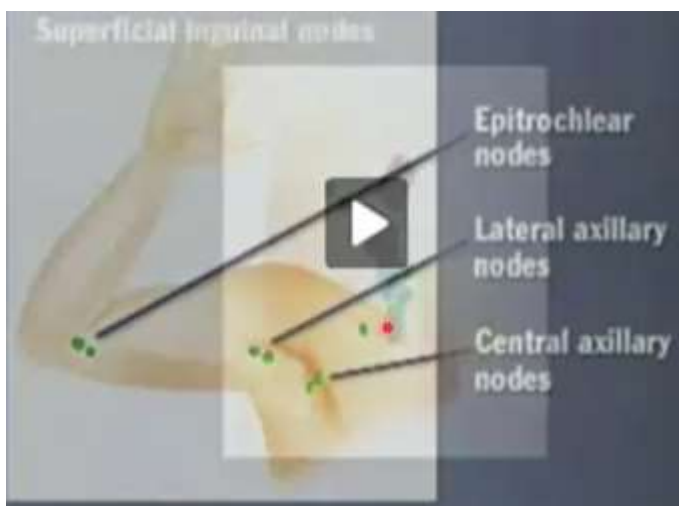
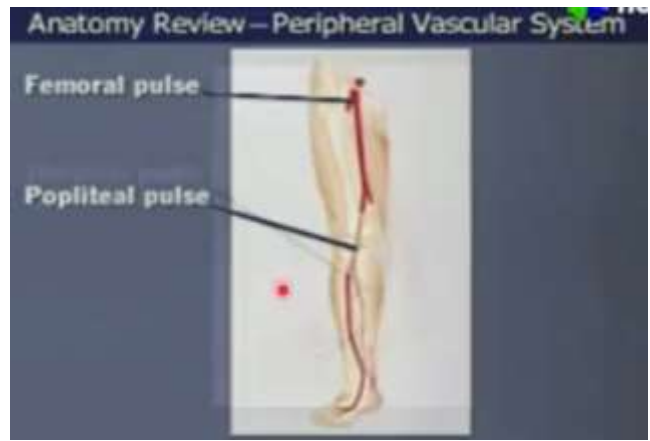
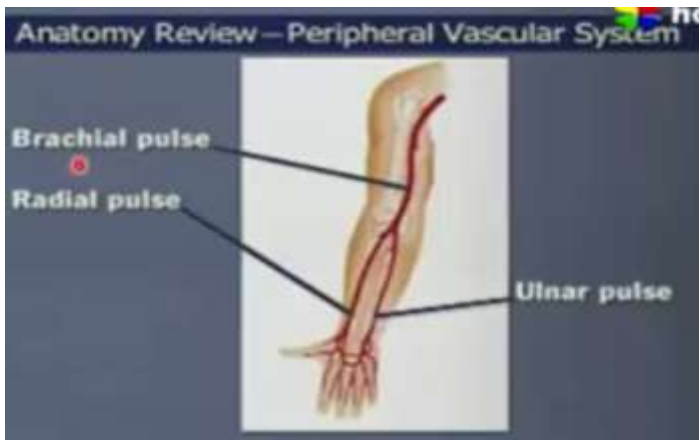


Peripheral Assessment



Current symptoms	Have you noticed any Color, temperature or texture changes in your skin	Arterial insufficiency the skin is cold and clammy on the extremities and thin ,shiny skin with loss of hair especially over lower legs
		Venous insufficiency the skin is warm with brown pigmentation are founded around the ankles
	Do you experience pain in your legs? Does it a waken you from sleep	Intermittent claudicating characterized by pain ,tension ,weakness that occurs with activity and is relieved with rest may indicate arterial disease Heaviness and an aching sensation That is aggravated by standing or sitting for long periods of time and is relieved by rest is associated with venous disease
	Do you have any leg veins that are ropelike, bulging or contorted?	Varicose vein are hereditary but may also develop from increased venous pressure and venous pooling
	Do you have any sores or open wounds on your legs?	Ulcers associated with arterial disease are usually painful and are often located on the toes, foot or lateral ankle
		Venous ulcers are usually painless and occur on the lower leg or medial ankle
	Do you have any swelling edema in your legs or feet	Peripheral edema swelling resulting from obstruction in the lymphatic flow or from venous insufficiency or deep venous thrombosis
	Do you have any swollen glands or lymph nodes? Do you have tender	Enlarged lymph nodes may indicate a local or systemic infection
Past history	Describe any problems you have in the past with circulation in your arms or legs (e.g. blood clots ,ulcers, coldness, numbness, swelling or poor healing)	A history of prior peripheral vascular disease increases the risk of recurrence
	Have you had any heart or blood vessels surgeries or treatment	Previous surgeries may alter the appearance of skin and the underlying tissues surrounding the blood vessels
family history	Do you have a family history of diabetic hypertension CAD	These disorders tendons to be hereditary and cause damage to the blood vessels
Life Style and Health Practice	Do you smoke? How many backs of cigarette per day for how many years	Cigarette smoking greatly increases the risk of chronic arterial insufficiency
	What type of stress do you have in your life	Stress increase the heart rate and blood pressure and contribute to vascular disease

