

TISSUE PERFUSION

Hypertension

Pathophysiology

persistent SBP 140 mmHg +
 persistent DBP 90 mmHg +
 pre-htn: 120-139 / 80-89
 stage 1: 140-159 / 90-99
 stage 2: >160 / >100

RISK FACTORS

Age	Obesity
Alcohol	Ethnicity
Tobacco use	Stress
Diabetes	Sedentary life
Elevated serum lipids	
↑ Na ⁺ intake <small>water follows Na⁺</small>	access to Tx
Gender	Socioeconomic
	Family Hx

Nursing Intervention

Health promotion healthy lifestyle diets
 BP measurement teach pt to take it @ home ↓ Na⁺
 Nutritional therapy lose weight when & how often; side effects
 Med. education & compliance
 Monitor for complications

Treatment

Medications

↳ Beta-adrenergic blockers -olol
 Angiotensin Converting Enzyme Inhibitors -pril
 Angiotensin II Receptor Blockers -sartan
 Calcium Channel Blockers -pine
 Vasodilators
 Diuretics

"can't have your CAKE & eat it too"

Clinical Manifestations

often little to no symptoms *silent killer*
 Fatigue
 Dizziness
 Palpitations
 Angina
 Dyspnea

C - CHF
 A - br A in → stroke
 K - kidneys → renal failure
 E - eye → retinal damage

Diagnostic Tests

Hx and physical risk factors baseline BP, family Hx
 Lab values CBC, BNP
 12 lead ECG
 UA kidneys involved or affected

Complications

Coronary Artery Disease → stiffen response to const. pressure on walls
 L. Ventricular hypertrophy overcompensation
 ♡ failure compensatory mechanisms overwhelm
 Cerebrovascular disease atherosclerosis
 Peripheral vascular disease atherosclerosis
 Nephrosclerosis HTN that causes kidney vessels to narrow → ischemia small vessels in retina can hemorrhage
 Retinal damage

Teaching

Dash diet Dietary Approaches to Stop HTN
 Home BP measurements
 Exercise
 Med education

↓
 no high sugar
 no high fats
 no high sodium

HTN MEDS

Beta Blockers end in -olol that HTN is: angina

selective: target β_1 in \heartsuit "cardioselective" metoprolol, atenolol, esmolol

nonselective: target β_1 & β_2 timolol, propranolol

side effects: B brady \heartsuit L lowers BP hypotens.
E exacerbation of CHF \uparrow weight edema O orthostatic
T taper off cannot abruptly stop C circulation impaired
A asthma is COPD $\&$ non selective K know OD $\&$ s/s lethargy, Brady \heartsuit hypotension

Calcium Channel blockers

dihydropyridines \rightarrow smooth muscle; for HTN amlodipine, felodipine end w/ -pine

non dihydropyridines \rightarrow myocardium; diltiazem

side effects \rightarrow monitor for brady \heartsuit , \downarrow BP, s/s of \heartsuit failure (dyspnea, weight gain, edema), orthostatic
 $\&$ w/ grapefruit juice, fiber diet, good oral hygiene

ACE inhibitors Angiotensin Converting Enzyme

Captopril, lisinopril, Benazepril, Ramipril

used for \heartsuit failure & HTN

Assess for: BP (watch for hypotension)
 \heartsuit rate

Monitor: K^+ level (3.5-5.0) for hyperkalemia

Urine output $>$ 30 ml/hr - BUN/creatinine

Angioedema: swelling of dermis & sub Q

\rightarrow swelling in face, mouth, extremities
dyspnea

Side Effects: persistent dry cough

dizziness

hypotension

\uparrow K^+ level

Angio edema

- avoid salt sub w/ K^+
- record BP often
- dry cough w/ difficulty speaking \rightarrow talk to MD
- s/s of angioedema
- for missed dose \rightarrow take same day if next day, don't double up

(A) ACE Inhibitors "like a chill 'pri' for the heart"

look out for

Anaemia
Cough

E: Electrolyte Imbalances

(Low potassium & sodium)

Prevents vasoconstriction
& sodium & water retention

Anti-clotting agents

Anti Platelet (Anti-clumping)

A - Aspirin

C - Clopidogrel (caution bleeding)

Cholesterol lowering

Low statin (liver toxic)

