EXAMINATIONS

Moving away from Talley and O'Connor exam. More likely a clinical scenario e.g. chest pain, abdo pain, lower/upper limb compound exams.

Expectation is what you would do a focused clinical examination similar to what you would do on the floor – aiming to exclude dangerous pathology and narrow your differential diagnosis.

'Patient' will basically be a 'model'. The examination will be completely normal. You will then be handed the examination results and asked to interpret them/come up with a management plan etc

Again not an exhaustive list – some overlap with procedures list e.g clearing a c spine (2020.1 exam)

COMPOUND LOWER LIMB EXAM

Focus depends on stem

To include brief – back exam, neuro, vasc, musculoskeletal

From top down so you don't forget back

1) **Back exam**
   - LOOK – skin, muscle, bone
   - FEEL – bony pain, muscular spasm
   - MOVE – could poss skip depending on stem

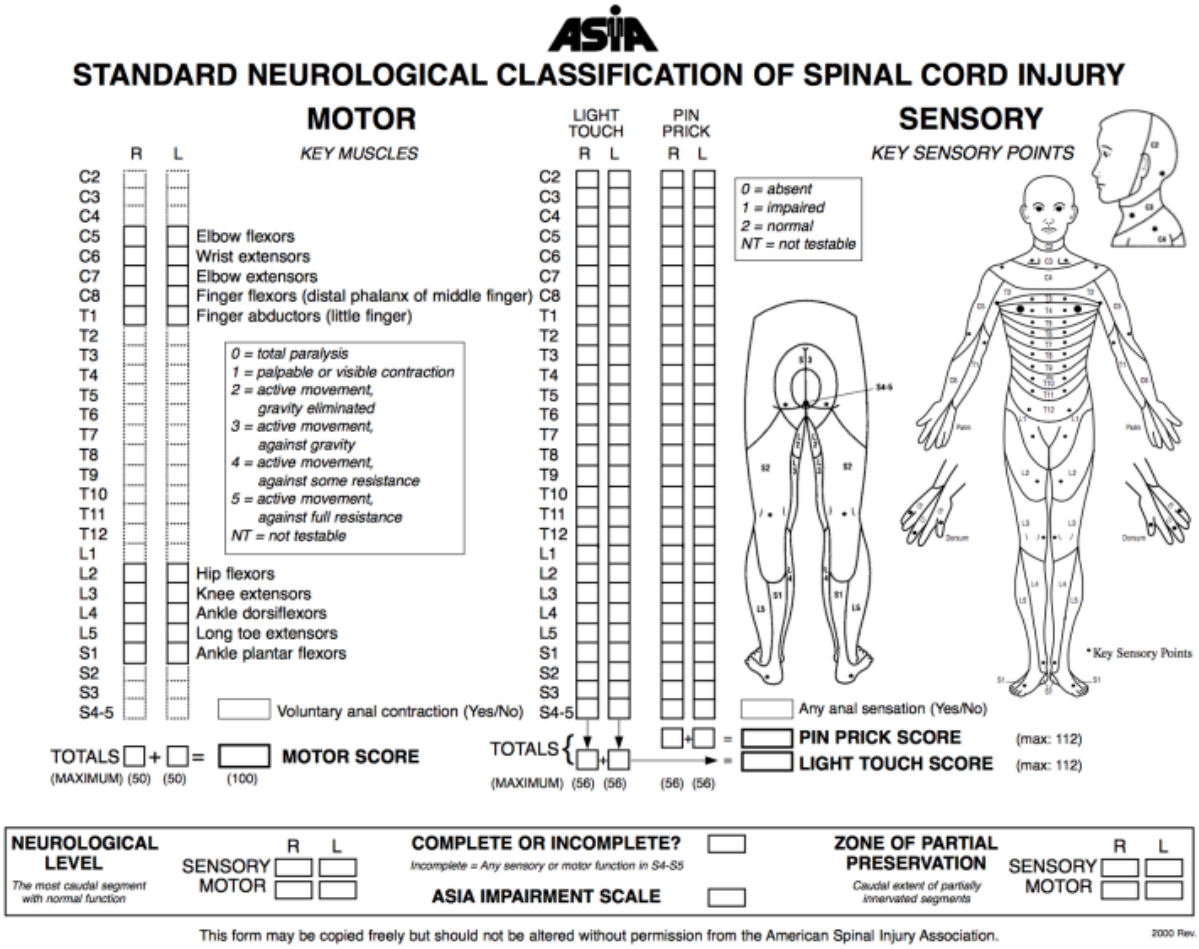
2) **Neuro Lower limb**
   - LOOK – skin, muscle, bone
   - FEEL – tone, clonus
   - MOVE – myotome dance
     - L2 – hip flexors
     - L3 – knee extensors
     - L4 – ankle dorsiflexion
     - L5 – big toe extension
     - S1 – ankle plantar flexion
   - SENSATION
     - Pinprick/temp – spinothalamic
     - Vib/touch/prop – dorsal columns
     - Dermatomes as per ASIA map
   - CO-ORDINATION
   - REFLEXES
     - Knee jerk L3/4
     - Ankle jerk S1/2
     - Babinski L5/s2

