MINI-OSCE

MACLEOD

OPHTHALMO

الفريق الأكاديمي
لجنة الطب والجراحة

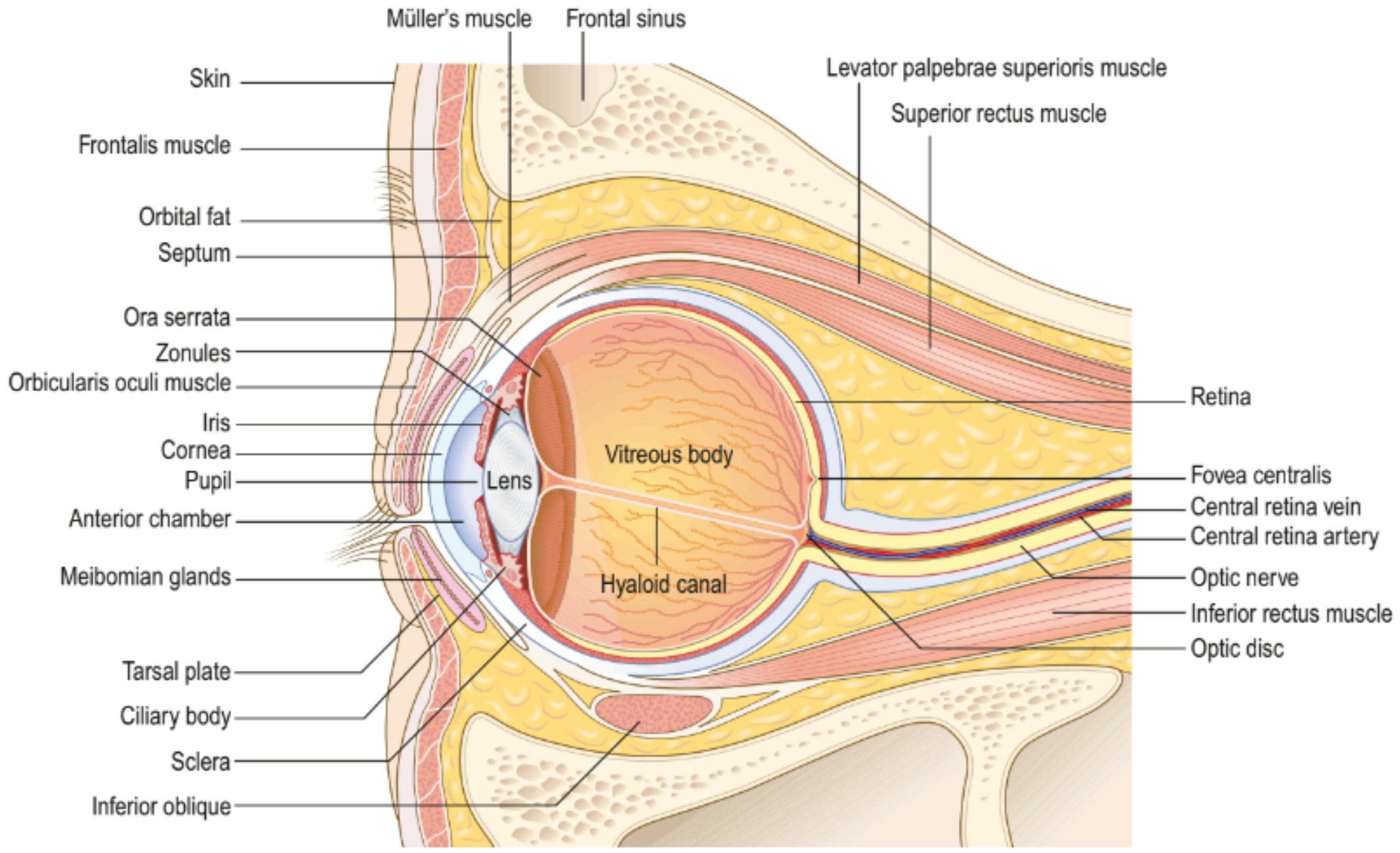


Fig. 8.1 **Cross-section of the eye and orbit (sagittal view).**

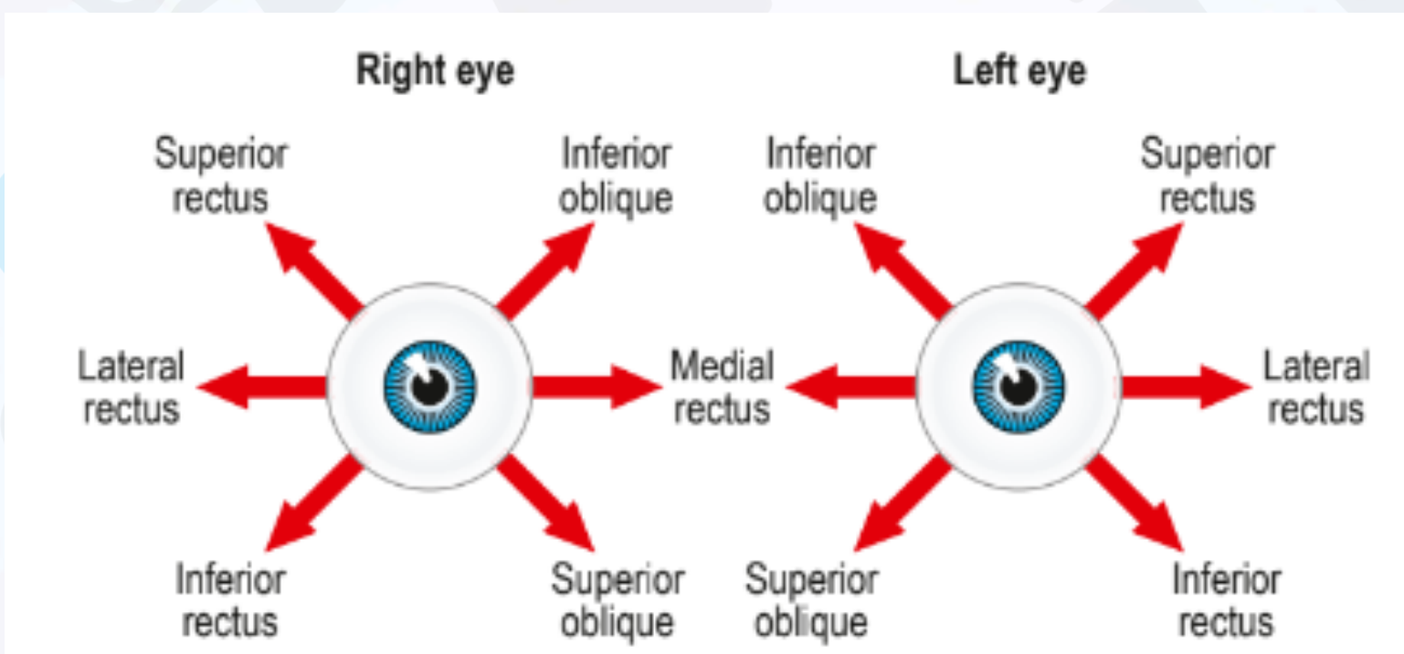


Fig. 8.2 **Control of eye movements.** The direction of displacement of the pupil by normal contraction of a particular muscle can be used to work out which eye muscle is paretic.

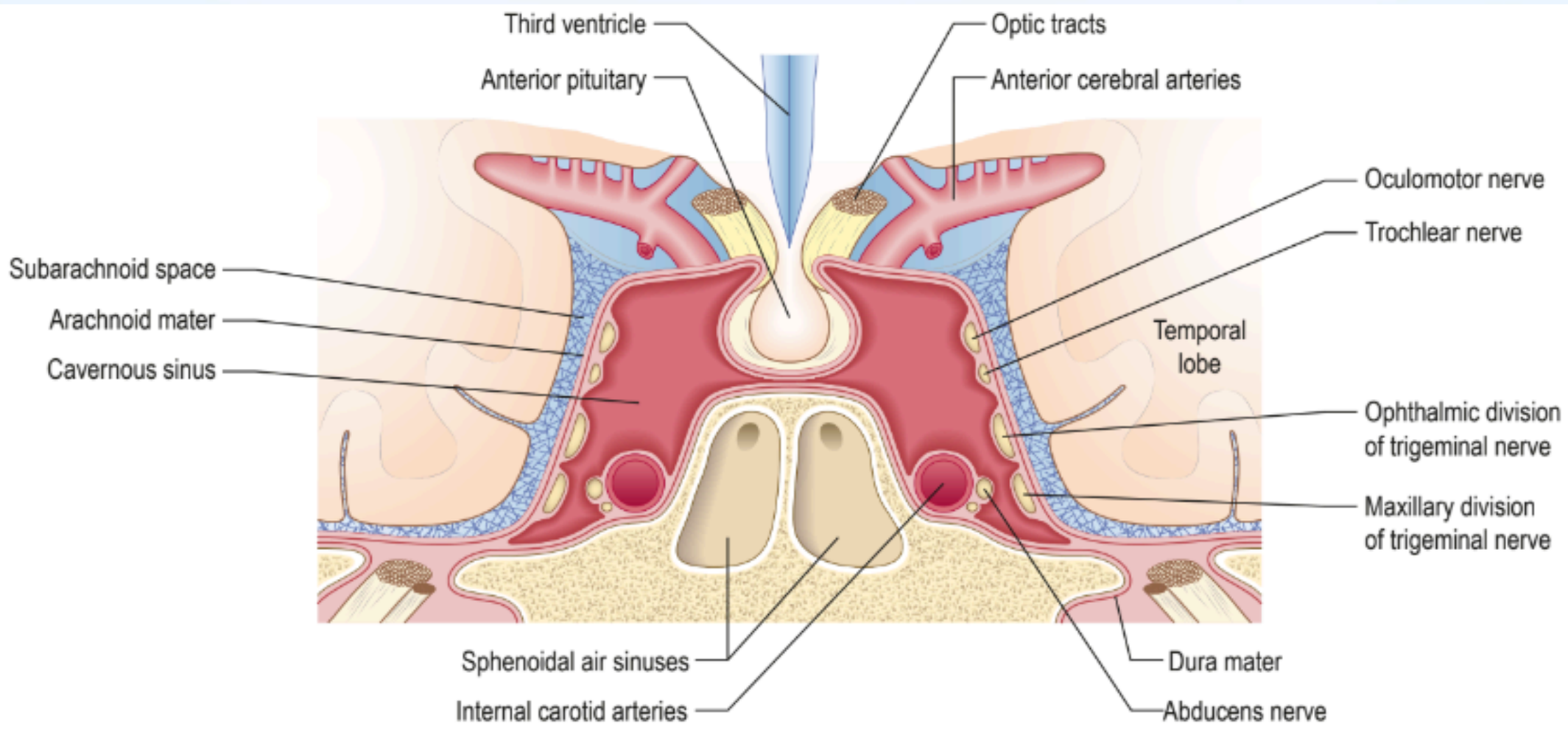


Fig. 8.3 **Cavernous sinus (coronal view).** Neuroanatomy of cranial nerves III, IV and VI.

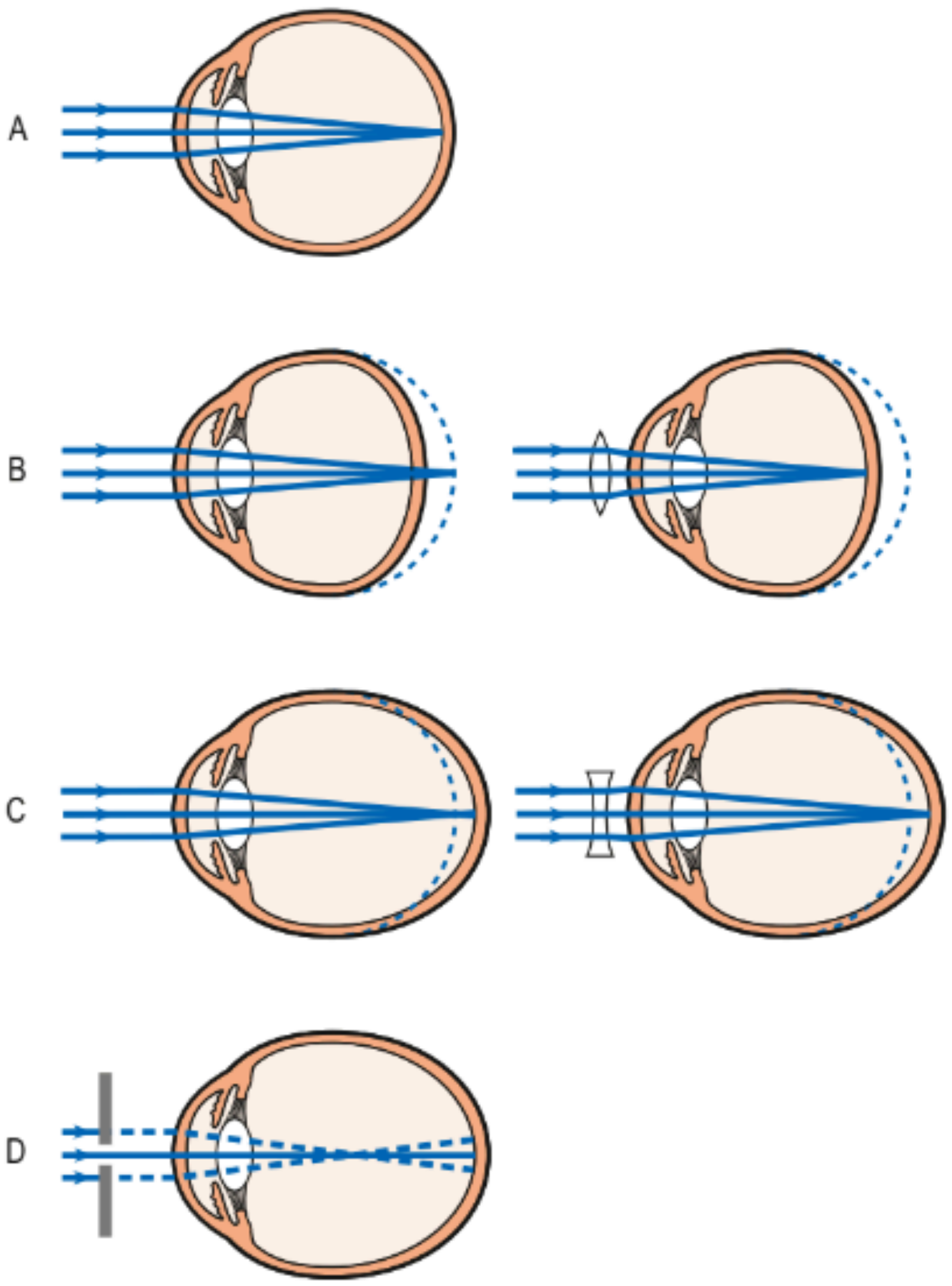


Fig. 8.4 **Normal and abnormal refraction by the cornea and lens.** A Emmetropia (normal refraction). Cornea and lens focus light on the retina. B Hypermetropia (long-sightedness). The eye is too short and the image focuses behind the retina. A convex (plus) lens focuses the image on the retina. C Myopia (short-sightedness). The eye is too long and the image focuses in front of the retina. A concave (minus) lens focuses the image on the retina. D Myopia corrected using a pinhole, which allows only rays not requiring refraction to pass to the retina.

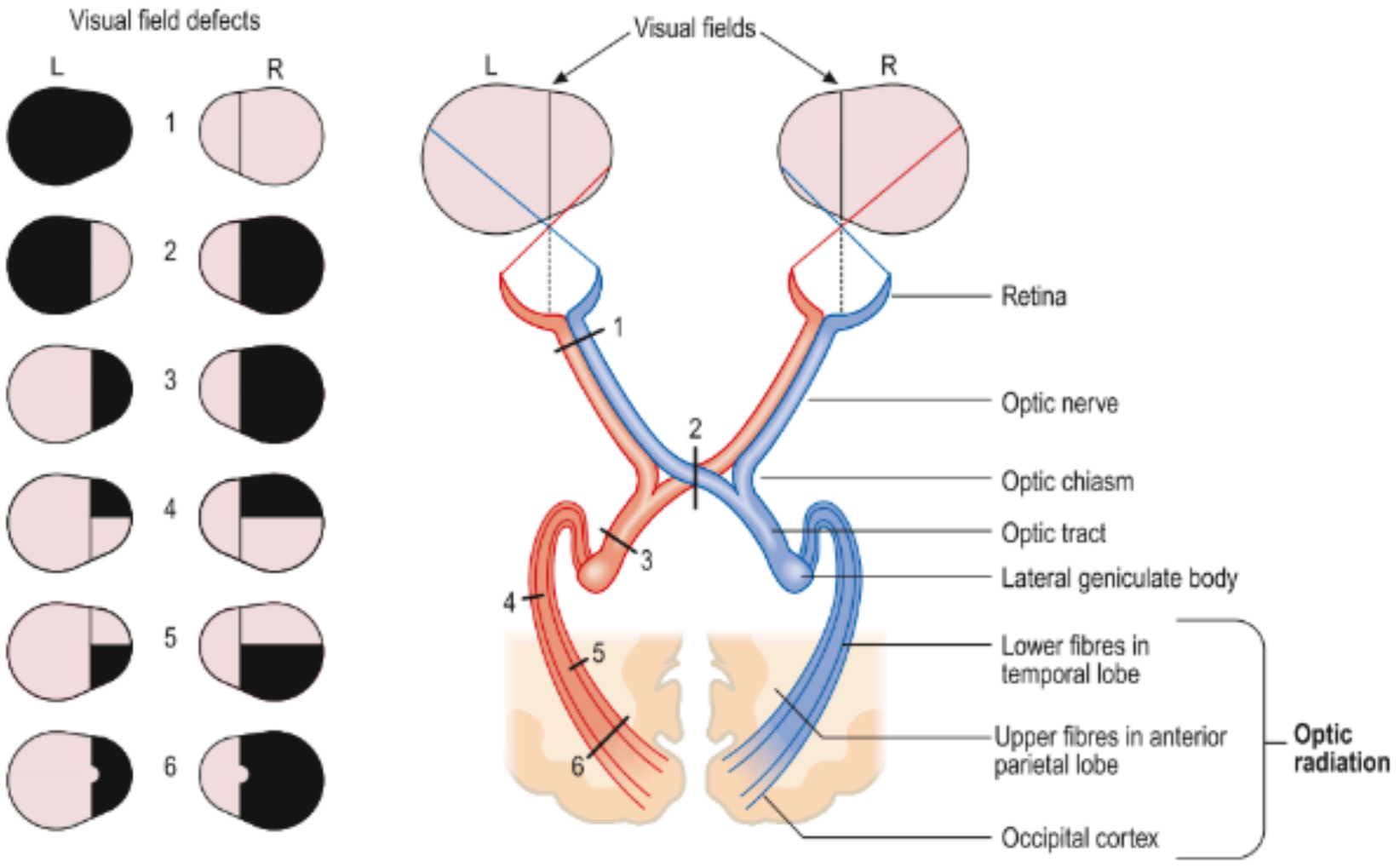


Fig. 8.5 **Visual field defects.** 1, Total loss of vision in one eye because of a lesion of the optic nerve. 2, Bitemporal hemianopia due to compression of the optic chiasm. 3, Right homonymous hemianopia from a lesion of the optic tract. 4, Upper right quadrantanopia from a lesion of the lower fibres of the optic radiation in the temporal lobe. 5, Lower quadrantanopia from a lesion of the upper fibres of the optic radiation in the anterior part of the parietal lobe. 6, Right homonymous hemianopia with sparing of the macula due to a lesion of the optic radiation in the occipital lobe.

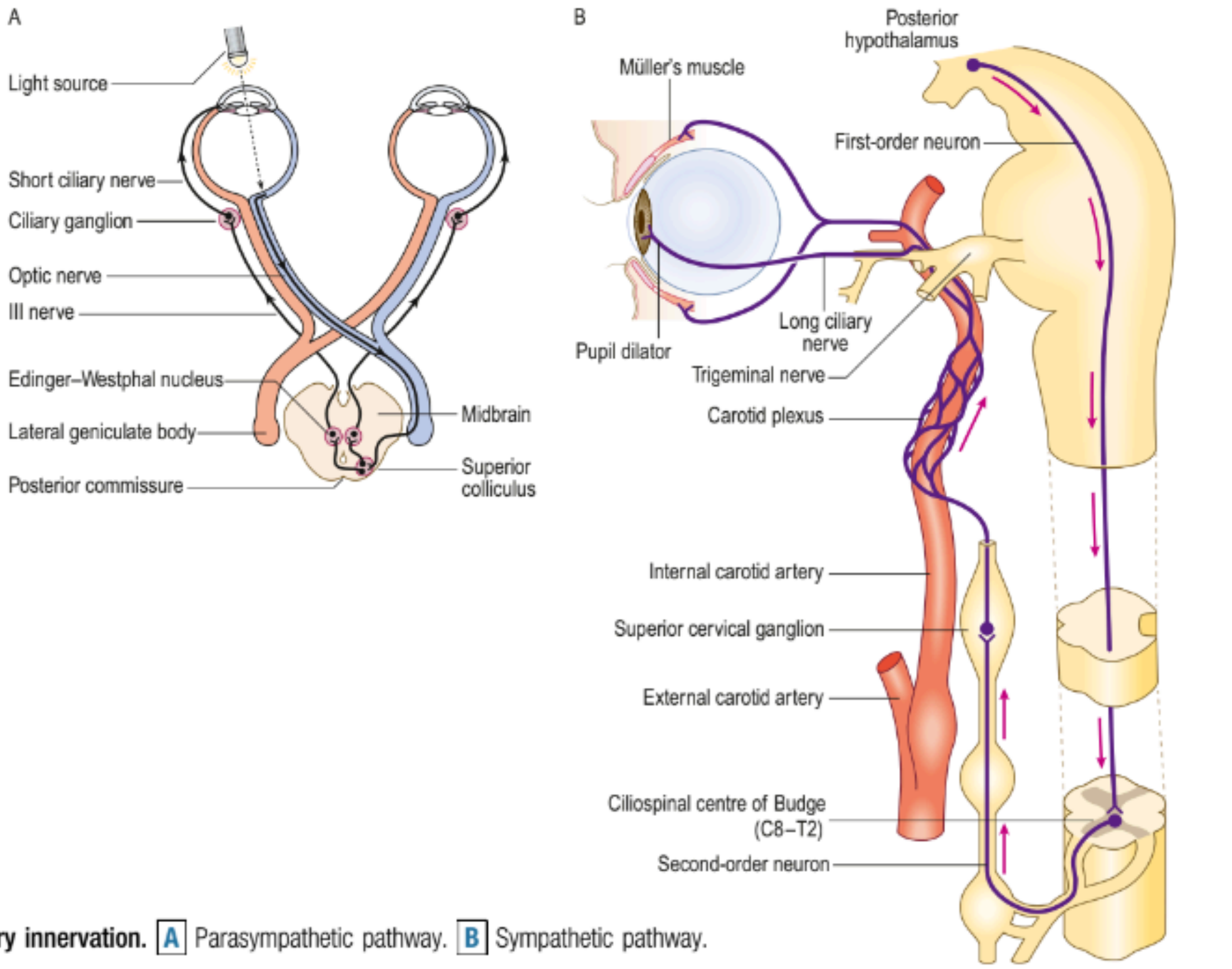


Fig. 8.6 Pupillary innervation. A Parasympathetic pathway. B Sympathetic pathway.

