Why?

Three main reasons:
- To elucidate causes of mental illness.
- To pick up comorbid physical disease, which is common (and sometimes induced by psychotropic drugs).
- Because it’s part of the MRCPsych exam.

When

- As soon as possible when you admit a patient (or when a patient has been admitted to your ward by an on-call person who has been turned down despite diligent attempts to conduct one).
- Whenever the need arises again.

Alcohol hand gel

You lose one grade if you fail to use the alcohol gel in the MRCPsych CASC ‘physical’ exam station, before and after patient contact [1]. It sits on a table and nobody indicates it; it’s up to you to use it.

The “standard” routines

Main reference: [2].

**Cardiovascular examination, and the general style of the MRCPsych exam**

1. Ask permission to examine the patient and ask him/her to lie on a couch at 45° with upper body clothing removed.
2. As you approach from the right, look at the patient as a whole (breathless? cyanosed? pale?), face (malar flush? signs of thyroid disease?), neck (abnormal carotid or jugular venous pulsations? endarterectomy scar? thyroidectomy scar? goitre?), and the rest of the body (pacemaker? thoracotomy scar? ascites? clubbing? peripheral oedema?).
3. Examine the hands briefly (clubbing? splinter haemorrhages? cyanosis? poor capillary refill [>1s]?).
4. Feel the radial pulse with your fingers (not thumb), counting rate (for at least 15 seconds), volume, rhythm, character (lift the arm vertically with the hand above the head; place the palmar aspect of your fingers across the anterior forearm near the wrist: collapsing pulse?). Feel both radial pulses (radioradial delay?). Check for radiofemoral delay (though MRCPsych examiners probably less bothered by missing this!).
5. Check the blood pressure (or ask for it).
6. Feel the carotid pulse (slow rising? collapsing?). OK to use your thumb. Never feel the two carotid pulses at the same time.
7. Examine the jugular venous pressure and waveform (“please rest your head back… turn your head to the left…” — ideally, have a light shining sideways across the skin to cast shadows). Doing this properly is one of the trickiest examination skills. You’re looking for the internal jugular vein (distinguish it from the carotid pulse: less easily palpable, double waveform, varies with respiration, can be obliterated with gentle pressure, time it against the opposite carotid pulse). If you can see it immediately, you know where it is. The JVP is measured in cm above the sternal angle (angle of Louis). (The sternal angle is ~5cm above the right atrium regardless of the patient’s angle [3]. If the patient is reclined at 45°, the angle of Louis is close to level with the base of the neck.) If you can’t see the JVP, then it may be extremely high (waggy earlobes? try sitting the patient up to see if it falls) or normal/low (try hepatic pressure to make it visible). A helpful shortcut is to press gently at the base of the neck over the external jugular vein: if this fills, and empties again when you release, then
the JVP is no higher than this point. This can get you the information “JVP not raised” within a few seconds (but a full external jugular vein doesn’t tell you as much as it can be compressed within the chest). See also [4].

8. Examine the eyes and mouth briefly (corneal arcus? conjunctival pallor? cyanosis? poor dentition?).

9. Look for a submammary scar (easily missed; lift the breast in females) and feel the apex beat (find the point of maximum impulse with a fingertip: is it displaced from the 5th intercostal space, medlavicular line? how strong is it [just palpable? lifting? throtting? heaving]?).

10. With the flat of your hand and fingers, palpate over the praecordium for a right ventilatory heave or palpable taps or thrills.

11. Auscultate: (1) Apex with the bell of the stethoscope (good for low-frequency sounds). (2) “Please roll your left…” — accentuates the diastolic murmur of mitral stenosis. (3) Mitral area, plus axilla if any murmur heard (?radiation), with the diaphragm; then working up the chest, (4) tricuspid (5) pulmonary (6) aortic areas with the diaphragm. (7) “Please sit forward… breathe in… and out… and stop there…” = auscultate over the left sternal edge with breath held in expiration (accentuates the murmur of aortic regurgitation, and in practice is helpful when patients won’t stop talking to accentuate most murmurs!). (8) Listen to the carotids with breath held (?bruits).

12. If the heart rate is rapid or irregular, count the rate whilst listening at the apex as well (e.g. in fast AF, not all beats may be transmitted to the periphery).