ARBs: Lowers BP Jaran

(B) Beta Blockers (slows heart rate) - LOL

Blocks beats

Common B's

• Bradycardia (Goless)

• Bottomed out BP (P0160)

• Breathing problems (COPD / Asthma)

• Blood Sugar masking (diabetics)

(C) Calcium Channel Blockers "Calm the heart"

Common: nifedipine, amlodipine &
Verapamil

Low BP / heart rate

(D) Diuretics

Decreases BP

Drain fluid

Dehydrate

K⁺-wasting furosemide -ide

K⁺sparing avoid salt substitutes
avoid potassium

(E) Nitroglycerin (vasodilator) (relaxes pressure)

nitroglycerin pillow (rest / relaxed ♡)

caution viagra = death

"Ptt / pt" = the "tt" looks like an H so think of heparin
"inz" = looks like wafarin

Peripheral Artery Disease (PAD)

Pathophysiology

thickening of artery wall
- progressive narrowing of arteries in upper/lower extremities

leading cause is atherosclerosis

RISK FACTORS

Women ^{low lifetime recreational activity compared to men}

African American

Tobacco use

Diabetes

Hyperlipidemia ^{↑ lipids in blood}

Uncontrolled HTN

↑ age

Obesity

Sedentary lifestyle

Stress ^{bigger role → cortisol release}

NURSING INTERVENTION

Modify risk factors

Pain management

Monitor for wounds

Educate

Treatment

Medications

Antiplatelet

↳ clopidogrel (Plavix)

Aspirin

Lipid lowering agents

↳ Atorvastatin (Lipitor)

Clinical Manifestations

Intermittent claudication ^{pain w/ exercise in calf thighs feet}

Paresthesia

Skin → shiny, thin & taut ^{elevate = pallor}
^{dangle = rubor} cool to touch

Hair loss on lower legs

Diminished lower extremity pulses ^{use doppler} ^{red, warm weak or absent}

Pallor w/ leg elevation

∅ edema

Redness of feet in dependent positions

Thickness of toenails

Diagnostic Tests

Doppler ultrasound ^{maps blood flow through entire artery}

Ankle brachial index ^{handheld doppler}

Complications

Delayed wound healing

Wound infection

Tissue necrosis

Gangrene

Amputation

Ulcers ^{end of toes, top of feet, lateral ankle}
^{"punched out look"} ∅ drainage, ∅ tissue gran. (necrotic or light pink)

Teaching

Dietary changes

Exercise

Dependent positions ^{dangle legs helps blood flow}

Peripheral Vascular Disease (PVD) (venous disease)

Pathophysiology

blood circulation disorder
blood vessels outside \heartsuit :
brain to narrow, block or
spasm

RISK FACTORS

Family Hx
 \heartsuit disease
HTN
Obesity
Sedentary lifestyle
Diabetes
Smoking

Nursing Intervention

Drug Therapy
Smoking cessation
Promote vasodilation
 \rightarrow place legs in dependent
position

Treatment

Blood thinners
Surgery angioplasty

Clinical Manifestations

Dull ache
Heaviness
Skin \rightarrow hard, indurated (brown pigmentation)
Lower leg edema
Pulses present hard to find

Diagnostic Tests

Complications

Teaching

Encourage physical activity
Smoking cessation
Encourage healthy diets
Avoid restrictive or tight clothing

VENOUS Thrombo embolism (VTE)

Pathophysiology

formation of thrombus w/
inflammation of vein

3 factors: venous stasis
damage of endothelium
hypercoagulability

RISK FACTORS

Age
Chronic disorders
Obesity
Pregnancy
Oral contraceptives
Surgery
Cancer
Tobacco use

NURSING Intervention

Prevention
Prophylaxis → Mechanical ^{SCDs} ambulate
Pharm. anticoagulants
Assess for complications
Monitor for bleeding
Monitor labs

Treatment

Surgery
Pharmacological
↳ Unfractionated Heparin
*monitor PTT - Heparin sodium
Low Molecular Weight Heparin
- Enoxaparin (lovenox)
Vitamin K antagonist
- Warfarin (Coumadin)
*monitor PT/INR

Clinical Manifestations

Pain
Tenderness w/ palpating
Dilated superficial veins
Sense of fullness in calf
Paresthesia
Warm skin
Erythema *redness of skin, patches*

