

Chronic diseases

Hypertension (HTN)

Important because: role in the causation of coronary heart disease, stroke, and other vascular complications.

■ **commonest cardiovascular disorder, posing a major public health problem**

■ **major risk factors** for cardiovascular mortality الوفاة

■ **Top** leading cause of **death** globally (2022) is **Heart disease** (HTN affect it , so this is very dangerous !)

■ When systolic and diastolic pressure fall into different categories تعددت القراءات, **the higher category should be selected** to classify the individual's blood pressure.

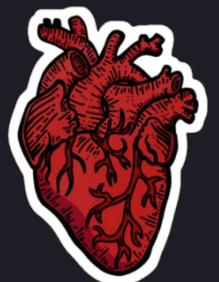
■ incidence has limited value عديم القيمة in hypertension / prevalence has more value and you can calculate it using { cross sectional study design }

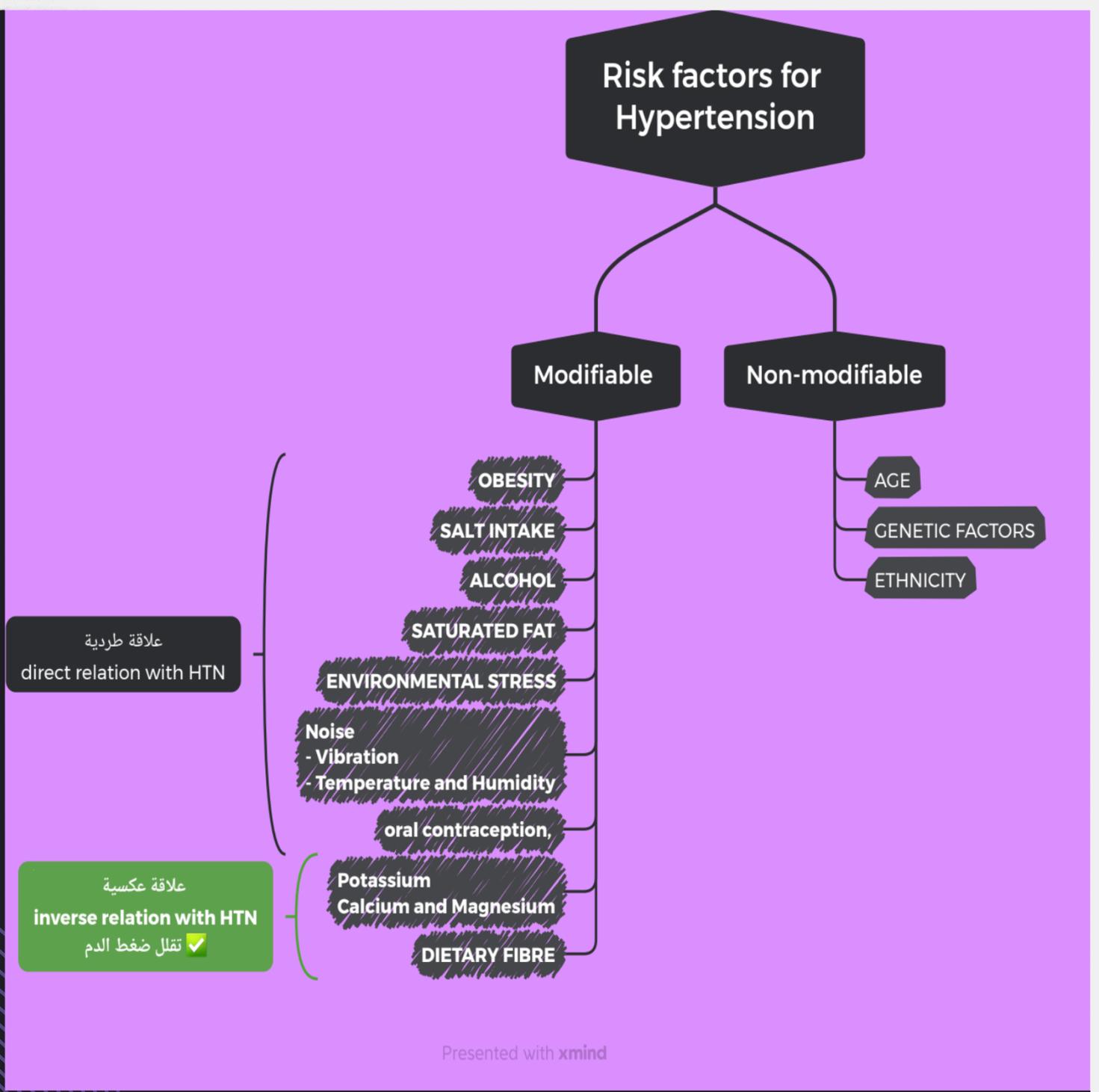
■ **Isolated systolic hypertension** : systolic blood pressure of **140 mmHg or more** and a **diastolic of less than 90 mmHg**

Types of HTN

■ Hypertension is divided into primary (essential) and secondary.

