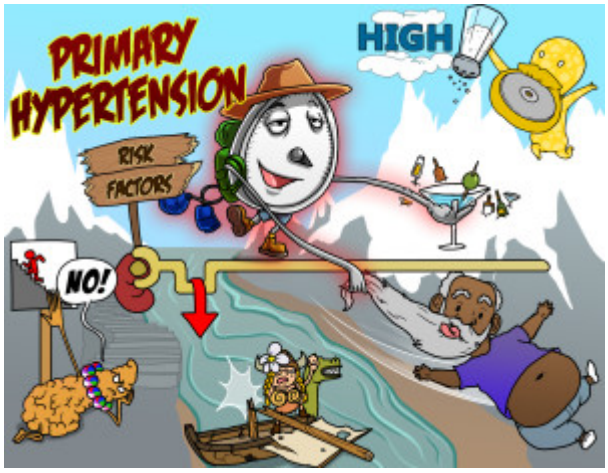
Primary Hypertension Risk Factors

Primary (Essential) Hypertension is defined as elevated blood pressure with no known cause. It is the most common type of hypertension, accounting for >95% of hypertension cases. Over time, primary hypertension causes injury to vessel walls, which leads to vessel thickening and end artery damage. Independent risk factors for primary hypertension include advanced age, obesity, black race, reduced nephron number, high sodium diet, excessive alcohol consumption, physical inactivity, diabetes, dyslipidemia, and hypovitaminosis D.



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Excessive Alcohol Consumption
Alcoholic-martini
Acute alcohol use is known to cause transient rises in blood pressure. However, if consumed chronically, alcohol may cause hypertension by mechanisms which are still debated.

High Sodium Diet
High Salt-shaker
Higher concentrations of serum sodium creates an osmotic gradient, which increases intravascular volume and fluid retention.

Dyslipidemia
Disc-lips
Excess cholesterol may result in atherosclerosis, or the deposition of cholesterol plaques along arterial walls. As arterial walls thicken and luminal narrowing occurs, the pressure within the vessels increases.

Obesity
Obese
Obesity commonly coexists with hypertension. It is suggested that patients who suffer from both conditions have impaired pressure-natriuresis regulation.

People of African Descent
African American
Hypertension has a higher prevalence in black populations than those of other races.

Advanced Age
Elderly beard
As we age, our blood vessels, especially the aorta, become more stiff and lose elasticity which leads to increased blood pressure.

Vitamin D Deficiency
Broken Viking Daisy
While the mechanism is still unclear, it is hypothesized that Vitamin D helps to regulate the renin-angiotension-aldosterone system which is involved in blood pressure modulation.

Reduced Nephron Number
Down-arrow Nephron
Over time, kidneys may undergo subtle damage via vasoconstriction while regulating acute changes in blood pressure, leading to renal ischemia. Patients with reduced nephron number are more susceptible to this ischemic damage. As more nephrons become dysfunctional, hypertension may develop.

Diabetes
Dyed-bead-pancreas
In patients with diabetes, the basement membrane of their blood vessels undergoes non-enzymatic glycosylation, which causes protein build-up within the vessel wall in a process known as hyaline arteriolosclerosis. Vessel lumens become narrowed due to the thickened walls, which causes blood pressure to rise.

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Lack of Physical Activity

Refusing to Climb Stairs

Physical activity is recommended to help patients lower their blood pressure. People who exercise regularly are also less likely to be obese and have other comorbidities which are associated with hypertension.

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