

# *Clinical Examination*

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# Cardiovascular examination

Check bedside cabinet  
Position patient at 45°  
“Have you any pain anywhere?”

## ***General***

Cyanosis, pallor, dyspnoea

## ***Hands and arms***

Wasting, cyanosis, clubbing, splinter haemorrhages, pallor, Osler’s nodes, Janeway lesions  
Pulse (bilateral radial, rate, rhythm, character, radio-femoral delay, collapsing)  
Blood pressure

## ***Eyes, ears, mouth and neck***

Xanthelasma, corneal arcus, icterus, pallor  
Diagonal ear crease  
Central cyanosis, sublingual veins, high arched palate  
JVP (inspect, time, occlude, reflux)

## ***Praecordium***

Inspection - scars, visible pulsations, visible apex beat  
Palpation - palpable thrill, apex beat  
Auscultation - S1, S2, added sounds

Bell at mitral area (lean to left, relocate apex beat, exhale) (M5)  
Diaphragm at mitral, tricuspid, pulmonary and aortic areas, carotids for bruit (A5)  
Sit up, exhale, tricuspid area (A1)

## ***Other***

Lung bases, sacral oedema  
Hepatomegaly if ↑JVP, tricuspid regurgitation  
Abdominal aneurysm, bruits → femorals  
Peripheral pulses (femoral, popliteal, posterior tibial, dorsalis pedis)  
Peripheral oedema

# Respiratory examination

Check bedside cabinet  
Position patient at 45°  
“Have you any pain anywhere?”

## ***General***

Cyanosis, pallor, dyspnoea, tachypnoea, stridor, wheeze, lip pursing, chest shape, use of accessory muscles

## ***Hands and arms***

Wasting, cyanosis, clubbing, tar staining, pallor, asterixis  
Pulse (rate, rhythm, character, collapsing)

## ***Eyes, mouth and neck***

Pallor  
Central cyanosis  
Central trachea, crico-sternal distance  
[JVP (inspect, time, occlude, reflux), then apex beat]

## ***Chest (front and back)***

Inspection - scars, asymmetry, paradoxical breathing  
Palpation - chest expansion, tactile vocal fremitus  
Percussion - asymmetry (dullness, hyperresonance)  
Auscultation - breath sounds, added sounds (rhonchi, wheeze, stridor, crepitations), vocal resonance

Examine front, then back, then neck for lymphadenopathy

# Gastrointestinal examination

Check bedside cabinet  
Position patient flat on bed  
“Have you any pain anywhere?”

## ***General***

Icterus, cachexia, pallor

## ***Hands and arms***

Wasting, clubbing, leuconychia, koilonychia, pallor, Dupuytren’s contracture, palmar erythema, asterixis  
Pulse (rate, rhythm, character)  
Spider naevi

## ***Eyes, mouth, neck and trunk***

Xanthelasma, corneal arcus, Kaiser-Fleischer rings, icterus, pallor  
Angular cheilitis, Peutz-Jegher, stomatitis, glossitis, ulcers, leukoplakia, candidiasis  
[JVP (inspect, time, occlude, reflux)]  
Supraclavicular lymphadenopathy  
Gynaecomastia, loss of hair

## ***Abdomen***

Inspection - scars, moves on respiration, masses, visible pulsations, shape, herniae (lift head and cough)  
Palpation - tenderness, masses, organomegaly (liver, spleen, kidneys), pulsations, ascites (shifting dullness, fluid thrill)  
Auscultation - bowel sounds, bruits (organs, blood vessels)

Per rectal examination

## ***Other***

Peripheral oedema  
Genitalia (testicular atrophy, loss of hair)

# Neurological examination

## *General*

Posture

## *Limbs*

Inspection - asymmetry (wasting, position, fasciculation, tremor), pronator drift  
Palpation - tone - increased (clasp-knife, lead-pipe, cogwheel) or decreased  
- power - isometric  
- reflexes - x2, then reinforce  
- co-ordination  
- sensation - proprioception, light touch, pain, temperature, vibration  
- does it feel normal (compare with forehead), asymmetry

## *Upper limb*

Tone - feel over tendons, move wrist

Power

- shoulder shrug	- trapezius	- C3,4
- shoulder abduction	- deltoid	- C5
- elbow flexion	- biceps	- C5,6
- elbow extension (radial n.)	- triceps	- C7
- wrist extension (radial n.)	- ext. carpi radialis	- C6,7,8
- median nerve	- power grip	- C8, T1
	- thumb/pinky opp	- C8, T1
	- thumb abduction	- C8, T1
- ulnar nerve	- abduct/adduct fingers	- C8, T1

Reflexes

- biceps - C5,6
- triceps - C7
- supinator - C5,6
- Hoffman's - hyperflex DIP joint, thumb flexes

Co-ordination

- dysdiadochokinesis
- dysmetria, dyssynergia
- rebound overshoot

Sensation

- proprioception	- MCP joint
- light touch	- cotton wool
- pain	- pin-prick
- temperature	- cold object (metal)
- vibration	- Hz