Essential hypertension : when the causes are generally unknown. And it is the most prevalent form of hypertension accounting for 90 per cent of all cases of hypertension .





Non-modifiable risk factors

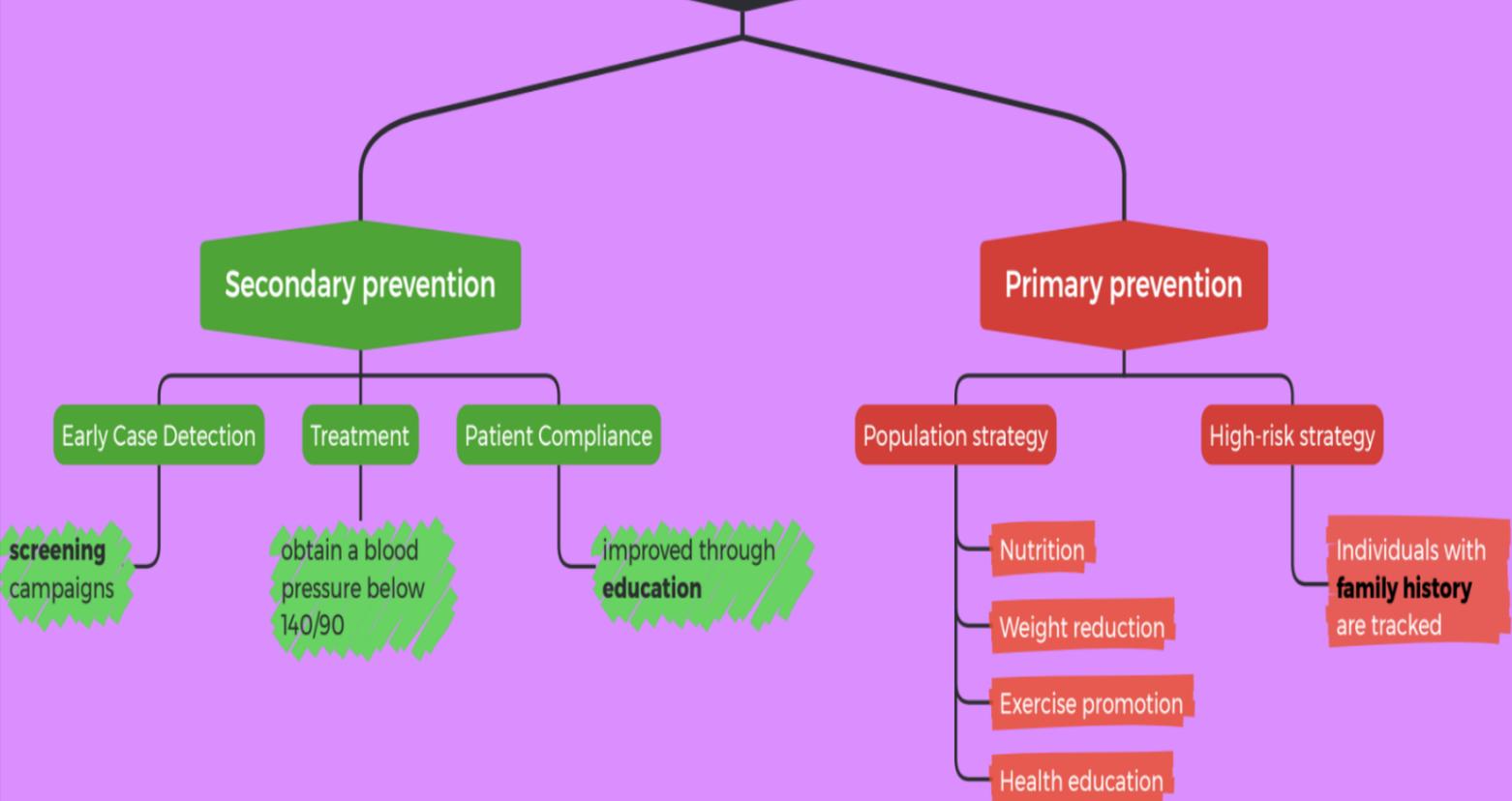
- Blood pressure **rises** with age in both sexes.
- **higher** blood pressure levels in **black communities** than other ethnic groups. [this can be proved by **Case Control** study design]

Modifiable risk factors

- greater the weight gain the greater the risk of high blood pressure. علاقة طردية
- **Central obesity** indicated by increased **WAIST / HIP ratio**
- The higher incidence of hypertension is **found in JAPAN**, where the sodium intake is high .
- Potassium antagonizes the biological effects of sodium and thereby reduces blood pressure.
- Potassium supplements have been found to lower the blood pressure of mild to moderate hypertensives.
- **Most fibres reduce plasma total and LDL cholesterol** so reduce atherosclerosis SO reduce HTN علاقة عكسية
- **alcohol** consumption raises **systolic blood** pressure more than the diastolic.
- alcohol-induced hypertension **returns to normal with abstinence**
عند الامتناع عن الكحول يعود ضغط الدم للطبيعي
- The commonest cause of **secondary hypertension** is : **oral** **contraception**, because of the oestrogen component in combined preparations.