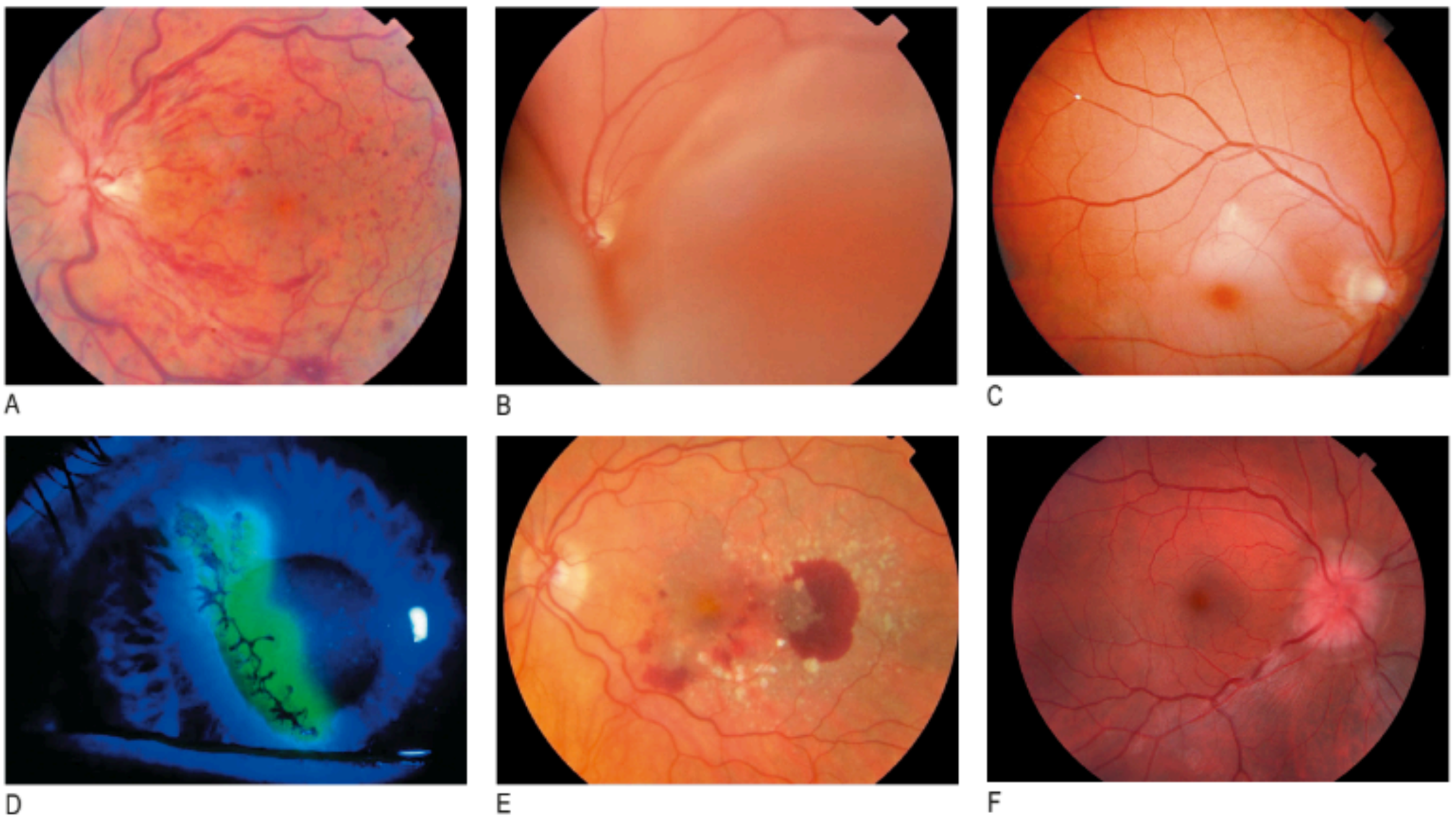


Fig. 8.7 Common causes of an acute change in vision. A Central retinal vein occlusion. B Retinal detachment. Elevation of the retina around the 'attached' optic disc; the retina may even be visible on viewing the red reflex. C Central retinal arterial occlusion. D Herpes simplex virus keratitis. E Wet age-related macular degeneration. F Swollen optic nerve head in acute optic neuritis.

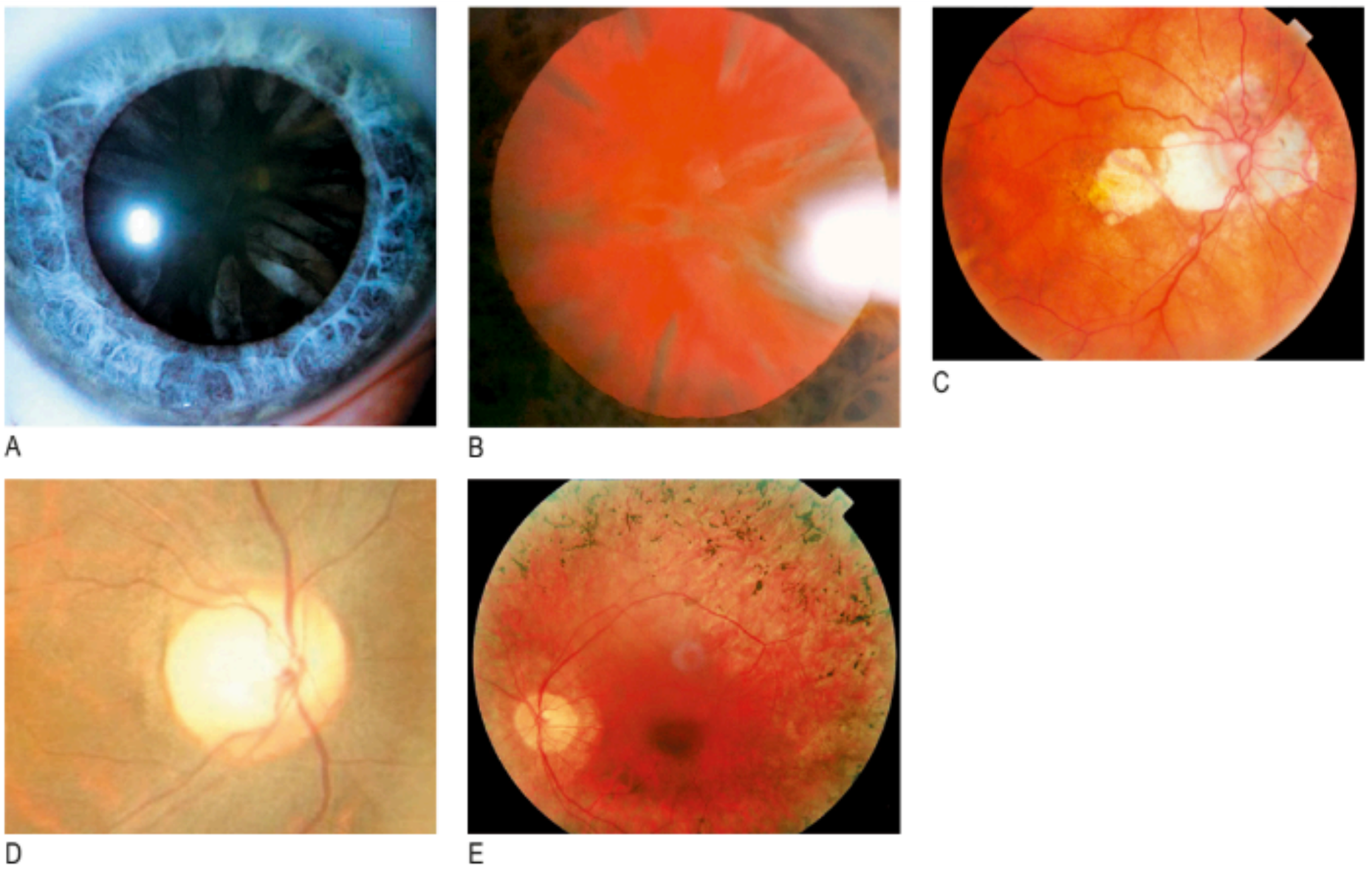


Fig. 8.8 Common causes of a gradual loss of vision. A Cataract. B Altered red reflex in cataract. C Dry age-related macular degeneration. D Compressive optic neuropathy. Optic nerve sheath meningioma causing optic disc pallor and increased disc cupping with sparing of the outer optic nerve rim. E Retinitis pigmentosa: a triad of optic atrophy, attenuated retinal vessels and pigmentary changes. The latter typically start peripherally with an associated ring scotoma and symptoms of night blindness.

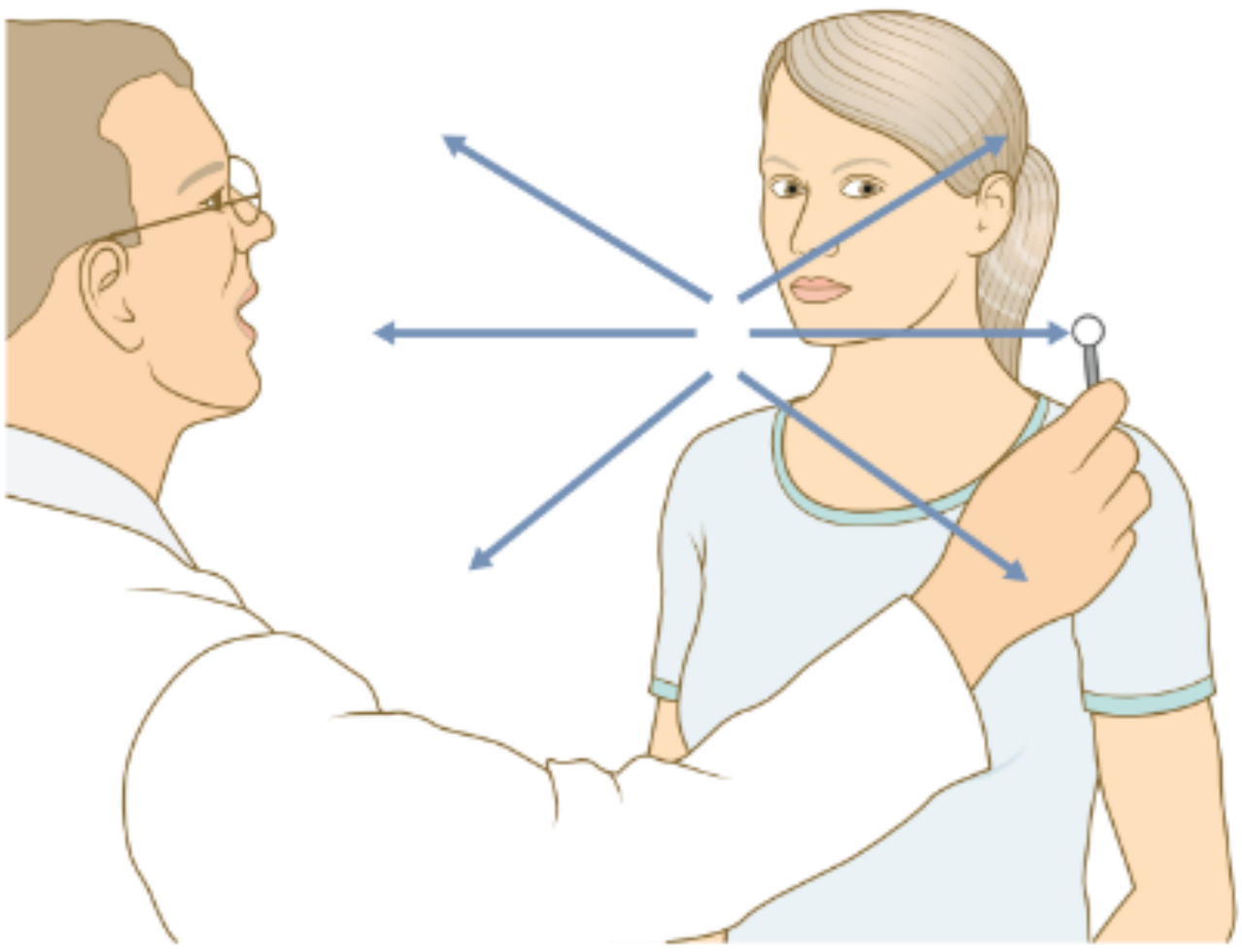


Fig. 8.9 Testing the six positions of gaze. Sit facing the patient, 1 metre away. Perform the test with both eyes open. Hold a pen torch or target in front of the patient and move it to the six positions of gaze *(blue arrows)*. Ask if they see the target as double.

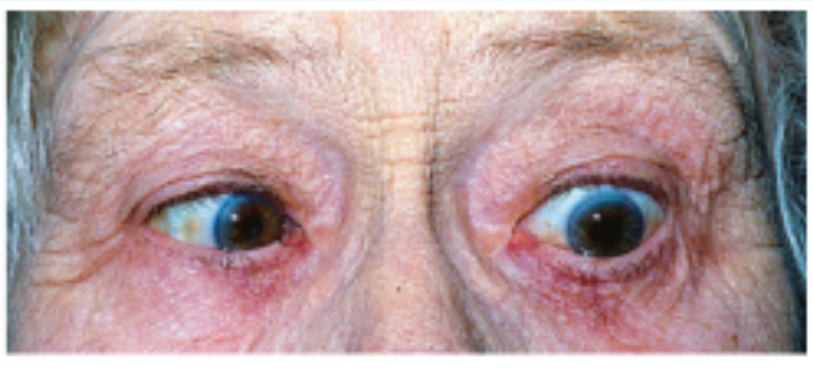
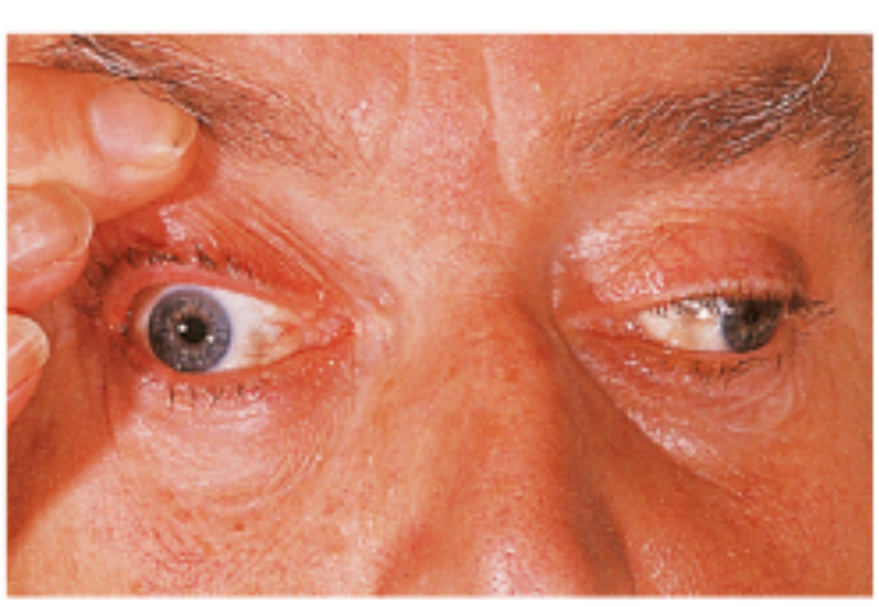


Fig. 8.10 L sided sixth nerve palsy causing weakness of the lateral rectus. The patient is attempting to look left.

A



B

Fig. 8.11 Third nerve palsy. A Complete ptosis in R third nerve palsy. B The same patient looking down and left. The affected R eye is unable to adduct or depress and remains slightly abducted due to unopposed action of the lateral rectus. *From Forbes CD, Jackson WF. Color Atlas of Clinical Medicine. 3rd ed, Edinburgh: Mosby; 2003.*

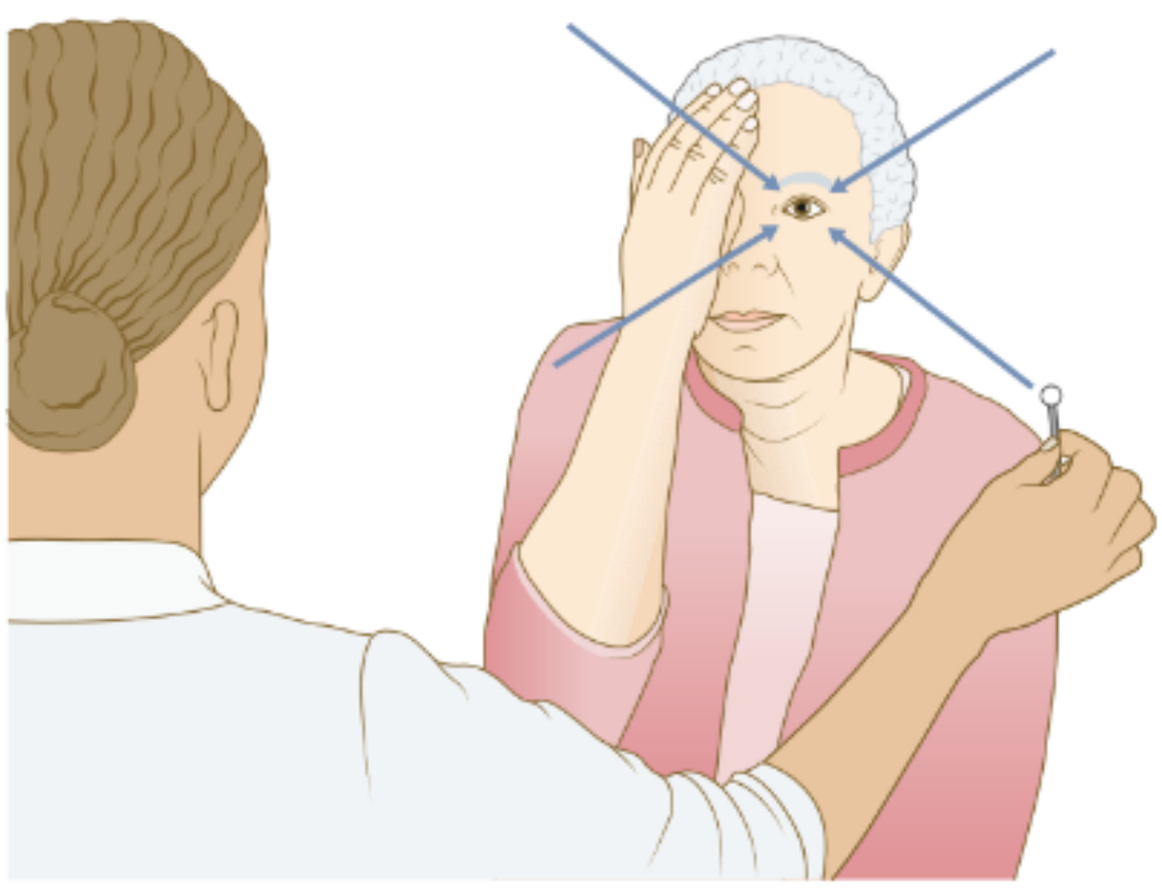


Fig. 8.12 Confrontation visual field testing. Sit facing the patient, 1 metre away. To compare your visual field (assumed normal) with the patient's, present a white target or your fingers at a point equidistant between yourself and the patient in the periphery. Bring the target inwards in the direction of the blue arrows, asking the patient to alert you when they first see it. Test each eye separately.

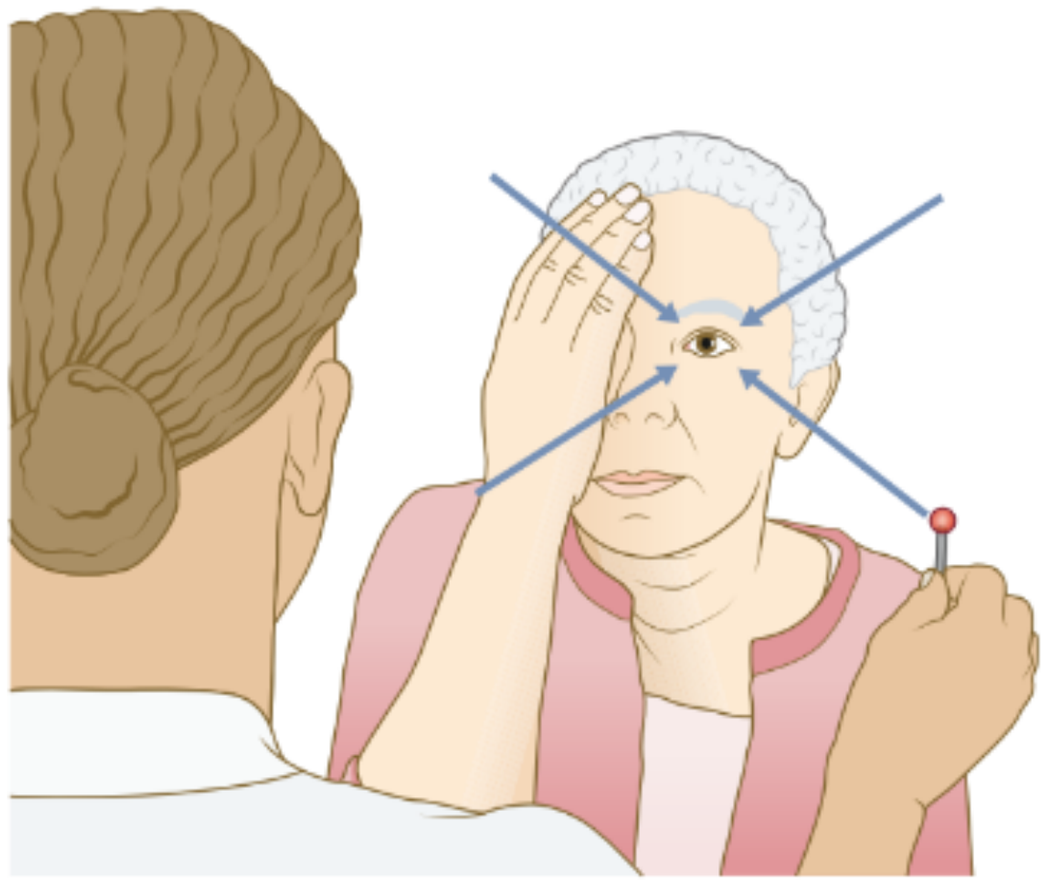


Fig. 8.13 Testing the central visual field. Sit facing the patient, 1 metre away. Present a red target at a point equidistant between yourself and the patient in the periphery, starting when you can first see the target as red. Bring the target inwards in the direction of the blue arrows, asking the patient to alert you when they first see the target as red. Test each eye separately.

