



FACULTY OF NURSING SCIENCES

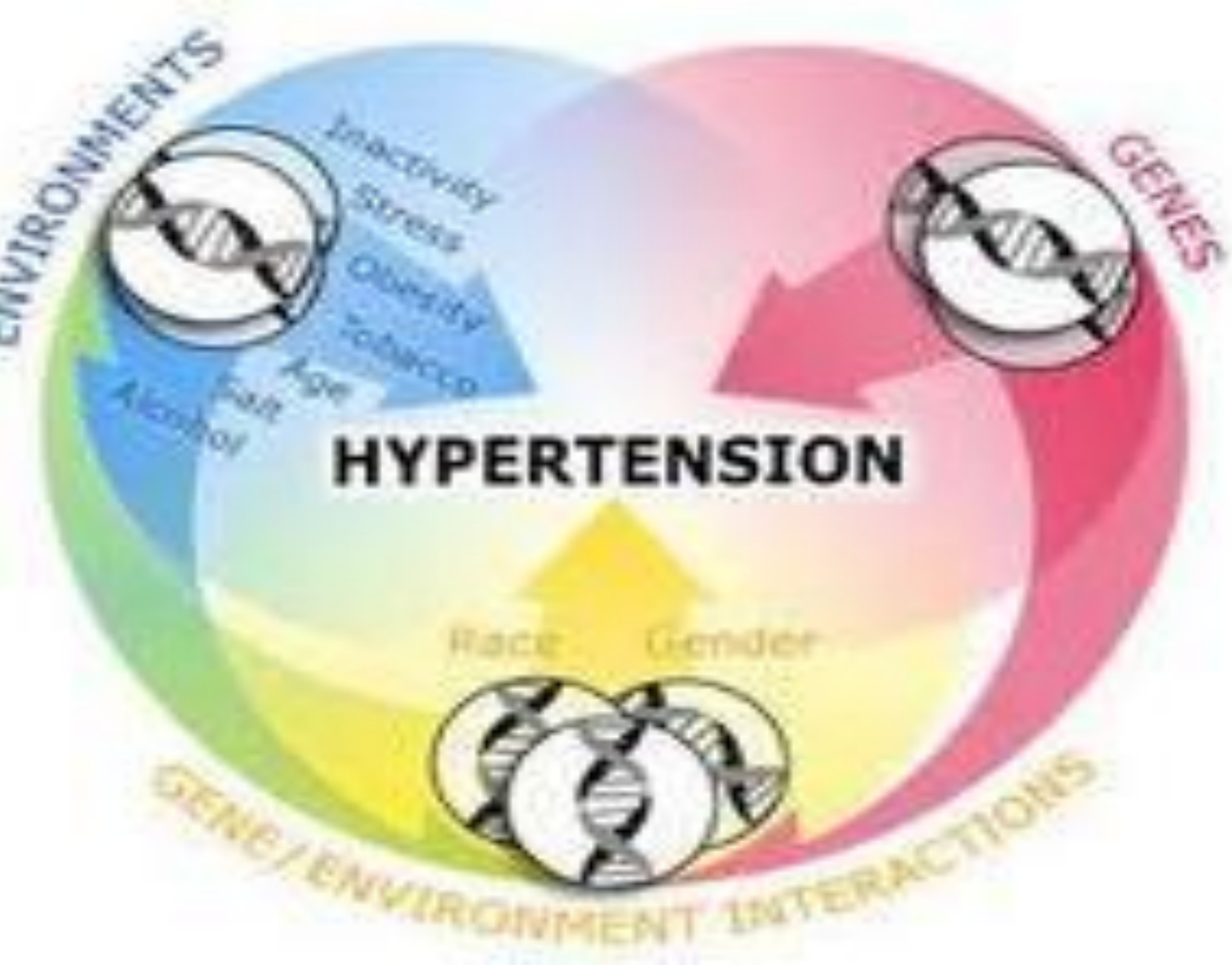
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HYPERTENSION

