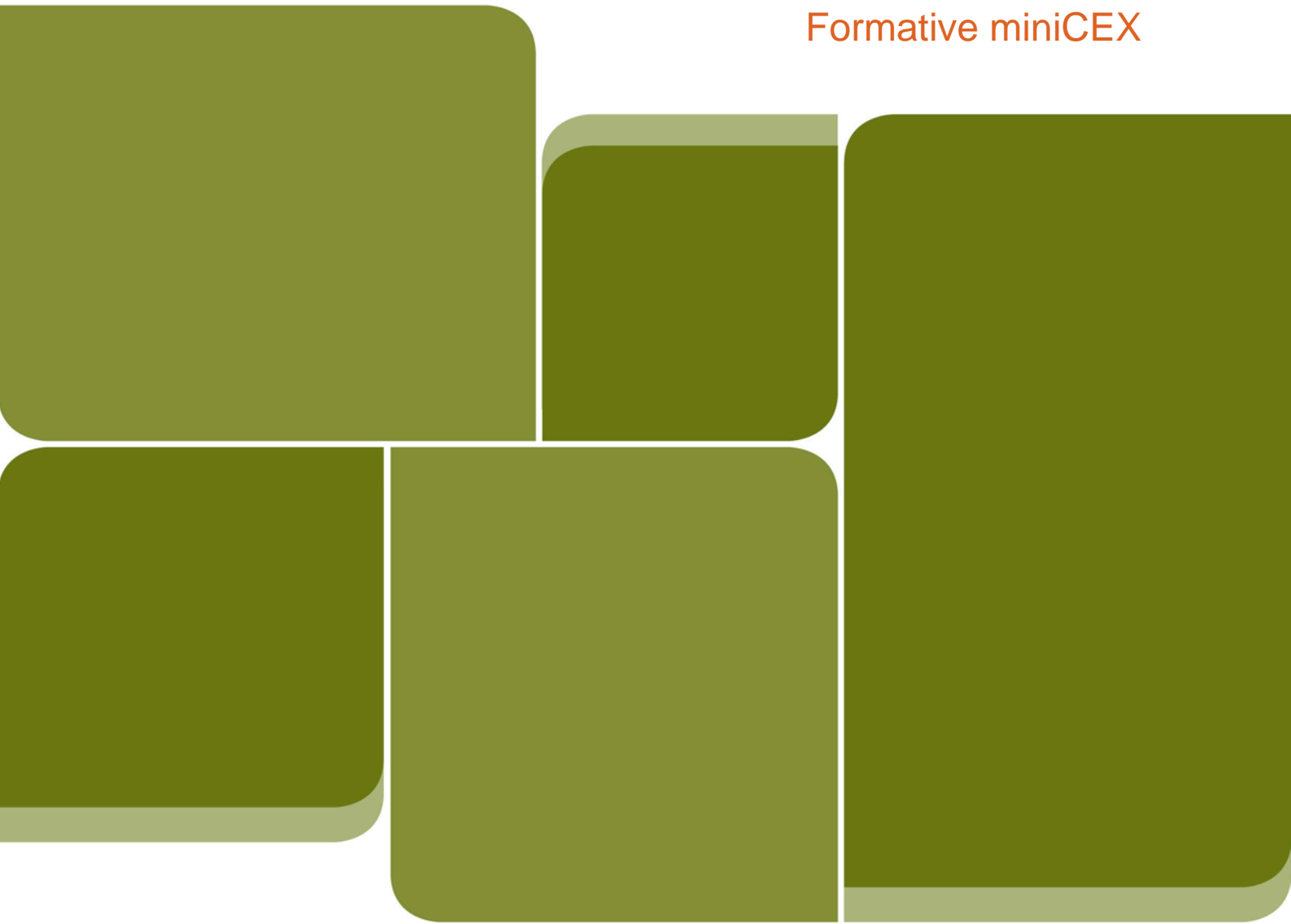




# Physical Exam Reference

Formative miniCEX



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# Introduction

This document is designed to be used a reference when assessing physical examination skills for the ACRRM formative miniCEX. The guide is summarised from relevant text books. Physical examinations should be thorough and relevant to the presenting complaint.

## Adults

### Physical Examination of the Respiratory System

*Clinical Examination: A Systematic Guide to Physicians Diagnosis*  
*Nicholas Talley and Simon O'Connor*

