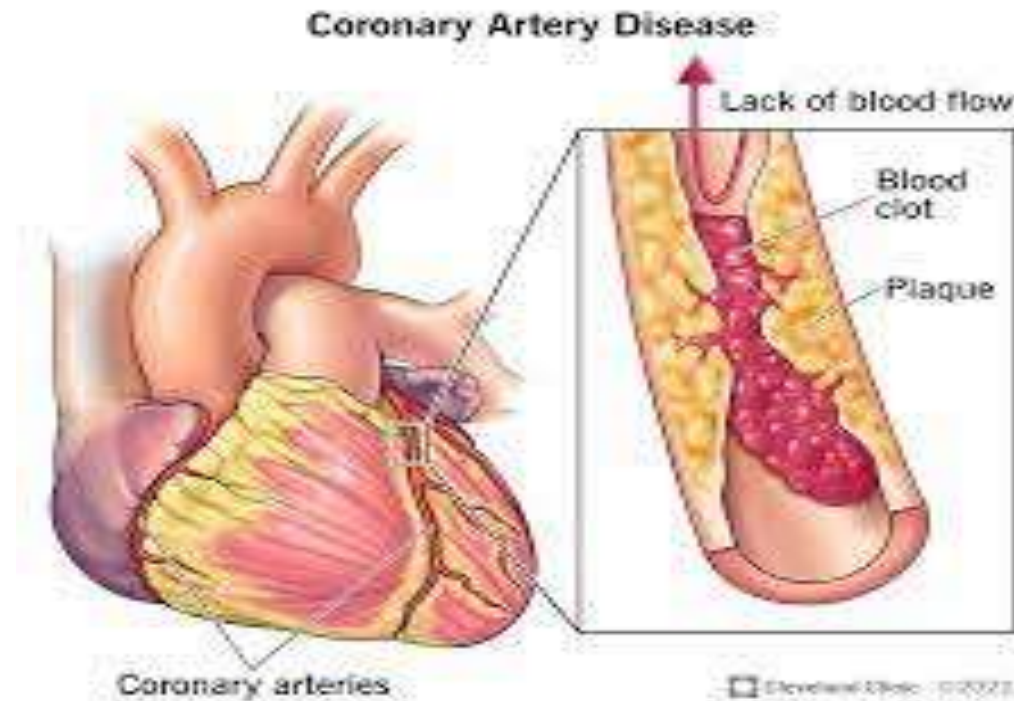
Coronary Heart Disease Cont



- ▶ It's the most common form of heart disease and the single most important cause of premature death in Europe, Russia, North and South America, Australia and New Zealand.
- ▶ It's the cause of 25-30% of deaths in most industrialized countries.

Clinical Problems of CHD

1. **Stable angina**
2. **Unstable angina**
3. **Myocardial infarction**
4. **Heart failure**
5. **Arrhythmia**
6. **Sudden death**





Risk Factors



Not Modifiable

- Age
- Cigarette smoking
- Sex
- Genetic Factors

Modifiable

- High blood pressure
- Family History
- Elevated serum cholesterol
- Others (Diabetes, Obesity, Sedentary habits ,Stress)



1. Smoking

- ▶ Smoking damages the lining of arteries, leading to a build up of fatty material (atheroma) which narrows the artery.
- ▶ The carbon monoxide induced atherogenesis and in tobacco smoke reduces the amount of oxygen in the blood. This means the heart has to pump harder to supply the body with the oxygen it needs.

1. Smoking Cont

- The nicotine in cigarettes stimulates the body to produce adrenaline, which makes the heart beat faster and raising the blood pressure, making the heart work harder and raising myocardial oxygen demand.



2. Hypertension

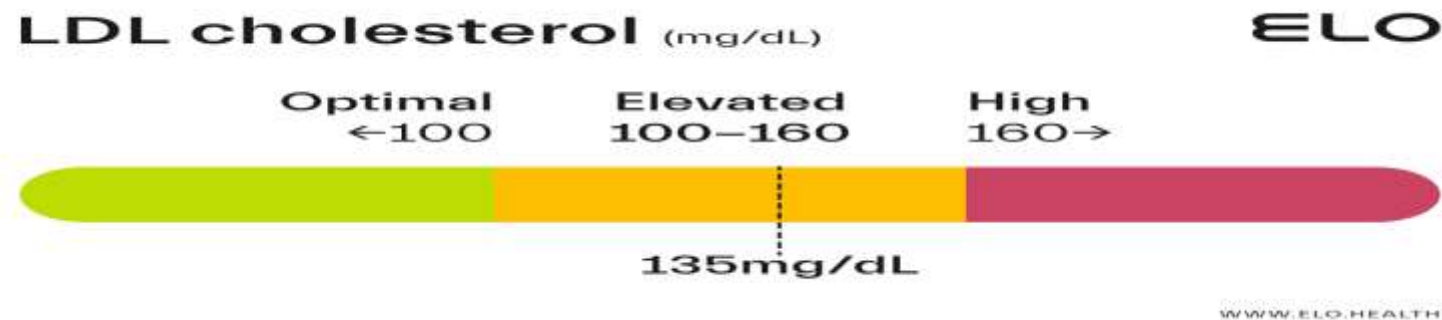
- ▶ The blood pressure is the single most useful test for identifying individuals at a high risk of developing CHD.
- ▶ Hypertension accelerates the atherosclerotic process, especially if hyperlipidaemia is also present and contributes importantly to CHD.





