

Peripheral Arterial Exam

Introduction

- **W**ash hands, **I**ntroduce self, ask **P**atient's name & DOB & what they like to be called, **E**xplain examination and get consent
- Lie patient flat and expose legs

General Inspection

- **Patient:** stable, pain/ discomfort, face, position
- **Risk factors:** age, body habitus
- **Around bed:** oxygen, mobility aids, cigarettes, medicine

Upper Limbs

Expose patient's arms...

- **Inspection:** skin colour changes (**pink, pale, matted**); ischaemia changes (**gangrene**); tar stains in fingers; tendon xanthomata
- **Palpation:**
 1. Temperature
 2. Capillary refill
 3. Pulses: radial (including radio-radial & radio-femoral delay), brachial, and blood pressure in both arms (**>10mmHg difference significant**)

Face

- **Eyes:** corneal arcus, xanthlasma
- **Mouth:** central cyanosis
- **Carotid pulse character and bruits**

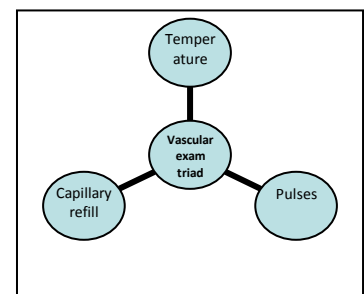
Abdomen

- Body habitus, scars
- **Aortic pulse:** inspect for pulsation, palpate, auscultate (**AAA**) (*NB. it is important to feel this even if the focus of the examination is the legs*)
- **Femoral pulse:** palpate both at once, auscultate

Lower Limbs (MAIN PART)

Check if pain in legs. Examine with patient standing fully, then laying supine.

- **Inspection** (especially feet)
 - Skin colour changes (**pink, pale, matted**)
 - Ischaemia changes: especially between toes and heels
 - Trophic changes (shiny skin, hair loss, thin skin, ulcers - check pressure areas)
 - Muscle wasting
 - Ankle oedema
 - Scars (e.g. CABG venous grafting, femoral-popliteal bypass)
 - Also take elements of diabetic foot exam inspection
- **Palpation:**
 1. Temperature: along length of leg
 2. Capillary refill
 3. Pulses: starting proximally (popliteal, posterior tibial, dorsalis pedis); squeeze calves (**tenderness= critical ischaemia**); sensation
- **Buerger's angle** and filling/ reperfusion time
 - Check if pain in leg
 - With patient lying supine, lift their leg until heel becomes pale then hold for 30s (if it does not become pale, test is normal; if it becomes pale, this angle is Buerger's angle)
 - Now ask patient to sit up and hang their legs over the edge of the bed
 - Watch their feet for 2-3min
 - Pallor followed by reactive hyperaemia (rubor) on dependency, is a positive test and implies significant peripheral arterial disease.



To Complete Exam

- Thank patient and cover them
- “I would complete my exam by performing a full cardiovascular exam, testing sensation and using Doppler ultrasound for pulses”
- Summarise and suggest further investigations you would do after a full history (e.g. ABPI, duplex USS, angiography, bloods, ulcer swabs, ECG, CXR, HbA1C...)

Specific conditions

Intermittent claudication (ABPI<0.9)

Acute ischaemic limb (ABPI<0.6; pale, pulseless, parasthesia, paralysis, pain, perishingly cold)

Critical ischaemia (= tissue loss + rest pain + ABPI<0.3)

Aneurysm



Ischaemic ulcer

Used with permission from: Smith & Nephew. Arterial ulcer [online]. Available from: <http://www.smith-nephew.com/global/images/other/country/1d3c46d1-9c81-4765-945e-16aad0aa39e2.gif> [Accessed 26.06.2013]