<p><b>Position</b>  <i>Undressed to waist</i>  <i>Sitting over side of bed</i></p>	<p><b>The trachea</b></p> <ul style="list-style-type: none"> <li>• position</li> <li>• tug</li> <li>• dyspnoeic</li> </ul>
<p><b>General appearance</b></p> <ul style="list-style-type: none"> <li>• dyspnoea</li> <li>• cyanosis</li> <li>• characteristics of cough             <ul style="list-style-type: none"> <li>○ sputum</li> <li>○ stridor</li> <li>○ hoarseness</li> </ul> </li> </ul>	<p><b>The chest</b></p> <ul style="list-style-type: none"> <li>• inspection anterior and posterior</li> <li>• shape and symmetry             <ul style="list-style-type: none"> <li>○ barrel chest</li> <li>○ pigeon chest</li> <li>○ funnel chest (pectus excavatum)</li> <li>○ Harrison's sulcus</li> <li>○ kyphosis</li> <li>○ scoliosis</li> </ul> </li> </ul>
<p><b>The hands</b></p> <ul style="list-style-type: none"> <li>• clubbing</li> <li>• staining</li> <li>• wasting and weakness</li> <li>• pulse rate</li> <li>• flapping tremor (asterixis)</li> </ul>	<p><b>Palpitation</b></p> <ul style="list-style-type: none"> <li>• expansion</li> <li>• vocal fremitus</li> </ul>
<p><b>The face</b></p> <ul style="list-style-type: none"> <li>• eyes</li> <li>• nose – inside and out             <ul style="list-style-type: none"> <li>○ polyps</li> <li>○ engorged turbinates</li> <li>○ deviated septum</li> </ul> </li> <li>• tongue             <ul style="list-style-type: none"> <li>○ central cyanosis</li> <li>○ reddened pharynx and tonsillar enlargement</li> <li>○ rotten or broken teeth</li> </ul> </li> <li>• sinuses             <ul style="list-style-type: none"> <li>○ palpitation</li> <li>○ check transillumination</li> </ul> </li> <li>• face – general skin             <ul style="list-style-type: none"> <li>○ red, leathery, wrinkled – smoker</li> <li>○ plethora</li> <li>○ cyanosis</li> <li>○ receding chin, and small pharynx</li> </ul> </li> </ul>	<p><b>Percussion</b></p> <ul style="list-style-type: none"> <li>• liver dullness</li> <li>• cardiac dullness</li> </ul>
	<p><b>Auscultation</b></p> <ul style="list-style-type: none"> <li>• breath sounds</li> <li>• vocal resonance</li> </ul>
	<p><b>The heart</b>  <b>Position</b>  <i>Lay down patient 45%</i></p> <ul style="list-style-type: none"> <li>• measure JVP</li> <li>• examine praecordium</li> </ul>
	<p><b>The abdomen</b></p> <ul style="list-style-type: none"> <li>• palpate liver</li> </ul>
	<p><b>Other</b></p> <ul style="list-style-type: none"> <li>• feet</li> </ul>

# Physical Examination of the Cardiovascular System

*Clinical Examination: A Systematic Guide to Physicians Diagnosis*

<p><b>Position</b> <i>Lay down patient at 45%</i></p>	<p><b>The praecordium</b></p> <ul style="list-style-type: none"> <li>• inspection             <ul style="list-style-type: none"> <li>○ scars</li> <li>○ skeletal abnormalities                 <ul style="list-style-type: none"> <li>- funnel chest</li> <li>- kyphoscoliosis</li> <li>- scoliosis</li> </ul> </li> <li>○ surgical abnormalities                 <ul style="list-style-type: none"> <li>- pacemaker</li> <li>- cardioverter-defibrillator box</li> </ul> </li> </ul> </li> <li>• palpation             <ul style="list-style-type: none"> <li>○ apex beat</li> <li>○ other praecordial impulses</li> </ul> </li> <li>• percussion</li> <li>• auscultation             <ul style="list-style-type: none"> <li>○ mitral area with bell</li> <li>○ mitral area with diaphragm</li> <li>○ tricuspid area</li> <li>○ pulmonary area</li> <li>○ aortic area</li> <li>○ abnormalities of heart sounds                 <ul style="list-style-type: none"> <li>- alterations in intensity</li> <li>- splitting</li> <li>- extra heart sounds</li> <li>- additional sounds</li> </ul> </li> </ul> </li> <li>• murmurs             <ul style="list-style-type: none"> <li>○ associated features</li> <li>○ timing</li> <li>○ area of greatness intensity</li> <li>○ loudness and pitch</li> <li>○ dynamic manoeuvres</li> </ul> </li> </ul>
<p><b>General appearance</b></p> <ul style="list-style-type: none"> <li>• respiration rapid, laboured</li> <li>• cachectic</li> <li>• Marfan's syndrome</li> <li>• Down's syndrome</li> <li>• Turner's syndrome</li> </ul>	<p><b>The neck</b></p> <ul style="list-style-type: none"> <li>• auscultation bruits</li> </ul>
<p><b>The hands</b></p> <ul style="list-style-type: none"> <li>• clubbing</li> <li>• splinter haemorrhages</li> <li>• Osler's nodes</li> <li>• Janeway lesions</li> <li>• tendon xanthomata</li> <li>• palmar xanthomata</li> </ul>	<p><b>The back</b></p> <ul style="list-style-type: none"> <li>• lung bases percussion and auscultation</li> <li>• pitting oedema of sacrum</li> </ul>
<p><b>The arterial pulse, bilateral</b></p> <ul style="list-style-type: none"> <li>• rate             <ul style="list-style-type: none"> <li>○ bradycardia/ tachycardia</li> </ul> </li> <li>• rhythm             <ul style="list-style-type: none"> <li>○ irregular /delete chaoticregularly irregular</li> <li>○ extra beats, frequent or occasional</li> </ul> </li> <li>• radiofemoral delay</li> <li>• character and volume             <ul style="list-style-type: none"> <li>○ alternating strong and weak pulse</li> </ul> </li> <li>• Condition of vessel wall             <ul style="list-style-type: none"> <li>○ thickening</li> <li>○ turtuosity</li> </ul> </li> </ul>	<p><b>The neck</b></p> <ul style="list-style-type: none"> <li>• carotid artery             <ul style="list-style-type: none"> <li>○ amplitude</li> <li>○ shape</li> <li>○ volume</li> </ul> </li> <li>• jugular venous pressure (JVP) pulsation             <ul style="list-style-type: none"> <li>○ <i>lay down patient at 45%</i></li> <li>○ <i>good lighting</i></li> <li>○ height and character</li> <li>○ abdominojugular reflux test</li> </ul> </li> </ul>
<p><b>The blood pressure, bilateral</b></p> <ul style="list-style-type: none"> <li>• systolic</li> <li>• diastolic</li> <li>• pulsus paradoxus</li> </ul>	
<p><b>Face</b></p> <ul style="list-style-type: none"> <li>• sclerae for jaundice</li> <li>• xanthelasma</li> <li>• mitral facies</li> </ul>	
<p><b>Mouth</b></p> <ul style="list-style-type: none"> <li>• high arched palate</li> <li>• teeth diseased or broken</li> <li>• tongue and lips for central cyanosis</li> <li>• mucosa for petechiae</li> </ul>	