13. Listen to the lung bases (and if there are basal inspiratory crepitations, how far up do they go?).

14. Check for sacral oedema by pressing gently.

15. Check for ankle oedema, and if present, see how far up the legs (+ abdomen) it goes.

16. Feel the dorsalis pedis pulses. If they are absent, proceed to the others (posterior tibial, popliteal [easiest with knee flexed], femoral). Check for capillary refill in the toes (press the pad of the big toe, release, watch it pink up).

The idea of all these routines is to be swift and thorough, and in an order that means the patient has to move around as little as possible. Here, we’ve done hands — neck — face — chest — back — legs.

For finals and MRCP, you’d do this rapidly with minimal conversation and then present to the examiners (“On examination of Mrs X’s cardiovascular system, she was comfortable at rest. There was no cyanosis, clubbing, or conjunctival pallor. The pulse was 70/minute and regular. The blood pressure was 120/80 and the JVP was not raised… blahblah… the most likely diagnosis is blahblah”, etc.).

For MRCPsych, the style is different: develop a reassuring script that tells the patient and the examiners what you’re doing, and incorporates the findings as you go along, which are likely to be normal; you don’t present to the examiners at the end, but talk to the patient.

“Hello. I’ll just clean my hands… I’m Dr XXX, one of the psychiatrists. [Incorporate some discussion and brief history at this point, relating to the instructions given to you in the exam.] May I examine your heart and blood vessels? Thank you. I’ll just incline the head of this couch at 45°. Please remove your shirt [and bra], and your shoes and socks, and rest back on the couch. I’d like to begin by looking at your hands…. thank you, they look normal… and feeling your pulse. It’s XXX per minute and regular. Now I’d like to take your blood pressure… it’s XXX/YYYY [or: Oh, I see there is no equipment to do that with. (Turning to the examiner:) Do we know the blood pressure? I’ll move on]. Would you mind relaxing your head back against the couch and turning it slightly to the left, please? Thank you. I’m looking at the veins and arteries in your neck… and just feeling them at the same time… thank you, they look normal. Would you look up to the ceiling, please? I’ll just pull your lower eyelid down gently and look at its colour… and pop your tongue out? Thank you. I’d like to feel your heart now… here… and here… that’s fine… I’m also looking for any scars… and I’d like to listen to your heart… Would you roll to the left, please? Thank you. And back to the middle… And sit forward, please? Could you take a deep breath… and out… and hold it there. Thank you, breathe away. Your heart sounds entirely normal. Could I listen to your neck as well,
please? Deep breath in and hold it... and relax. And the other side: deep breath, hold it... Thank you, and relax. That sounds normal. I’d like to listen to your lungs as well: deep breaths in and out through your mouth... That sounds normal. I’ll just press at the base of your spine, if I may, to check if there’s swelling there... no. Finally, I’d like to feel your ankles and the pulses in your feet. I’m just going to press over your lower shins... there doesn’t seem to be any swelling there... and the pulses in your feet are normal... and I’ll just press your toes briefly... The blood supply to your feet seems fine. Thank you very much; your heart and blood vessels appear entirely normal to me. I’ll just clean my hands again.” [Now summarize and conclude including the reason, given on the exam sheet, why you were doing the examination, and say what your findings were, and what you plan to do next.]

If the findings are not normal, don’t say they are! If you know what’s going on, say so confidently, even if you cannot be precise (e.g. “you have a heart murmur; did you know about that? Do you get breathless when you walk or when you lie flat? Do you ever feel dizzy or pass out? [If it sounds like this is genuinely a new or symptomatic thing...] I wonder if one of your heart valves is [narrowed/leaky]. I suggest you see your GP about this [though I don’t think it’s urgent / soon]”). This scenario is probably unlikely, but be ready for it (quiet murmurs are quite common, though the chances of serious pathology in this exam are quite low).