Blood pressure is the measurement of force applied to artery walls



RISK FACTORS FOR HYPERTENSION



Angiotensinogen

Renin



Angiotensin I

ACE



Angiotensin II



Vasoconstrictor



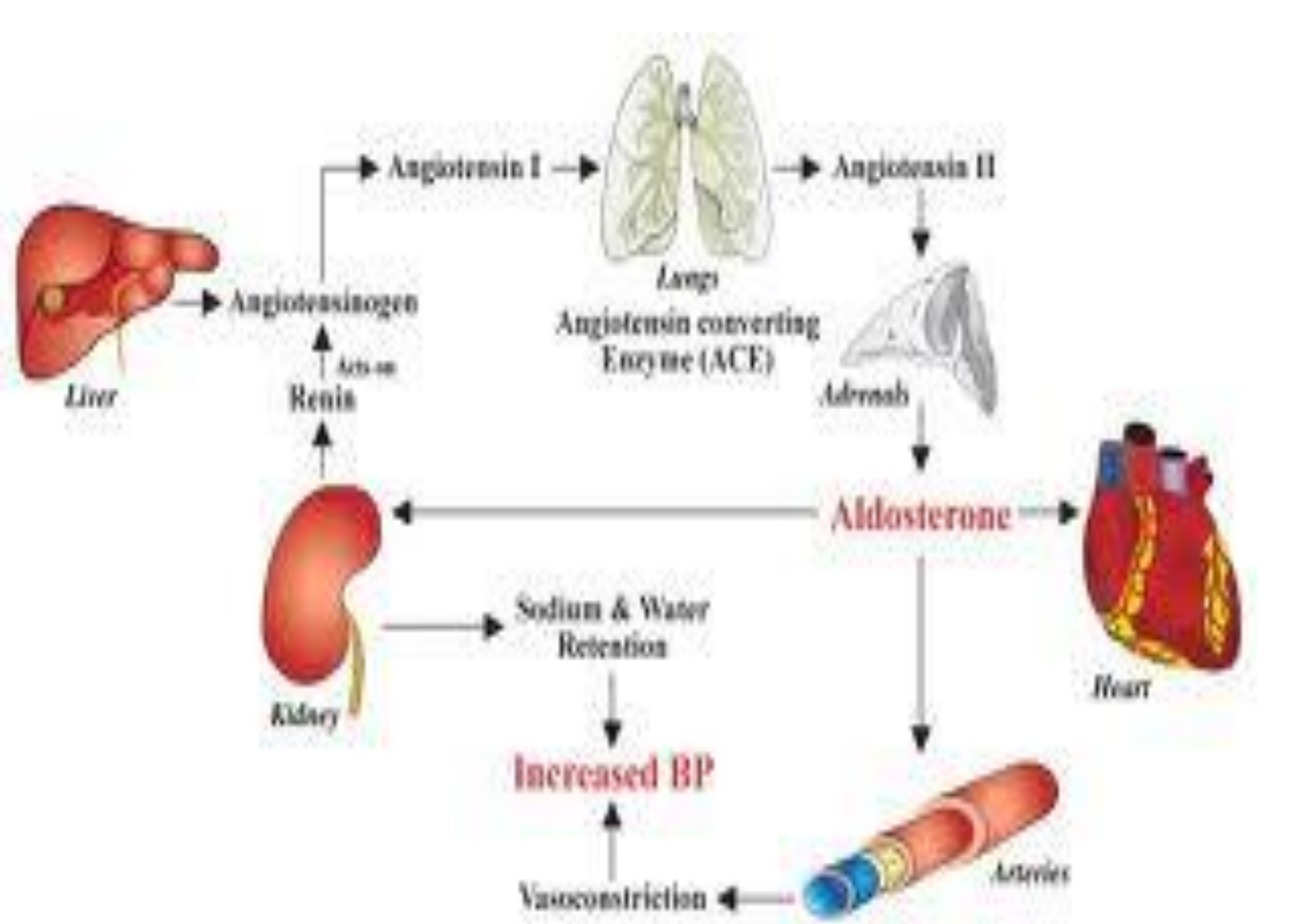
Aldosterone

Argenine Vasopressin (ADH)



Na & Water Retention

Vasoconstrictor
Water Retention



SECONDARY HYPERTENSION

CHRONIC RENAL DISEASE

- Glomerulonephritis
- Renal artery stenosis

ADRENAL GAND DISEASES

Increased aldosterone, cortisol and catecholamines



Retention of sodium and water



Expansion of blood volume

PHEOCHROMOCYTOMA

Release excess amount of epinephrine
and norepinephrine



Increased blood pressure

CUSHING SYNDROME

Increased cortisol



Increased renal sodium retention



Increased blood pressure

STRESS

Increased secretion of catecholamines



Increased blood pressure

DIAGNOSTIC FINDING

- HISTORY COLLECTION
- PHYSICAL EXAMINATION
- ESTIMATED GFR-KIDNEY DISEASE
- DOPPLER FLOW STUDY-RENAL ARTERY STENOSIS
- DEXAMETHASONE SUPPRESSION-CUSHING SYNDROME

- 24 HR URINE METANEPHRINE-PHEOCHROMOCYTOMA
- 24 HR URINE ALDOSTERONE-ALDOSTERONISM
- ECHOCARDIOGRAM
- ECG

MEDICAL MANAGEMENT

THIAZIDE DIURETICS

- CHLOROTHIAZIDE
- HYDROCHLOROTHIAZIDE

They block sodium reabsorption in ascending tubule

LOOP DIURETICS

- FUROSEMIDE
- TORSEMIDE

They block sodium and water reabsorption in medullary portion

POTASSIUM-SPARING DIURETICS

- SPIRONOLACTONE
- AMILORIDE

They inhibit aldosterone

BETA - BLOCKERS

- ATENOLOL
- BISPROLOL
- METOPROLOL
- PROPANOLOL
- They block beta adrenergic receptor of sympathetic nervous system

ANGIOTENSIN-CONVERTING ENZYME INHIBITORS

- BENAZEPRIL
- CAPTOPRIL
- ENALAPRIL

They inhibit conversion of Angiotensin I
to Angiotensin II

CALCIUM CHANNEL BLOCKERS

- DILTIAZEM
- VERAPAMIL

Inhibit influx of calcium into muscle cells;
act on vascular smooth muscle to
reduce spasms and promote
vasodilatation



*Thank
You*