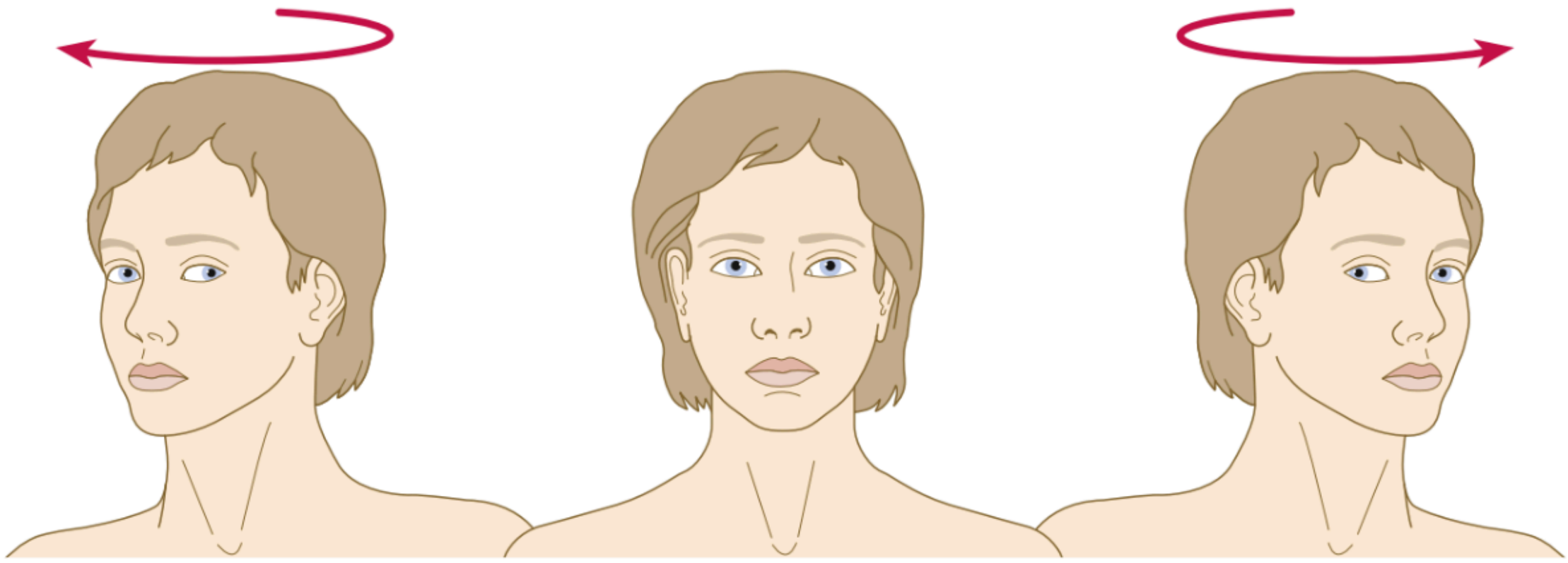
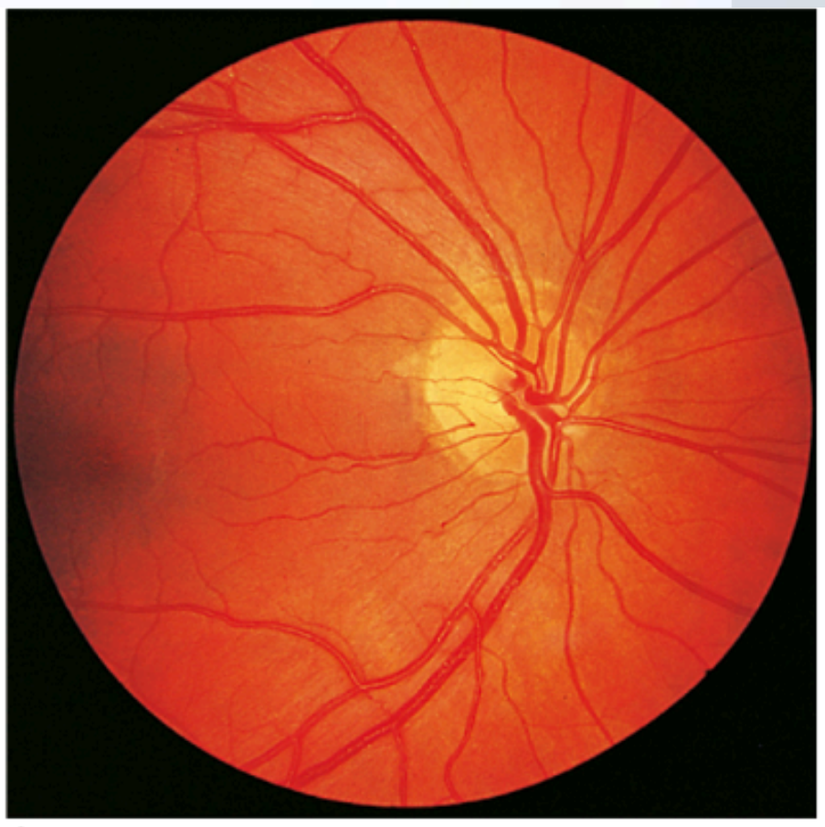


Fig. 8.14 Oculocephalic reflex. Move the head in the horizontal plane. Note that the eyes move in the opposite direction to head movement.

Fig. 8.15 Ophthalmoscopy. Ask the patient to focus on a distant target. To examine the left eye, use your left eye to look through the ophthalmoscope and left hand to hold it, index finger on the wheel. Hold the patient's head with your free hand. Gradually move in to visualise the optic disc. Rotate the wheel to obtain a clear, focused image.



A

B

Fig. 8.16 The normal fundus. A Caucasian. B Asian.

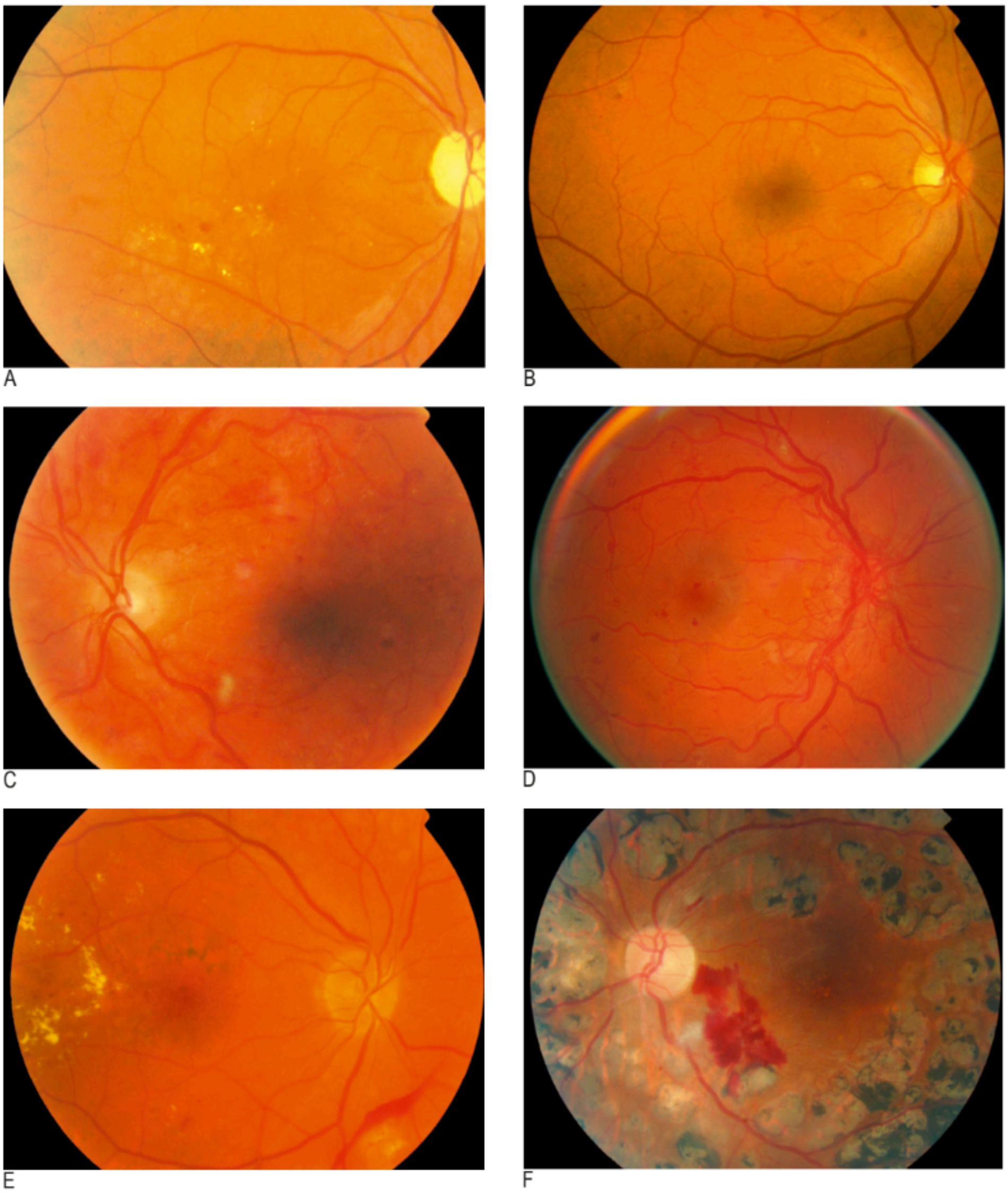
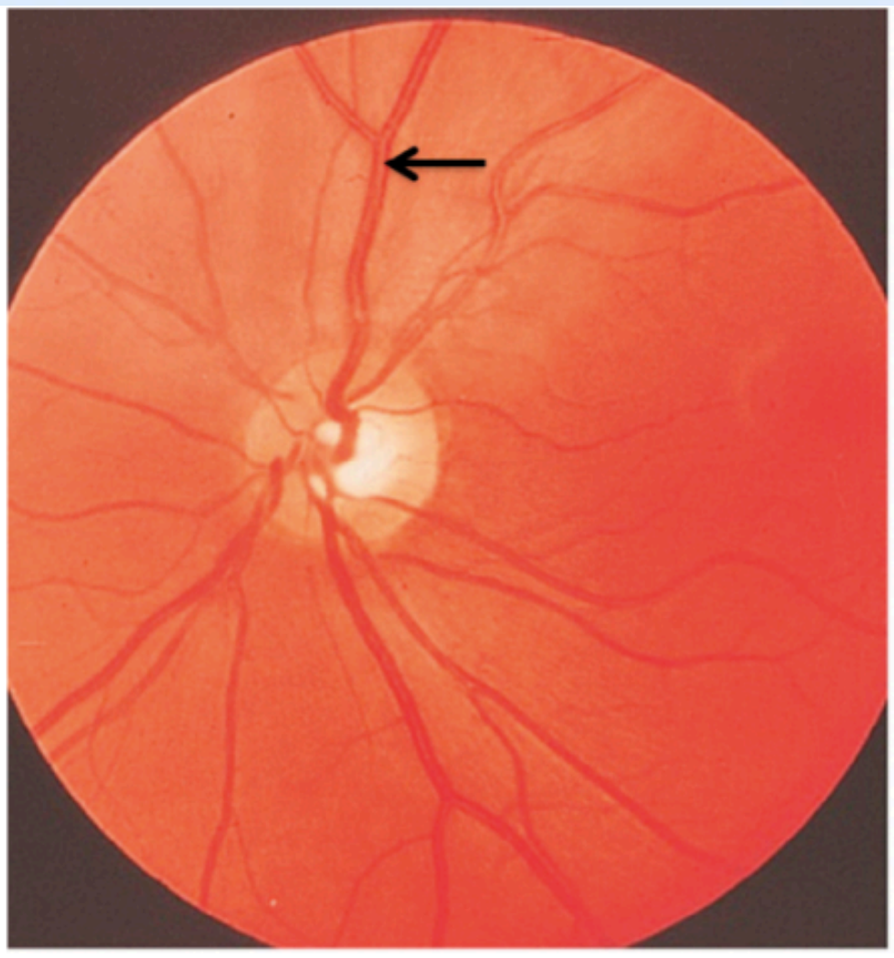


Fig. 8.17 Retinal abnormalities in diabetes mellitus. A Diabetic maculopathy with yellowish hard exudates near the fovea and macular blot haemorrhages. B Background diabetic retinopathy: dot and blot haemorrhages and a cotton wool spot in the macula. C Severe non-proliferative diabetic retinopathy: dot and blot haemorrhages in all quadrants, intraretinal microvascular abnormalities superotemporally and scattered cotton wool spots. D Proliferative diabetic retinopathy with extensive neovascularisation at the disc. E Proliferative diabetic retinopathy: vitreous haemorrhage and circinate hard exudates in the macula. F Treated proliferative diabetic retinopathy: pigmented scars from panretinal laser photocoagulation and persistent haemorrhage in a regressed neovascular complex inferotemporally.



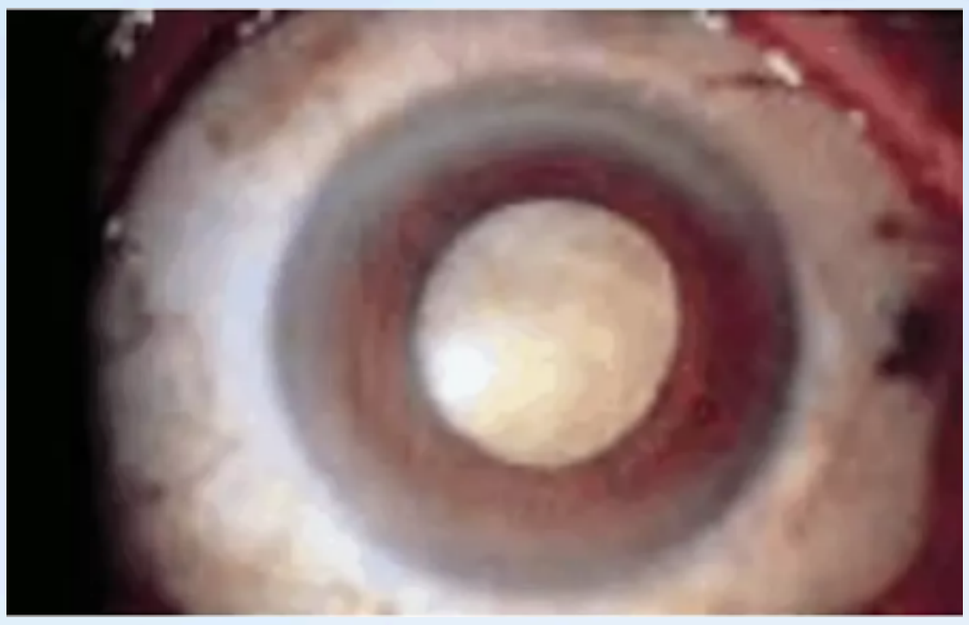
A

B

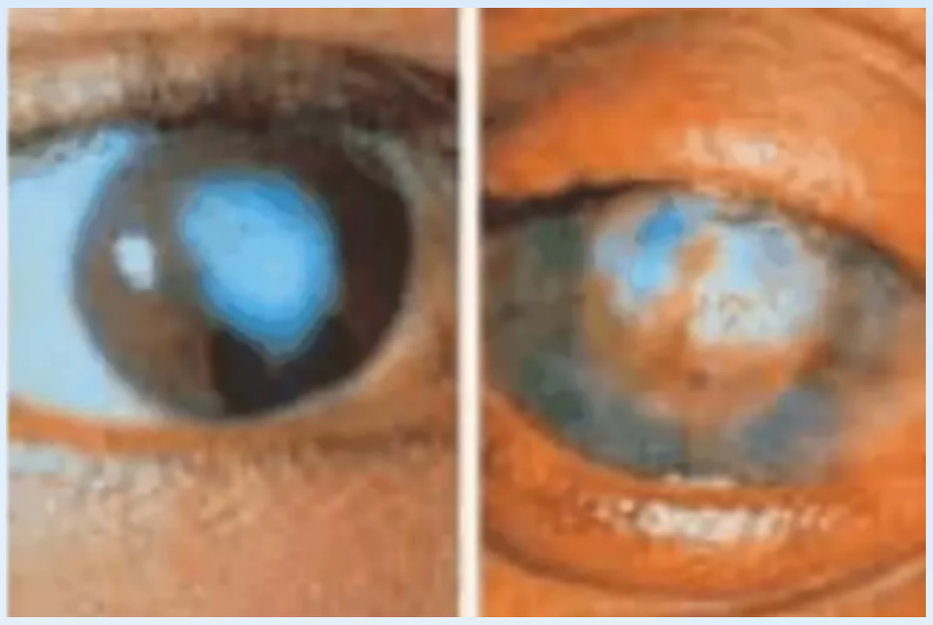
C

D

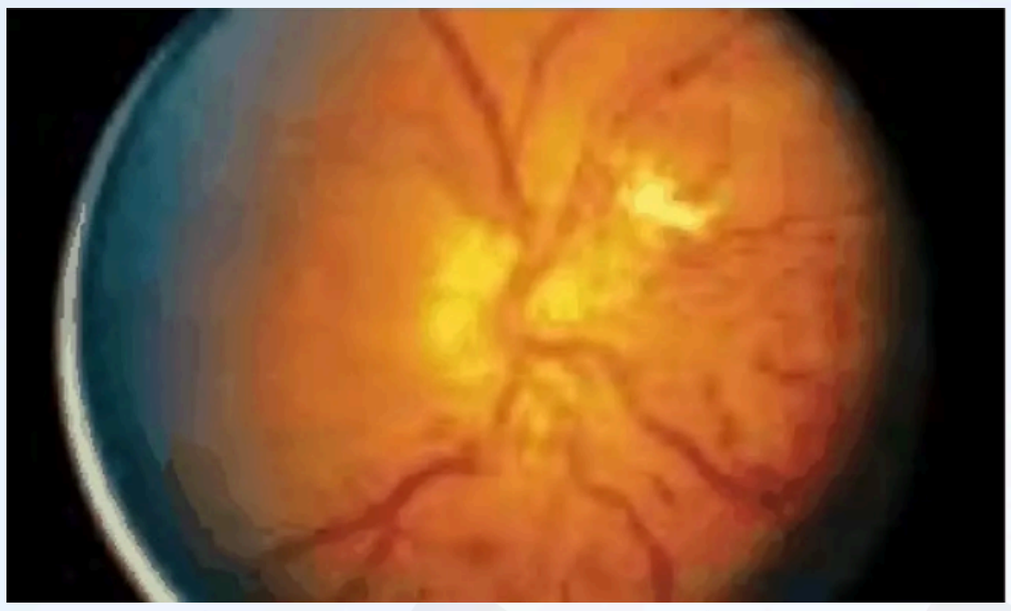
Fig. 8.18 Hypertensive retinopathy. A Increased reflectance, giving a silver wiring appearance to the arteriole *(arrow)*. B Focal arteriolar narrowing *(double arrows)* seen in grade 2 disease. C Exudates and flame haemorrhages in grade 3 retinopathy. D Signs of malignant hypertension in grade 4 disease with a swollen optic disc and macular exudate.