3) **Vascular lower limb**
   - Pulses throughout – aorta, femoral, popliteal, post tibial, dorsalis pedis
   - Capillary refill
   - Comment on the 6 p's if stem appropriate (Pallor, pulseless, paraesthesia, pain, paralysis, perishingly cold)

4) **Musculoskeletal lower limb**
   - Hip/knee/ankle/foot exam as required by stem – LOOK, FEEL, MOVE, SPECIAL TESTS

5) **For completion**
   - gait assessment
   - perineal sensation
   - bladder scan residual vol
   - urinalysis (rhabdo)

- full upper limb neuro and cranial nerves



EXTRA

Foot drop – sciatic nerve vs L5 vs common peroneal

- Sciatic nerve lesion (L4-S3) – weak knee flexion, lose ankle jerk, lose plantarflexion, dorsiflexion, eversion, inversion and widespread sensory loss
- L5 lesion – weak big toe extension, lose inversion, eversion, dorsiflexion, sensation sole foot as well as anterolat shin and dorsum foot (L5 numbness). Cannot SLR, ankle jerk preserved
- Common Peroneal nerve
    - Sensory:
        - Common peroneal nerve: lateral aspect of the leg just distal to the knee.
        - Superficial peroneal nerve: the anterolateral distal third of the leg and the majority of the dorsum of the foot (except the first webspace.
        - Deep peroneal nerve: first dorsal webspace
    - Motor
        - Common peroneal nerve: none
        - Superficial peroneal nerve: eversion of the foot (preservation of inversion)
        - Deep peroneal nerve: dorsiflexion of the foot and great toe extension

COMPOUND UPPER LIMB EXAM

Focused depending on stem

To include brief – neck exam, neuro, vasc, musculoskeletal

From top down so you don't forget back

1) **Neck exam**
   - LOOK – skin, muscle, bone
   - FEEL – bony pain, muscular spasm
   - MOVE

2) **Neuro Upper Limb**
   - LOOK – skin, muscle, bone
   - FEEL – tone
   - MOVE – myotome dance
     - C5 – elbow flexors
     - C6 – wrist extensors
     - C7 – elbow extensors
     - C8 – finger flexors
     - T1 – finger abductors
   - SENSATION
     - Pinprick/temp – spinothalamic
     - Vib/touch/prop – dorsal columns
     - Dermatomes as per ASIA map
   - CO-ORDINATION
   - REFLEXES
     - Biceps C5
     - Brachioradialis C6
     - Triceps C7

3) **Vascular upper limb**
   - Pulses throughout – axillary, brachial, radial, ulnar
   - Capillary refill
   - Comment on the 6 p's if stem appropriate (Pallor, pulseless, paraesthesia, pain, paralysis, perishingly cold)

4) **Musculoskeletal lower limb**
   - Shoulder, elbow, wrist/hand exam as required by stem – LOOK, FEEL, MOVE, SPECIAL TESTS

5) **For completion**
   - full lower limb neuro and cranial nerves

JOINT EXAMINATIONS/MUSCULOSKELETAL EXAM

Focused depending on stem

Remember LOOK, FEEL, MOVE, SPECIAL TESTS

Try and be logical and work from top down

Extras include ADT, handedness, and occupation

1) LOOK – skin, muscle, bone
2) FEEL – temperature, bony pain, effusions
3) MOVE – passive & active, flex/ext, adduction/adduction, int/external rotation. Consider compound movements e.g. arms behind head, arms behind back etc
4) SPECIAL TESTS