Respiratory examination

1. Ask permission to examine the patient and ask him/her to lie on a couch at 45° with upper body clothing removed.
2. Look: weight loss, breathlessness, lip pursing, cyanosis, use of accessory muscles, indrawing of intercostal muscles, movement of the chest wall (direction? asymmetry?), shape of the chest, marks (e.g. scars), peripheral clues (e.g. inhalers). Listen during this to the breathing (inspiration is normally more prolonged than expiration; are there added noises?).
3. Examine the hands briefly (clubbing? tobacco stains? rheumatoid arthritis? etc.).
4. Feel the pulse. This is a good moment to check the respiratory rate. Check for tremor (CO₂ retention, salbutamol).
5. If in doubt about cyanosis look in the mouth (tongue, buccal mucosa).
6. At the neck, examine the jugular venous pressure and look for distension of other neck veins.
7. Gently feel the trachea: central or deviated? (Use index and middle fingers.) Tracheal tug? Distance from suprasternal notch to cricoid cartilage (feel from the side; should be ≥3 finger breadths)?
8. Axillary lymphadenopathy?
9. Apex beat: difficult to localize? Displaced?
10. Rest your hands on the chest and look for asymmetry of movement, then assess expansion (inframammary, supramammary).
11. Percuss from supraclavicular fossae downwards, including axillae.
12. Tactile vocal fremitus with the ulnar aspect of the hand.
13. Auscultate including the apices and axillae, with the patient breathing through an open mouse.
14. Vocal resonance (“say 99”) and if there is an area of bronchial breathing, whispering pectoriloquy (“whisper 66”).
15. Sit the patient forward, and examine for cervical lymphadenopathy from behind.
16. Examine the back: asymmetry/Expansion — percuss — TVF — auscultate — VR.
17. Consider examining e.g. ankles (if cor pulmonale suspected), pupils/hand muscles (e.g. apical lung cancer suspected), forced expiration (if airways obstruction expected; should take <1 second per decade of age).

Abdominal examination

1. Ask permission to examine the patient and ask him/her to lie supine on one pillow with the whole abdomen and chest exposed.
2. **Visual survey** (e.g. pallor, pigmentation, jaundice, spider naevi, xanthelasma, parotid swelling, gynaecomastia, scratch marks, tattoos, abdominal distension or localized swelling, distended veins, herniae, decreased body hair).

3. **Hands** (Dupuytren’s contracture, clubbing, leuconychia, palmar erythema, flapping tremor).


5. Feel the neck and supraclavicular fossae for cervical lymph nodes (and if you find any, remember to examine the axillae and groins likewise).

6. Don’t forget to look on the back for spider naevi.

7. **Chest**: check for gynaecomastia, spider naevi, scratch marks, paucity of hair.

8. **Observe the abdomen** in three segments, epigastric, umbilical, and suprapubic (scars? pulsation? distension? swelling? distended veins?).

9. **Palpate**: light palpation of the whole abdomen, then deep:
   - liver (right iliac fossa → right hypochondrium)
   - spleen (right iliac fossa → left hypochondrium)
   - kidneys (bimanually, each side)
   - bladder (gently!)
   - ascending and descending colon (flanks)
   - aorta (midline)
   - inguinal lymph nodes?

10. **Percuss**: liver, spleen, bladder, any free fluid? (If ascites suspected, i.e. dullness in the flanks, check for shifting dullness).

11. **Auscultation**: bowel sounds, renal artery bruits.

12. **Depending on the instructions**, you may want to say you’d normally examine the external genitalia and perform a rectal examination (but the exam instructions will likely prohibit this explicitly).

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**Cranial nerves**

- **Look** for any obvious abnormality.
- Ask about any difficulty with **smell (I) or taste (I, VII, IX).**
- **Eyes**:
  - **Acuity (II)**: use a Snellen chart, or ask the patient if he/she has any difficulty with vision, and to read some text or a clock.
  - **Fields (II)**: at least the peripheral fields to confrontation (or for a full visual field routine, see below).
  - **Eye movements (III, IV, VI)**: move your finger in an H pattern. Ask about diplopia (and if there is, check which is the false image, and think about the cause). Remember “SO₂ LR,” (superior oblique IV, lateral rectus VI, the rest III). Also check for **nystagmus (VIII, cerebellum)** and ptosis (III).
  - **Pupils (II, III)**: direct reflex, consensual reflex, accommodation (“look into the distance… now look at my finger”).
  - **Funduscopy (II).** (Described in more detail below.)
  - **Facial sensation (V)**, in the three divisions of V, including the corneal reflex.
  - **Facial movements**:
    - (VII) “Raise your eyebrows… Screw your eyes up tight… Puff your cheeks out… Whistle… Show me your teeth…”
    - (Motor V) “Clench your teeth…” (feel masseters and temporalis) “Open your mouth; stop me closing it.”
  - **Hearing (VIII)**: ask about problems; then test (e.g. rub thumb and finger together in front of each ear; ask it patient can hear it; ± Rinne/Weber tests and otoscopy if abnormal).