PREVENTION OF HYPERTENSION



Presented with xmind

Primary Prevention: “all measures to reduce the incidence of disease in a population by reducing the risk of onset.”

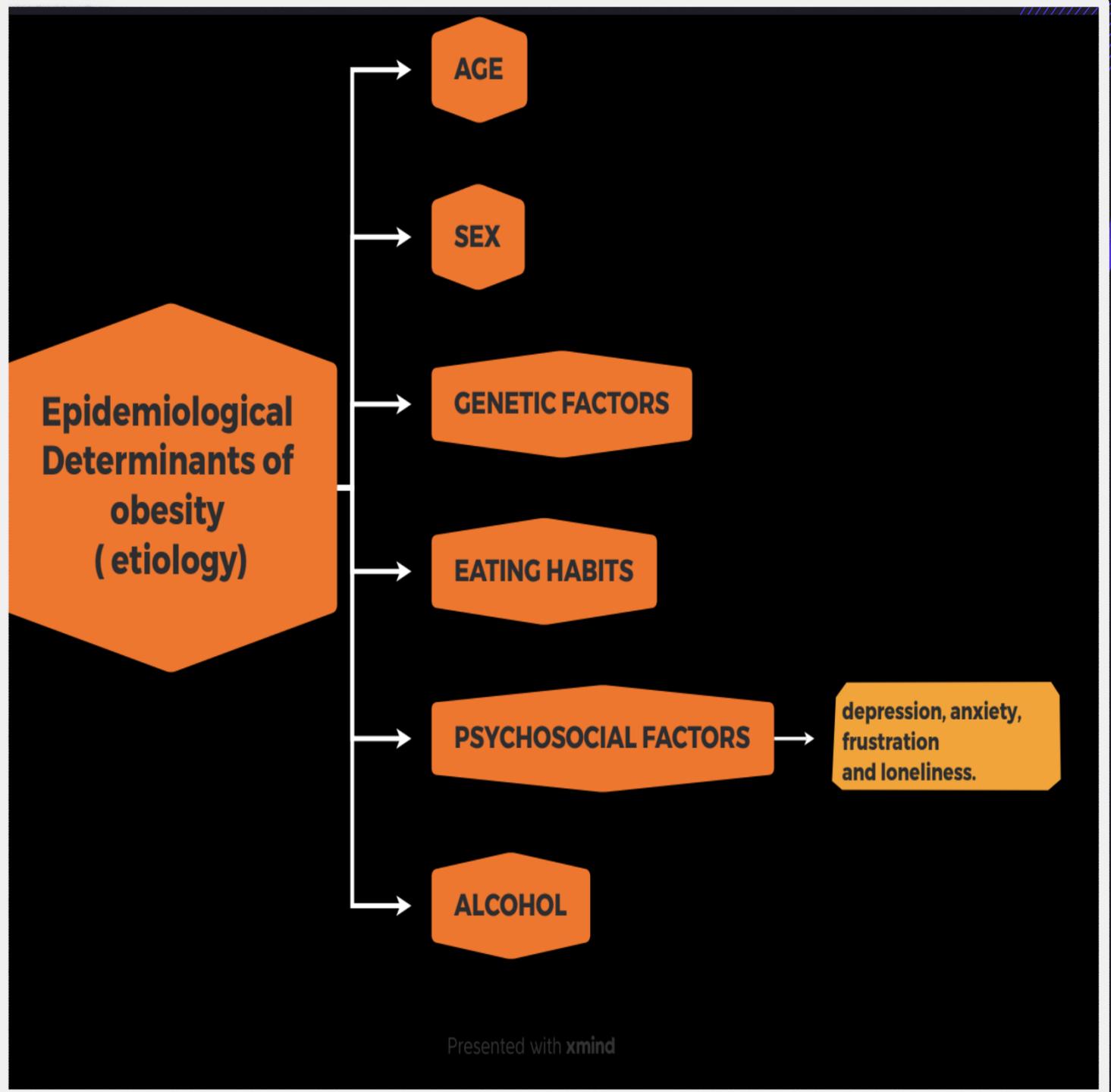
High Risk Strategy is appropriate if the risk factors occur with very low prevalence in the community.