## ***Lower limb***

Tone	<ul style="list-style-type: none"><li>- roll leg, watch big toe</li><li>- lift knee quickly</li><li>- move foot, test for clonus</li></ul>		
Power	<ul style="list-style-type: none"><li>- hip flexion (femoral n.)</li><li>- hip extension</li><li>- knee extension (femoral n.)</li><li>- knee flexion (sciatic n.)</li><li>- dorsiflexion (sciatic n.)</li><li>- plantarflexion (sciatic n.)</li></ul>	<ul style="list-style-type: none"><li>- ilio-psoas</li><li>- gluteus maximus</li><li>- quadriceps</li><li>- hamstrings</li><li>- tibialis anterior</li><li>- gastrocnemius/soleus</li></ul>	<ul style="list-style-type: none"><li>- L1,2,3</li><li>- L5, S1,2</li><li>- L2,3,4</li><li>- L4,5, S1,2</li><li>- L4,5</li><li>- S1,2</li></ul>
Reflexes	<ul style="list-style-type: none"><li>- quadriceps</li><li>- ankle</li><li>- Babinski</li><li>- crossed adductor</li></ul>	<ul style="list-style-type: none"><li>- L2,3,4</li><li>- S1,2</li></ul>	<ul style="list-style-type: none"><li>- tap vastus medialis, contralateral limb adducts</li></ul>
Co-ordination	<ul style="list-style-type: none"><li>- heel-shin</li><li>- pendulum reflex</li></ul>		
Sensation	<ul style="list-style-type: none"><li>- proprioception</li><li>- light touch</li><li>- pain</li><li>- temperature</li><li>- vibration</li></ul>	<ul style="list-style-type: none"><li>- MTP joint</li><li>- cotton wool</li><li>- pin-prick</li><li>- cold object (metal)</li><li>- Hz</li></ul>	
Romberg's test	<ul style="list-style-type: none"><li>- stand up, feet together, hands outstretched, eyes closed</li><li>- if worsens there is proprioceptive defect</li></ul>		
Gait			

# Examination of cranial nerves

Inspect face

- I** - ask about recent change in smell, test nostrils individually
  
- II** - AFRO (acuity, fields, reflexes, ophthalmoscopy)
  - test acuity in each eye
  - test visual fields
  - test pupillary reflexes (direct, consensual, accommodation)
  - fundoscopy
  
- III** - strabismus, ptosis, dilation of pupil, downward/lateral displacement, no accommodation
- IV** - extorsion, weakness of downwards gaze, head tilted away from affected side
- VI** - strabismus, failure of lateral gaze

Also eye movements, diplopia, nystagmus

- V** - clench teeth
  - hold mouth open, hold mouth closed
  - jaw jerk
  - sensation (including corneal reflex)
  
- VII** - raise eyebrows, screw up eyes
  - puff out cheeks, smile, whistle
  
- VIII** - hearing (free-field testing)
  
- IX, X** - uvula and soft palate elevate without deviation, gag reflex
  - deviate away from affected (weaker) side
  
- XI** - hold head still against resistance, shrug shoulders
  
- XII** - tongue fasciculation, stick it out, move from side to side
  - deviates towards affected (weaker) side

## Assessment of thyroid status

### *General*

Hyper - restless, sweaty, weight loss, gynaecomastia, palpitations, heart failure, hepato- or splenomegaly, lymph nodes (esp. axillae), osteoporosis

Hypo - lethargic, slow, weight gain, hoarse voice, deafness, dry skin, myxoedema

### *Hands and arms*

Hyper - hot, sweaty, tremor, acropachy, onycholysis (4th finger), palmar erythema  
- pulse (rate, rhythm, character, collapsing) tachycardia, atrial fibrillation  
- systolic hypertension with wide pulse pressure, spider naevi

Hypo - cold, dry, pallor  
- bradycardia

### *Hair, face, eyes and neck*

Hyper - fine thin hair  
- exophthalmos/lid retraction, lid lag, ophthalmoplegia, diplopia  
- goitre, bruit, percuss sternum

Hypo - dry brittle hair, loss of eyebrows and hair  
- 'peaches and cream'  
- periorbital oedema, pallor

### *Lower limbs*

Hyper - proximal myopathy  
- pretibial myxoedema (deposition of mucopolysaccharide)  
- hyperreflexia

Hypo - proximal myopathy  
- slow-relaxing ankle reflexes  
- oedema, cold peripheries

Signs of other autoimmune diseases

## **Vascular examination**

- Inspection - skin colour, dry skin, diminished sweating, loss of hair, venous guttering, ulcers (pressure areas, between toes)
- Palpation - temperature, capillary/vein filling time, Buerger's angle, pulses
- Auscultation - bruits

### ***Other***

Sensation, power

## **Thyroid examination**

### ***General***

Signs of hyper- or hypothyroidism

### ***Neck***

- Inspection - swelling, moves on swallowing, stick out tongue
- Palpation - palpable?, define margins/character/etc., swallow, trachea
- Percussion - retrosternal goitre
- Auscultation - bruit

# Varicose veins

Ask patient to stand up

Inspection - site, extent, size, skin - chronic venous hypertension (brown pigmentation, eczema, ulceration)

Palpation - skin texture, pitting oedema/thickening/redness/tenderness – lipodermatosclerosis, cough impulse in groin  
- tourniquet, Trendelenburg and Perthes tests  
- elevate leg, empty veins, tourniquet, stand

Percussion - full veins transmit impulse

Auscultation- bruits

## ***Other***

Abdominal examination - obstructing masses

Testes