- **Mouth**:
  - **Palatal movement (IX, X)**: “Keep your mouth open; say aah”
  - **Gag reflex (IX, X)**: touch the back of the pharynx on both sides with an orange stick.
  - Look for **tongue** wasting or fasciculation (XII); “put your tongue out; waggle it from side to side” (XII).
  - **Accessory nerve (XI)**:
    - “Shrug your shoulders; keep them shrugged” — push down (XI).
• “Turn your head to the left… now to the right…” — feeling for the opposite sternocleidomastoid (XI).

Peripheral neurology: arms

Remember anatomical versus casual terminology (we’ll use casual):

<table>
<thead>
<tr>
<th>casual</th>
<th>anatomical</th>
</tr>
</thead>
<tbody>
<tr>
<td>arm</td>
<td>upper limb</td>
</tr>
<tr>
<td>upper arm</td>
<td>arm</td>
</tr>
<tr>
<td>lower arm</td>
<td>forearm</td>
</tr>
<tr>
<td>leg</td>
<td>lower limb</td>
</tr>
<tr>
<td>thigh</td>
<td>thigh</td>
</tr>
<tr>
<td>lower leg</td>
<td>leg</td>
</tr>
</tbody>
</table>

• Expose the patient as usual.
• General inspection including face, neck, elbows (scars?), hands (inc. tremor? abnormal movements).
• Inspect the muscles for bulk and fasciculation (upper arms, lower arms, hands).
• Test tone at the elbow and wrist.
• “Hold your arms out in front of you, palms up… now close your eyes…” (abnormal movements; abduction of the little finger in pyramidal lesions and ulnar nerve palsy; pronator drift).

Power.
• “Put your arms out to the side, like this…” (arms at 90° to body, with elbows flexed): “Stop me pushing them down” (deltoid; C5).
• “Bend your elbow; stop me straightening it” (biceps; C5–6).
• “Push your arm out straight”: resist elbow extension (triceps; C7).
• “Squeeze my fingers” (offer two fingers) (C8, T1).
• “Hold your fingers out straight, like this… Stop me bending them”: attempt to flex the patient’s fingers from above (radial nerve, C7).
• “Spread your fingers apart… Stop me pushing them together” (dorsal interosseis; ulnar nerve).
• “Hold this piece of paper between your fingers; stop me pulling it out” (palmar interosseis; ulnar nerve).
• “Point your thumb at the ceiling; stop me pushing it down” (abductor pollicis brevis; median nerve).
• “Put your thumb and little finger together; stop me pulling them apart” (opponens pollicis; median nerve).

Power grading (MRC system):

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No muscle contraction is visible</td>
</tr>
<tr>
<td>1</td>
<td>Muscle contraction is visible but there is no movement of the joint</td>
</tr>
<tr>
<td>2</td>
<td>Active joint movement is possible with gravity eliminated</td>
</tr>
<tr>
<td>3</td>
<td>Movement can overcome gravity but not resistance from the examiner</td>
</tr>
<tr>
<td>4</td>
<td>The muscle group can overcome gravity and move against some resistance from the examiner</td>
</tr>
<tr>
<td>5</td>
<td>Full and normal power against resistance</td>
</tr>
</tbody>
</table>

• Coordination.
• Dysdiadochokinesis? “Tap quickly on the back of your hand, like this” (alternating palm and dorsum of the tapping hand).
• Finger–nose test. “Touch my finger; touch your nose; backwards and forwards, quickly” (moving the target).

Reflexes.
• Biceps (C5, 6). Patient’s elbow at 90°; arm relaxed and resting. Finger or thumb over biceps tendon. Tap finger.
• Supinator (C5, 6). Patient’s elbow at 90°. Hand pronated. Tap over distal end of radius.
• Triceps (C7). Patient’s arm crossed over onto chest. Tap triceps tendon.
• Finger (C8). Patient’s hand palm up, fingers very slightly flexes; your finger pads overlie the patient’s; tap your own fingers.
If any reflex appears not to be present, test with reinforcement (e.g. clenching teeth, or for lower limb reflexes, clasping the fingers of each hand with the fingers of the other and pulling).