Diagnostic Tests

Blood tests ^{coagulation:} PTT, PT/INR, D-Dimer ^{if high, actively breaking down clot}
Duplex ultrasound
venography imaging

Complications

Pulmonary embolism
Post thrombotic syndrome ^{stiff noncompliant vein wall}
↳ persistent venous obstruction

Teaching

Medication compliance
encourage dietary changes

Simple nursing PAD - PVD Review

Signs & Symptoms

PVD

Peripheral vascular disease
Veiny

- Voluptuous pulses = Warm legs
- Edema (Blood pooling)
- Irregular shaped sores
- No sharp pain (dull pain)
- Yellow/Brown ankles

Pain: Unrelieved @ Rest PAD

Parasthesia: tingling / numbness PAD

Pulses: diminished / weak

Polar: pale

Polar: cold

Paralysis: inability to move limb

Veins = elevate

Arteries = hang

Safety

careful - hot temp

cautions w/ foot trauma

Constriction - avoid

Cross leg &

constrictive clothing &

Cigarettes &

Coffee &

Cold temps &

Skin assessed daily

Shoes well fitted & sandals

Hydration

Toenails trimmed only by provider

PAD

Peripheral Artery Disease: narrow artery
Arts

- Absent pulses: Absent hair (shiny) cool legs
- POUND, Red sores
- Toes/feet Pale or Black
- Sharp calf pain: intermittent claudication

Anti platelet

ASPIRIN

Plavix → Bleeding

Cholesterol lowering - statin

NO grapefruit / liver pills

Atrial Fibrillation

most common

clinically significant dysrhythmia

Pathophysiology

total disorganization of atrial electrivity - multiple ectopic foci

results in loss of effective atrial contract

RISK FACTORS

Coronary artery disease

Valvular \heartsuit disease

cardiomyopathy

HTN

\heartsuit failure

Pericarditis

NURSING Intervention

↓ ventricular response

Prevent embolism

if possible → Convert to sinus rhythm

Pharmacotherapy

Electrical conversion

Ablation

Pacemaker

Treatment

Pharmacotherapy

Warfarin (coumadin)

anticoagulant - interferes w/ hepatic synthesis of Vitamin K dependent clotting factors

• Monitor for bleeding

• Monitor PT/INR (2.0-3.0)

antidote → Vitamin K

Clinical Manifestations

Palpitations

Irregular pulse

Fatigue

Hypotension

Dyspnea

Chest pain

Syncope

Diagnostic Tests

Complete Hx & physical

12 lead EKG

Chest x-ray rule out other causes

Blood test electrolytes: ex: K^+ CBC, PTT rule out other causes: ex → Thyroid

Stress test complaints of palpitations

Holter monitor - home monitoring (days, wks, mo.)

Complications

↓ cardiac output

Thrombus formation

Embolized thrombus stroke

Angina

Dizziness

Syncope

Teaching

n/a

Central perfusion: \heartsuit & electrical

MUST WORK

1. The client has chronic atrial fibrillation. Which discharge teaching should the nurse discuss with the client?

- A Instruct the client to use a soft-bristle toothbrush
- B Discuss the importance of getting a monthly partial thromboplastin time (PTT)
- C Teach the client about signs of pacemaker malfunction
- D Explain to the client the procedure for synchronized cardioversion

Blood pool in heart think that they are on blood thinners try to prevent bleeding

warfin : want pt/ink done monthly

2. The 66-year-old male client has his blood pressure (BP) checked at a health fair. The BP is 168/98. Which action should the nurse implement first?

- A Recommend that the client have his blood pressure checked in one (1) month.
- B Instruct the client to see his health-care provider as soon as possible.
- C Discuss the importance of eating a low-salt, low-fat, low-cholesterol diet.
- D Explain that this BP is within the normal range for an elderly person.

*hypertension is a silent killer

3. The nurse is teaching a class on arterial essential hypertension. Which modifiable risk factors would the nurse include when preparing this presentation?