3. Elevated Serum cholesterol

- ▶ The elevation of serum cholesterol was one of the factors which carried an increased risk for the myocardial infraction.
- ▶ the level of low-density lipoprotein (LDL) cholesterol that is most directly associated with coronary heart disease.





4. Other risk factor(Diabetes)



- ▶ The risk of coronary heart disease is 2-3 times higher in diabetics than in non-diabetics.
- ▶ Coronary heart disease is responsible for 30-50% of deaths in diabetics over the age of 40 years in industrialized countries.



Symptoms of CHD

- Chest pain (angina)
- Shortness of breath
- Heaviness, tightness, pain, burning, pressure or squeezing behind the breastbone or in the arms, neck, or jaws
- Pain may vary
- Perhaps no pain



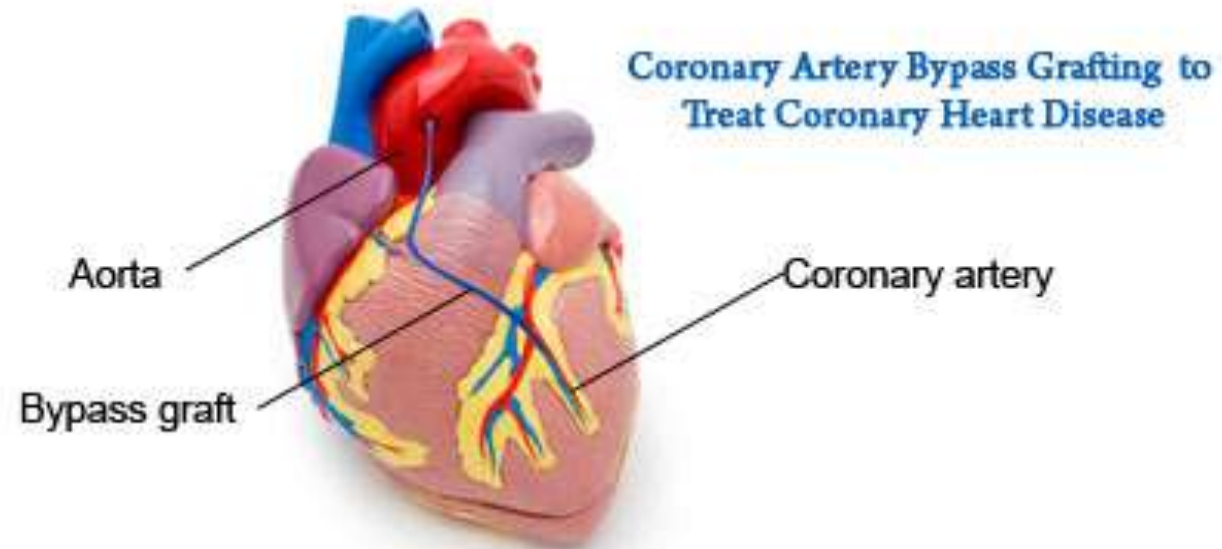
Diagnosis of CHD

- Electrocardiogram (EKG)
- Stress test
- Nuclear scanning
- Coronary angiography



Treatment for CHD

- Lifestyle changes
- Medication
- Surgery



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Lifestyle Changes

- Change of habits
- Low fat diet
- Lower weight
- Increase exercise
- Stop smoking





