Diseases of heart and blood vessels
Hypertension

• It is the most common problem in Indians

• Blood pressure is the force exerted against the walls of the arteries by the pumping action of the heart

• It is recorded in two numbers, such as 120/80
• It is defined as hypertension if the blood pressure is 140/90 or higher on at least three occasions on different dates

• A person with hypertension may not feel sick, so blood pressure screening is to be often done
Atherosclerosis

• Narrowing of arterial walls with fatty material

• Fatty deposits of cholesterol, fat or other substances accumulate inside the walls of artery

• The deposited material, or plaque, is soft, but later it becomes fibrosed or hard
• It interferes with the pumping of blood

• Make pumping of the heart harder

• Increases blood pressure which injures arteries

• It is essential to bring the BP back to normal to prevent damage to circulatory system
Diet therapy

Hypertension is the major risk factor for stroke occurring

• At older age

• Higher BMI & ethnicity causes hypertension

• Two dietary influences have been related to hypertension
  - High salt intake
  - Low intake of potassium, calcium & magnesium
Normal blood pressure

- Limit salt intake
- Maintain a healthy body weight
- Limit alcohol
• If your blood pressure is between **120/80 and 139/89**, the AHA says you have prehypertension. It’s time to take steps like getting more exercise and eating a healthier diet to bring your blood pressure down.

• If your blood pressure is between **140/90 and 159/99**, you have stage 1 hypertension and need treatment. Stage 2 hypertension is **160/100 or higher**. And if your blood pressure is higher than **180/110**, you need emergency care.
Mild hypertension

- Moderate sodium restriction: It should be 1000-1500 mg/day exclude salt in cooking or at table

- Exclude processed foods

- Adequate intake of potassium: Fruits & vegetables are rich in potassium

- Diet should include 3-4 servings of fresh fruits
• **Regular exercise**: should walk briskly for at least half an hour daily to be fit

• **Stress management**: It involves regular planning of one’s activity

• A proper planning of work should be done to remove stress

• A planned, enjoyable routine of each day is important
Sodium restricted diets

Severe restriction
500-700mg/d

Moderate restriction
1000-1500mg/d

Mild restriction
2000-3000mg/d

No sodium is used in cooking or at table. Avoid all processed or canned vegetables.

Measured amount is to be used.
The DASH diet (Dietary Approaches to Stop Hypertension)

- Grains: 7-8 servings
- Fruits: 4-5 servings
- Vegetables: 4-5 servings
- Milk (low-fat): 2-3 servings
- Meat (lean): 2 or less servings
Healthy reduction in blood pressure

- High amount of fruits & vegetables
- Inclusion of fish, low-fat milk
- Reducing the fat & sodium intake

Lowers the incidence of stroke
Sources of sodium in the diet

• Sodium is a mineral found naturally in foods and also added to foods
• All living things plants & animals require some sodium
• Plant foods are low in sodium
• Animal foods are high in sodium
• Learn to read food labels
• Buy fresh vegetables and fruits as these are naturally low in sodium
High sodium foods

- Vegetables: Amaranth & field beans
- Fruits: Muskmelon, lichis, dried fruits & cherries

Salty snacks

Baked foods

Salted butter

Salted fish & meat
Conclusion

- Additional risk factors that affect hypertension are excessive salt intake & low intake of potassium, calcium & magnesium.

- Dietary modifications in cardiovascular disease most often involve cholesterol-lowering or sodium-controlling measures.