- A Include information on retinopathy and nephropathy.
- B Discuss sedentary lifestyle and smoking cessation.
- C Include discussions on family history and gender.
- D Provide information on a low-fiber and high-salt diet.

two most modifiable risk factors for hypertension

want a low salt diet

4. The nurse is caring for clients on a surgical floor. Which client should be assessed first?

- A The client who is four (4) days postoperative abdominal surgery and is complaining of left calf pain when ambulating.
- B The client who is one (1) day postoperative hernia repair who has just been able to void 550 mL of clear amber urine.
- C The client who is five (5) days postoperative open cholecystectomy who has a T-tube and is being discharged.
- D The client who is 16 hours post-abdominal hysterectomy and is complaining of abdominal pain and is expelling flatus.

*unilateral pain in calf when walking = dvt → bed rest

5. The client is being admitted with Coumadin (warfarin) toxicity. Which laboratory data should the nurse monitor?

- A Blood urea nitrogen (BUN) levels
- B Bilirubin levels
- C International normalized ratio (INR)
- D Partial thromboplastin time (PTT)

pt/ink used to monitor bleeding time with warfin therapy

need to know this

→ monitored with heparin

6. The unlicensed assistive personnel (UAP) is caring for the client diagnosed with chronic venous insufficiency. Which action would warrant immediate intervention from the nurse?

- A Removing compression stockings before assisting the client to bed.
- B Taking the client's blood pressure manually after using the machine.
- C Assisting the client by opening the milk carton on the lunch tray.
- D Calculating the client's shift intake and output with a pen and paper.

• Compression socks should be worn by client while in bed
• helps with blood flow prevents clots

7. What are nonmodifiable risk factors for primary hypertension? (Select all that apply)

- A Age
- B Obesity
- C Gender
- D Ethnicity
- E Genetic link

Prevalent in men early/middle age
Women above age 65
African American

8. What early manifestations is the patient with primary hypertension likely to report?

- A No symptoms
- B Cardiac palpitations
- C Dyspnea on exertion
- D Dizziness and vertigo

hypertension is often asymptomatic mild/mod.
Severe hypertension: fatigue, palpitations, angina
dyspnea + dizziness

9. A patient with peripheral artery disease (PAD) has a nursing diagnosis of ineffective peripheral tissue perfusion. What should be included in the teaching plan for this patient? (Select all that apply)

- A Apply cold compresses when the legs become swollen.
- B Wear protective footwear and avoid hot or cold extremities.
- C Walk at least 30 minutes per day, at least 3 times per week.
- D Use nicotine replacement therapy as a substitute for smoking.
- E Inspect lower extremities for pulses, temperature, and any injury.

exercise should be stopped when pain occurs then con.
Cold/nicotine should be avoided cause vasoconstriction
think of diabetics similar
think legs

↳ most important thing

10. When teaching the patient with PAD about modifying risk factors associated with the condition, what should the nurse emphasize?

- A Amputation is the ultimate outcome if the patient does not alter lifestyle behaviors.
- B Modifications will reduce the risk of other atherosclerotic conditions, such as stroke.
- C Risk-reducing behaviors initiated after angioplasty can stop the progression of the disease.
- D Maintenance of normal body weight is the most important factor in controlling arterial disease.

major risk factors tobacco, hyperlipidemia, elevated c-reactive protein, diabetes, obesity, uncontrolled hypertension

amputation risk: severe occlusive disease, not best approach

encourage change of lifestyle

NON QUIZ

11. During care of the patient following femoral bypass graft surgery, the nurse immediately notifies the health care provider if the patient experiences...

- A fever and redness at the incision site.
- B 2+ edema of the extremity and pain at the incision site.
- C a loss of palpable pulses and numbness and tingling of the feet.
- D increasing ankle-brachial indices and serous drainage from the incision.

→ extremity pallor, cyanosis
indication of occlusion
* notify HCP before you do anything

12. A patient has atrial fibrillation and develops an acute arterial occlusion in an artery. What are the six Ps of acute arterial occlusion the nurse may assess in this patient that would require immediate notification of the health care provider?

pallor pain pulseless paresthesia
paralysis poik-

13. What are the characteristics of peripheral artery disease? (Select all that apply)

- A Pruritus
- B Thickened, brittle nails
- C Dull ache in calf or thigh
- D Decreased peripheral pulses
- E Pallor on elevation of the legs
- F Ulcers over bony prominences on toes and feet

} A + C are characteristic of PVD

14. Which care could the RN delegate to the UAP for a patient with VTE?

- A Assess the patient's use of herbs.
- B Measure the patient for elastic compression stockings.
- C Remind the patient to flex and extend the legs and feet every 2 hours.
- D Teach the patient to call emergency response system with signs of pulmonary embolus.