Medications to Treat CHD

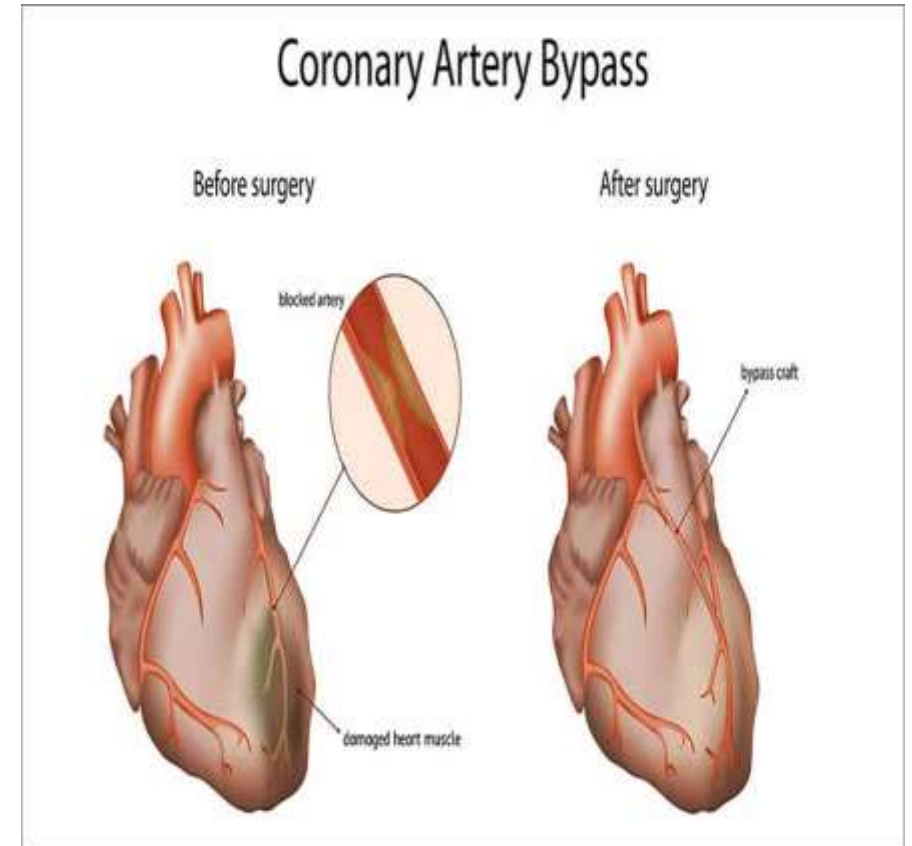


- Beta blockers
- Nitroglycerine and other nitrates
- Calcium-channel blockers
- Aspirin
- Cholesterol-lowering drugs
- Digitalis
- ACE inhibitors
- Diuretics



Surgery to Treat CHD

- Balloon angioplasty
- Atherectomy
- Laser angioplasty
- Stent insertion
- Coronary artery bypass operation (CABG)





Prevention of CHD



1. Primordial prevention.
2. Primary prevention.
 - A. Population strategy.
 - B. High risk strategy.
3. Secondary prevention

ASSESSMENT

- WHAT ARE THE LEVELS OF PREVENTION?
- DEFINE PRIMORDIAL PREVENTION?
- BRIEF ABOUT SECONDARY PREVENTION?



1. Primordial prevention

- ▶ It involves preventing the emergence and spread of CHD risk factors and life-styles that have not yet appeared or become endemic.

Figure 1. ABCDE of Primary Prevention: Lifestyle Changes and Team-Based Care





2. Primary prevention



- **a. Population strategy:**

- The strategy should therefore be based on mass approach focusing mainly on the control of risk factors in *whole populations*, not merely in individuals.
- This approach is based on the principle that small changes in risk factor levels in total populations can achieve the biggest reduction in mortality



2. Primary prevention Cont



- **a. Population strategy:** The population strategy include the following key areas
 1. Dietary changes.
 2. Smoking.
 3. Blood pressure.
 4. Physical activity.



1. Dietary changes

- Dietary modification is the principal preventive strategy in the prevention of CHD by :
 1. Reduction of fat intake to 20-30% of total energy intake.
 2. consumption of saturated fats must be limited to less than 10 per cent of total energy intake.
 3. Reduction of dietary cholesterol to below 100 mg per 1000 kcal per day.



2. Smoking

- The goal should be to achieve smoke free society and several countries are progressing towards this goal.





B. High risk strategy

- 1) Identifying risk
- 2) Specific advice





1) Identifying risk

- High-risk intervention can only start once those at high risk have been identified.
- By means of simple tests such as blood pressure and serum cholesterol measurement it is possible to identify individuals at special risk.
- Individuals at special risk also include those who smoke, those with a strong family history of CHD, diabetes and obesity and young women using oral contraceptives



2) Specific advice



- Having identified those at high risk, the next step will be to bring them under preventive care and motivate them to take positive action against all the identified risk factors.



Secondary prevention



- ▶ Secondary prevention must be seen as a continuation of primordial prevention and primary prevention, It forms an important part of an overall strategy.
- ▶ The aim of secondary prevention is to prevent the recurrence and progression of CHD.
- ▶ Despite advances in treatment



ASSESSMENT



- WHEN IS WORLD HEART DAY ??





References

- K. Park, Text book of preventive and social medicine, Bhanot publication, 18th edition.
- B.T.Basvanthappa, Community health nursing, Jaypee, Publication, 6th edition.



*Thank
you*