cataract

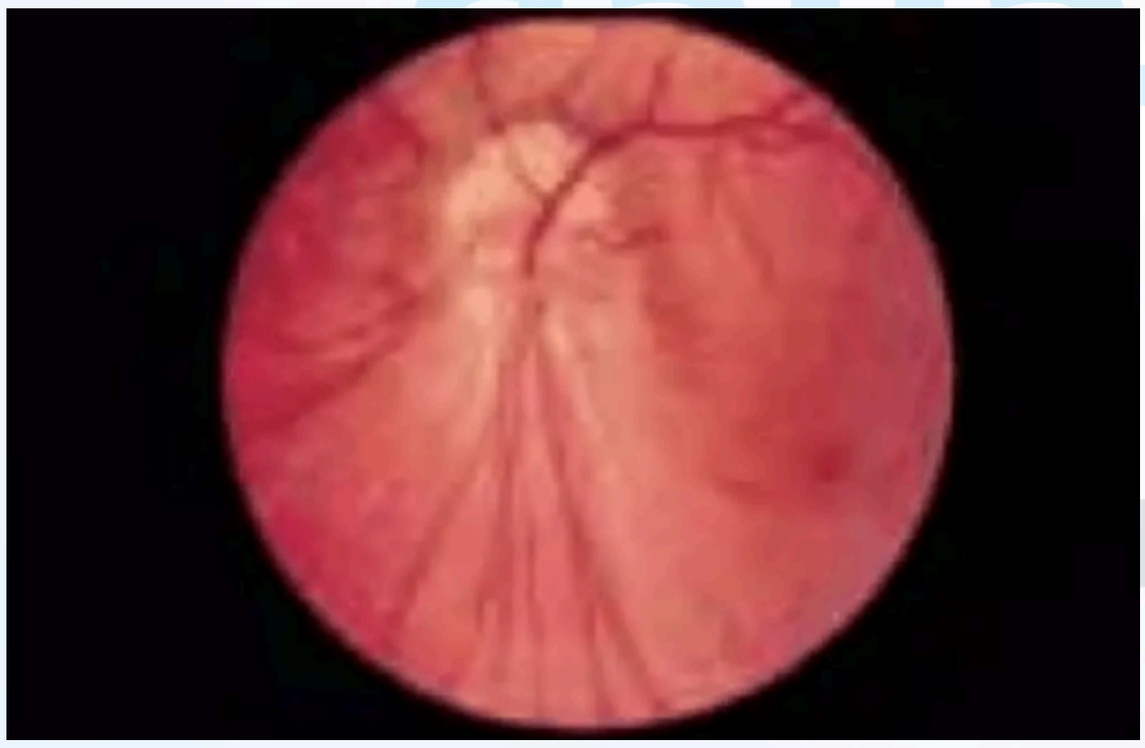


trachoma



Exudative maculopathy with neW vessels

trachoma



Tractional retinal detachment

MINI-OSCE

MACLEOD

LOCOMOTOR SYSTEM

الفريق الأكاديمي

لجنة الطب والجراحة

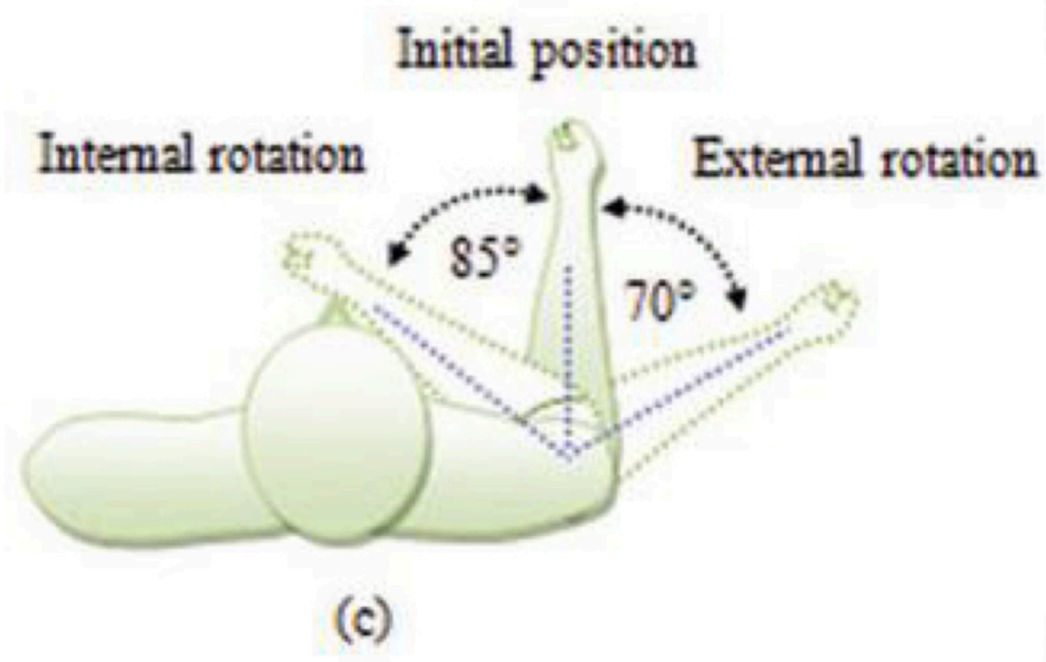
Lecture's Pictures

Swelling

Redness

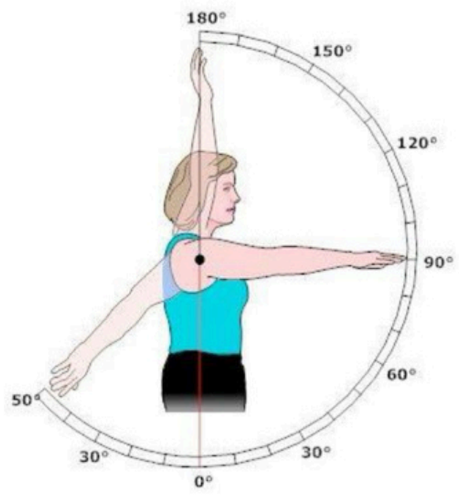
Deformity

Valgus and Varus

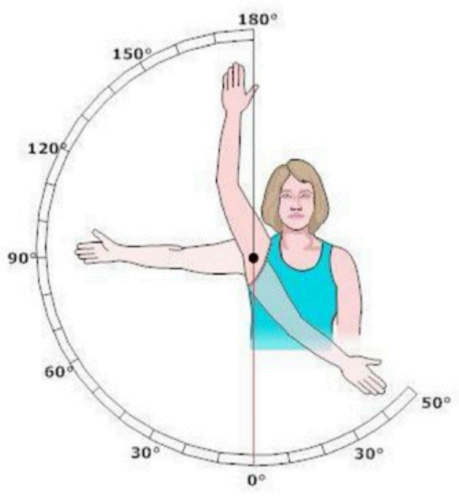


Special Joint and Special Test

Range of Motion: Shoulder SmartDraw



Shoulder Flex/Ext:
Lateral view of woman exhibiting normal range of movement in the flexion and extension of the arm at the shoulder joint.



Shoulder Abd/Add:
Anterior view of woman exhibiting normal range of movement in the abduction and adduction of the arm at the shoulder joint.

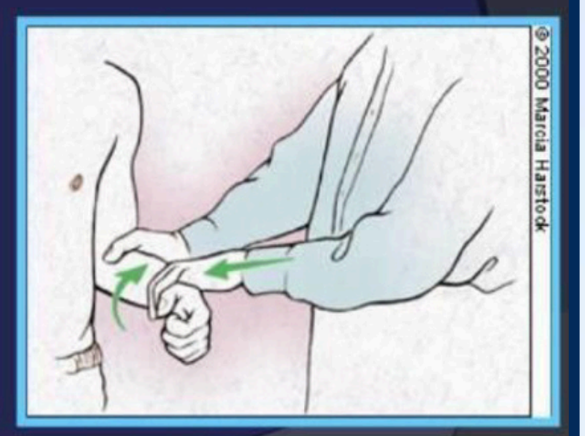
Lecture's Pictures

Biceps

Palms up with elbows bent to 15° flexion and resisted upward motion (Speed's test) — biceps

Biceps Tendon/Labrum
Yergason's Test

- Elbow flexed to 90° with thumb up
- Grasp hand (hand shake)
- Patient supinates against resistance

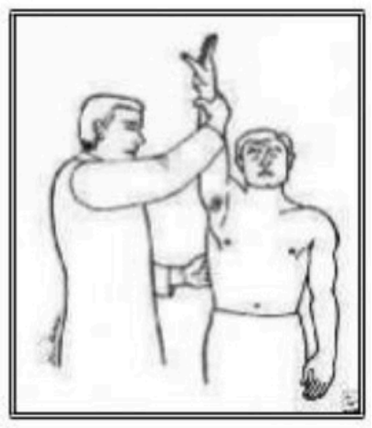


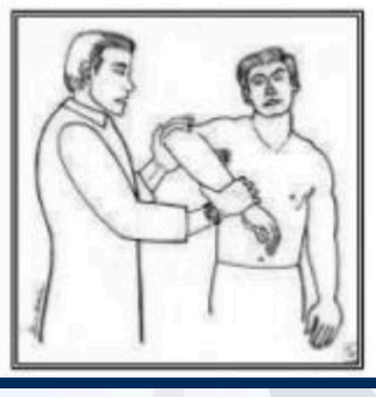
Simultaneous resisted supination and elbow flexion (Yergason's test) — biceps

TESTS FOR IMPINGEMENT

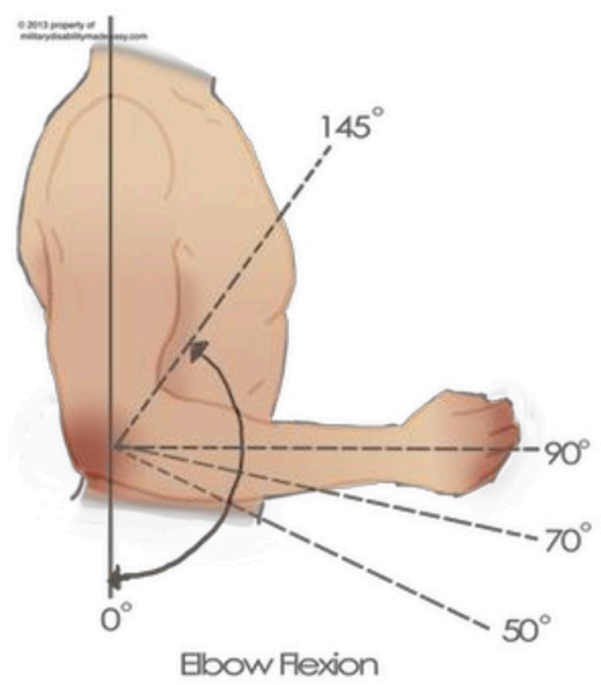
- Neer's sign
- Neer's test
- Hawkins test

Neer's sign





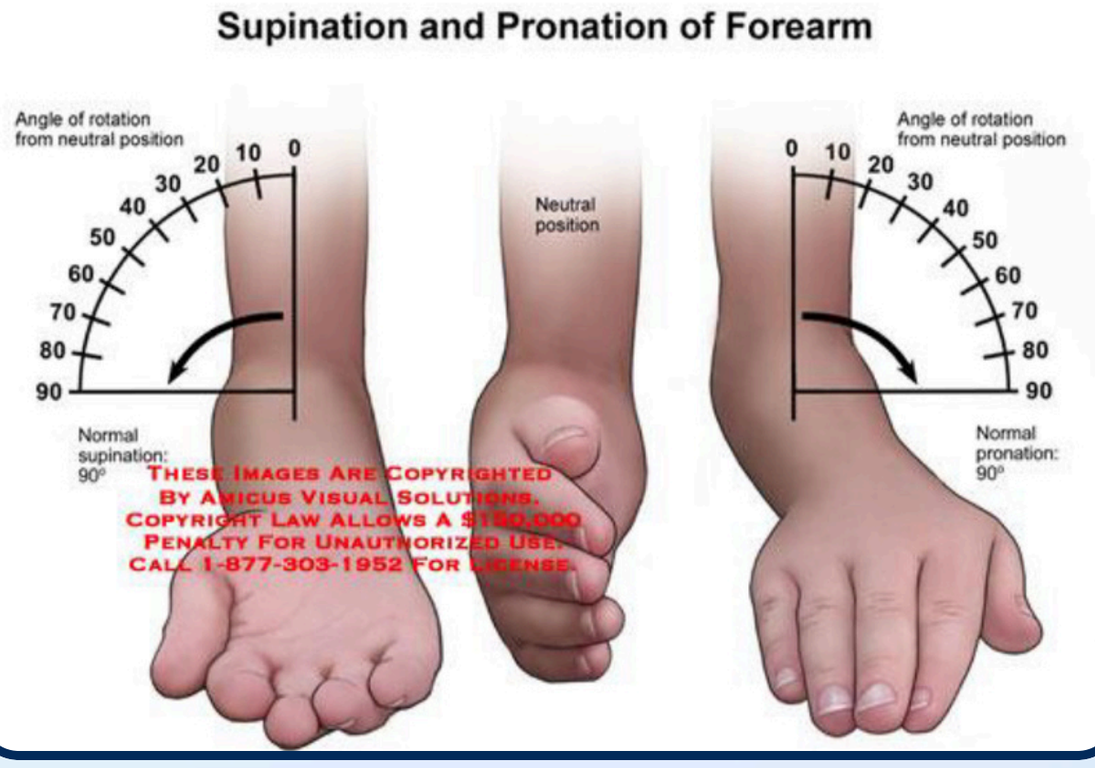
Elbow Flexion Extension



Instability Tests

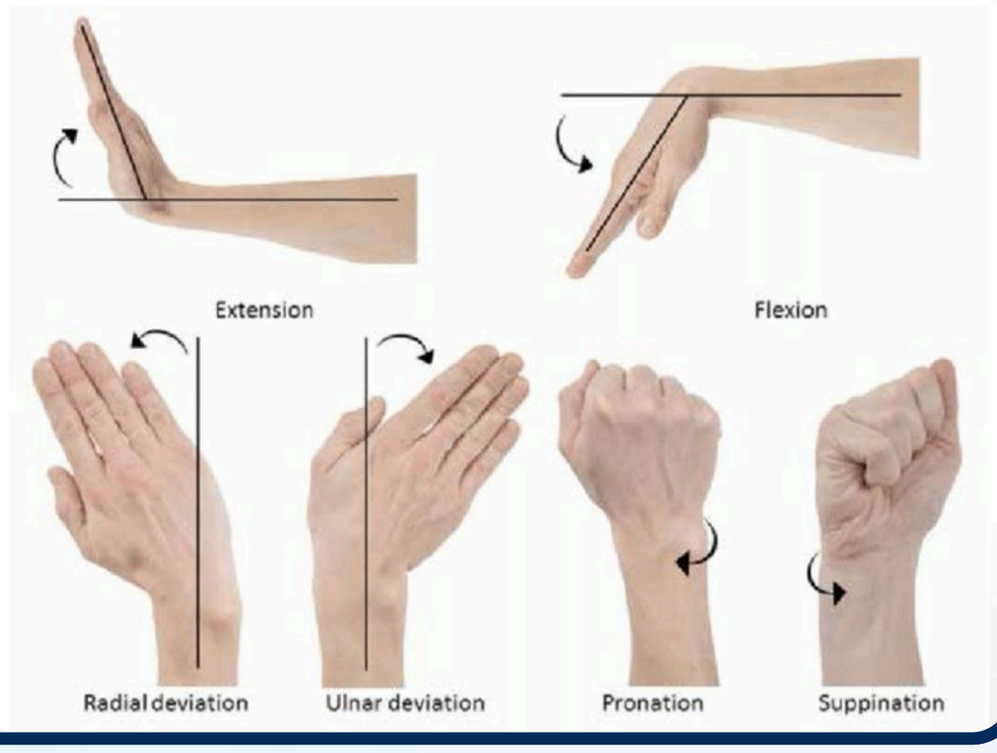
- Anterior apprehension — performed with shoulder and elbow at 90°; apply an anterior force to the posterior shoulder pushing the humeral head anteriorly