**Reflex grading (one of unfortunately several systems!):**

- Absent
- +/- Present with reinforcement only.
- + Diminished
- ++ Normal
- +++ Increased
- ++++ Clonus

**Sensation.**
- **Light touch** and **pinprick** in key areas (a screening run-through and then focus in on any abnormalities, thinking in terms of dermatomes and in terms of nerves). Alternate left/right, and flow logically (e.g. shoulder C4 → lateral upper arm C5 → lateral hand C6 → middle finger C7 → lateral hand C8 → medial forearm T1).
- Use the sternum for reference (and for pins: not “can you feel it?” but “does it feel sharp?”).
- **Vibration** and **joint position sense.**

**Peripheral neurology: legs**

- Expose the legs.
- General survey (including face, eyes, hands, arms).
- **Inspect** the legs for obvious changes (e.g. pes cavus; one leg smaller than the other; abnormal movements).
- Inspect the muscles for **wasting and fasciculation.**
- Examine **tone** at the hip (roll relaxed leg sideways, back and forth) and knee (bend the knee and let it drop, or bend and straighten in an unpredictable rhythm).
- **Power.**
  - “Lift your leg; stop me pushing it down” (L1–2).
  - “Bend your knee; don’t let me straighten it” (L5; S1, S2).
  - (with knee still bent) “Push out straight against my hand” (L3–4).
  - “Cock up your foot; point your toes at the ceiling. Stop me pushing your foot down” (L4–5).
  - “Bend your foot down; push my hand away” (S1).
- **Coordination.** “Put your right heel on your left knee and run it down your shin… now up the shin, now down… Now with the left heel on the right knee, and down the shin… now up, now down.”

**Reflexes.**
- **Knee** (L3, 4). Support the leg, tap the patellar tendon.
- **Ankle** (S1, 2). Several methods, inc. (a) patient supine; hold and externally rotate foot, tap tendon; (b) patient kneels on bed or chair, hold foot, tap tendon; (c) hold the ball of the foot with your fingers on the sole and dorsiflex the foot (waggling it to overcome resistance and make it relax); tap your fingers (which further dorsiflexes the foot, stretching the tendon). I find (c) easiest.
- **Plantar reflex** (sweep up the lateral border of the foot then medially across the balls of the toes). Use an orange stick.

**Sensation.**
- **Light touch** and **pinprick** on: outer thigh (L2), inner thigh (L3), inner calf (L4), outer calf (L5), medial foot (L5), lateral foot (S1).
- **Vibration sense** (medial malleoli; and if impaired, knee and iliac crest); **joint position sense** (in the great toes).
- **Gait.** Ordinary walk (to a point and back); then heel-to-toe (exacerbates ataxia); then on toes (S1); then on heels (L5; foot drop). Watch arm swing
- **Romberg’s test.** Feet together, arms outstretched in front. Be ready to catch the patient. Close eyes. (Positive test = sensory ataxia = more unsteady with eyes closed.)

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**The “everyday” all-in-one routine**

Be swift and sure. I think it’s easiest to split “neurology” and “the rest”, like this:

- Begin with patient at 45°.
- General inspection.
- Stuff you’ll forget otherwise and others won’t do for you: temperature, SpO₂.
- **Hands:** inspection, pulse, respiratory rate (while still feeling the pulse), ?tremor.
- **Arms:** blood pressure.
- **Neck:** JVP, carotids, trachea.
- **Face:** eyes and conjuctivae, mouth.
- **Chest:** inspect, palpate (apex beat, expansion), percuss, auscultate (heart), auscultate (lungs), vocal resonance.
- Sit forward.
- **Neck from behind:** lymph nodes.
- **Back:** inspect, palpate, percuss, auscultate (lungs), vocal resonance, check for sacral oedema.
- Lie flat.

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[Link to website for the diagram](http://www.patient.co.uk/doctor/Neurological-Examination-of-the-Upper-Limbs.htm)
Abdomen.
Legs: oedema, pulses.

Cranial nerves.
Peripheral neurology: arms.
Peripheral neurology: legs.

The “focused” routines

Cerebellar signs

- Introduction, rapport, stand back and observe.
- Speech including natural speech (observe the rhythm and articulation) and repetition of stock phrases (“British constitution... West Register Street...”). (“Scanning” dysarthria, with slow rate, irregular rhythm, and variable volume; slurring of speech, tremor of the voice, and ataxic respiration.)
- Eye movements (nystagmus?).
- Watch head movements: titubation?
- Upper limbs:
  - reduced tone?
  - rebound phenomenon [5] (overcorrection of passive displacement of the limb)?
  - dysdiadochokinesia?
  - finger–nose test
- Lower limbs:
  - reduced tone?
  - “pendular” knee jerk (knee keeps swinging after knee jerk, if performed sitting on a chair)?
  - heel–shin test?
- Gait, as above (e.g. wide-based staggering gait, unable to do heel–toe).
  - Note that Romberg’s test is not a test of cerebellar disease.
  - Finish (thank you, sum up, etc.).