<p><b>The abdomen</b></p> <p><b>Position</b></p> <p><i>Patient lying flat with one pillow</i></p> <ul style="list-style-type: none"> <li>• enlarged tender liver</li> <li>• ascites</li> <li>• splenomegaly</li> <li>• pulsation of abdominal aorta</li> </ul>	<p><b>The lower limbs</b></p> <ul style="list-style-type: none"> <li>• oedema (pitting or non- pitting)</li> <li>• achilles tendon xanthomata</li> <li>• cyanosis of toes</li> <li>• clubbing of toes</li> <li>• femoral artery palpitation and auscultation</li> <li>• palpate <ul style="list-style-type: none"> <li>○ popliteal</li> <li>○ posterior tibial</li> <li>○ dorsalis pedis</li> </ul> </li> <li>• atrophic skin</li> <li>• loss of hair</li> <li>• colour change in feet (red or blue)</li> <li>• ulcers (venous, diabetic or arterial)</li> <li>• reduced capillary return <ul style="list-style-type: none"> <li>○ Buerger's test</li> </ul> </li> <li>• acute arterial occlusion</li> <li>• deep venous thrombosis <ul style="list-style-type: none"> <li>○ tenderness and erythema</li> <li>○ swelling</li> <li>○ dilated superficial veins</li> <li>○ warmth</li> <li>○ Homan's sign</li> </ul> </li> </ul>
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# Physical Examination of the Gastrointestinal System

*Clinical Examination: A Systematic Guide to Physicians Diagnosis*

*Nicholas Talley and Simon O'Connor*

<p><b>Position</b> <i>Patient lying flat one pillow</i></p>	<ul style="list-style-type: none"> <li>• tongue             <ul style="list-style-type: none"> <li>○ coating</li> <li>○ lingua migra (black tongue)</li> <li>○ geographical tongue</li> <li>○ leukoplakia</li> <li>○ glossitis</li> <li>○ macroglossia</li> </ul> </li> <li>• mouth ulcers             <ul style="list-style-type: none"> <li>○ aphthous ulceration</li> <li>○ angular stomatitis</li> </ul> </li> <li>• candidiasis (moniliasis)</li> </ul>
<p><b>General Appearance</b></p> <ul style="list-style-type: none"> <li>• jaundice</li> <li>• weight and wasting</li> <li>• skin             <ul style="list-style-type: none"> <li>○ pigmentation</li> <li>○ acanthosis nigricans</li> <li>○ hereditary haemorrhagic teleangiectasia</li> <li>○ porphyria cutanea tarda</li> <li>○ systemic sclerosis</li> <li>○ mental state (encephalopathy)</li> </ul> </li> </ul>	<p><b>The neck and chest</b></p> <ul style="list-style-type: none"> <li>• lymph nodes</li> <li>• spider naevi</li> <li>• gynaecomastia</li> </ul>
<p><b>The hands</b></p> <ul style="list-style-type: none"> <li>• nails             <ul style="list-style-type: none"> <li>○ leuconychia</li> <li>○ clubbing</li> </ul> </li> <li>• the palms             <ul style="list-style-type: none"> <li>○ palmar erythema</li> <li>○ anaemia</li> <li>○ Dupuytren's contracture</li> </ul> </li> <li>• hepatic flap</li> </ul>	<p><b>The abdomen</b></p> <ul style="list-style-type: none"> <li>• inspection             <ul style="list-style-type: none"> <li>○ scars</li> <li>○ distention</li> <li>○ local swelling</li> <li>○ prominent veins</li> <li>○ pulsations</li> <li>○ visible peristalsis</li> <li>○ skin lesions</li> <li>○ Sister Joseph nodule</li> <li>○ discoloration of umbilicus</li> <li>○ striae</li> <li>○ asymmetrical movement</li> </ul> </li> <li>• palpitation             <ul style="list-style-type: none"> <li>○ examine each region</li> <li>○ examine tender area last</li> <li>○ light to deep palpitation</li> <li>○ guarding</li> <li>○ rigidity</li> <li>○ rebound tenderness</li> </ul> </li> <li>• the liver             <ul style="list-style-type: none"> <li>○ liver span</li> <li>○ hepatomegaly</li> </ul> </li> <li>• the gallbladder             <ul style="list-style-type: none"> <li>○ Murphy's sign</li> </ul> </li> <li>• the spleen</li> <li>• the kidneys</li> </ul>
<p><b>The arms</b></p> <ul style="list-style-type: none"> <li>• bruising</li> <li>• petechiae</li> <li>• muscle wasting</li> <li>• scratch marks</li> <li>• spider naevi</li> <li>• lymphadenopathy</li> </ul>	
<p><b>The face</b></p> <ul style="list-style-type: none"> <li>• jaundice</li> <li>• anaemia</li> <li>• Kayser- Fleischer rings</li> <li>• iritis</li> <li>• xanthelasma</li> <li>• periorbital purpura</li> </ul>	
<p><b>Salivary glands</b></p> <ul style="list-style-type: none"> <li>• parotid enlargement</li> <li>• submandibular enlargement</li> </ul>	
<p><b>The mouth</b></p> <ul style="list-style-type: none"> <li>• teeth             <ul style="list-style-type: none"> <li>○ state of teeth</li> <li>○ gum hypertrophy</li> <li>○ gum pigmentation</li> <li>○ ulcers</li> </ul> </li> <li>• breath             <ul style="list-style-type: none"> <li>○ fetor</li> <li>○ fetor hepaticus</li> </ul> </li> </ul>	