15. Which indirect thrombin inhibitor is only administered subcutaneously and does not need routine coagulation tests?

- A Warfarin (Coumadin) → pt/ink monitor
- B Unfractionated heparin → effects must be monitored with pit
- C Hirudin derivatives (Angiomax)
- D Low-molecular-weight heparin (Lovenox)

16. Which characteristics describe the anticoagulant warfarin (Coumadin)? (Select all that apply)

- A Vitamin K is the antidote **vitamin k antagonist**
- B Protamine sulfate is the antidote **antidote for heparin**
- C May be administered orally **→ only administer orally**
- D Dosage monitored using INR
- E Dosage monitored using PTT **- only vka to monitor coagulation with heparin**

17. The patient with VTE is receiving therapy with heparin and asks the nurse whether the drug will dissolve the clot in her leg. What is the best response by the nurse?

- A "This drug will break up and dissolve the clot so that circulation in the vein can be restored."
- B "The purpose of the heparin is to prevent growth of the clot or formation of new clots where the circulation is slowed."
- C "Heparin won't dissolve the clot, but it will inhibit the inflammation around the clot and delay the development of new clots."
- D "The heparin will dilate the vein, preventing turbulence of blood flow around the clot that may cause it to break off and travel to the lungs."

18. A patient with VTE is to be discharged on long-term warfarin (Coumadin) therapy and is taught about prevention and continuing treatment of VTE. The nurse determines that discharge teaching for the patient has been effective when the patient makes which statement?

- A "I should expect that Coumadin will cause my stools to be somewhat black." **GI Bleed**
- B "I should avoid all dark greens and leafy vegetables while I'm taking Coumadin."
- C "Massaging my legs several times a day will help increase my venous circulation." **↳ shouldn't be increased during therapy**
- D "Swimming is a good activity to include in my exercise program to increase my circulation." **↳ shouldn't be massaged out dislodge clots don't elevate**

19. The nurse teaches the patient with any venous disorder that the best way to prevent venous stasis and increase venous return is to...

- A take short walks. **increase this gradually**
- B sit with the legs elevate. **→ decrease edema**
- C frequently rotate the ankles.
- D continuously wear elastic compression stockings.

20. A 62-yr-old Hispanic male patient with diabetes mellitus has been diagnosed with peripheral artery disease (PAD). The patient is a smoker with a history of gout. To prevent complications, which factor is priority in patient teaching?

- A Gender
- B Smoking **diabetes + hyperuricemia are also risk factors**
- C Ethnicity
- D Comorbidities

21. The nurse is reviewing the laboratory test results for a 68-yr-old patient whose warfarin (Coumadin) therapy was initiated during the preoperative period. On postoperative day 2, the international normalized ratio (INR) result is 2.7. Which action by the nurse is most appropriate?

therapeutic range INR 2.0-3.0

- A Hold the daily dose of warfarin.
- B Administer the daily dose of warfarin.
- C Teach the patient signs and symptoms of bleeding.
- D Call the physician to request an increased dose of warfarin.

* know for exam

22. A 67-yr-old man with peripheral artery disease is seen in the primary care clinic. Which symptom reported by the patient would indicate to the nurse that the patient is experiencing intermittent claudication?

* on test
this is ischemic muscle ache
resolves within 10 mins

- A Patient complains of chest pain with strenuous activity.
- B Patient says muscle leg pain occurs with continued exercise.
- C Patient has numbness and tingling of all his toes and both feet.
- D Patient states the feet become red if he puts them in a dependent position.

* characteristic PAD

23. When the patient is being examined for venous thromboembolism (VTE) in the calf, what diagnostic test should the nurse expect to teach the patient about first?

- A Duplex ultrasound
- B Contrast venography
- C Magnetic resonance venography
- D Computed tomography venography

* know this

Vein with a clot will NOT collapse

24. When teaching a patient about dietary management of stage 1 hypertension, which instruction is most appropriate?

- A Increase water intake.
- B Restrict sodium intake.
- C Increase protein intake.
- D Use calcium supplements.

* know this

water follows sodium

25. The nurse observes no P waves on the patient's monitor strip. There are fine, wavy lines between the QRS complexes. The QRS complexes measure 0.08 sec (narrow), but they occur irregularly with a rate of 120 beats/min. What does the nurse determine the rhythm to be?