	Do you exercise regular? What type of exercise and how often	Regular exercise improves peripheral vascular circulation and decrease stress, pulse and blood pressure
	How have problems with your circulation affected your ability to function?	Pain associated with arterial disease and heaviness associated with venous disease may limit the clients' ability to stand or walk for long time
	Do leg ulcers or varicose veins affect how you feel about yourself?	If the client perceive the appearance of their legs as disfiguring their body image or feeling about self-worth may be negatively influenced

Inspection		
Observe arm size, venous pattern, presence of edema	-Arms are bilaterally symmetric - no edema or prominent of venous patterning	prominent of venous patterning with edema may indicate venous obstruction
Observe coloration of the hands and arms	Color veins depending on clients' skin tone The color should be the same bilaterally	Raynaud's' disease characteristic rapid changes of color (pallor, cyanosis and rashes, swelling, pain numbness, tingling, burning thumbing and coldness)
Palpate		
Palpate client's turgor hands and arms. Note the temperature	Skin is warm to the touch bilaterally from fingertips to upper arms	A cool extremity may be a sign of arterial insufficiency Cold finger and hands are common findings with Raynaud's disease.
Palpate to assess capillary refill Assess peripheral perfusion and reflect cardiac output	Capillary beds refill and color return in 2 seconds	Capillary refill time exceeds 2 seconds may indicate vasoconstriction ,decreases COP, hypothermia
Palpate radial pulse	Radial pulse has equal strength bilaterally	Increased radial pulse volume indicates a hyperkinetic state. Diminished or absent pulse suggests partial or complete arterial occlusion
Palpate ulnar pulse	ulnar pulse may not be detectable because they are located deeper than the radial pulse	Lack of resilience of the artery wall may indicate arteriosclerosis
Palpate brachial pulse	Brachial pulse has equal strength bilaterally	Brachial pulse increased diminished or absent

Palpate the Epitrochlear Lymph Nodes		
Flex the client's' elbow about 90 degree	Normally epitrochlear lymph nodes are not palpable	Epitrochlear lymph nodes may infection in the hand or forearm.
Perform the Allen Test		
The Allen Test. Evaluate patency of the radial or ulnar arteries	Pink coloration returns to the palms within 3 to 5 second if the ulnar artery and radial artery (individually are present)	With arterial insufficiency or occlusion of the ulnar artery or radial artery, pallor persist
Inspect and palpate the legs	Uncover the leg while keeping the genitalia draped. Inspect both legs together for: Discoloration. Skin hair distribution.	
Observe the skin color in both legs from the toes to the groin	Pink color for lighter skinned client and pink or red tones visible under darker pigmented skin. There should be no change in pigmentation	Pallor, especially when elevated and rubor when dependent ,suggested arterial insufficiency Cyanosis when dependent ,suggested venous insufficiency
		A rusty or brownish pigmentation around the ankles indicates venous insufficiency
Inspect for lesions or ulcers	Legs are free of lesions or ulceration	Ulcers from arterial insufficiency are smooth even margins that occurs at pressure areas such as toes or and lateral ankle
		Ulcers from venous insufficiency have irregular edges, bleeding and possible bacterial infection
Inspect for edema Compare with extremities at the same location	Identical size and shape bilaterally No swelling or atrophy	Bilateral edema may be detected by the absence of visible veins ,tendons or bony prominences and usually indicates systemic problems as CHF, Lymph edema
		Unilateral edema caused by venous stasis Difference in measurement between legs may be due to muscular atrophy results from disuse due to being in cast for long time