<ul style="list-style-type: none"><li>• other abdominal masses<ul style="list-style-type: none"><li>○ stomach and duodenum</li><li>○ pancreas</li><li>○ aorta</li><li>○ bowel</li><li>○ bladder</li><li>○ inguinal lymph nodes</li><li>○ testes</li><li>○ anterior abdominal wall</li></ul></li><li>• hernias<ul style="list-style-type: none"><li>○ irreducible</li><li>○ obstructed</li><li>○ strangulated</li></ul></li></ul>	<ul style="list-style-type: none"><li>• percussion<ul style="list-style-type: none"><li>○ liver</li><li>○ spleen</li><li>○ kidneys</li><li>○ bladder</li><li>○ ascites<ul style="list-style-type: none"><li>- shifting dullness</li><li>- fluid thrill</li></ul></li></ul></li><li>• auscultation<ul style="list-style-type: none"><li>○ bowel sounds</li><li>○ friction rubs</li><li>○ venous hums</li><li>○ bruits</li></ul></li></ul>
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# Physical Examination of the Endocrine System

*Clinical Examination: A Systematic Guide to Physicians Diagnosis*

*Nicholas Talley and Simon O'Connor*

<p><b>General</b></p> <ul style="list-style-type: none"> <li>• inspect for diagnostic facies or body habitus</li> <li>• body weight</li> <li>• height</li> <li>• examine urine</li> <li>• trousseau's sign (tetany)</li> <li>• proximal weakness</li> </ul>	<p><b>Mouth</b></p> <ul style="list-style-type: none"> <li>• protrusion of chin</li> <li>• enlargement of tongue</li> <li>• buccal pigmentation</li> </ul>
<p><b>Hands</b></p> <ul style="list-style-type: none"> <li>• overall size</li> <li>• length of metacarpals</li> <li>• abnormalities of nails</li> <li>• tremor</li> <li>• palmar erythemia</li> <li>• sweating palms</li> <li>• pulse</li> </ul>	<p><b>Neck</b></p> <ul style="list-style-type: none"> <li>• protrusion of chin</li> <li>• enlargement of tongue</li> <li>• buccal pigmentation</li> </ul>
<p><b>Axillae</b></p> <ul style="list-style-type: none"> <li>• axillary hair</li> <li>• acanthosis</li> <li>• skin tags</li> </ul>	<p><b>Chest wall</b></p> <ul style="list-style-type: none"> <li>• hirsutism</li> <li>• loss of hair</li> <li>• reduction breast size (women)</li> <li>• gynaecomastia (men)</li> <li>• nipple pigmentation</li> </ul>
<p><b>Eyes</b></p> <ul style="list-style-type: none"> <li>• fundi</li> </ul>	<p><b>Abdomen</b></p> <ul style="list-style-type: none"> <li>• hirsutism</li> <li>• central fat deposition</li> <li>• purple striae</li> </ul>
<p><b>Face</b></p> <ul style="list-style-type: none"> <li>• hirsutism</li> <li>• fine wrinkled hairless skin</li> <li>• greasiness</li> <li>• acne</li> <li>• plethora</li> </ul>	<p><b>Genitalia</b></p> <ul style="list-style-type: none"> <li>• virilisation</li> <li>• atrophy</li> </ul>
	<p><b>Legs</b></p> <ul style="list-style-type: none"> <li>• diabetic changes</li> </ul>