SPECIFIC JOINTS

LOWER LIMB

- **BACK**
  - SLR to >80 degrees normal
  - Pain <30 degrees = sciatic and then force dorsiflexion

- **HIP**
  - Hip – true length vs apparent (ASIS to medial malleolus vs umbilicus to medial malleolus)
  - Thomas test – hand under lumbar spine, fixed flexion deformity

- **KNEE**
  - Remember to check patella for effusions
  - Lateral/medial collateral
  - ACL/PCL draw test
  - McMurrys meniscus test – flex knee with circular movements
  - Ottawa knee x ray rules = >55 y/o, isolated tenderness patella, tenderness fibula head, unable to flex knee 90 degrees, unable to weight bear 4 steps initially or in ED

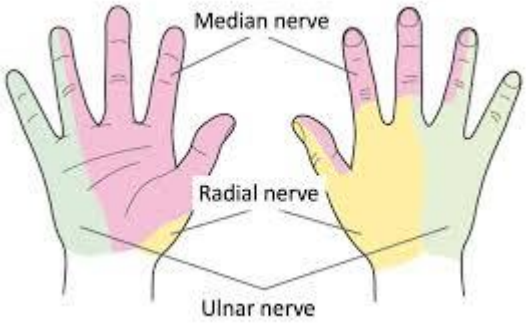
- **ANKLE**
  - Calf squeeze – Achilles
  - Fibula head palp VIP
  - Stability
  - Ottawa foot/ankle x ray rules = pain on palpation post/distal 6cm lateral/medial malleolus, pain base 5^{th} MT, pain over navicular, unable to weight bear 4 steps initially or in ED

UPPER LIMB

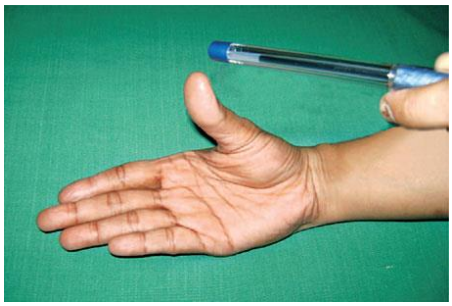
- **SHOULDER**
  - Rotator cuff
    - Empty can test – supraspinatus
    - Resisting external rotation - infraspinatus
    - Gerber's lift off – subscapularis
    - Hornblower's sign – teres minor
  - Apprehension test for dislocation
  - Scapula winging for long thoracic nerve

- **ELBOW**
  - Equilateral triangle – 2x epicondyles/olecranon

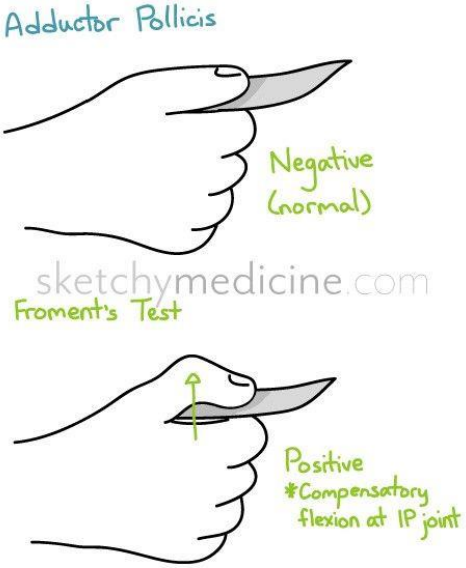
- **HAND/WRIST**
  - Allen's test for collateral flow
  - Long and short flexors of hand
    - Long – immobilize PIP (FDPs)
    - Short – hold other fingers not being assessed flat (FDS)
  - Radial/ulnar/median nerve tests
    - if injury at/above elbow issues with not performing
      - Radial N – thumbs up, sensation snuffbox
      - Median n – OK sign, thenar sensation
      - Ulnar nerve – cross fingers, hypothenar sensation
    - Hand assessment if injury at the wrist
      - Radial – loss of sensation only
      - Median nerve – pen torch test (pic 1)
      - Ulnar nerve – fromen's test (pic 2)



1)



2)



CRANIAL NERVE EXAMINATION

unlikely to be asked to perform a full CN exam

more likely focal/part of high yield ED examinations

e.g.