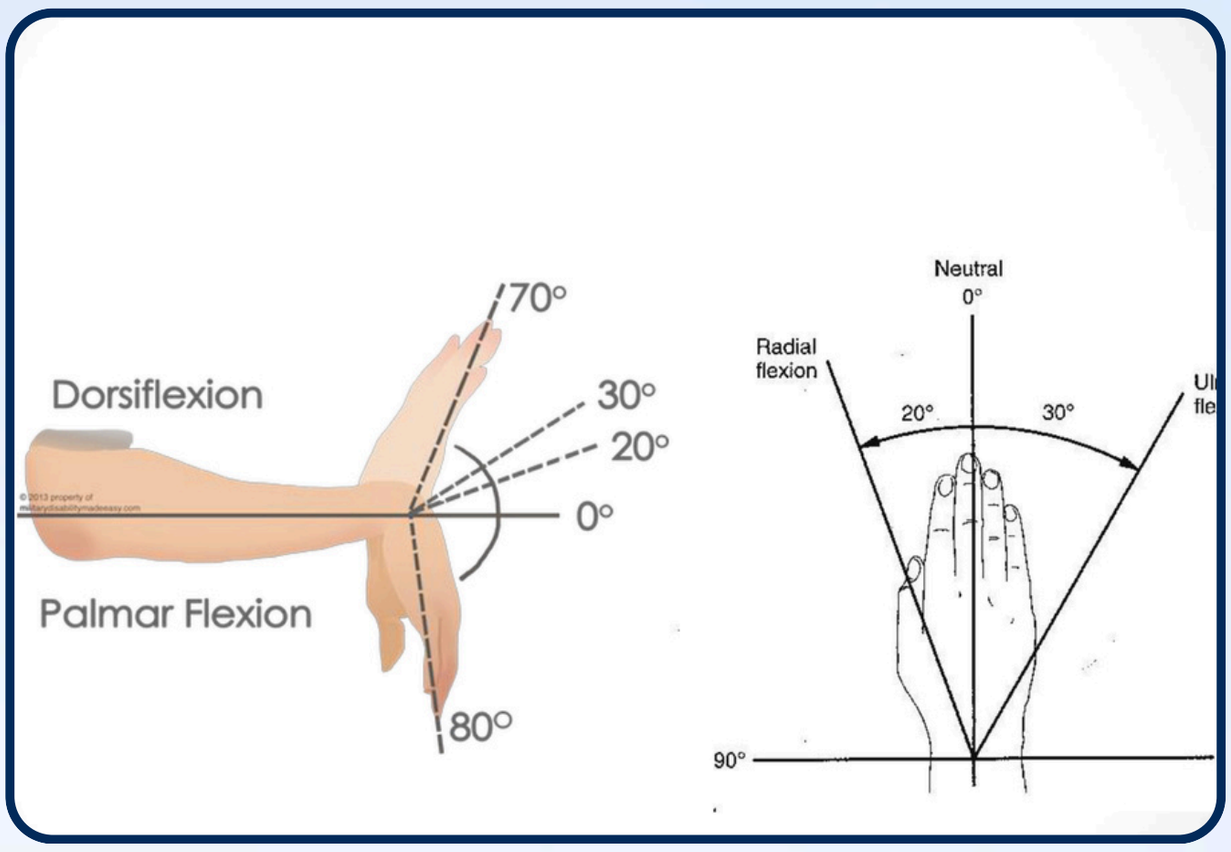
Elbow



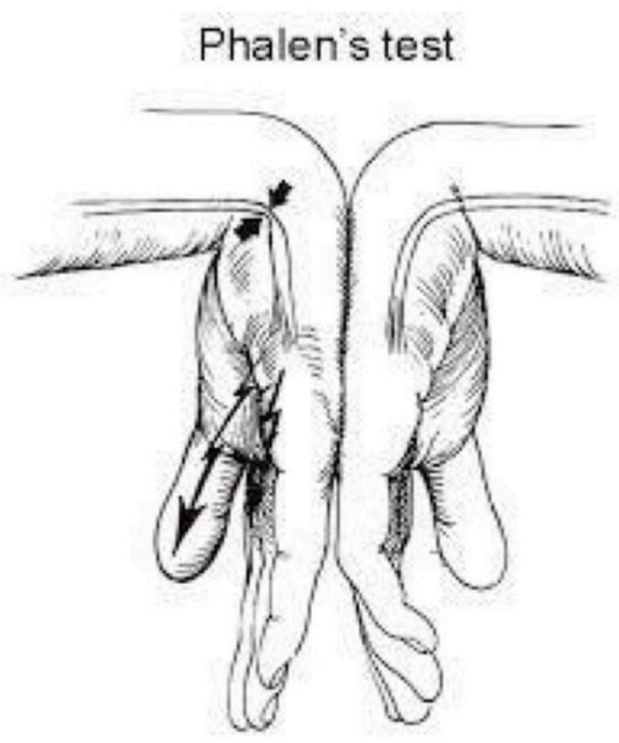
Lecture's Pictures

Hand and wrist

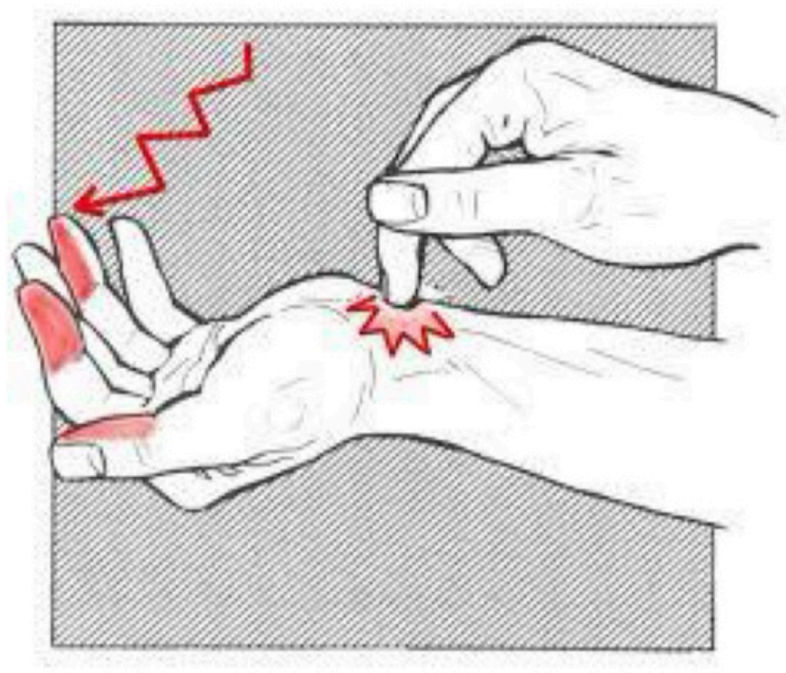




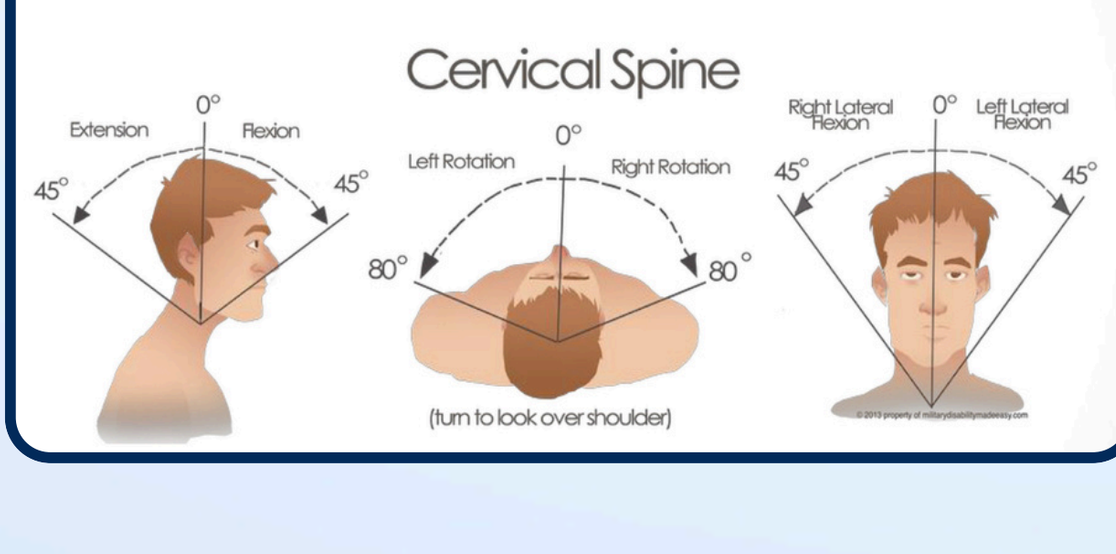
Phalen's test



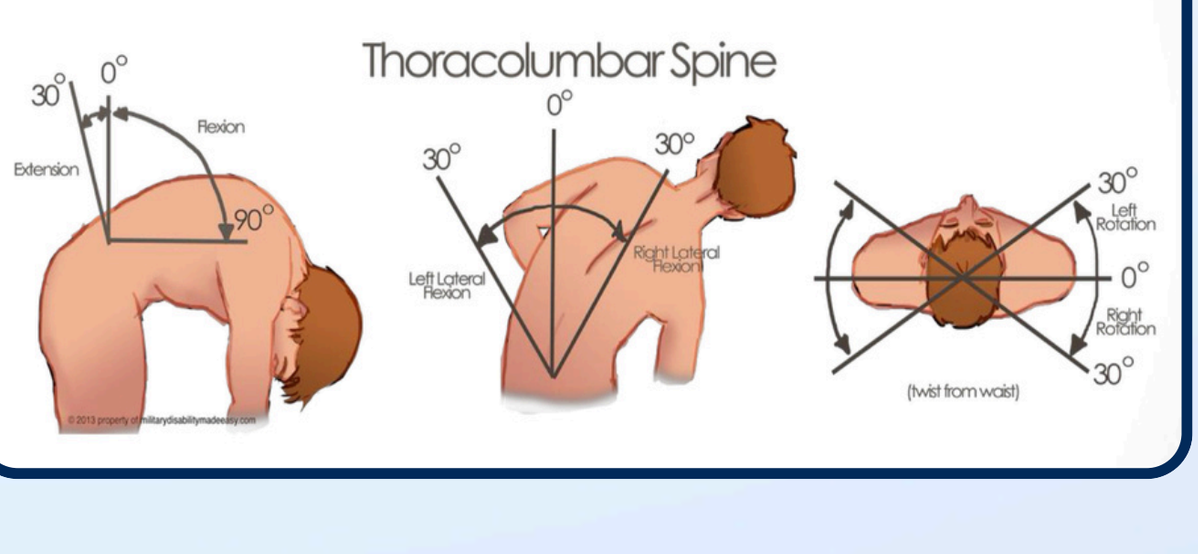
Tinel test



Spine

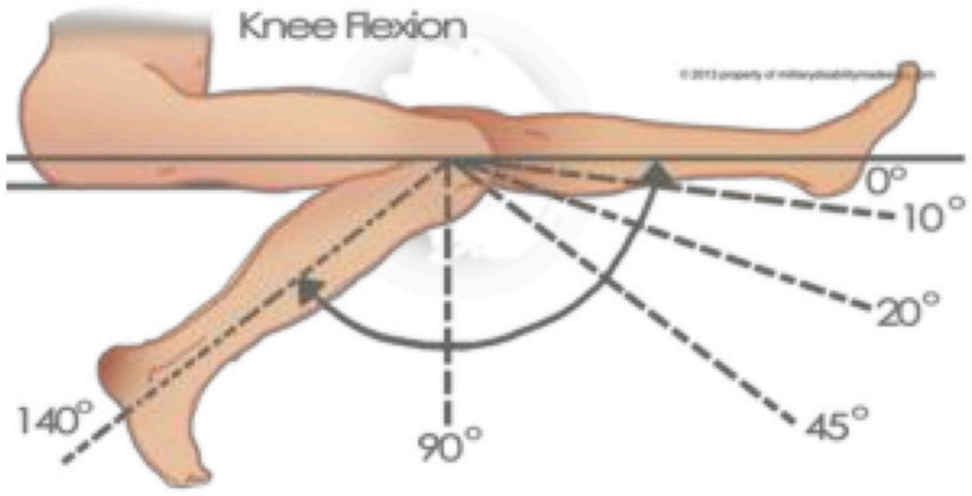


Spine

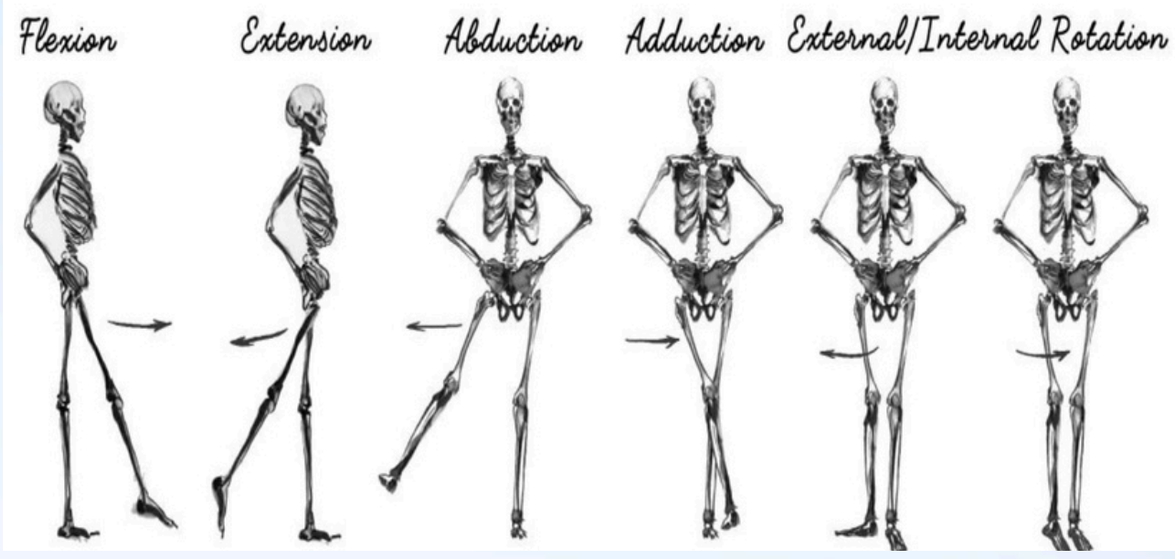


Lecture's Pictures

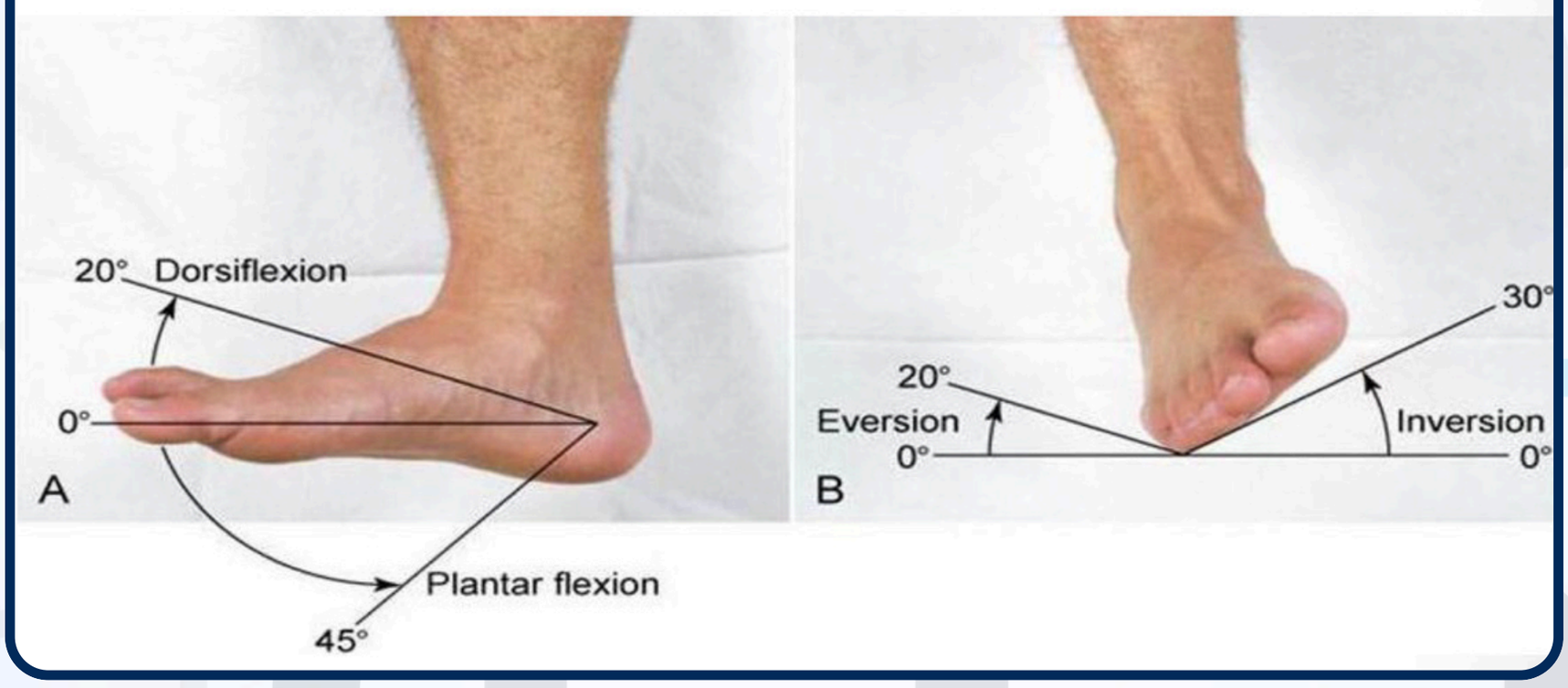
Knee



Hip



Ankle and foot



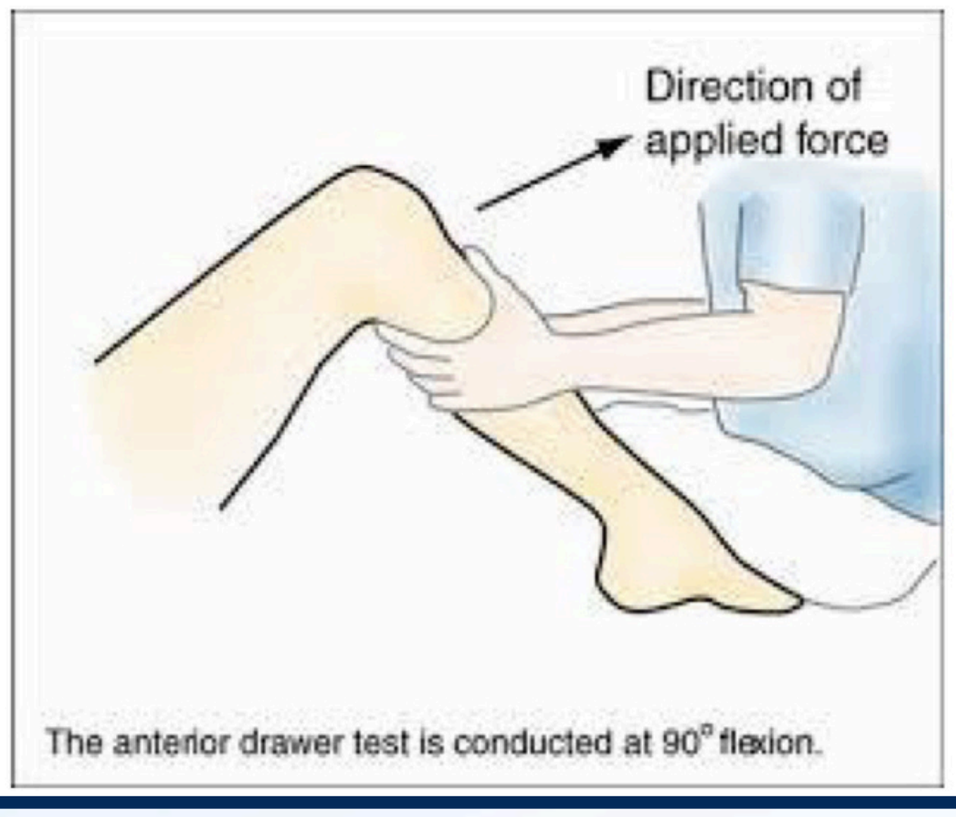
Bulge test (message test) of knee

Patrick test for Sacroiliiatis

Lecture's Pictures

Anterior drawer test

90 degrees , Anterior Cruciate ligament

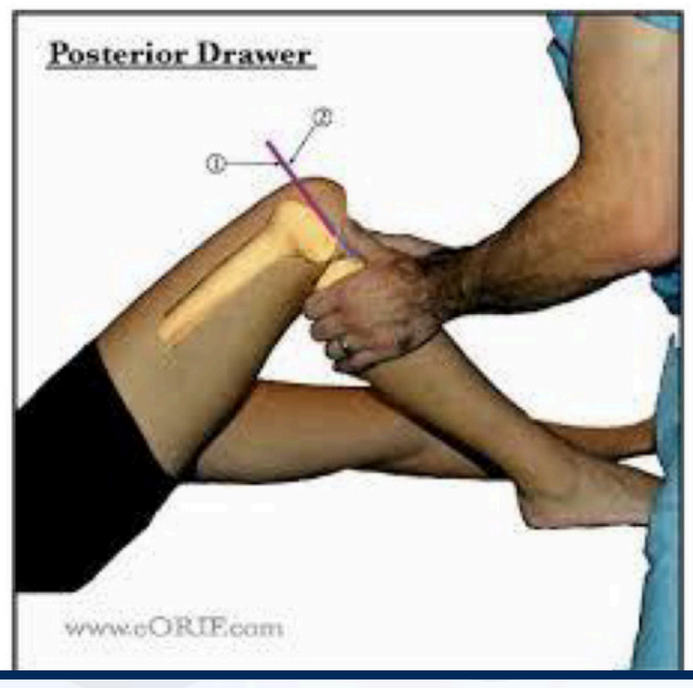


Lachman

30 degrees, Anterior Cruciate ligament

Posterior drawer test

90 degrees, posterior Cruciate ligament



Varus/ Valgus stress test

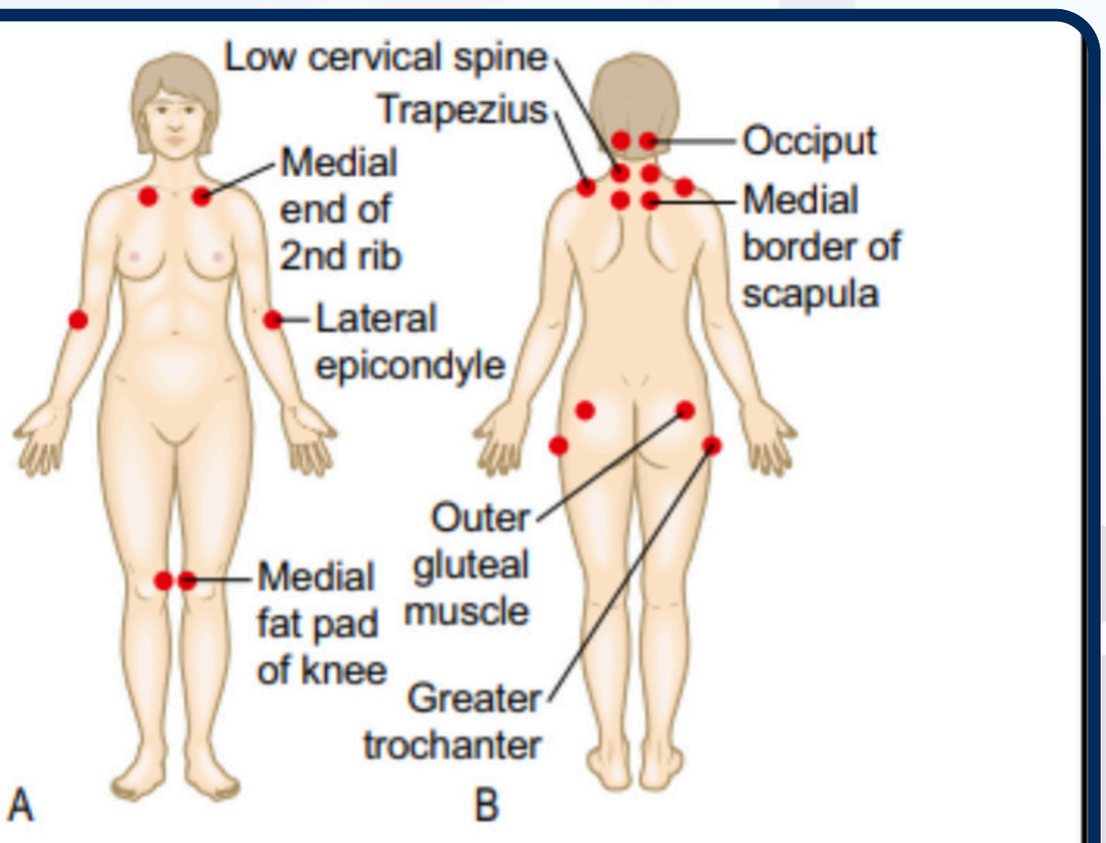
Varus for lateral collateral ligament
Valgus for medial collateral ligament

Mcmurray test for meniscal injury

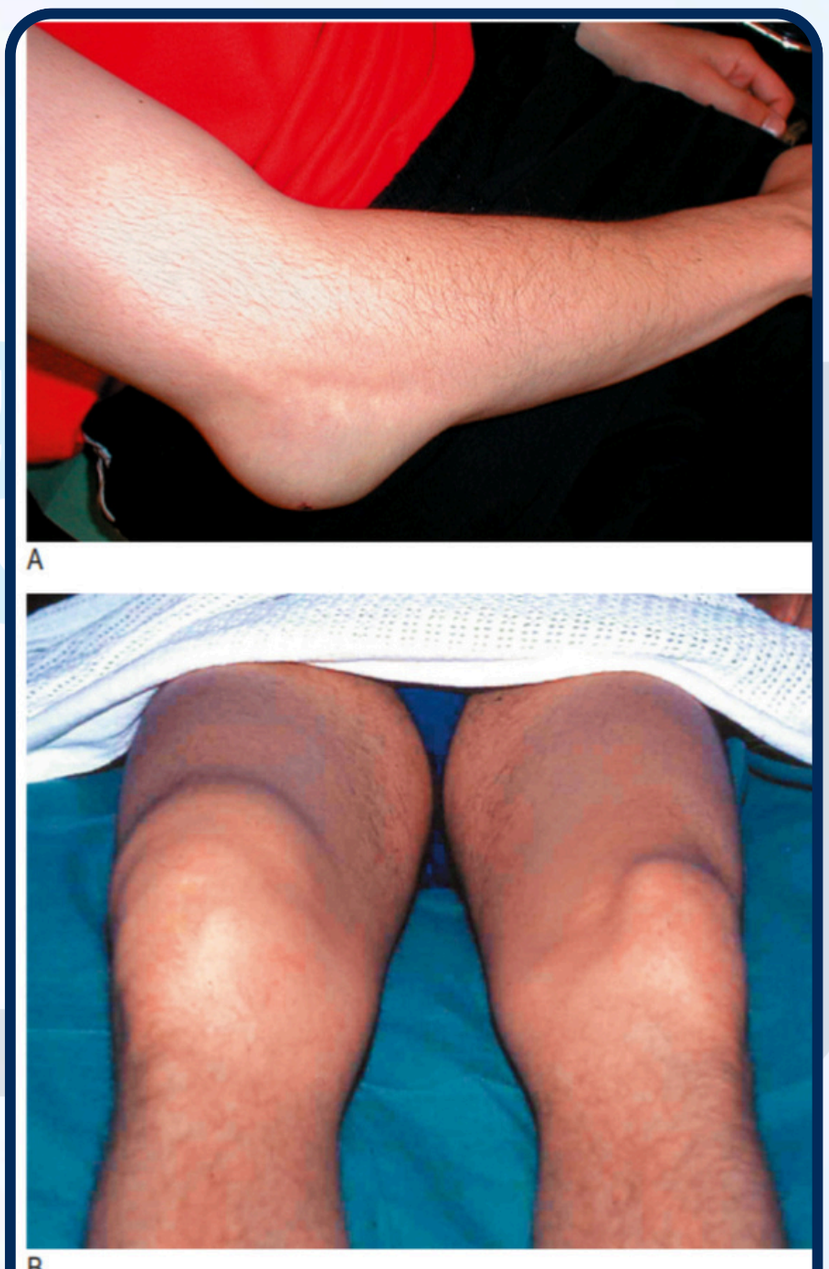
Macleod's Pictures

Fig. 13.2 Acute gout of the first metatarsophalangeal joint. This causes swelling, erythema, and extreme pain and tenderness (podagra). *From Col-*

Fig. 13.5 Nail-fold infarcts caused by small-vessel vasculitis.



Typical tender points in fibromyalgia. **A** Anterior view. **B** Posterior view.



A

B

Fig. 13.4 **A** Olecranon bursitis. **B** Right-knee haemarthrosis.