## Physical Examination of the Nervous System

*Clinical Examination: A Systematic Guide to Physicians Diagnosis*

Nicholas Talley and Simon O'Connor

<p><b>General</b></p> <ul style="list-style-type: none"> <li>• handedness</li> <li>• conscious level</li> <li>• neck stiffness</li> <li>• Kernig's sign</li> <li>• dysarthria</li> </ul>	<p><b>Upper limbs</b></p> <ul style="list-style-type: none"> <li>• motor System <ul style="list-style-type: none"> <li>○ wasting</li> <li>○ tremor</li> <li>○</li> <li>○ tone</li> <li>○ power</li> <li>○ reflexes)</li> </ul> </li> <li>• coordination</li> <li>• sensation <ul style="list-style-type: none"> <li>○ pain</li> <li>○ temperature</li> <li>○ vibration</li> <li>○ proprioception</li> <li>○ light touch</li> </ul> </li> <li>• thickened nerves</li> </ul>
<p><b>Cranial nerves</b> <b>Position:</b> <i>Sit over side of bed if possible</i></p>	<p><b>Lower limbs</b></p> <ul style="list-style-type: none"> <li>• motor system <ul style="list-style-type: none"> <li>○ tone</li> <li>○ power</li> <li>○ reflexes</li> </ul> </li> <li>• coordination</li> <li>• sensation</li> <li>• saddle region</li> <li>• back</li> <li>• gait</li> </ul>
<p><b>General inspection of head and neck</b></p> <ul style="list-style-type: none"> <li>• craniotomy scars</li> <li>• neurofibromas</li> <li>• facial asymmetry</li> <li>• ptosis</li> <li>• proptosis</li> <li>• skew deviation of eyes</li> <li>• inequality of pupils</li> <li>• I smell</li> <li>• II visual acuity and fields; fundoscopy</li> <li>• III, IV, VI</li> <li>• V corneal reflexes</li> <li>• VII facial muscles</li> <li>• VIII hearing</li> <li>• IX, X palate and gag</li> <li>• XI Trapezius and sternomastoids</li> <li>• XII tongue</li> </ul>	

## Physical Examination of the Cervical Spine

*Clinical Orthopaedic Examination: Ronald McRae*

<p><b>Inspection</b></p> <ul style="list-style-type: none"> <li>• asymmetry in supraclavicular fossae</li> <li>• torticollis</li> </ul>	<ul style="list-style-type: none"> <li>• thoracic outlet syndrome <ul style="list-style-type: none"> <li>○ ischaemia of hand/s</li> <li>○ pulse on traction</li> <li>○ Adson's test</li> <li>○ Roos test</li> <li>○ neurological disturbance</li> </ul> </li> <li>• cord compression and cervical myelopathy</li> <li>• cervical myelopathy <ul style="list-style-type: none"> <li>○ Hoffmann's test</li> <li>○ dynamic Hoffmann's test</li> <li>○ L Hermitte's test</li> <li>○ inverted radial reflex</li> <li>○ clonus</li> <li>○ myelopathy hand</li> </ul> </li> </ul>
<p><b>Palpation</b></p> <ul style="list-style-type: none"> <li>• tenderness</li> <li>• masses</li> <li>• prominence of cervical rib with local tenderness</li> <li>• enlarged cervical lymph nodes</li> <li>• enlarged thyroid gland</li> </ul>	
<p><b>Movements</b></p> <ul style="list-style-type: none"> <li>• head range flexion and extension</li> <li>• head range lateral flexion</li> <li>• head range of rotation</li> <li>• crepitus</li> </ul>	

# Physical Examination of the Shoulder

*Clinical Orthopaedic Examination: Ronald McRae*

<p><b>Inspection</b></p> <ul style="list-style-type: none"> <li>• the front             <ul style="list-style-type: none"> <li>○ prominent sternoclavicular joint</li> <li>○ deformity of clavicle (old fracture)</li> <li>○ prominent acromioclavicular joint</li> <li>○ deltoid wasting</li> </ul> </li> <li>• the side             <ul style="list-style-type: none"> <li>○ swelling of the joint</li> </ul> </li> <li>• from behind             <ul style="list-style-type: none"> <li>○ scapulae normally shaped and situated</li> </ul> </li> <li>• from above             <ul style="list-style-type: none"> <li>○ swelling of the shoulder</li> <li>○ deformity of clavicle</li> <li>○ asymmetry of supraclavicular fossae</li> </ul> </li> </ul>	<p><b>Rotation screening</b></p> <ul style="list-style-type: none"> <li>• place arm behind opposite shoulder blade</li> <li>• ask patient to draw hand away from back</li> <li>• place both hands behind neck</li> <li>• compare two sides</li> <li>• pull elbows back gently</li> <li>• abduct shoulder 90, and flex elbow to right angle             <ul style="list-style-type: none"> <li>○ patient to lower forearm from horizontal plane</li> <li>○ raise hand keeping shoulder at 90</li> </ul> </li> <li>• elbows into sides and flex to 90 with hands forwards</li> <li>• move hands laterally</li> <li>• compare two hands</li> <li>• move hand to chest from facing forward position</li> <li>• measure shoulder elevation and depression</li> <li>• screen cervical spine</li> <li>• crepitus             <ul style="list-style-type: none"> <li>○ place hand over shoulder, abduct arm</li> </ul> </li> <li>• rotator cuff             <ul style="list-style-type: none"> <li>○ abduction and drop arm test</li> <li>○ neer impingement sign</li> </ul> </li> <li>• anterior glenohumeral instability             <ul style="list-style-type: none"> <li>○ apprehension test</li> <li>○ relocation test</li> <li>○ drawer test of Gerber and Ganz</li> </ul> </li> <li>• posterior glenohumeral instability             <ul style="list-style-type: none"> <li>○ drawer test</li> <li>○ jerk test</li> </ul> </li> <li>• inferior glenohumeral instability             <ul style="list-style-type: none"> <li>○ sulcus sign</li> </ul> </li> <li>• biceps tendon instability test</li> <li>• biceps tendinitis             <ul style="list-style-type: none"> <li>○ speed test</li> </ul> </li> <li>• integrity of the long head of biceps</li> <li>• deltoid power</li> <li>• suprascapular nerve             <ul style="list-style-type: none"> <li>○ supraspinatus</li> <li>○ infraspinatus</li> </ul> </li> <li>• long thoracic nerve             <ul style="list-style-type: none"> <li>○ lean with both hands against the wall</li> </ul> </li> </ul>
<p><b>Palpation</b></p> <ul style="list-style-type: none"> <li>• anterior and lateral aspects glenohumeral joint</li> <li>• upper humeral shaft and head via axilla</li> <li>• acromioclavicular joint</li> <li>• press below acromion and abduct arm</li> <li>• length of clavicle</li> </ul>	
<p><b>Movement</b></p> <ul style="list-style-type: none"> <li>• abduction both arms noting:             <ul style="list-style-type: none"> <li>○ initiation of abduction</li> <li>○ passive abduction if patient unable</li> <li>○ smooth</li> <li>○ range of movement</li> <li>○ pain</li> <li>○ hold arm vertical position</li> <li>○ lower arm</li> </ul> </li> <li>• movements restricted             <ul style="list-style-type: none"> <li>○ fix angle of the scapula and try to abduct arm</li> <li>○ place one hand on shoulder and swing arm across chest, flexed at elbow</li> </ul> </li> <li>• forward flexion             <ul style="list-style-type: none"> <li>○ swing arms forward above head</li> <li>○ view range from side</li> </ul> </li> <li>• backwards flexion             <ul style="list-style-type: none"> <li>○ swing arms directly backwards</li> <li>○ view angle from side</li> </ul> </li> <li>• horizontal flexion and abduction (not routine)</li> </ul>	