- A Sinus tachycardia
- B Atrial fibrillation with RVR
- C Atrial fibrillation with CVR
- D Ventricular tachycardia

* central perfusion requires the heart's physiological & electrical functions to be intact.



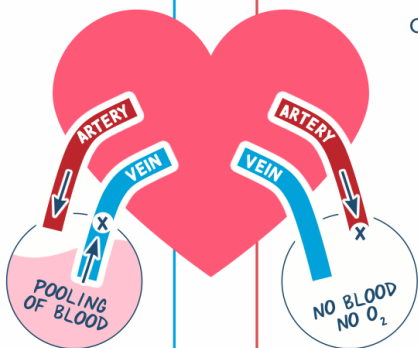
MED-SURG
CARDIAC

PERIPHERAL VASCULAR DISEASE

is an umbrella term for...

PERIPHERAL VENOUS DISEASE (PVD)

Deoxygenated blood can't get back to the heart.
Pooling of oxygenated blood in the extremities.



PAIN ?



Dull, constant, achy pain!

PULSE ?



May not be palpable due to edema

EDEMA ?



Blood is POOLING in the leg

TEMP ?

Warm legs (Blood is warm)

COLOR ?

Stasis dermatitis (Brown/yellow)

WOUNDS ?

Venous STASIS ulcers, Irregular shaped wounds, shallow

GANGRENE ?



We have too much blood! Gangrene is caused by insufficient amounts of blood.

POSITIONING ?

Elevate Veins Positions that make it worse: dangling, sitting/standing for long periods of time

PERIPHERAL ARTERIAL DISEASE (PAD)

Think "BAD"

Narrow artery (atherosclerosis) where oxygenated blood can't get to the distal extremities (hands & feet).

Ischemia & necrosis of the extremities

PAIN ?



Sharp pain: Gets worse at night "rest pain"
Intermittent claudication

PULSE ?



Very poor or even absent

EDEMA ?



No blood in the extremities

TEMP ?

Cool No blood = cool leg (blood is warm)

COLOR ?

Pale, hairless, dry, scaly, thin skin due to lack of nutrients (↓ O₂)

WOUNDS ?

Regular in shape, red sores round appearance "punched out"

GANGRENE ?



Tissue death caused by a lack of blood supply

POSITIONING ?

Dangle arteries

CAUSES OF BOTH

Smoking • Diabetes • High cholesterol • Hypertension

DX: Doppler Ultrasound or Ankle Brachial Index (ABI)

TREATMENT

KEEP VEIN OPEN!

- Elevate Veins
- Medications
 - Aspirin or Clopidogrel
 - Cholesterol lowering drugs "statin"
- Surgery
 - Angioplasty
 - Bypass (CABG)
 - Endarterectomy

TREATMENT

GET BLOOD MOVING!

- DAngle Arteries (Dependent position)
- Perform daily skin care with moisturizer
- Stop smoking
- Avoid tight clothing (vasoconstriction)
- No heating pads!
- Medications
 - Vasodilators
 - Antiplatelets



HYPERTENSION (HTN)

MED-SURG
CARDIAC

HYPERtension = **HIGH** BP

MOST ACCURATE DIAGNOSIS FOR HTN

CATEGORIES	SYSTOLIC (SQUEEZE)	DIASTOLIC (DECOMPRESS)
NORMAL	< 120	< 80
PRE-HTN	120 - 139	80 - 89
STAGE 1 HTN	140 - 159	90 - 99
STAGE 2 HTN	> 160	> 100
HTN CRISIS	> 180	> 120

AFFECTED ORGANS



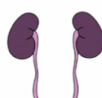
CONGESTIVE HEART FAILURE (CHF)

Overworking of the heart muscle (ventricle enlarges)



STROKE

Weak & narrow vessels could lead to rupture of vessels



RENAL FAILURE

Too much blood flowing to the kidneys at a fast rate & high pressure



VISUAL CHANGES

Damages blood vessels in the retina (blurred vision, can't focus on objects)