<p>Palpate Edema determine if it is pitting or non-pitting</p>	<p>No edema pitting or non-pitting in the legs</p>	<p>Bilateral edema associated with systematic problems such as CHF or hepatic cirrhosis Or local causes as venous stasis due to insufficiency or obstruction or prolonged standing or sitting (orthostatic edema) A 1+ to 4+ scale is used to grade the severity of edema</p>
<p>Palpate Skin Palpate bilaterally for temperature of the feet and legs</p>	<p>Toes, feet, legs are equally warm bilaterally</p>	<p>Generalized coolness in one or change in temperature from warm to cool as you move down the legs suggest arterial insufficiency Increased warmth in the leg may be caused by superficial thrombophlebitis resulting from a secondary inflammation in the tissue around the vein</p>
<p>Palpate Superficial Inguinal Lymph nodes</p>	<p>Non tender movable lymph nodes up to 1 or 2 cm are commonly palpated</p>	<p>Lymph nodes larger than 2 cm with or without tenderness (lymphadenopathy) may be from a local infection or generalized lymphadenopathy Fixed nodes may be indicating malignancy</p>
<p>Palpate the femoral pulses Assess the pulses and compare the amplitude bilaterally</p>	<p>femoral pulses Strong and equal bilaterally</p>	<p>Weak or absence Femoral pulses indicate partial or complete arterial occlusion</p>
<p>Auscultator femoral pulses Listen for bruit by bell</p>	<p>No sound auscultator over femoral arteries</p>	<p>Bruit over one or both femoral arteries suggested partial obstruction of the vessels and diminished blood flow to lower extremities</p>
<p>Palpate the popliteal pulses usually detected lateral to the medial tendon</p>	<p>It is not unusual for popliteal pulses To be difficult or impossible to detect and yet for circulation to be normal</p>	<p>Although normal popliteal arteries may be non-palpable ,an absent pulse may also be the result of an occluded artery, Further circulation assessment (temperature and color) to the popliteal artery assists in determine the significant of an absent pulse</p>

Palpate the dorsalis pads pulse Assess both feet at the same time to aid in making comparisons assess amplitude bilaterally	dorsalis pads pulse Are bilaterally	A weak or absent pulse may indicate impaired arterial circulation Further circulation assessment (temperature and color) are warranted to determine the significant of an absent pulse
Palpate the posterior tibial pulse Assess both feet at the same time to aid in making comparisons assess amplitude bilaterally	posterior tibial pulse Are bilaterally	A weak or absent pulse may indicate partial or complete obstruction arterial circulation
Inspect for Varicosities and thrombophlebitis		
If superficial thrombophlebitis Is present note redness or discoloration on skin surface over the vein	Vein are flat and barely seen under surface of skin Varicosities common on the older adult	Varicose vein may appear as a distended nodular bulging tortuous depending on severity. Varicose vein may Result from incompetent valves in the veins, weak veins walls or an obstruction Above Varicosities. Aching or cramping may occur with walking or dorsiflexion of the foot (Positive Homans' sign)
Check for Homans' Sign	No pain or tenderness elicited with this maneuvers .Homans' sign	Calf pain and tenderness elicited with this maneuver is positive Homans Sign. A positive sign may indicate Deep vein thrombosis or superficial thrombophlebitis
Special Tests for Arterial or Venous Insufficiency		
Position Changes Test for arterial insufficiency Raise legs about 12 inches above the level of heart	Feet pink to slightly pale in color in the light skinned client with elevation. It is more difficult to see the subtle color changes in darker skin	Marked pallor with legs elevated is an indications of arterial insufficiency .Return to pink color that takes longer than 10 second to fill suggest Arterial insufficiency