# Physical Examination of the Knee

*Clinical Orthopaedic Examination: Ronald McRae*

Inspection	Movements
<ul style="list-style-type: none"><li>• swelling<ul style="list-style-type: none"><li>○ confined to limits of synovial cavity and suprapatellar pouch</li><li>○ extends beyond joint cavity</li></ul></li><li>• lumps</li><li>• discoloration</li><li>• skin marks<ul style="list-style-type: none"><li>○ scars</li><li>○ sinus scars</li><li>○ psoriasis</li></ul></li><li>• temperature<ul style="list-style-type: none"><li>○ knee</li><li>○ foot</li></ul></li><li>• quadriceps<ul style="list-style-type: none"><li>○ inspect/ measure wasting</li><li>○ examine contracted quads</li><li>○ contracted quads dorsiflex inverted foot</li></ul></li><li>• extension apparatus<ul style="list-style-type: none"><li>○ patient sitting legs over side of couch</li><li>○ patient extend leg while you hold ankle</li><li>○ feel quads contraction</li><li>○ note position of patella</li><li>○ place finger along upper broader</li><li>○ look for gaps and tenderness at other levels</li></ul></li><li>• effusion<ul style="list-style-type: none"><li>○ inspection</li><li>○ patellar tap test (ballotement test)</li><li>○ fluid displacement test</li><li>○ palpable fluid wave test</li></ul></li><li>• haemarthrosis</li><li>• pyarthrosis</li><li>• Tenderness<ul style="list-style-type: none"><li>○ joint line structures</li><li>○ collateral ligaments</li><li>○ tibial tubercle</li><li>○ patellar ligament</li><li>○ femoral condyles</li><li>○ Wilson's test</li></ul></li></ul>	<ul style="list-style-type: none"><li>• extension<ul style="list-style-type: none"><li>○ full</li><li>○ hyperextension</li></ul></li><li>• flexion<ul style="list-style-type: none"><li>○ range</li></ul></li><li>• genu valgum (knock knee)<ul style="list-style-type: none"><li>○ unilateral or bilateral</li><li>○ adults</li><li>○ children</li></ul></li><li>• genu varum (bow leg)</li><li>• instability<ul style="list-style-type: none"><li>○ valgus</li><li>○ varus</li><li>○ anterior displacement of tibia</li><li>○ posterior displacement of tibia</li><li>○ rotatory</li></ul></li><li>• the menisci<ul style="list-style-type: none"><li>○ tenderness in joint line</li><li>○ springy block to full extension</li><li>○ oedema</li><li>○ posterior lesions</li><li>○ anterior lesions</li><li>○ McMurray manoeuvre for medial meniscus</li><li>○ McMurray manoeuvre for lateral meniscus</li><li>○ clicks</li><li>○ Apley's grinding test</li><li>○ meniscal cysts</li></ul></li><li>• the patella<ul style="list-style-type: none"><li>○ examine knees flexed over couch</li><li>○ tenderness</li><li>○ Q angle</li><li>○ mobility</li><li>○ pain</li><li>○ apprehension test</li><li>○ crepitus</li><li>○ examine popliteal region</li><li>○ examine the hip</li></ul></li></ul>