Secondary Prevention: The goal of secondary prevention is to **detect** and **control** high blood pressure in affected individuals by antihypertensive drug therapy.

Obesity

defined as an abnormal growth of the adipose tissue due an enlargement of fat cell size (**hypertrophic** obesity) or an increase in fat cell number (**hyperplastic** obesity) or a combination .

- Obesity is the most prevalent form of malnutrition.
- chronic disease, is prevalent in both developed and developing countries.
- it has been suggested that such increase in body weight have been **caused primarily by reduced levels of physical activity** rather than changes in food intake.
- Overweight and Obesity are the **5th** leading risk of Global Deaths.
- Childhood obesity is associated with a higher chance obesity, premature death and disability in adulthood.



- **Women generally have higher rates of overweight.**
- Men gain weight between the ages of 29 and 35 years.
Women gain weight between 45 and 49 years of age
« menopause »
- the *relationship* between alcohol consumption and adiposity was generally **positive for men and negative for women.**

Classification of Obesity

We use BMI

◇ **Body Mass Index (BMI)** is a simple index of weight for-height that is commonly used to classify underweight, overweight, and obesity in adults.

And it is **Body weight in Kilograms divided by the Square of the height in Metres**

◇ BMI values are **age-independent** and the same for both sexes

◇ BMI **does NOT distinguish** between weight associated with **muscle** and weight associated with **fat** ↪ so not accurate for body fat !



Assessment of Obesity

- 1- BODY WEIGHT
- 2- SKINFOLD THICKNESS
- 3- WAIST- HIP CIRCUMFERENCE RATIO

☆ BODY WEIGHT is **not an accurate** measure of excess fat

☆ SKINFOLD THICKNESS is **most accessible, it is the non-invasive** method most used for assessing body fat.

☆ Sites of measurement of Skinfold thickness :

- 1- Mid-triceps.
- 2- Biceps
- 3- Subscapular.
- 4- Supra-iliac

☆ WAIST- HIP CIRCUMFERENCE RATIO is an approximate index of **intra-abdominal fat mass and total body fat.**

☆ WAIST- HIP CIRCUMFERENCE RATIO is **high** (indicates abdominal fat accumulation.) **when** :

▶ **WHR > 1.0 in MEN**

And

▶ **WHR > 0.85 in WOMEN**



Prevention and Control of Obesity

- Prevention of obesity should begin in **early childhood**
- **Weight control** is : maintaining weight within the healthy range of **body mass index of 18.5 to 24.9** kgm/m² throughout adulthood
- Obesity is *harder* to treat in *adults* than in children.

● **Methods** of Prevention and Control of Obesity :

- 1- DIETARY CHANGES
- 2- INCREASED PHYSICAL ACTIVITY
- 3- APPETITE SUPPRESSING DRUGS
- 4- BARIATRIC SUGERY

**W.H.O Global Action
Plan for the Prevention
and Control of
NCDs (chronic diseases)**

**Protecting people from tobacco
smoke**

Restricting salt intake

**Restricting access to retailed
alcohol,**

**Replacing trans-fat in food with
polyunsaturated**

**Promoting public awareness
about diet and physical activity**

cost-effective and low-cost interventions to reduce risk factors for NCDs

Nicotine dependence treatment

Enforcing of drink-driving laws

Restrictions on marketing of foods and beverages high in salt, fats, and sugar

Food taxes

Health nutrition environments in schools

National physical activity guidelines

9 global NCD *targets* of The Global Action Plan of W.H.O. :

- 📌 1- A **25% relative reduction** in risk of premature mortality from cardiovascular diseases, cancer, diabetes and chronic respiratory disease.
- 📌 2- At least **10% relative reduction** in the harmful use of alcohol.
- 📌 3- A 10% relative reduction in the prevalence of insufficient physical activity.
- 📌 4- A **10% relative reduction** in mean population intake of salt/ sodium
- 📌 5- A **10% relative reduction** in prevalence of current tobacco use in persons aged 15+ years
- 📌 6- A **25% relative reduction** in prevalence of raised blood pressure
- 📌 7- Halt **تقليل** the rise of diabetes and obesity
- 📌 8- At least 50% of eligible people receive drug therapy and counselling to prevent heart attacks and strokes
- 9- An **80% availability** of the affordable basic technology and essential medicines including generics, required to treat major NCDs in both public and private facilities

سَيَجْعَلُ اللَّهُ
بَعْدَ عُسْرٍ يُسْرًا

الطَّبُّ وَالْجِرَاحَةُ
لِلْجَنَّةِ

اللهم انصر المسلمين المستضعفين في غزة و في كل مكان يارب العالمين 🙏
و لا تنسوننا من صالح دعائكم 🙏

Done by : Nizar maaitah