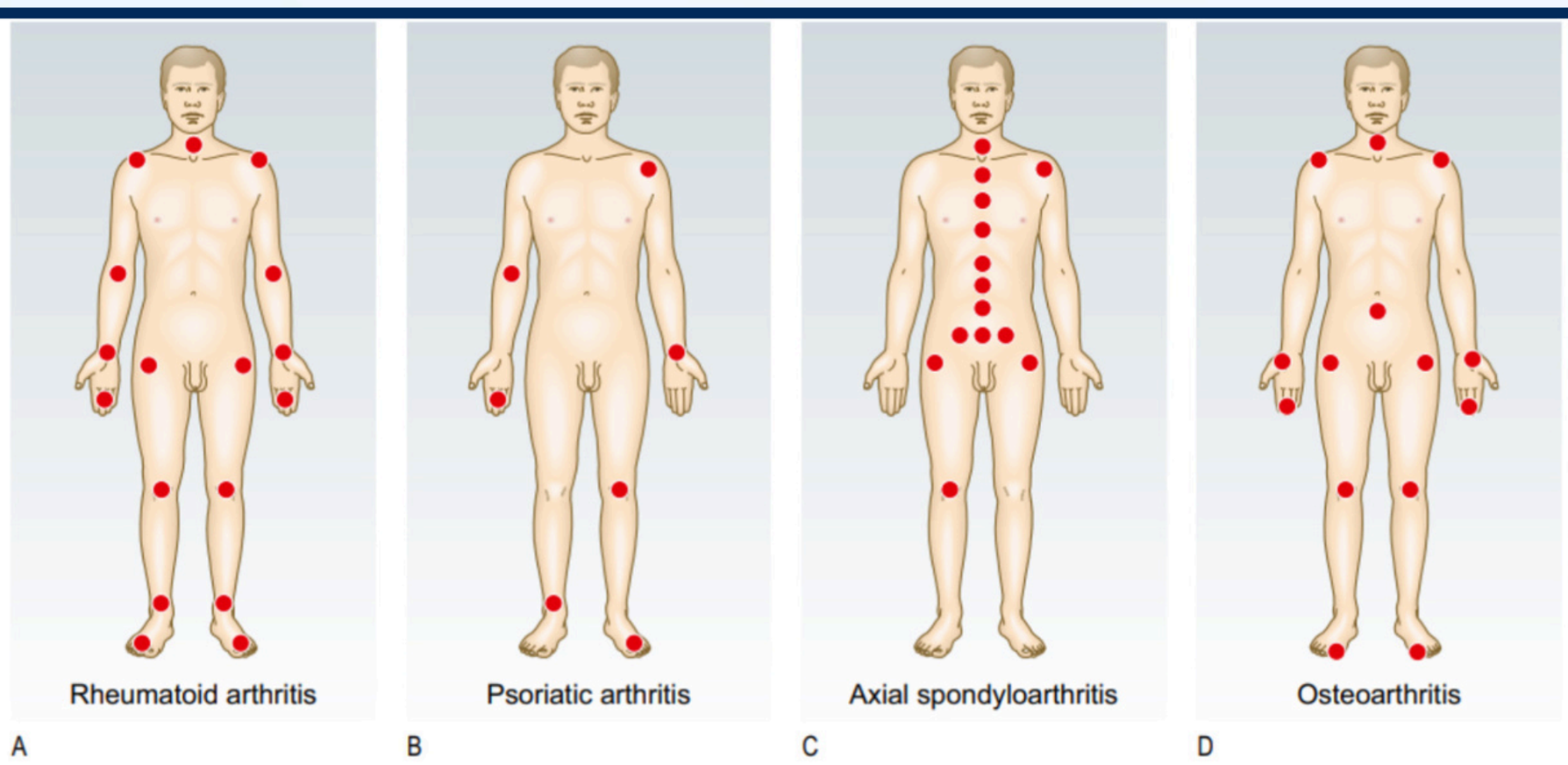


Fig. 13.3 Contrasting patterns of joint involvement in polyarthritis. **A** Rheumatoid arthritis (symmetrical, small and large joints, upper and lower limbs). **B** Psoriatic arthritis (asymmetrical, large > small joints, swelling of a whole digit – dactylitis, enthesitis). **C** Axial spondyloarthritis (spine and sacroiliac joints, asymmetrical peripheral arthritis, large > small joints, enthesitis). **D** Osteoarthritis (symmetrical, small and large joints, base of thumb, distal interphalangeal joints).

Macleod's Pictures

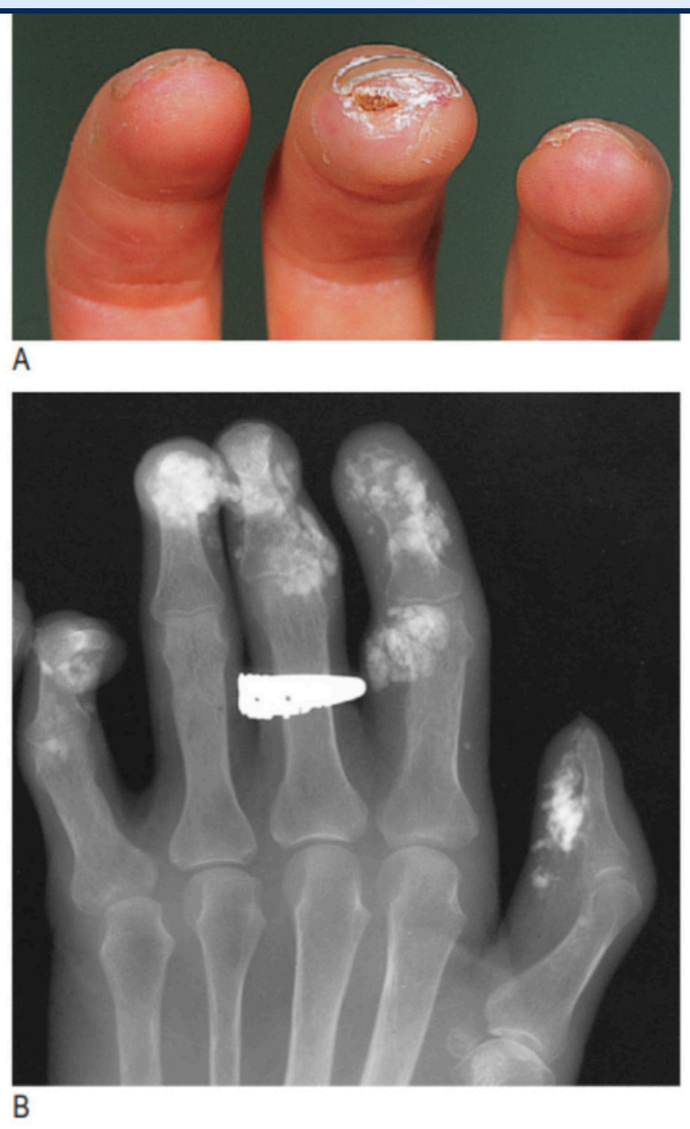


Fig. 13.6 Systemic sclerosis in the hand. A Calcium deposits ulcerating through the skin. B x-ray showing calcium deposits. *(A) From Forbes CD*

Fig. 13.7 Rheumatoid nodules at the olecranon and ulnar border.

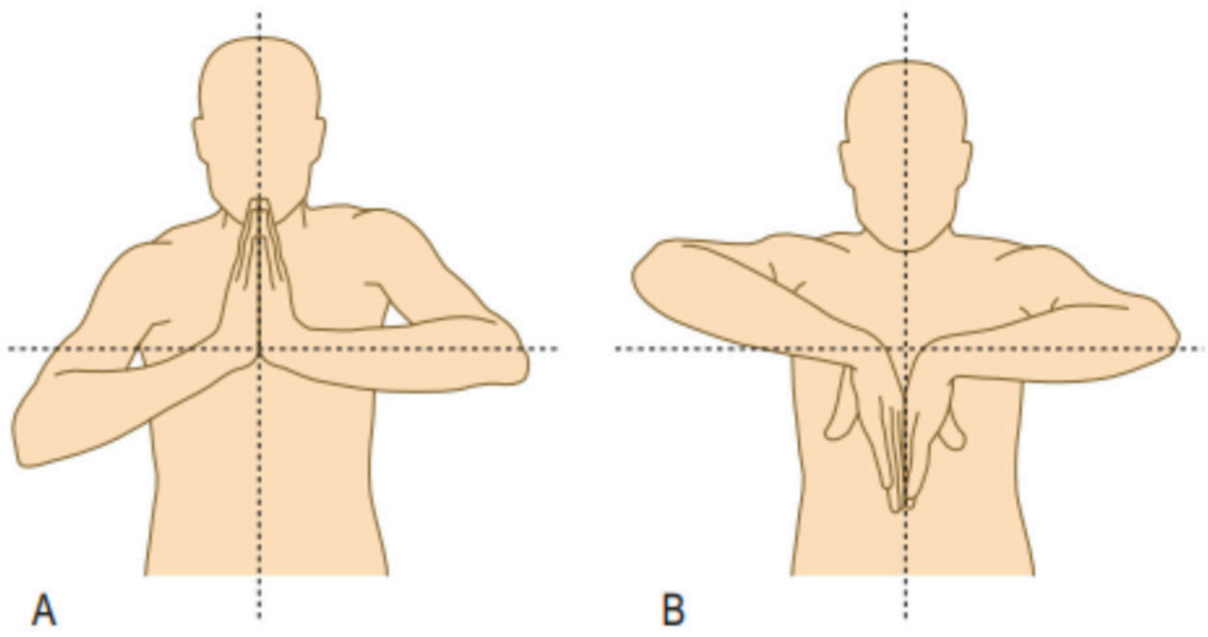


Fig. 13.10 Assessing the wrist. A Extension. B Flexion. There is a reduced range of movement at the right wrist.

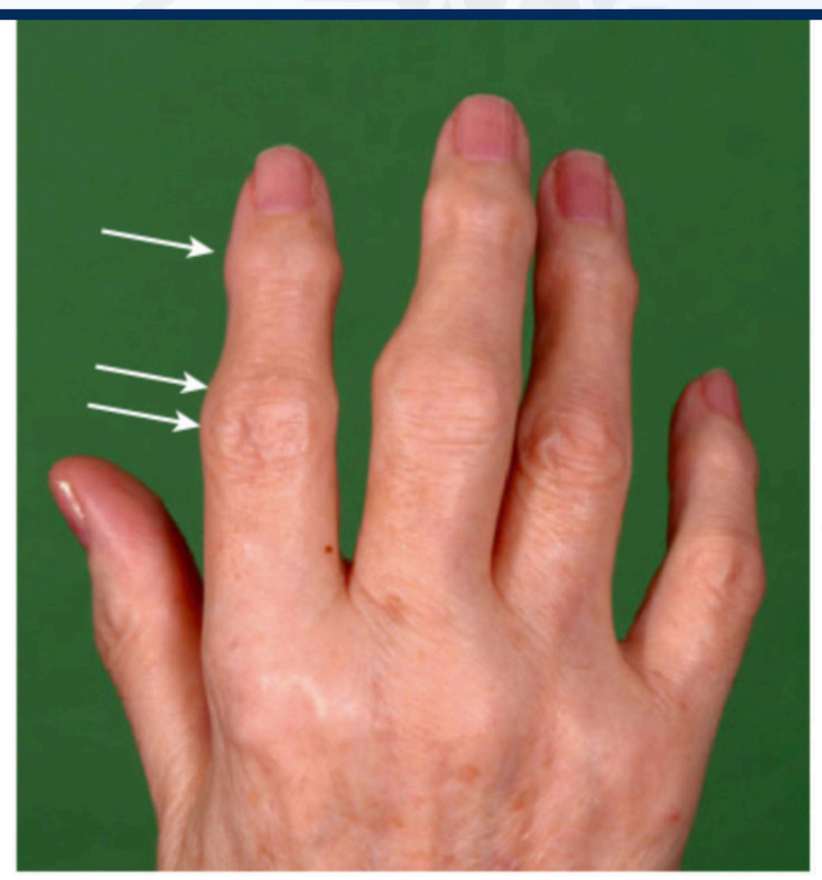


Fig. 13.8 Osteoarthritis of the hand Heberden's (single arrow) and Bouchard's (double arrow) nodes.

Fig. 13.9 Gouty tophi.

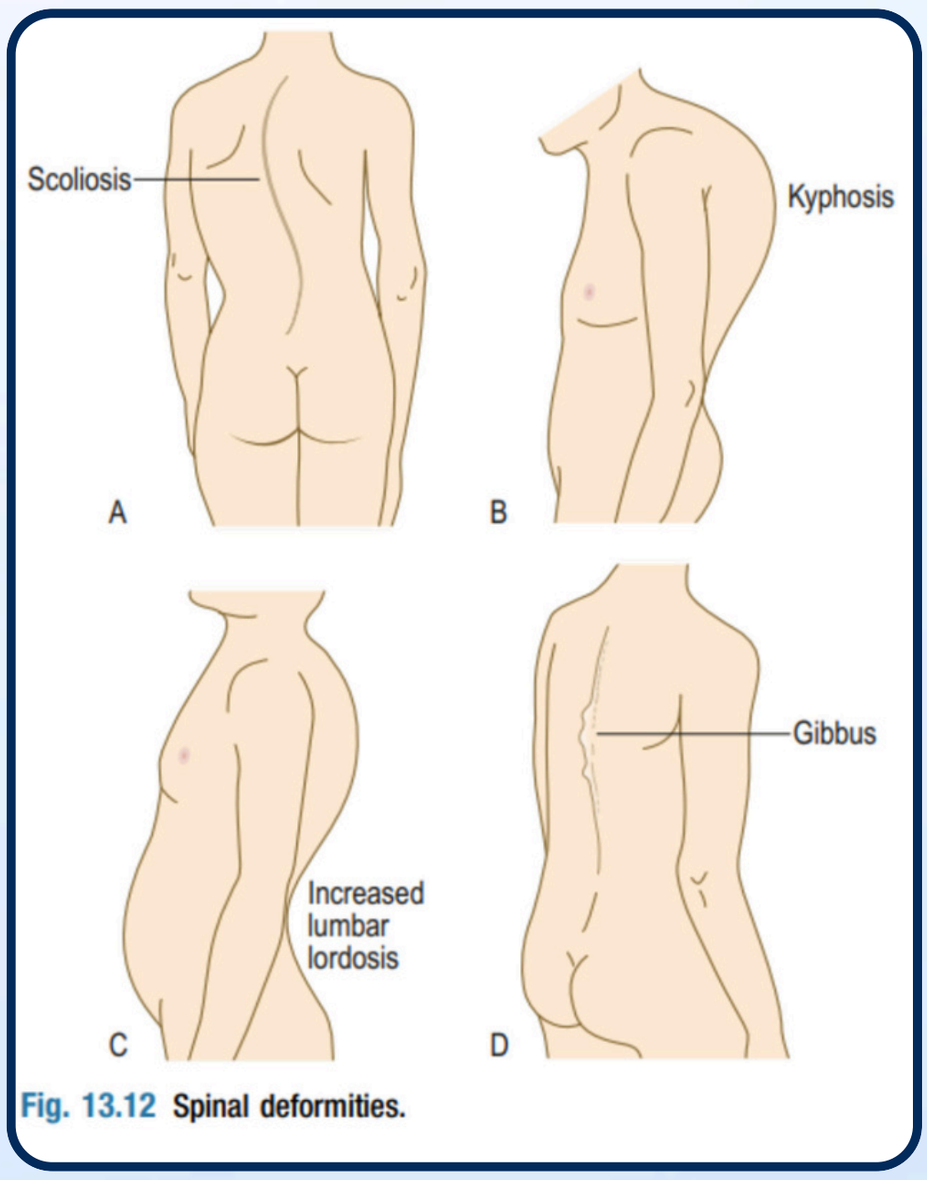


Fig. 13.12 Spinal deformities.

Macleod's Pictures

Axial spondyloarthritis. The patient trying to touch his toes

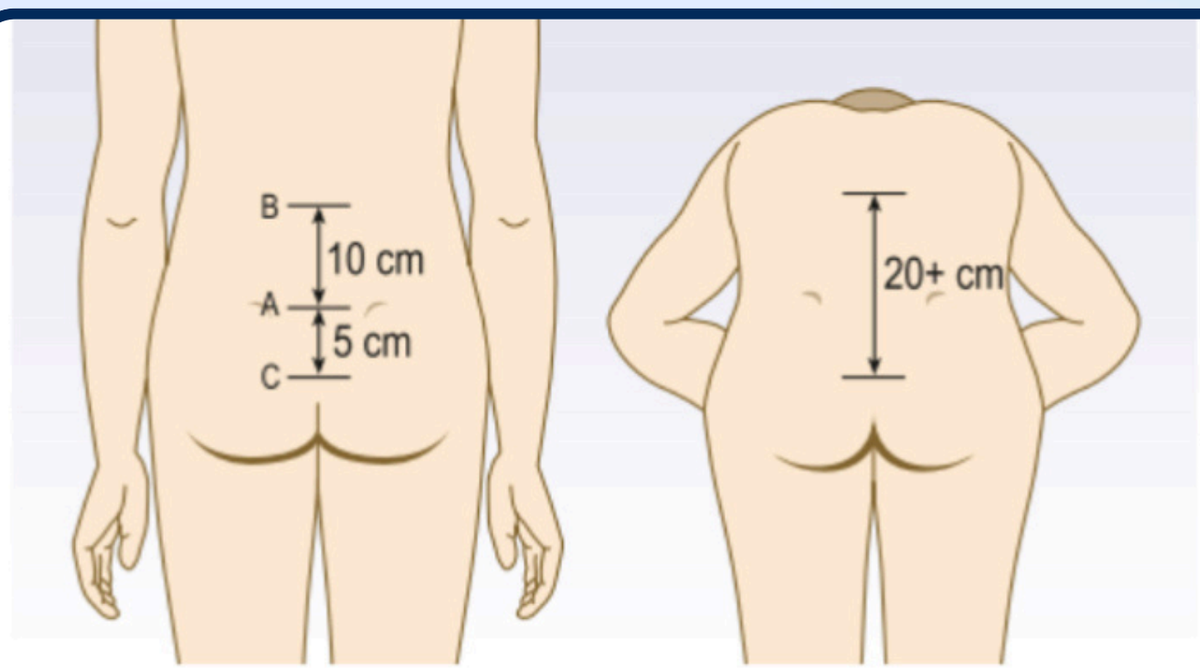


Fig. 13.15 Schober's test. When the patient bends forward maximally with the knees straight, distance BC should increase by at least 5 cm.

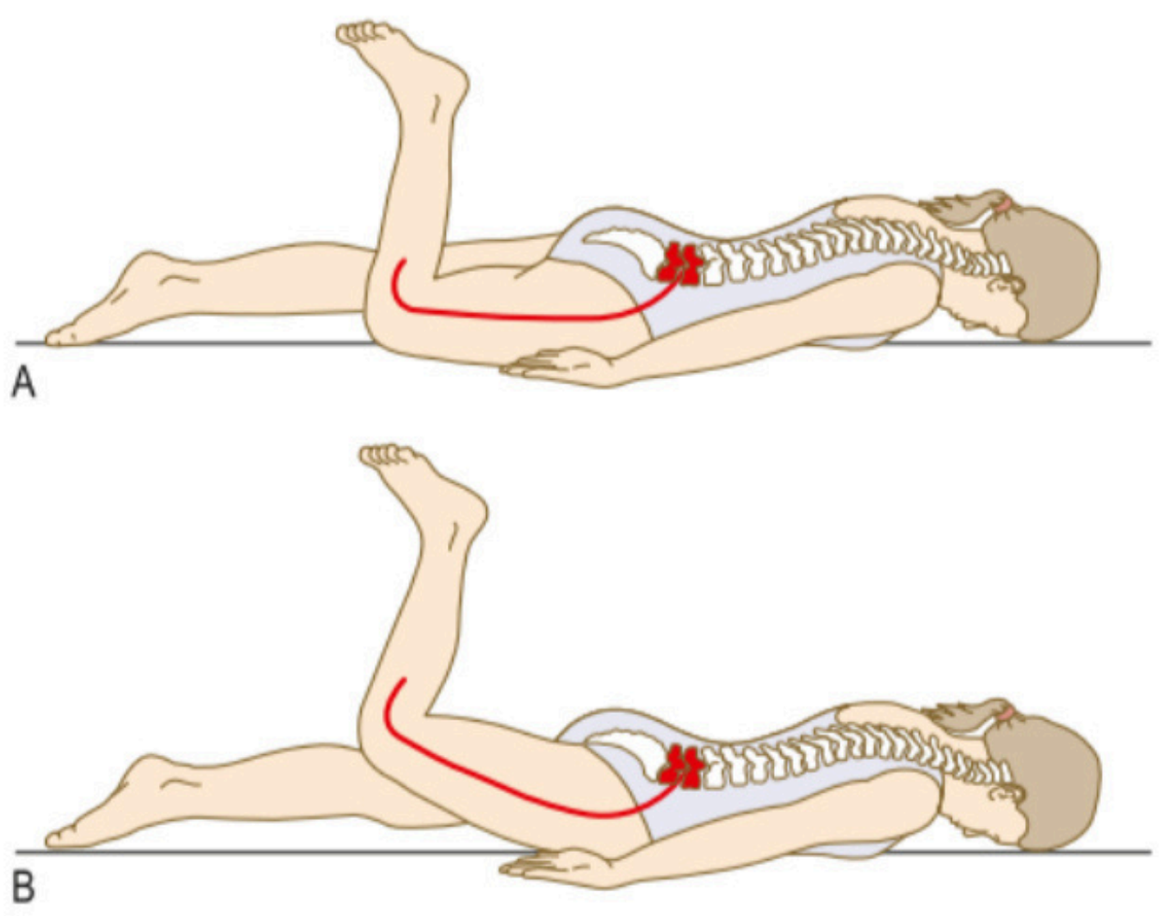


Fig. 13.17 Stretch test: femoral nerve. A Pain may be triggered by knee flexion alone. B Pain may be triggered by knee flexion in combination with hip extension.