- eye examination
- facial trauma
- 7th CN injury/differentiate UMN and LMN
- Hearing assessment

1) Olfactory
2) Optic
3) Oculomotor
4) Trochlear
5) Trigeminal
6) Abducens
7) Facial
8) Vestibulocochlear
9) Glossopharyngeal
10) Vagus
11) Spinal accessory
12) Hypoglossal

Cranial nerve palsy	Exam findings – evidence of incomitance (i.e. angle of squint varies with position of gaze)		
Right 3rd nerve palsy	 Smaller angle of horizontal squint	 Right eye turns downwards & outwards	 Unable to adduct right eye Larger angle of squint Double vision further apart
Right 4th nerve palsy	 No obvious squint	 Right eye turns upwards	 Right eye elevates more as it moves medially Double vision further apart
Right 6th nerve palsy	 Unable to abduct right eye Larger angle of squint Double vision further apart	 Right eye turns inwards	 Able to adduct right eye No obvious squint

- 1 – Smell
- 2 – Snellen, visual fields, pupil reflexes and accommodation, fundoscopy (RAPD)
- 3, 4, 6 – Oculomotor movements (use hat pin)
  - 3 palsy – eye looks down and out at rest
  - 4 complain of diplopia, struggle to look down and in, fall downstairs, hold head tilted
  - 6 abducts eye, if injury pt can't look outward
  - Nb isolated 6th nerve palsy false lateralising sign of cranial malignancy until proved otherwise
- 5 – Pinprick light touch, corneal reflex, motor – masseter and open jaw, jaw jerk
- 7 – Facial expression and taste
- 8 – Look at ear and TM, whisper, Rinne's and Webers
  - Rinne's – mastoid and when stops – ears
  - Weber – centre forehead
  - 256hz
- 9 and 10 – Gag and uvula, deviation to normal side when say eeee
- 11 – trapezius and sternocleidomastoid
- 12 – tongue power – deviation to affected side

Then full neuro and cerebellar examination

FACIAL TRAUMA EXAM

Based on Dunn

Remember will be on normal patient/model

- Airway and C spine 1st
- Then top of head to bottom chin
- LOOK – forehead to chin, BOS bruising, lacerations, deformity etc
- FEEL – facial skeleton, midface and teeth mobility, infraorbital nerve
- MOVE – Facial nerve, ocular exam (see next)
- SPECIAL TESTS
    - Intraoral exam – midface/teeth
    - Ears, TM
    - Nose

- Investigations
    - Isolated Zygomatic pain – facial x ray
    - Isolated mandibular pain – OPG
    - All others – CT

EYE ASSESSMENT

Asked in the 2020.1 OSCE – hx sudden visual loss and asked what you would look for on examination

Ask re glasses, use of analgesia vs topical drops

(alternate approach from outer eye to retina)

LOOK

- Snellen chart +/- pinhole CN2
- Pupils and swinging flashlight RAPD CN2
- Accommodation CN3
- Visual fields CN2
- Red reflex
- Look for Ptosis

FEEL

- n/a unless facial trauma (see above)