Manual Compression test to assess the competence of the veins' valve	No pulsation is palpated if the client has competent valves	You will feel a pulsation with your upper fingers if the valves in the veins are incompetent
Trendelenburg test to determine the competence of the saphenous vein valves and the retrograde filling of the superficial veins	Saphenous vein fills from below in 30 second. No rapid filling of the varicose veins from above (retrograde filling) after removal of tourniquet if valves are competent	Filling from above with the tourniquet in place and client standing suggest incompetent valves in the saphenous Rapid filling of the superficial varicose veins from above after the tourniquet has been removed also indicates retrograde filling past incompetent valves in the veins

Types of Peripheral edema

Items	Edema associated with Lymphedema	Edema associated with Chronic Venous Insufficiency
Causes	Caused by abnormal or blocked lymph vessels	Caused by obstruction or insufficiency of deep vein
Character	No pitting	Pitting documented as =+1, =+2, =+3, =+4
Site	Usually bilateral may be unilateral	Usually unilateral, may be bilateral
Skin condition	No skin ulceration or pigmentation	Skin ulceration and pigmentation may be present

Characteristic of venous and arterial leg ulcers

Characteristic	venous ulcers	arterial ulcers
Pulses	Present	Diminished
Capillary refill	Less than 3 second	Greater than 3 second
Skin temperature	Warm \no temperature gradient	Cool\temperature gradient
Ulcers location	Typically near medial malleolus	Tips of toes ,foot or lateral malleolus
Ulcer tissue	Dark —red granulation	Black Escher or pale-pink Granulation tissue
Ulcer drainage	Moderate to large amount	Minimal
Periulcer	Bronze-brown pigmentation thick hardened and indurate	Pale thin friable and shiny; thick toenails elevation pallor dependent rubor
Dermatitis	Frequency occur	Rarely occur
Pruritus	Frequency occur	Rarely occur

Edema	Moderate to sever	Minimal unless leg constantly in dependent position
Pain	Often painful especially if infected	Intermittent claudication ulcer not painful

Comparison between venous and arterial insufficiency of lower extremities

Items	Venous	Arterial
Pulses	Present	Decreased \absent
Color of the skin	Pink to cyanotic Brown pigmentation at ankles	Pale on elevation Dusky rubor on dependency
Temp	Warm	Cool-cold
Edema	present	Non
Skin	Ulcers on ankles, discolored scaly	Shiny skin thick nails absence of hair ulcers on toes gangrene may develop
Sensation	Leg pain by long standing or sitting and relieved by elevating the legs, lying down or walking	Leg pain when exercise and relieved with rest. Pressure or cramps in calves during walking paresthesia

- ❖ Bruit: soft blowing sound suggestive of narrowing and blood flow restriction when heard in a blood vessel
- ❖ A thrill which is a palpable vibration to a cat purr, which is associated with heart murmurs ,usually suggests a valvular dysfunction

**For a comprehensive assessment and documentation
technique for veins and arteries following the device called
PATCHES**

P	Pulse	Assess the patients' affected extremity first
A	Appearance	Pale ,cyanotic ,discolored, red, black or brown , Document areas of necrosis, bleeding, size, depth and location of ulcers
T	Temperature	Feel cool (arterial) abnormal warm (venous)
C	Capillary Refill	Normally less than 2 second, toes fingers
H	Hardness	Palpate the extremity to determine if the tissues are supply or soft or hard and inelastic Hardness may indicate long standing PVD
E	Edema	Pitting :acute assessed by edema scale indicate venous insufficiency Non pitting :chronic assessed by measuring the circumference
S	Sensation	Abnormal sensation ,numbness or tingling result from vascular peripheral tissue ischemia (DM)

The 7P's for rapid peripheral vascular assessment

P	Pain increase in active or passive motion
P	Pallor
P	paresthesias or numbness
P	Polar temperature is an extremity cold compared with other
P	Puffiness: from edema or hematoma
P	Pulselessness
P	Paralysis

Arterial Pulse Amplitude -Grading Scale

0= Absent

1= Diminished, weaker than expected

2= Brisk, expected (normal)

3=1ncrease

4= Bounding

Edema Scale

0	Non present
1+	0-1\4 inch indentation disappear rapidly
2+	1/4-1/2 inch indentation disappear in 10-15 seconds
3+	1\2-1 inch indentation disappear in 1-2 minutes
4+	More than 1 inch indentation disappear after 5 minutes