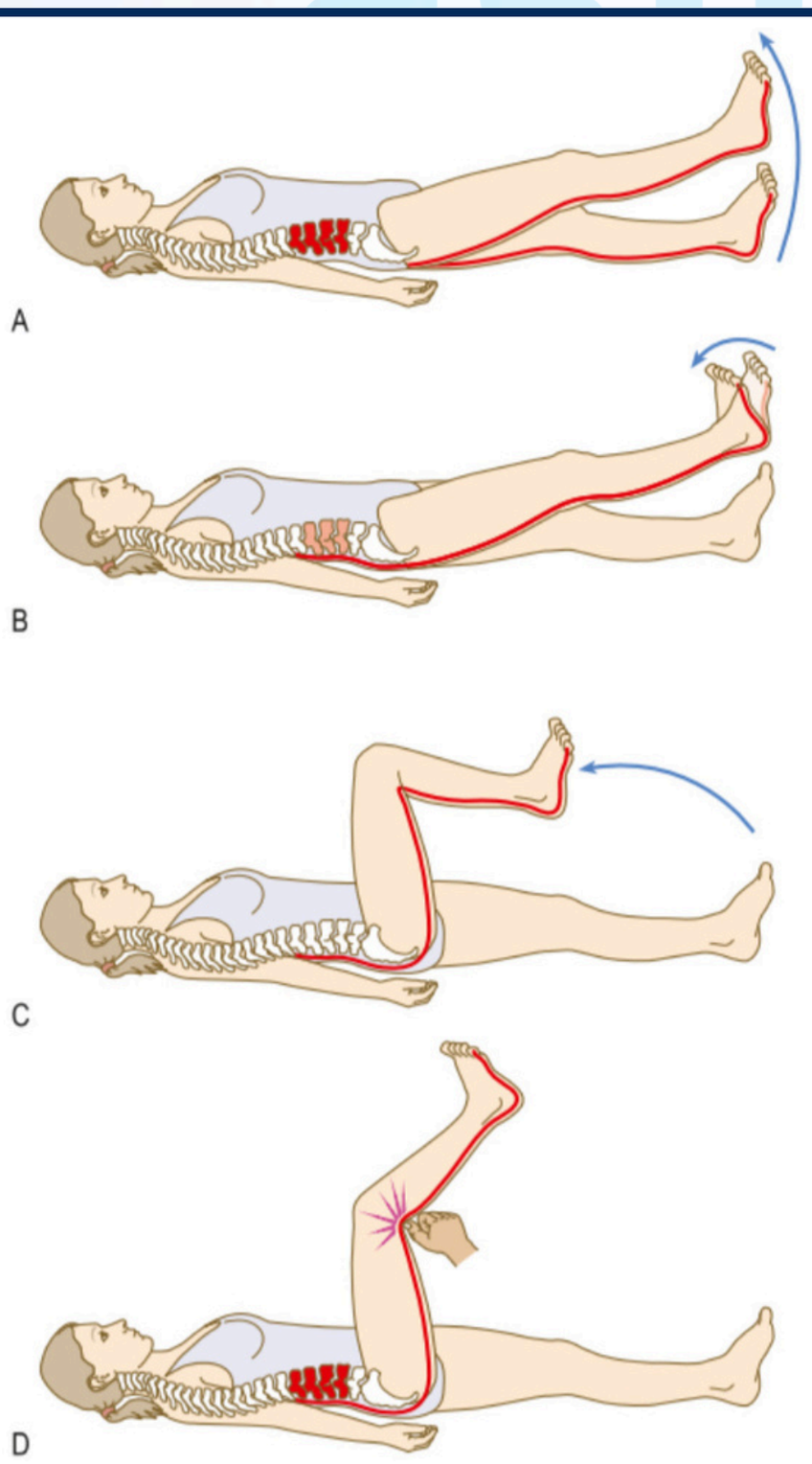


Fig. 13.16 Stretch test: sciatic nerve. A Straight-leg raising limited by the tension of the root over a prolapsed disc. B Tension is increased by dorsiflexion of the foot (Bragard's test). C Root tension is relieved by flexion at the knee. D Pressure over the centre of the popliteal fossa bears on the posterior tibial nerve, which is 'bowstringing' across the fossa, causing pain locally and radiation into the back.

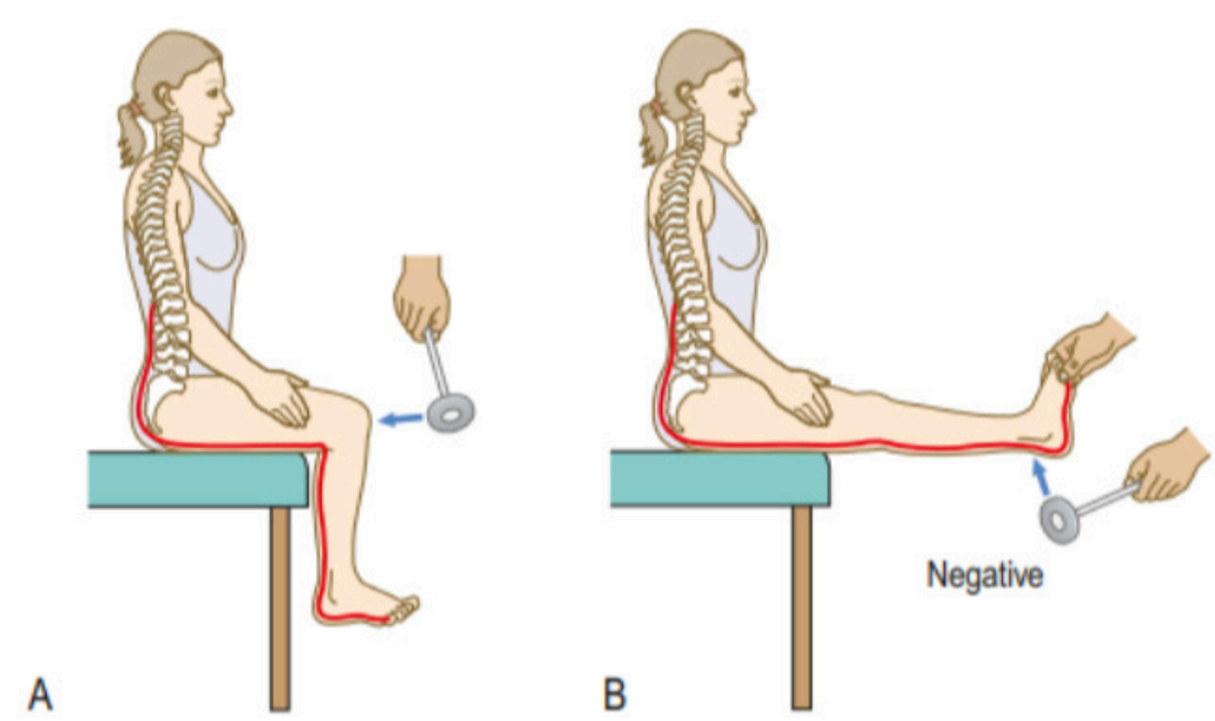


Fig. 13.18 Sciatic nerve: 'flip' test. A Divert the patient's attention to the tendon reflexes. B The patient with physical nerve root compression cannot permit full extension of the leg.

Macleod's Pictures

A

B

Fig. 13.19 Swelling of the metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joints. A Ask the patient to make a fist. Look at it straight on to detect any loss of the 'hill–valley–hill' aspect. B Swelling and erythema of the middle finger MCP joint and index and middle finger PIP joints. Note also small muscle wasting.

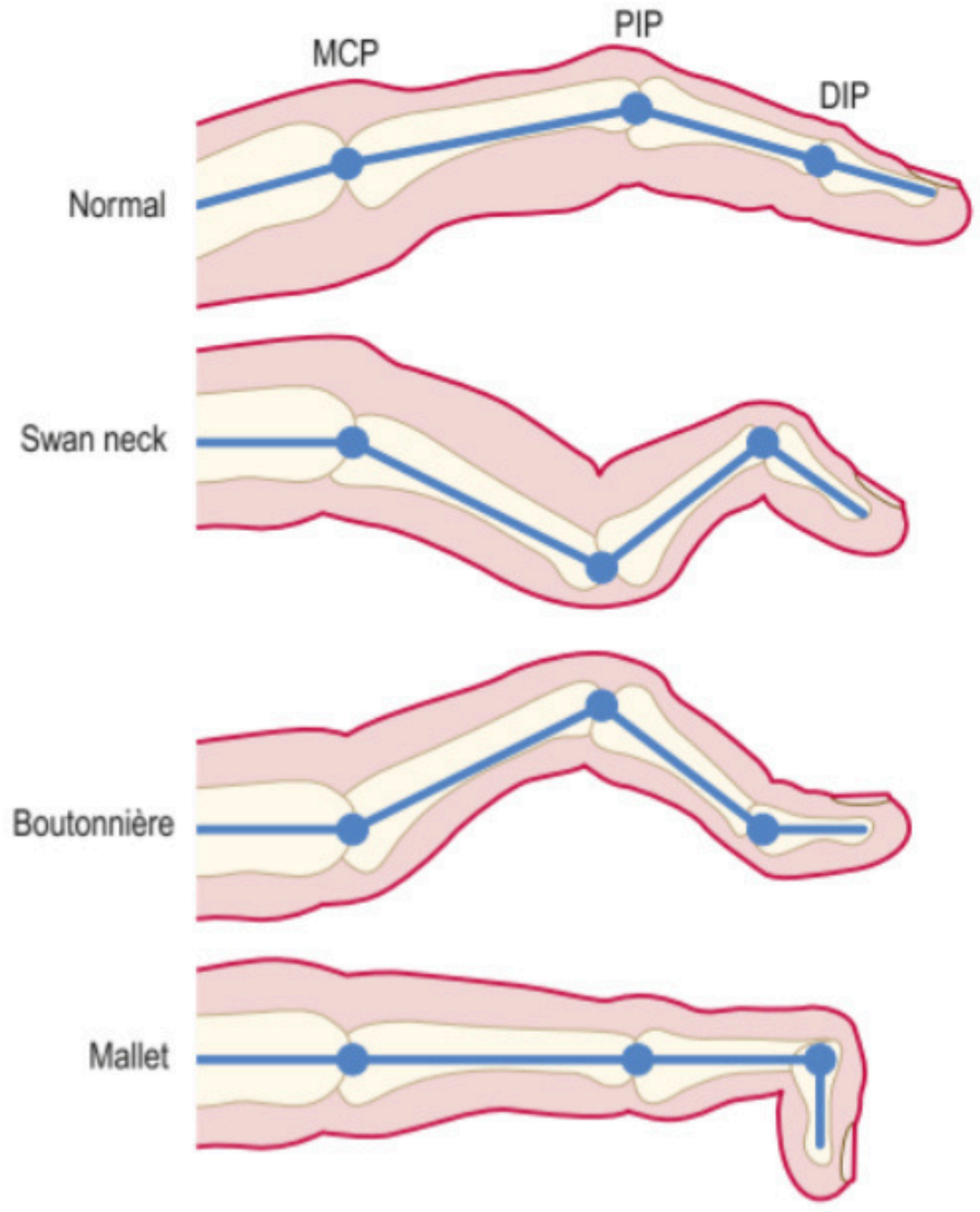


Fig. 13.21 Deformities of the fingers. Swan neck and boutonnière deformities occur in rheumatoid arthritis. Mallet finger occurs with trauma. *DIP*, Distal interphalangeal; *MCP*, metacarpophalangeal; *PIP*, proximal interphalangeal.

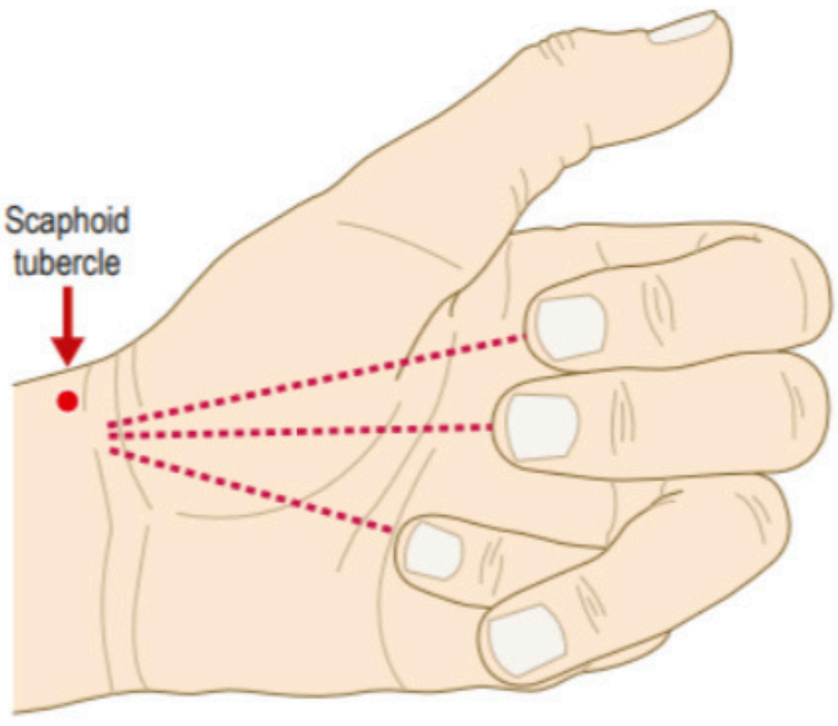


Fig. 13.20 Flexion of the fingers showing rotational deformity of the ring finger.

Fig. 13.22 Advanced rheumatoid arthritis. Small muscle wasting, subluxation and ulnar deviation at the metacarpophalangeal joints, boutonnière deformities at the ring and little fingers, and swelling and deformity of the wrist.

Macleod's Pictures

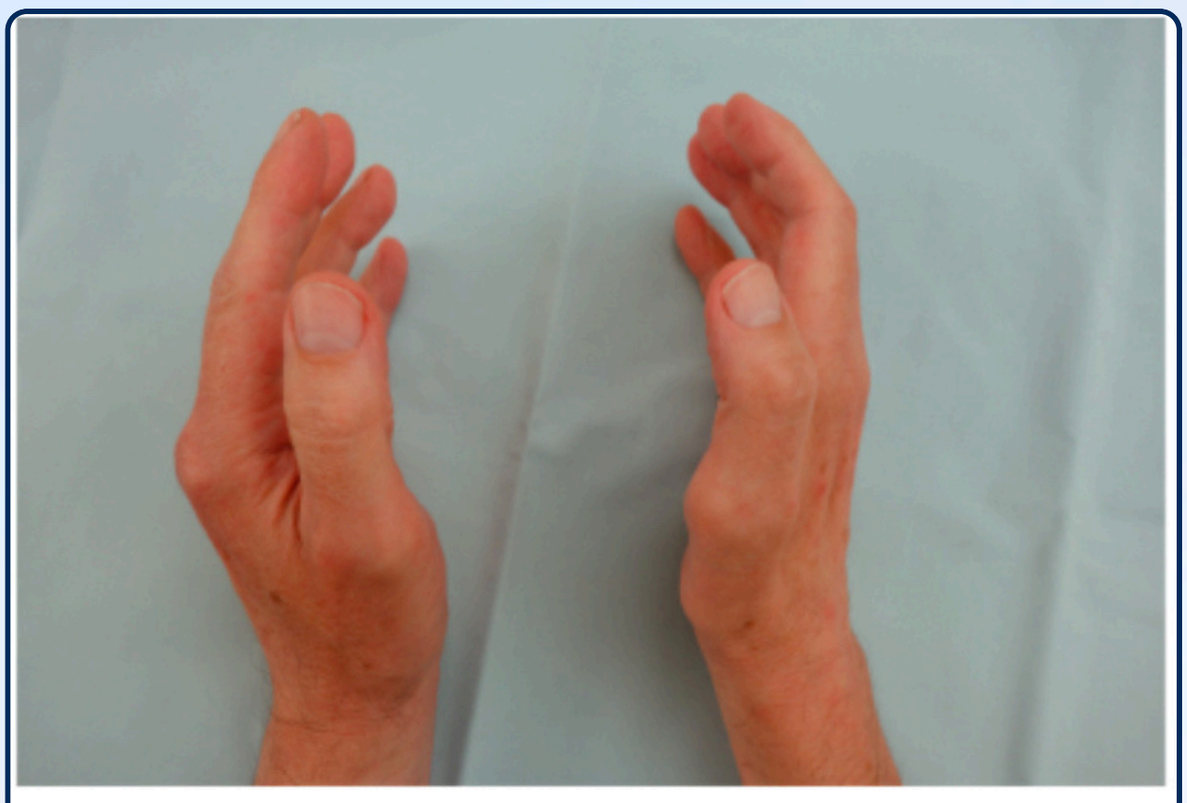


Fig. 13.23 T1 root lesion (cervical rib) affecting the right hand. Wasting of the thenar eminence and interossei, and flexed posture of the fingers due to lumbrical denervation.

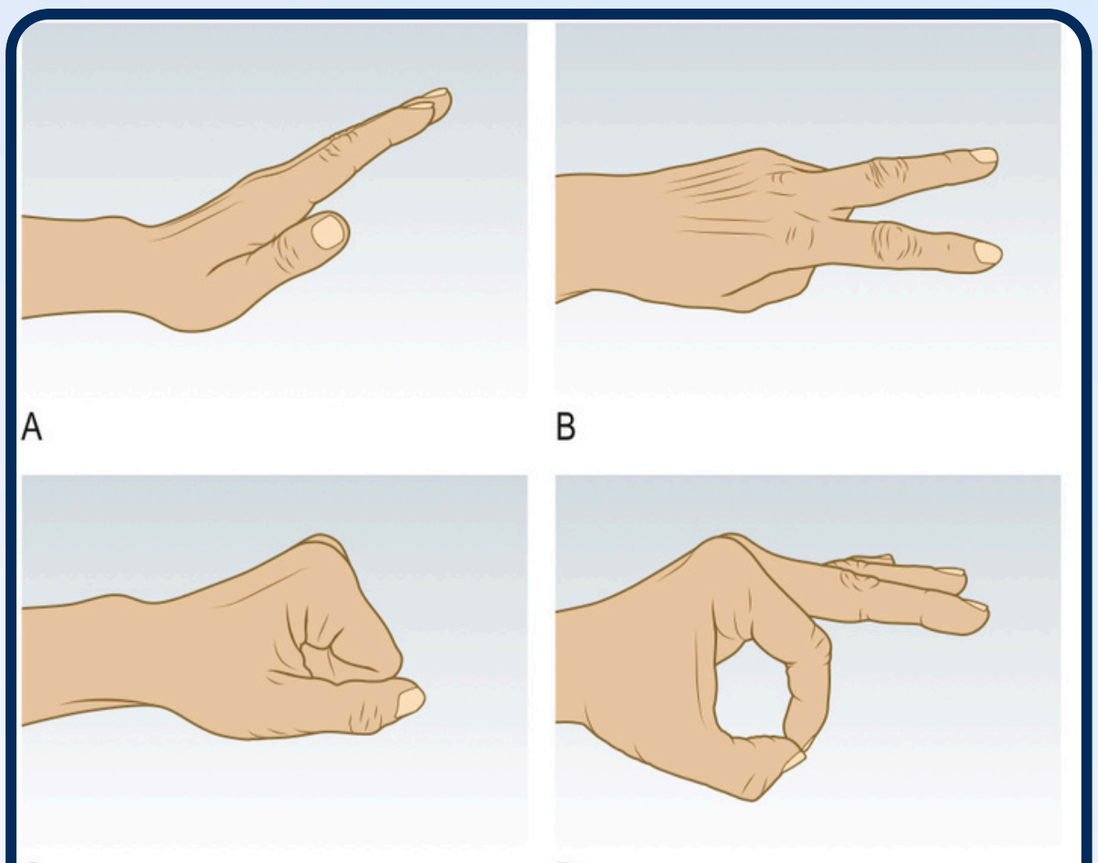


Fig. 13.26 Rapid assessment of the motor functions of the radial, ulnar and median nerves. A Paper (radial). B Scissors (ulnar). C Stone (median). D OK (median – anterior interosseus).

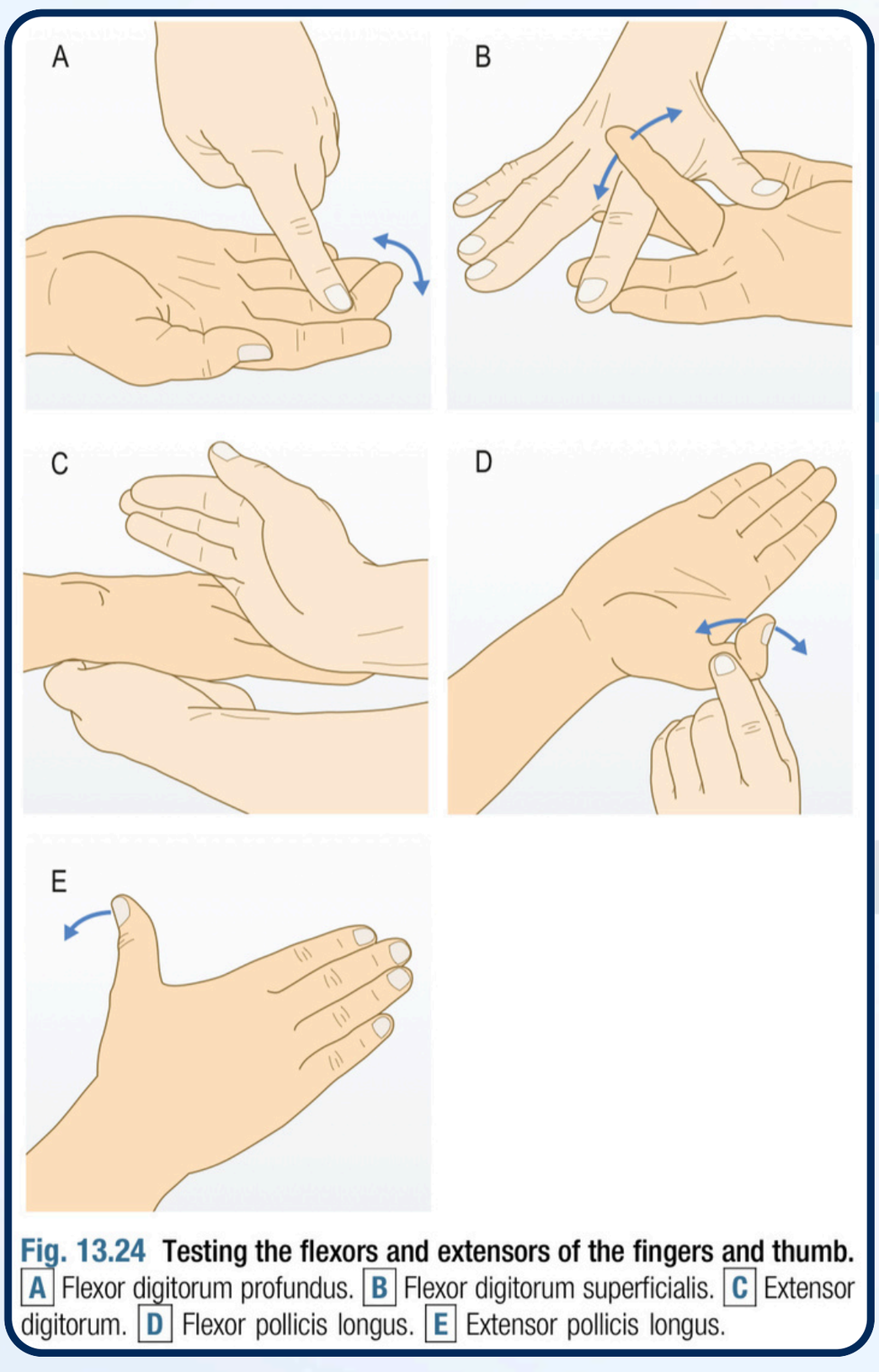


Fig. 13.24 Testing the flexors and extensors of the fingers and thumb. A Flexor digitorum profundus. B Flexor digitorum superficialis. C Extensor digitorum. D Flexor pollicis longus. E Extensor pollicis longus.

