

Lower limb venous system examination

Intro (WIIPPPPE)

- **W**ash your hands
- **I**ntroduce yourself
- **I**dentify of patient – confirm
- **P**ermission (consent and explain examination)
- **P**ain?
- **P**osition – initially standing
- **P**rivacy
- **E**xposure – trousers/skirt removed

General Inspection

- Surroundings
 - Monitoring and treatments
 - Paraphernalia – especially walking aids
- Patient
 - Well or unwell?
 - Comfortable or in pain?
 - Body habitus

Systemic examination

- Inspect (standing)
 - Ask patient to externally rotate each leg. Inspect long saphenous vein and perforator veins of the superficial system (2, 3 and 5cm above medial malleolus).
 - Pay close attention to the saphenofemoral junction (SFJ) for a saphena varix (2.5cm lateral and below the pubic tubercle).
 - Ask patient to turn away from you to inspect the short saphenous vein and sapheno-popliteal junction.
- Inspect (supine at 45 degrees)
 - Signs of venous insufficiency - entire leg and foot but especially gaiter area:
 - Venous ulcers
 - Scars from healed venous ulcers
 - Haemosiderin deposit
 - Venous eczema
 - Lipodermatosclerosis and inverted champagne bottle shaped legs
 - Atrophie blanche
 - Venulectasias (thread veins)
 - Signs of thrombophlebitis
 - Swollen, red, tender vein
 - Hardened thrombus within vein
 - Signs of DVT
 - Swollen, red, painful calf often with dilated superficial veins
- Palpate
 - Temperature
 - Calf tenderness (DVT)
 - Pitting oedema
 - Palpate over course of long saphenous, perforators and short saphenous vein (varicosities, thrombophlebitis)
 - If there is a saphena varix:
 - Ask the patient to cough to emphasise it

- Palpate for a thrill over varix
 - Tap test:
 - Tap long saphenous vein (medial) at knee and palpate SFJ simultaneously. A palpable impulse at the SFJ indicates venous insufficiency in the long saphenous vein.
- Auscultate
 - Any large clusters of veins (continuous 'machinery' murmur suggests AV fistula)

Closure

- Thank patient
- Ensure patient is comfortable
- Check if they need any help getting dressed
- Wash hands

Turn to examiner, hands behind back, holding stethoscope before saying:

- **"To complete my examination, I would like to..."**
- Further examinations:
 - Perform a peripheral arterial examination (mixed vessel disease may contraindicate venous compression stockings)
 - Perform an abdominal examination (to exclude abdominal cause of varicose veins)
- Bedside investigations:
 - Confirm site of venous incompetence with hand-held Doppler probe
- Further investigations
 - Colour flow venous duplex of superficial and deep system
 - Colour flow arterial duplex if mixed vessel disease suspected
 - Consider venography in complicated cases
- For further information on special tests in the venous exam (Trendelenberg's, Pethes' and the tourniquet test) please see the questions section.