MOVE

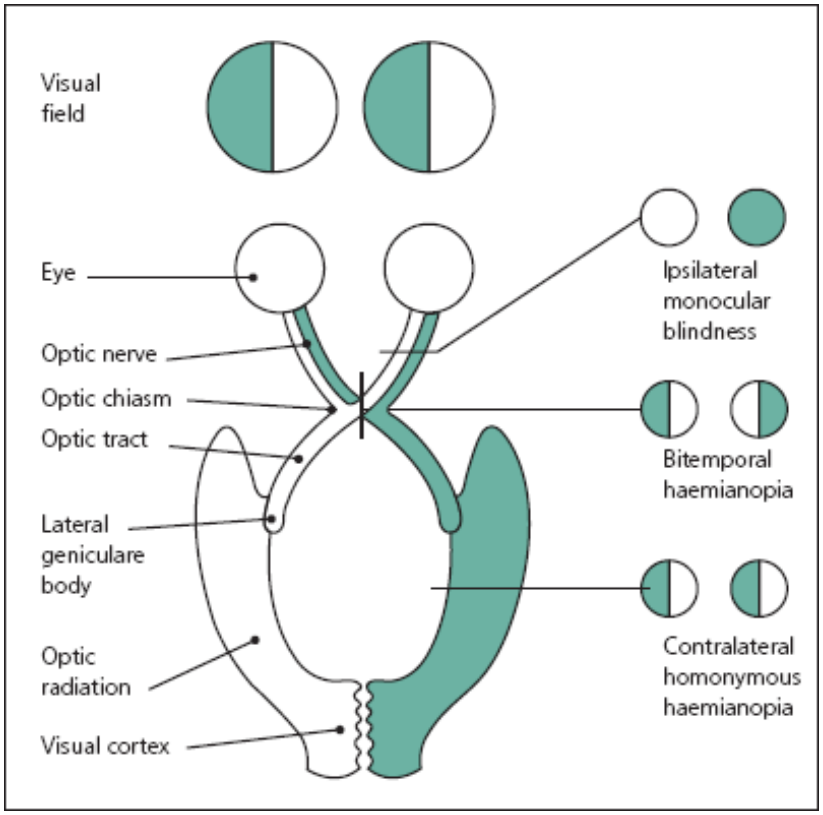
- CN 3,4,6 – eye movements
- If concerns re trauma eye movements also to assess for entrapment of extraocular muscles

SPECIAL TESTS (eye itself)

- Fb/external changes and evert eyelid
- Slit lamp
    - Fluorescein for abrasion
    - Anterior chamber
    - Fundoscopy
- Do ocular pressures

EYES EXAMINATION AND SITE OF LESION

- Complete vision loss 1 eye = optic N – giant cell arteritis, RAPD – CRAO, CRVO, retinal detachment etc
- Bitemporal hemianopia = chiasm – Pit adenoma (or aneurism/meningioma)
- R homonymous hemianopia = L optic tract. Congenital, trauma, infection, stroke, surg, vasc
- R homonymous quadrant = L occipital lobe



HINTS/CEREBELLAR EXAMINATION

Do HINTS & cerebellar examination for persistent vertigo

HINTS 1st then cerebellar

Dix Hallpike for intermittent / provoked vertigo

There should never be a situation when you are performing both HINTS and dix Hallpike

HINTs – less confusing to say central/peripheral rather than +ve/-ve, 1x central finding warrants imaging/workup. Check neck issues prior to starting

HINTS

1) **Head impulse**
2) **Nystagmus**
3) **Test of skew**

1) Head impulse

- Look at examiners nose
- Move head lat/medial
- Rapidly back to midline
- Central = fixed (dolls eye reflex)
- Unidirectional = peripheral, away from affected side

2) Nystagmus

- Vertical or horizontal = central
- Bidirectional fast phase = central
- Unidirectional = peripheral away from affected side

3) Test of skew

- Alternatively cover each eye
- Central = skew and correction saccade
- Peripheral = no skew

If ?central = move onto cerebellar examination

CEREBELLAR EXAMINATION

(Top to toe)

- Nystagmus – assessed with hints
- Speech – 'British constitution' – scanning speech
- Finger nose – past pointing + heel/shin for lower limb
- Dysdiadokinesis – hand and foot tapping for lower limb
- Cerebellar drift – pronates and moves upwards/outwards normally to side of lesion (unlike pronator/pyramidal drift)
- Rebound phenomenon – protect face
- Truncal ataxia – arms folded – lying to sitting or sitting to lying
- Pendular knee jerks (sign hypotonia – 4+ is pendular
- Stand for Romberg's – should be normal as it is a test of proprioception
- Gait – wide based/staggering

For completion

CNs – cerebropontine tumour

Horner's and ipsilateral cranial nerves – lateral medullary syndrome

Upper and lower limb neuro exams

Fundoscopy

DIX HALLPIKE

DIX Hallpike for intermittent / provoke vertigo

There should never be a situation when you are performing both HINTS and Dix Hallpike

Patient can get dizzy

Check neck/back issues

- Pt sits on couch at end of bed
- Head 45 degrees to 1 side
- Sit back quickly
- Eye open
- Head 20 degrees below the horizontal
- 30-60 seconds
- Look for nystagmus for up to 1 min
- +VE -rotational = superior canal
- Horizontal = lateral canal