Extrapyramidal signs

- Introduction, rapport, history, stand back and observe, esp. for abnormal movements.

  Sitting.
  - Stretch arms out... observe for tremor.
  - Finger repetition tapping. (Ask patient to tap index finger to thumb, then middle finger, etc., in a rapid sequence.)
  - Tone
    - Shoulder: flex arm at elbow (hold hand and elbow), push arm to and fro, externally rotate humerus.
    - Elbow: flex and extend, while also observing and palpating the biceps.
    - Wrist: hold forearm in one hand and hand in the other. Flex, extend, and deviate the wrist to the radial and ulnar sides.
  - Glabellar tap. (Explain first! Tell patient to try not to blink. Normal is 0–5 blinks; ≥21 is maximal on the Simpson–Angus Extrapyramidal Side Effects Scale.)
  - Mouth.
    - Inspect for salivation or abnormal movements.
    - Ask patient to open mouth, then protrude and retract tongue rapidly.
  - Feel for head/neck rigidity from behind. (Alternative when lying on a well-padded couch only: lift head gently, allow it to drop back. Slowed or stiff?)

  Lying on a couch.
  - Tone at the hip and knee.
  - Sit on the edge of a couch.
    - Allow lower leg to dangle at the knee. Lift (extend) it and let it drop. Watch it swing (slowed?).

  Stand.
• Shrug shoulders, and drop.
• Arms out sideways, and drop. (Observe speed of dropping.)
• Gait. “Walk away… turn around… walk back… The same again, please, but as if in a hurry.” Observe for arm swing, leg movements.

Often set in the context of a story about concern regarding side effects, making the introductory history bit generally clear. Then if there are side effects, conclude with your findings and make a plan (e.g. go through notes, talk to GP, talk to CPN, consider dose reduction or a change of drug, ± addition of e.g. anticholinergic medication to dopamine antagonist, and arranging another appointment soon, e.g. in a week, to see how things have been going).

Thyroid status

• History: in MRCPsych, probably do this first (e.g. temperature preference, sweating, weight change, fatigue, appetite, bowel habit, palpitations, chest pain, change in hair quality or quantity, change in voice, change in skin, change in menstrual cycle, anxiety, mood change).
• Visual survey: exophthalmos? Goitre? Thyroid acropathy? Pretibial myxoedema? (These can occur with any thyroid status.) Facial features of myxoedema?
• Behaviour: hyperactive/fidgety/restless (hyperthyroid); normal/uninterested (hypothyroid)?
• Pulse rate and rhythm.
• Feel the palms: warm/cold? Sweaty?
• Ask the patient to stretch out his/her hands to full extension of wrists and elbows and look for tremor (and if in doubt, place your palm against the outstretched fingers, or place a piece of paper on the dorsum of the outstretched hands).
• Look at the eyes, looking for exophthalmos (sclera visible above the lower lid —not related to thyroid status) and lid retraction (sclera visible above the cornea). Test for lid lag (observe the patient from the side; “watch my finger”; the eyelid fails to keep pace with the down-moving eye).
• Examine the thyroid: (a) look, (b) look again with the patient holding a sip of water in their mouth and then swallowing (c) palpate, (d) auscultate for a bruit.
• Examine the reflexes for slow relaxation (esp. ankle jerks: easiest method is with the patient kneeling on a chair with the feet hanging over the edge, and you behind them).

Signs and consequences of alcohol and other drug abuse

• This type of question can lead you down several tracks. They might include:
• Consider peripheral stigmata of intravenous drug abuse and sequelae (e.g. abscesses, endocarditis).
• Consider liver disease and its peripheral stigmata from alcohol.
• Consider cardiac disease (e.g. alcoholic cardiomyopathy with AF; hypertension) from alcohol.
• Consider cerebellar atrophy secondary to alcohol.
• Consider peripheral neuropathy secondary to alcohol and related vitamin deficiencies.
• Consider Wernicke–Korsakoff encephalopathy secondary to thiamine deficiency in the context of alcohol. (Wernicke’s: (1) mental state change, with lethargy and inattentiveness, confusion, memory impairment, and progressive cognitive impairment; (2) eye signs, with ophthalmoplegias and diplopia (most commonly nystagmus on lateral or vertical gaze, sixth nerve palsy, or defects of conjugate gaze); (3) ataxia. Korsakoff’s: severe anterograde amnesia secondary to mammillary body damage in the diencephalon; confabulation.)