RISK FACTORS

MOST COMMON

PRIMARY HTN

Also called **ESSENTIAL** or **IDIOPATHIC HTN**

- Cause is unknown
- Not curable, only controllable

- F** Family HX
- A** Advanced age
- C** ↑ Cholesterol
- T** Too much caffeine
- O** Obesity
- R** Restricted activity
- S** Sleep apnea
- R** Race (African Americans)
- I** Intake of Na/ETOH
- S** Smoking
- K** Low K+ & vitamin D levels

SECONDARY HTN

- Has a direct cause / preexisting condition
 - Chronic kidney disease
 - Diabetes
 - Hypo/Hyperthyroidism
 - Cushing syndrome
 - Pregnancy
 - Certain drugs (oral contraceptives)

CHECKING BLOOD PRESSURE

- Place stethoscope over brachial artery
- Patients should not smoke, exercise, etc. within 30 minutes of having their BP checked (could lead to inflated BP)
- Instruct the client to:
 - Sit in a chair with legs uncrossed
 - Arm at ♥ level
 - Correct size cuff
- No BPs should be auscultated in arms with:
 - Mastectomy
 - HX of AV shunt
 - Blood clots
 - PICC lines/central lines



Too small = false high BP

Too large = false low BP

SIGNS & SYMPTOMS

Usually asymptomatic!

Commonly called the **"SILENT KILLER"**

Symptoms: (if seen)

- Blurred vision
- Headache
- Chest pain
- Nose bleeds

EDUCATION

- Limit sodium intake
- Limit alcohol intake
- Smoking cessation
- Teach how to measure BP & keep a record
- Exercise programs for weight loss if needed

ANTIHYPERTENSIVE MEDICATION OVERVIEW

"ABCDD"

- A** ACE inhibitors
- B** BETA Blockers
- C** Calcium Channel Blockers
- D** Digoxin
- D** Diuretics

SUFFIXES

- PRIL
- OLOL
- PINE -AMIL

Tissue perfusion Review Session

- central perfusion - central part of the conduction system
- post surgical most important to report immediately if there is NO pulse in the part where the surgery was

Systemic - conduction system / arterial pump of the heart

Localized - VTE or PAD look at areas that are affected

hypertension: silent killer

- long standing HTN has many complications
- understand the implications of giving hypertensive medications

PAD

- many factors that cause atherosclerosis
- nursing interventions
 - ↳ proactive leg care
 - ↳ exercise with intermittent claudication
 - ↳ pain with lack of blood flow to a extremity stops when activity stops
- medications
 - ↳ Plavix & ASA (aspirin)
 - ↳ know most common antiplatelet medications

VTE: Venous thromboembolism

- known as DVT
- complication: pulmonary embolism
- nursing interventions
 - ↳ prevent: mechanical & medications
 - ↳ treat: medications & surgery

↳ monitor for Bleeding

• Medications

↳ heparin (PTT)

↳ enoxaparin

↳ Warfarin: pt/INR (2-3 is therapeutic range)

Atrial Dysrhythmias

• Complications: embolized Stroke

• Care

↳ decrease Ventricular Response

↳ prevent embolism w/ anticoagulants

↳ convert to sinus rhythm

• A flutter, SVT, PAC's

↳ cardiac output concerns

Which nursing action can the nurse delegate to a UAP working as telemetry technician on the unit

- observe cardiac rhythms for multiple complaints

The RN received report on four pts with hypertension which pt should be assessed with first?

- a pt w/ 160/92 who is complaining of CP

The nurse is completing a htn screening which of the following would increase risk of Htn

- drinking 36 oz of Beer

The RN is teaching a pt with PHTN. Which statement indicates further teaching is needed?

i should cry back on walks pain in my legs

Rest pain is an assessment finding on PAD due to

- decrease in Atrial Blood flow to the nerves of feet

a nurse is assessing a pt who has chronic PAD which of the following findings should the nurse expect

- pallor on elevation of limbs & rubor on limbs w/ limbent

a nurse is caring for a pt with a known VTE which should the nurse report immediately

- a sudden increase in oxygen needs

which pt is at the highest risk of developing a VTE

- a pt who smokes & takes a oral contraceptive

what statement by the pt indicates that further teaching about Coumadin is needed?

Warfarin will dissolve my clot

a nurse is caring for a pt with a VTE & taking heparin. two days the provider also prescribed warfarin. the pt asks the nurse about receiving warfarin & heparin which is correct

it takes 3-4 days before therapeutic effect of warfarin are achieved and heparin will be discontinued