# Physical Examination of the thoracic and lumbar spine

*Clinical Orthopaedic Examination: Ronald McRae*

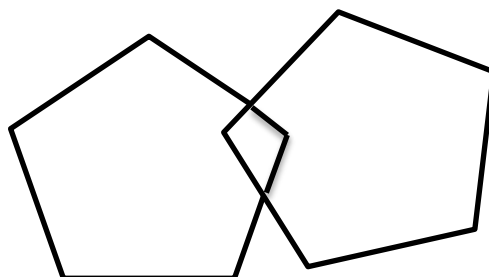
<p><b>Inspection</b></p> <ul style="list-style-type: none"> <li>• from the side – normal posture             <ul style="list-style-type: none"> <li>○ bend forward</li> <li>○ stand upright and brace back and shoulders to produce extension</li> <li>○ note lumbar curvature</li> <li>○ stature</li> </ul> </li> <li>• from behind             <ul style="list-style-type: none"> <li>○ café' au lait spots</li> <li>○ fat pad or hairy patch</li> <li>○ surgical scarring</li> <li>○ scoliosis</li> <li>○ note hips and shoulder level</li> </ul> </li> <li>• patient sitting             <ul style="list-style-type: none"> <li>○ curvature</li> </ul> </li> <li>• bend forward             <ul style="list-style-type: none"> <li>○ check leg lengths</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• suspected prolapsed intervertebral disc</li> <li>• screen hips</li> <li>• straight leg raising test lying down</li> <li>• straight leg raising sitting</li> <li>• standing apply pressure to head</li> <li>• pinch skin at sides</li> <li>• amount of rotation to produce pain</li> <li>• tendon reflexes             <ul style="list-style-type: none"> <li>○ knee jerk</li> <li>○ ankle jerk</li> </ul> </li> <li>• ask patient to dorsiflex both feet</li> <li>• attempt them into plantarflexion against resistance</li> <li>• test dorsiflexion holding toes greater and lesser</li> <li>• test plantarflexion holding toes greater and lesser</li> <li>• encircle feet with hands, test power of peronei against resistance</li> <li>• pin prick sensation             <ul style="list-style-type: none"> <li>○ dermatomes lower limb</li> <li>○ perineal</li> </ul> </li> <li>• suspected thoracic cord compression             <ul style="list-style-type: none"> <li>○ abdominal reflexes</li> </ul> </li> <li>• suspected thoracic motor root dysfunction             <ul style="list-style-type: none"> <li>○ lay down place hands behind head, flex knees and sit up</li> </ul> </li> <li>• suspected ankylosing spondylitis             <ul style="list-style-type: none"> <li>○ check chest expansion at fourth interspace</li> </ul> </li> <li>• suspected sacroiliac joint involvement             <ul style="list-style-type: none"> <li>○ flex hip and knee and forcibly adduct hip</li> <li>○ pelvic compression</li> <li>○ open out pelvis with thumbs hocked around anterior spines</li> </ul> </li> <li>• abdominal examination             <ul style="list-style-type: none"> <li>○ rectal or vaginal examination depending on findings</li> </ul> </li> <li>• circulation             <ul style="list-style-type: none"> <li>○ peripheral pulses and circulation</li> </ul> </li> </ul>
<p><b>Palpation</b></p> <ul style="list-style-type: none"> <li>• sitting leaning forward</li> <li>• tenderness             <ul style="list-style-type: none"> <li>○ between spines</li> <li>○ over lumbar muscles</li> <li>○ sacroiliac joints</li> <li>○ renal</li> <li>○ higher in spine</li> </ul> </li> <li>• standing</li> <li>• slide fingers down lumbar spine to sacrum             <ul style="list-style-type: none"> <li>○ note any curve irregularity</li> <li>○ change in friction</li> </ul> </li> </ul>	
<p><b>Percussion</b></p> <ul style="list-style-type: none"> <li>• standing bend forward</li> <li>• lightly percuss spine root of neck to sacrum</li> </ul>	
<p><b>Movements</b></p> <ul style="list-style-type: none"> <li>• flexion</li> <li>• attempt to touch toes             <ul style="list-style-type: none"> <li>○ smoothness</li> <li>○ areas of restriction</li> <li>○ hip flexion</li> <li>○ measure spine when erect and when bent forward</li> </ul> </li> <li>• patient to arch back with support</li> <li>• patient to slide hands down each side of leg</li> <li>• patient seated and twist to each side</li> </ul>	

## Mental State Examination

*Clinical Examination: A Systematic Guide to Physicians Diagnosis*

*Nicholas Talley and Simon O'Connor*

Orientation	Score	Max
<p>'What is the (year) (season) (date) (day) (month)?' Ask for the date, then specifically ask about the parts omitted (e.g. season).</p> <p>Score 1 point for each correct answer</p>		5
<p>'Where are we (country) (state) (town) (hospital) (ward)?' Ask in turn for each place.</p> <p>Score 1 point for each correct answer.</p>		5
<b>Registration</b>		
<p>'May I test your memory?' Repeat three objectives (e.g. pen, watch, book).</p> <p>Score 1 point for each correct answer.</p> <p>Then repeat until the patient learns all three. Count trials and record up to six.</p>		3
<b>Attention and calculation</b>		
<p>'Count backwards from 100 by sevens.'</p> <p>One point for each answer (93, 86, 79, 65)</p> <p>Or spell "world" backwards</p> <p>Score 1 point for each letter correct.</p>		5
<b>Recall</b>		
<p>Ask patient to recall the three objects in 'registration', above.</p> <p>Score 1 point for each correct answer.</p>		3
<b>Language</b>		
<p>Ask the patient to name two objects shown (e.g. pen, and watch).</p> <p>Score 0-2 points.</p> <p>'Repeat the following:" No ifs ands or buts". Score 1 point.</p> <p>Ask the patient to follow a three stage command e.g. 'Take this paper in your right hand, fold it in half and put on the table.'</p> <p>Score 1 point for each step.</p> <p>Read and obey the following:</p> <p>Close your eyes. Score 1 point.</p> <p>Write a sentence.</p> <p>Do not dictate-must be sensible, but punctuation and grammar not essential. Score 1 point.</p> <p>Copy this design (<i>see below</i>)</p> <p>All ten angles must be present, and the two must intersect. Score 1 point.</p>		2 1 3 1 1 1
<b>TOTAL</b>		<b>/30</b>
Assess patient's level of consciousness along a continuum		
Alert	Drowsy	Stuporose
		Comma
Scores of 21-29 indicate mild cognitive impairment.		
Scores below 20 indicate more sever cognitive impairment, and are likely to be due to dementia, especially if obtained on repeated examinations		