EPLEY

Dix Hallpike done and elicited nystagmus

- Move head into Neutral at 20 degrees below horizontal (neck extended)
- Then move head 45 degrees to opposite side (not one that tested nystagmus)
- Then shoulder/face to floor for 1 min
- Then sit patient up with head tilted downwards (flexed neck)

CARDIOVASCULAR EXAMINATION

Very unlikely that a full cardiovascular examination will be required

Examination should be brief and focused

Able to include/exclude whichever differentials you are concerned with

Observations and RR (likely to be provided in the stem)

1) **LOOK**
   - Around bed
   - Patient
   - Chest – scars, movements etc
2) **FEEL** – apex, heaves and thrills
3) **MOVE/LISTEN –**
   - Apex – mitral to apex
   - 5th IC L sternal edge - tricuspid
   - 2nd IC L sternal - pulmonary
   - 2nd IC R sternum – aortic to carotids
   - Back – resp creps
4) **SPECIAL TESTS**
   - Abdo – liver, spleen, AAA, pulses esp rad/rad and rad/femoral delay
   - Legs – sacral & leg oedema, pain, pulses
   - Fundoscopy

EXTRA

- ECG
- Urinalysis
- Bloods +/- trop
- CXR

Previously asked 2019.2 difference between left & right sided heart failure

- Left sided heart failure
  - PND, orthopnoea, soboe, fatigue, cyanosis, pul congestion – cough, creps, wheeze, increased respiratory rate, confusion, increased HR
- Right sided heart failure
  - Cor pulmonale
  - Normally secondary to chronic resp probs
  - Also, ascites, enlarged liver, spleen. High JVP, R vent heave, peripheral oedema, DVT

RESPIRATORY EXAMINATION

Very unlikely that a full respiratory examination will be required

Examination should be brief and focused

Able to include/exclude whichever differentials you are concerned with

Observations and RR (likely to be provided in the stem)

1) **LOOK**
   - Around bed
   - Patient – position, CO2 flap, JVP, central cyanosis
   - Chest – scars, movements/WOB
2) **FEEL**
   - Trachea central
   - Lymph nodes neck
3) **MOVE/LISTEN –**
   - Percussion
   - heart sounds
   - Auscultation lungs
4) **SPECIAL TESTS**
   - Abdo – hepatomegaly, ascites
   - Legs – sacral & leg oedema, DVT

Extra

- ECG
- ABG
- CXR
- Spirometry/ peak flow
- Sputum cultures

Pleural effusions not asked yet but perfect for new examination style

Lights criteria – exudate = high protein and high LDH > serum (or learn proper criteria)

- Exudates – increased protein leak secondary to inflammation
- Transudates – reduced protein movement secondary to increased capillary pressure

- Exudate – malignancy, infection – pneumonia, TB, PE, autoimmune, post mi, pancreatitis, drugs
- Transudate – CCF, liver failure, renal failure, hypothyroid, Meigs

ABDOMINAL EXAMINATION

Very unlikely that a full abdominal examination will be required

Examination should be brief and focused

Able to include/exclude whichever differentials you are concerned with

Observations and RR (likely to be provided in the stem)

1) **LOOK**
   - Around bed
   - Patient – exposure nipple to knee – jaundice, cachexia, liver flap
   - Abdo – scars, pulsations, masses, spider naevi, caput medusa, gynaecomastia
2) **FEEL**
   - Light and deep palpation
   - Liver, spleen, kidneys
   - Pulsation AAA
   - Percussion or rebound pain if signs found
3) **MOVE/LISTEN –**
   - Percussion – tympanic note, Shifting dullness ascites
   - Auscultation for bowel sounds
4) **SPECIAL TESTS**
   - PR
   - Hernial orifices
   - External genitalia

Extra

- Urine + quant
- Bloods incl VBG for lactate
- AXR/CXR
- FAST vs CT Abdo vs formal USS

WA mock 2020.1 patient on NOAC with abdo pain. Differential diagnosis for stem, abdo examination on normal patient and interpretation of provided examination results and outline further management

NECK/THYROID EXAMINATION

Examination should be brief and focused

Able to include/exclude whichever differentials you are concerned with

Observations and RR (likely to be provided in the stem)