So for alcohol, consider:
• swift abdominal examination, adding postural blood pressure (and don’t forget parotids [feel them], spider naevi);
• neurological examination: especially eye movements, cerebellar signs, sensory deficit, gait, Romberg’s test.
See also Michael AM (2003) OSCEs in Psychiatry for a suggested ‘alcohol’ routine.

**Visual fields**

1. Ask the patient to sit upright, and sit confronting him/her about a metre away.
2. Whilst doing this, perform a **visual survey** (acromegaly? hemiparesis? cerebellar signs?).
3. Test temporal fields together to check for **inattention** (“point to the finger that moves” — move each of yours in the periphery of your and the patient’s temporal fields, then both together).
4. Examine the **peripheral visual fields** by covering one eye (or asking the patient to do so) and moving your waggling finger in from the periphery (“tell me when you see my finger move”). Test each quadrant, then repeat for the other eye. (Ophthalmologists’ trick: check finger-counting in each quadrant.)
5. Check for a central scotoma with a red hat pin (move it horizontally from temporal to nasal field across the centre: “can you see the head of the pin? What colour is it? Tell me if it disappears or changes colour”).
6. If there is no scotoma, find the **blind spot** and compare it with your own.
7. If you find a field defect, look for additional features (e.g. features of acromegaly in bitemporal hemianopia).

**Fundoscopy**

Fix the patient’s head. Patient fixates on distant object. To examine the right eye, approach from the patient’s right using your right eye and right hand at the ophthalmoscope, and left hand on the patient’s head. Reverse entirely for the other side.

Look for red reflex (from a distance) → lens → vitreous → fundus. Then:

Optic disc (cup should be <50% of disc) → blood vessels (arterioles, arteriovenous junctions, venules, pattern) → rest of retina (in the four quadrants and at the macula).

You often get a better view of the quadrants by getting the patient to do the work: “Look up and left… up and right… down and right… I’ll just gently lift your eyelid… down and left… and straight at the light.” The last bit dazzles.

**Catatonia**

Unlikely to feature in the exam?

From [6].

<table>
<thead>
<tr>
<th>Procedure:</th>
<th>Examines:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Observe patient while trying to engage in a conversation.</td>
<td>Activity level, abnormal movements, abnormal speech.</td>
</tr>
<tr>
<td>2. Examiner scratches head in exaggerated manner.</td>
<td>Echopraxia</td>
</tr>
<tr>
<td>3. Examine arm for cogwheeling. Attempt to reposition, instructing patient to “keep your arm loose”. Move arm with alternating lighter and heavier force.</td>
<td>Rigidity, negativism, waxy flexibility</td>
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<tr>
<td>4. Ask patient to extend arm. Place one finger beneath hand and try to raise slowly after stating, “DO NOT let me raise your arm.”</td>
<td>Passive obedience</td>
</tr>
<tr>
<td>5. Extend hand stating, “DO NOT shake my hand.”</td>
<td>Ambitendence</td>
</tr>
<tr>
<td>6. Reach into your pocket and state, “Stick out your tongue, I want to stick a pin in it.”</td>
<td>Automatic obedience</td>
</tr>
<tr>
<td>7. Examine for the grasp reflex.</td>
<td>Grasp reflex</td>
</tr>
<tr>
<td>8. Examine the patient’s chart for oral intake, vital signs, and unusual incidents.</td>
<td></td>
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<tr>
<td>9. Observe the patient indirectly for a brief period each day.</td>
<td></td>
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</tbody>
</table>

Fink & Taylor criteria for catatonia [6].

<table>
<thead>
<tr>
<th>Symptom group A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stupor</strong> lasting ≥1 hour (conscious but unresponsive with hypoactivity and reduced or altered arousal; fails to respond to queries + to pain).</td>
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<tr>
<td><strong>Immobility</strong> lasting ≥1 hour.</td>
</tr>
<tr>
<td><strong>Mutism</strong> lasting ≥1 hour.</td>
</tr>
<tr>
<td>Symptom group B</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Catalepsy (rare flexibility).</td>
</tr>
<tr>
<td>Automatic obedience (permits an examiner’s light touch to move patient’s limbs into a new posture, despite instructions to the contrary).</td>
</tr>
<tr>
<td>Posturing (maintains abnormal posture of limbs/body/face for long periods).</td>
</tr>
<tr>
<td>Symptom group C</td>
</tr>
<tr>
<td>Stereotypy (repetitive, awkward, or stiff, apparently senseless, movements).</td>
</tr>
<tr>
<td>Ambitendency (the state of becoming “stuck” between two alternative actions, such as when given conflicting verbal and non-verbal instructions).</td>
</tr>
<tr>
<td>Negativism (includes resisting of examiner’s manipulations with force equal to that applied, or refusing or performing the opposite of any request).</td>
</tr>
<tr>
<td>Echophenomena (echolalia, echopraxia, utilization behaviour, speech-promptness).</td>
</tr>
</tbody>
</table>

These criteria for catatonia require either of:
- one symptom from group A, associated with at least one symptom from group B seen or elicited on ≥2 occasions;
- two symptoms from groups B and C seen or elicited on ≥2 occasions.