# Paediatrics

## Physical Examination of the Neonate

Queensland Maternity and Neonatal Clinical Guideline

<b>Position</b> <i>effectively prepared for examination</i>	<b>Abdomen</b> <ul style="list-style-type: none"> <li>• size</li> <li>• shape</li> <li>• symmetry</li> <li>• palpate organs</li> <li>• umbilicus</li> </ul>
<b>General appearance</b> <ul style="list-style-type: none"> <li>• skin colour</li> <li>• anomalies</li> <li>• alertness</li> </ul>	<b>Genitourinary structure</b> <ul style="list-style-type: none"> <li>• penis</li> <li>• foreskin</li> <li>• testes</li> <li>• clitoris</li> <li>• labia</li> <li>• hymen</li> <li>• anus position</li> <li>• passage of urine</li> <li>• passage of stool</li> </ul>
<b>Growth status</b> <ul style="list-style-type: none"> <li>• head circumference</li> <li>• weight</li> <li>• length</li> <li>• plot on centile chart</li> </ul>	<b>Back</b> <ul style="list-style-type: none"> <li>• spinal column</li> <li>• skin</li> <li>• symmetry of scapulae</li> <li>• symmetry of buttocks</li> </ul>
<b>Head/face and neck</b> <ul style="list-style-type: none"> <li>• shape</li> <li>• size</li> <li>• fontanelles</li> <li>• sutures</li> <li>• eyes</li> <li>• nose</li> <li>• ears-position</li> <li>• mouth</li> <li>• palate</li> <li>• tongue</li> <li>• jaw</li> </ul>	<b>Hips/legs and feet</b> <ul style="list-style-type: none"> <li>• ortolani's manoeuver</li> <li>• barlow's manoeuver</li> <li>• leg length</li> <li>• proportions symmetry</li> <li>• digits</li> </ul>
<b>Clavicles/arms and hands</b> <ul style="list-style-type: none"> <li>• length</li> <li>• proportion</li> <li>• symmetry</li> <li>• digits</li> </ul>	<b>Neurological function</b> <ul style="list-style-type: none"> <li>• posture</li> <li>• behaviour</li> <li>• movements</li> <li>• muscle tone</li> <li>• cry</li> <li>• reflexes (moro, rooting, suck, grasp, stepping)</li> </ul>
<b>Chest/cardiorespiratory system</b> <ul style="list-style-type: none"> <li>• size</li> <li>• shape</li> <li>• nipples</li> <li>• heart sounds</li> <li>• heart rate</li> <li>• pulses</li> <li>• breath sounds</li> <li>• respiratory rate</li> </ul>	

## First Antenatal Examination

<b>Measurements</b> <ul style="list-style-type: none"> <li>• height</li> <li>• weight</li> <li>• BMI</li> </ul>	<b>Breast examination</b> <ul style="list-style-type: none"> <li>• if in early pregnancy</li> </ul>
	<b>Fundal height/foetal heart rate</b> <ul style="list-style-type: none"> <li>• if appropriate</li> </ul>
<b>Cardiovascular</b> <ul style="list-style-type: none"> <li>• pulse</li> <li>• blood pressure</li> <li>• heart sounds</li> </ul>	<b>Urinalysis</b>
	<b>Edinburgh depression scale</b> <ul style="list-style-type: none"> <li>• usually will be done in maternity unit</li> </ul>
<b>Dental review</b>	<b>Vaginal examination</b> <ul style="list-style-type: none"> <li>• pap smear if due</li> </ul>

## Paediatric Examination ENT

<i>Interacts with the child appropriately</i> <i>Ensures child is held in a safe position for the examination</i>	<b>Mouth</b> <ul style="list-style-type: none"> <li>• lips</li> <li>• gingiva</li> <li>• teeth</li> <li>• mucosa</li> <li>• tongue</li> <li>• palate</li> <li>• pharynx</li> <li>• tonsils: size/symmetry/exudate</li> </ul>
<b>Ears</b> <ul style="list-style-type: none"> <li>• shape/Size/Position pinnae</li> <li>• preauricular lesions</li> <li>• external ear canal</li> <li>• otoscopic examination</li> </ul>	
<b>Nose</b> <ul style="list-style-type: none"> <li>• shape</li> <li>• size</li> <li>• position</li> <li>• inspection of internal structures</li> </ul>	<b>Neck</b> <ul style="list-style-type: none"> <li>• shape</li> <li>• height</li> <li>• neck vessels</li> <li>• masses</li> <li>• nodes</li> <li>• thyroid</li> </ul>

## Paediatric Chest Examination

<b>General appearance</b> <ul style="list-style-type: none"> <li>• chest wall</li> <li>• symmetry</li> <li>• shape</li> <li>• nipple alignment</li> <li>• breathing pattern</li> </ul>	<b>Heart</b> <ul style="list-style-type: none"> <li>• peripheral pulses</li> <li>• palpation of heart</li> </ul>
	<b>Lungs</b> <ul style="list-style-type: none"> <li>• Auscultation</li> </ul>
<b>Breasts</b>	



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