1) **LOOK**
   - Around bed
   - Patient – stridor/dysphonia, facial changes, flushing, exophthalmos
   - Neck – goitre, scars,
2) **FEEL**
   - From behind
   - Size/borders/texture/tethered/pulsatile
   - trachea
   - Lymph nodes
   - Thyroid
   - Submandibular glands
3) **MOVE/LISTEN –**
   - Swallow water – thyroid and thyroglossal cyst move with swallow
   - Poke out tongue – thyroglossal cyst moves
   - Auscultate for bruits
4) **SPECIAL TESTS** (depending on stem)
   - Hypocalcaemia – Chvostek's
   - SVC obstruction – Pemberton's sign
   - Pretibial myxoedema
   - Reflexes

Extra

Signs hypothyroid – dry skin, periorbital puffiness, delayed relaxation phase reflexes, dry/course hair or alopecia, bradycardia, non-pitting oedema

Sign hyperthyroid – increased perspiration, pretibial myxoedema, proptosis, periorbital oedema, diplopia, hyperreflexia, tachycardia/AF

MENTAL STATE EXAMINATION

ASEPTIC

A – appearance

S – speech

E – emotion mood/effect

P – perception

T – thoughts

I – insight

C – cognition

Capacity

Understanding

Retention

Balance

Communicate back

EXTRA EXAMINATIONS THAT WOULD BE UNFAIR &/OR SUCK

LATERAL MEDULLARY/PICA/WALLENBERGS

Secondary to lateral medullary infarct normally secondary to vertebral artery dissection

- Ipsilateral Horner's and nystagmus
- Ipsilateral facial cn5 hearing cn8 and dysphonia
- Uvula deviation cranial nerve 9/10
- Contralateral pain/temp – spinothalamic
- Ataxia

HORNERS SYNDROME

Lesion central or peripheral sympathetic nervous system

Ptosis, miosis and anhidrosis face

- **1st order**
  - Brainstem – stroke, demyelination, tumour
  - Cervical cord – trauma, tumour, AVM, demyelination
- **2nd order**
  - Chest/neck – brachial plexus, pulmonary apical lesion e.g. Pancoast, cervical rib, trauma, iatrogenic, hyperthyroid
- **3rd order**
  - Post ganglionic and above carotid bifurcation – trauma, int carotid a dissection, aneurism, trauma, arteritis, tumour
  - Skull base lesion
  - Carotid sinus – tumour, thrombosis, aneurism, pit tumour

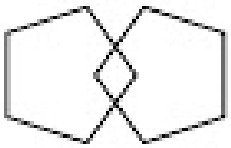
MINI MENTAL STATE EXAMINATION

MINI MENTAL STATE EXAMINATION (MMSE)

Name:

DOB:

Hospital Number:

One point for each answer	DATE:		
ORIENTATION Year Season Month Date Time	…../ 5	…../ 5	…../ 5
Country Town District Hospital Ward/Floor	…../ 5	…../ 5	…../ 5
REGISTRATION Examiner names three objects (e.g. apple, table, penny) and asks the patient to repeat (1 point for each correct. THEN the patient learns the 3 names repeating until correct).	…../ 3	…../ 3	…../ 3
ATTENTION AND CALCULATION Subtract 7 from 100, then repeat from result. Continue five times: 100, 93, 86, 79, 65. (Alternative: spell "WORLD" backwards: DLROW).	…../ 5	…../ 5	…../ 5
RECALL Ask for the names of the three objects learned earlier.	…../ 3	…../ 3	…../ 3
LANGUAGE Name two objects (e.g. pen, watch).	…../ 2	…../ 2	…../ 2
Repeat "No ifs, ands, or buts".	…../ 1	…../ 1	…../ 1
Give a three-stage command. Score 1 for each stage. (e.g. "Place index finger of right hand on your nose and then on your left ear").	…../ 3	…../ 3	…../ 3
Ask the patient to read and obey a written command on a piece of paper. The written instruction is: "Close your eyes".	…../ 1	…../ 1	…../ 1
Ask the patient to write a sentence. Score 1 if it is sensible and has a subject and a verb.	…../ 1	…../ 1	…../ 1
COPYING: Ask the patient to copy a pair of intersecting pentagons 	…../ 1	…../ 1	…../ 1
TOTAL:	…../ 30	…../ 30	…../ 30

MMSE scoring
24-30: no cognitive impairment
18-23: mild cognitive impairment
0-17: severe cognitive impairment

OME Oxford Medical Education