More on the exams

Example of a CASC station

Station 4
Mr Neil Spirits used to drink alcohol to excess but has been abstinent for three months. He complains of clumsiness. A recent CT brain showed cerebellar atrophy.
- Perform a relevant neurological examination.

Patient was sitting in a chair, and gave a history of dropping objects, no clear sensory loss, and some gait instability.

When asked to remove shoes/socks, examiner told him not to.

Only kit: alcohol gel, tendon hammer (no cotton wool, no tuning fork, no neurotips).

Other things that can be in the CASC

- Interpreting an ECG. (Likely to be fairly basic, like a ST-segment-elevation MI, or significant QT prolongation.)
- Resuscitation (CPR).
- Ophthalmoscopy: MRCPsych is famous for a fake head with slides in it. Look at a picture book of common eye disease (e.g. diabetic retinopathy, hypertensive retinopathy, branch retinal vein occlusion, etc.).

Other things in MCQs and EMIQs

This can be fairly broad, e.g.

You have a patient on clozapine who has amenorrhoea and hyperprolactinaemia. Pick the most useful investigation:

A. 24-hour EEG  
B. CT head  
C. LP  
D. skull X-ray  
E. SPECT

A 68-year-old man sees his general practitioner complaining of low mood and forgetfulness… He is otherwise well apart from a limp that developed suddenly six months ago and has not gone away. What is the most likely diagnosis?

A. Alzheimer’s disease  
B. Depressive episode  
C. Lewy-body dementia  
D. Pick’s disease  
E. Vascular dementia

Anorexia nervosa…

A. low corticotropin-releasing hormone  
B. low cortisol  
C. delayed insulin response  
D. exaggerated dopamine response  
E. high luteinizing hormone
A bitemporal hemianopia is caused by a lesion of:
A. the optic nerve
B. the occipital cortex
C. the optic chiasm
D. the left parietal cortex
E. the superior olive

Which is an eye sign of Wilson’s disease? (…)

Which would be an atypical feature of neuroleptic malignant syndrome?
A. bradycardia
B. tremor
C. incontinence
D. blood pressure lability
E. disrupted thermoregulation

Regarding pupils:
A. Holmes–Adie pupil
B. Marcus–Gunn pupil
C. Argyle–Robertson pupil
D. oculomotor nerve lesion
E. midbrain lesion
F. normal phenomenon
G. miotic drugs
H. mydriatic drugs

Select the SINGLE best answer from the list:
1. You swing a flashlight from pupil to pupil every 2–3 s; they constrict at first; after a short while, one dilates paradoxically in response to light.
2. Sluggish response to light and accommodation.
3. When you shine a light on one pupil, it constricts, then dilates widely. The other pupil then does the same.

Regarding problems with eating:
   a) anorexia nervosa
   b) bulimia nervosa
   c) hyperthyroidism
   d) coeliac disease
   e) generalized anxiety disorder
   f) hypothyroidism
   g) depressive episode
   h) Wilson’s disease
   i) neuroacanthocytosis
   j) Whipple's disease

1) The parents of a 14-year-old girl bring her to you because they are concerned about the fact that she has not entered menarche. They say she is a picky eater, and she thinks she is too fat. Her BMI is 13. ONE option.
2) The domineering parents of a 21-year-old woman demand answers about their daughter’s condition. She has seemed to them very anxious recently and has lost weight. She sometimes seems agitated and trembles. She cannot stand to be in the room with her father when he turns the heating on, saying that it makes her sweat. ONE option.
3) A 34-year-old woman is troubled by frequent diarrhoea and occasional vomiting. She has lost weight and feels lethargic. She says she often feels bloated. She has seen her GP, who noted cheilosis and mouth ulcers. ONE option.

Books
See also Michael AM (2003) _OSCEs in Psychiatry_, Churchill Livingstone.

References