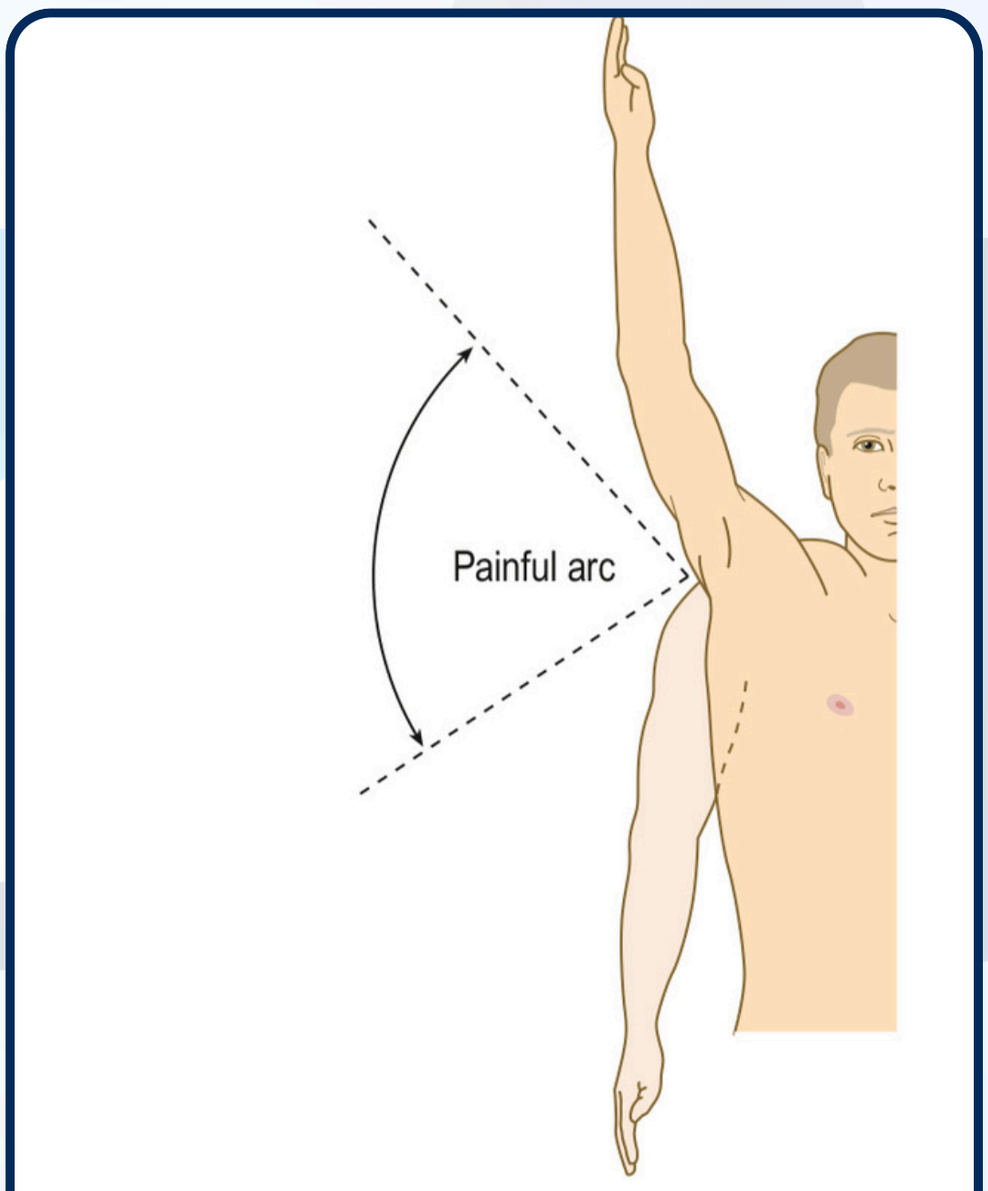


Fig. 13.27 Painful arc.

Fig. 13.29 'Winging' of the left scapula. This caused by paralysis of the nerve to serratus anterior.

Macleod's Pictures

Fig. 13.28 Right anterior glenohumeral dislocation. Loss of the normal shoulder contour.

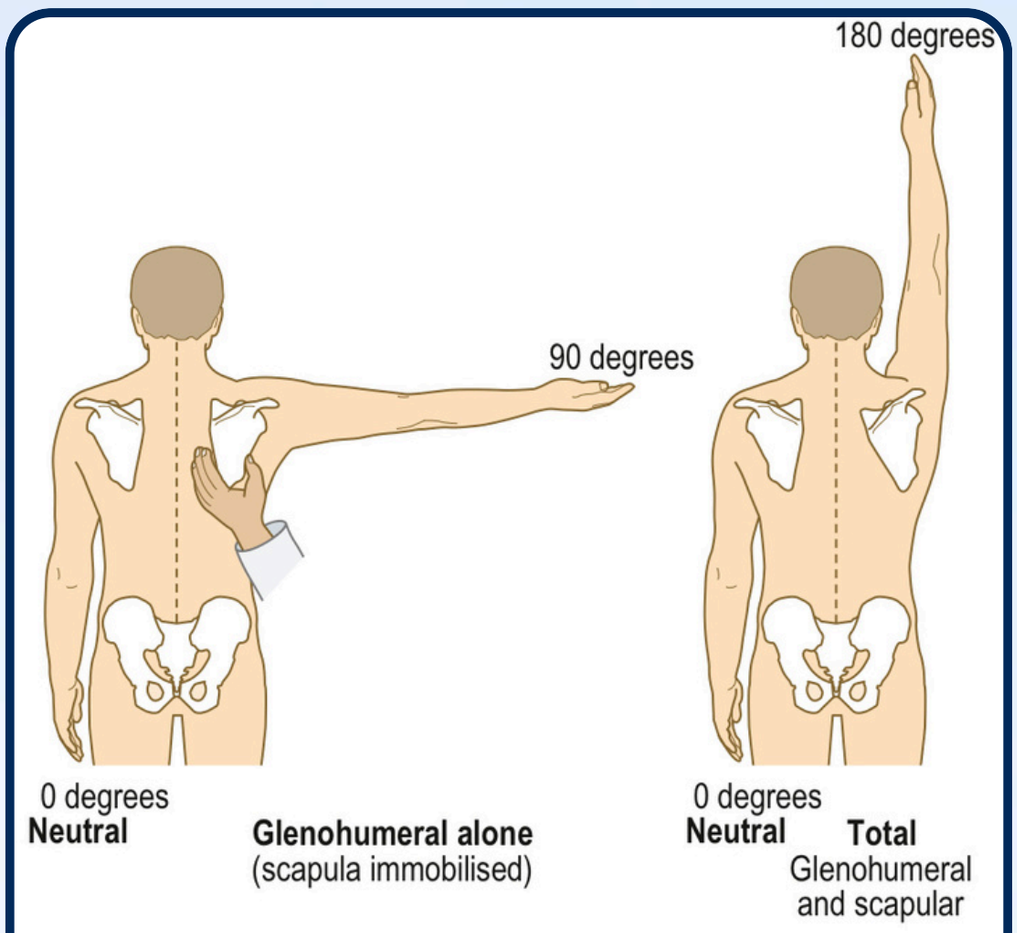


Fig. 13.31 Contribution of the glenohumeral joint and scapula to shoulder abduction.

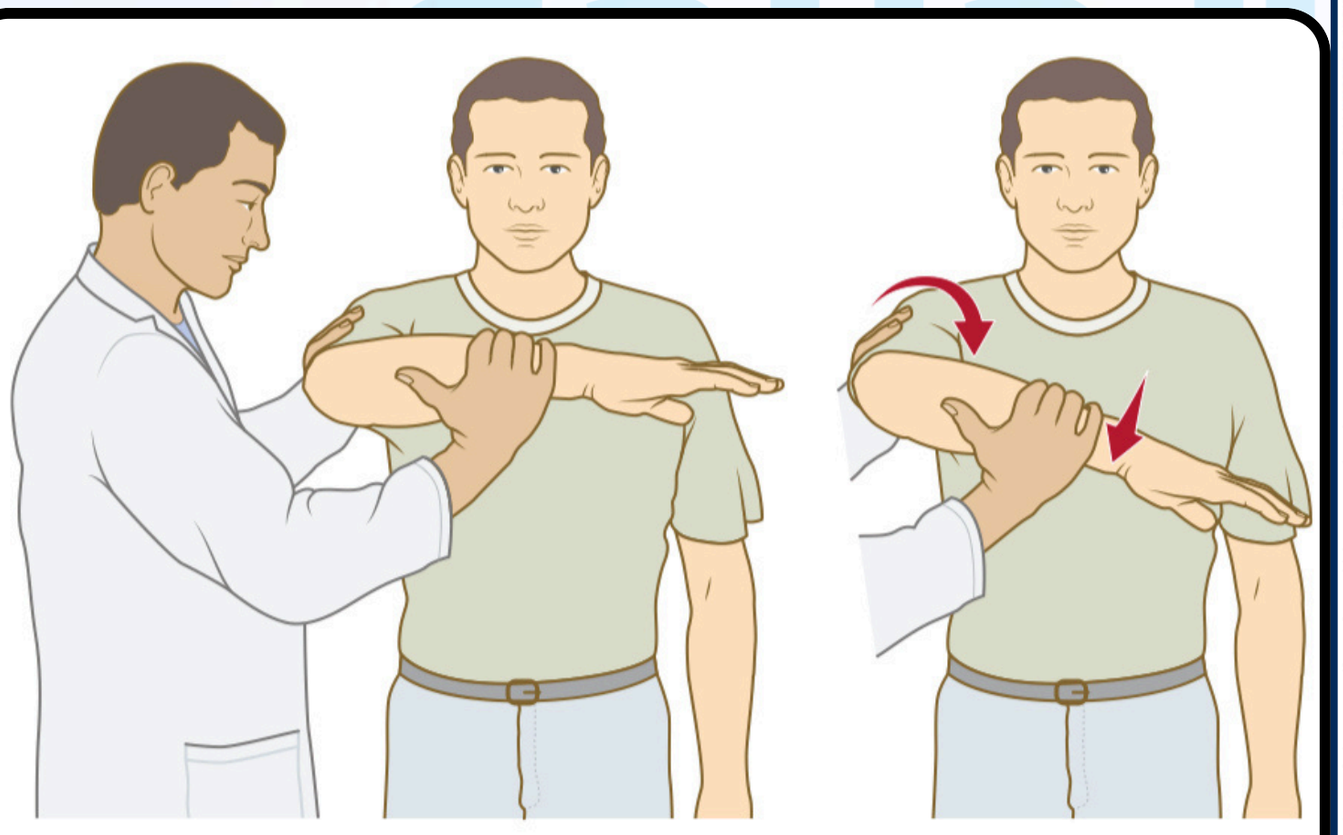


Fig. 13.32 Hawkins–Kennedy test for shoulder impingement.

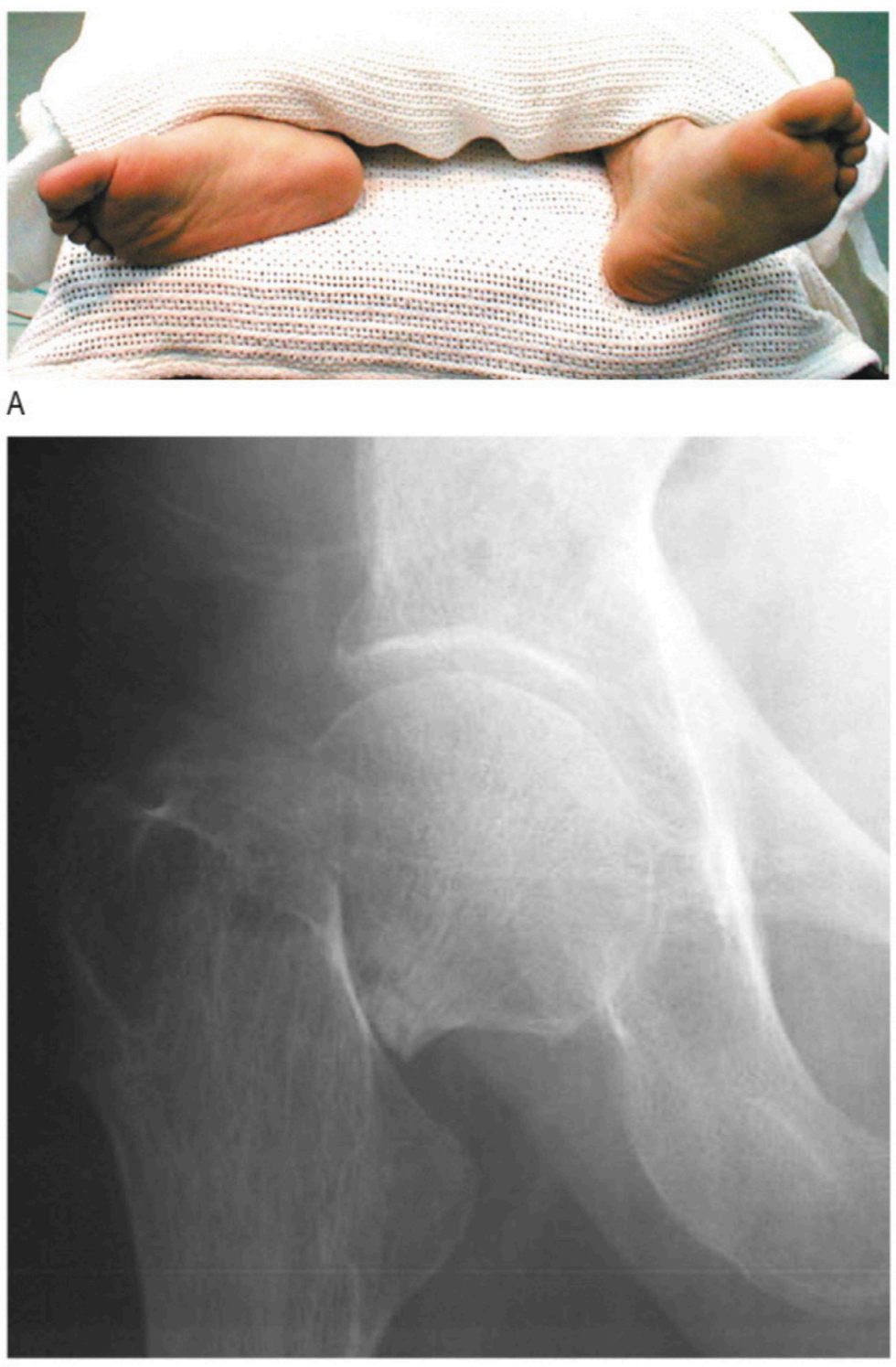


Fig. 13.34 Fracture of the neck of the right femur. A Shortening and external rotation of the leg. B x-ray showing translation and angulation.

Macleod's Pictures

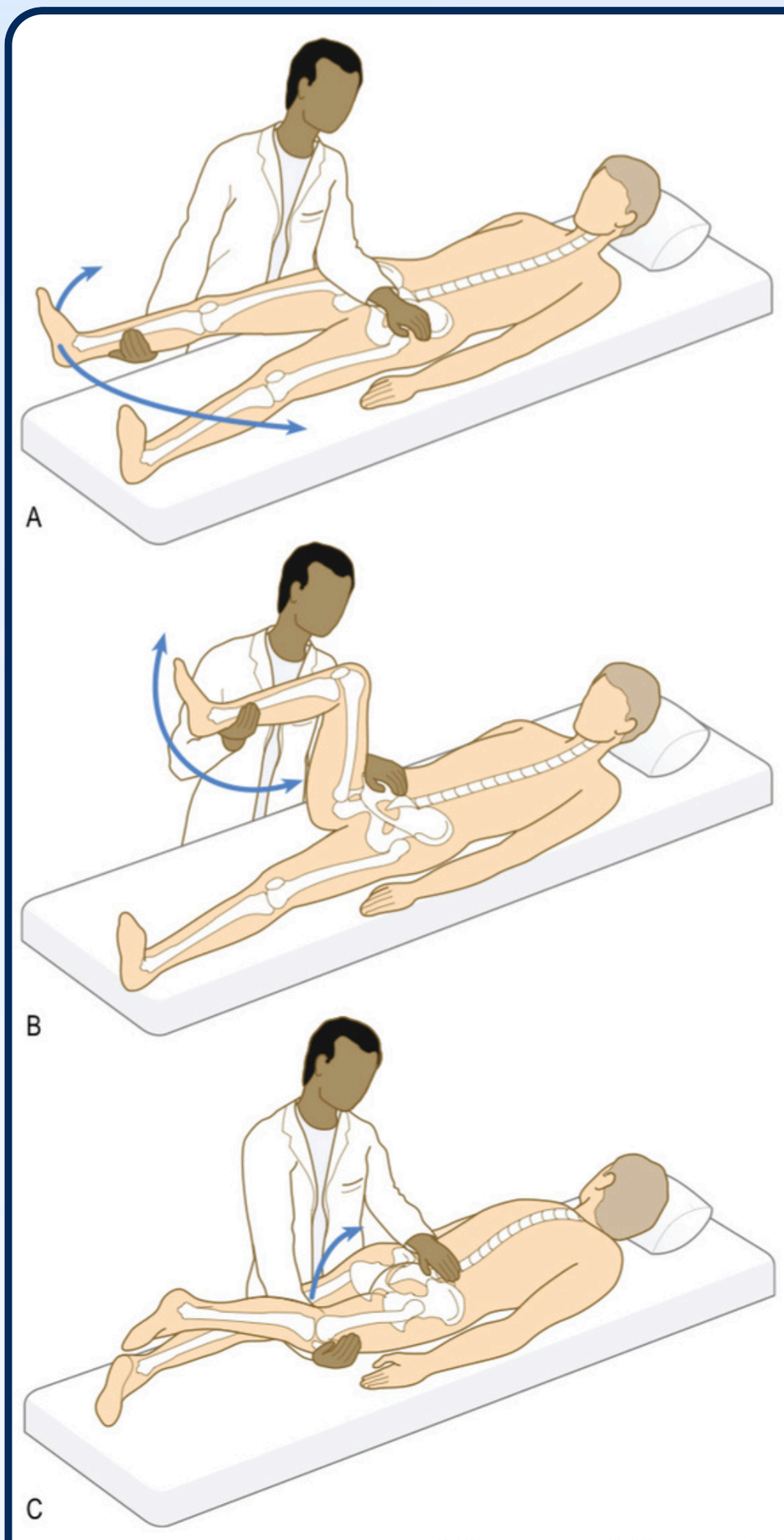


Fig. 13.35 Testing hip movement. A Abduction. B Flexion. C Extension.

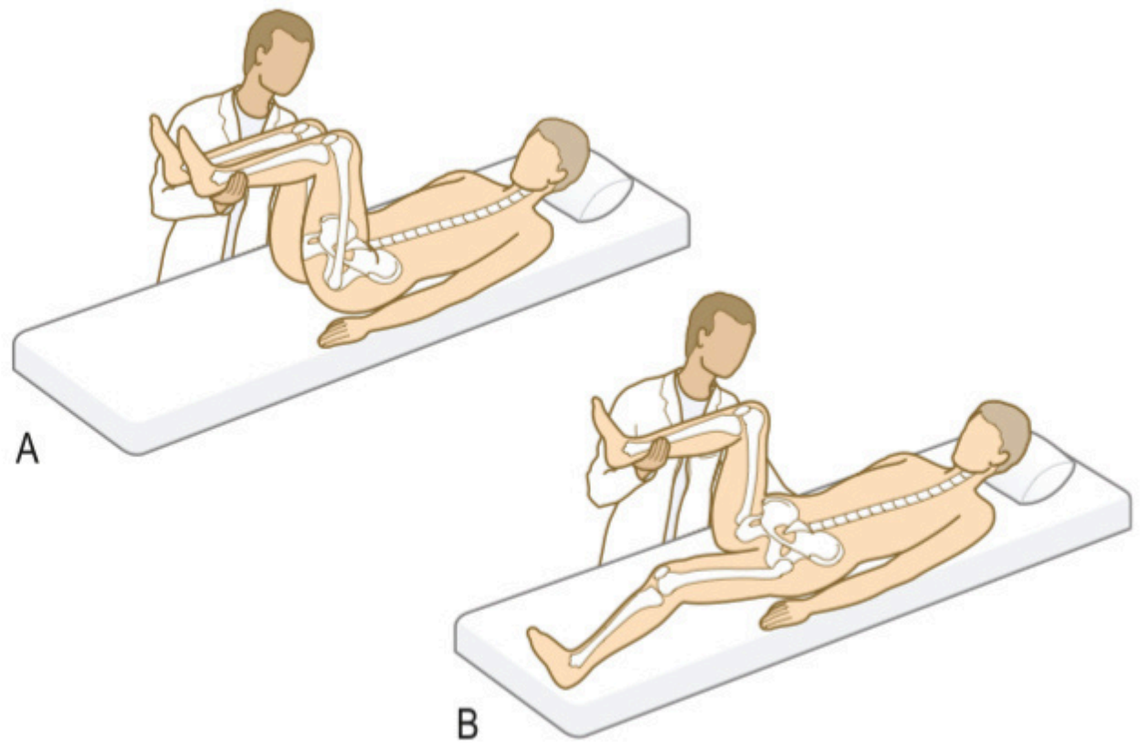


Fig. 13.36 Thomas test. A Passively flex both legs as far as possible. B Extend the test leg. Limitation indicates fixed flexion deformity.

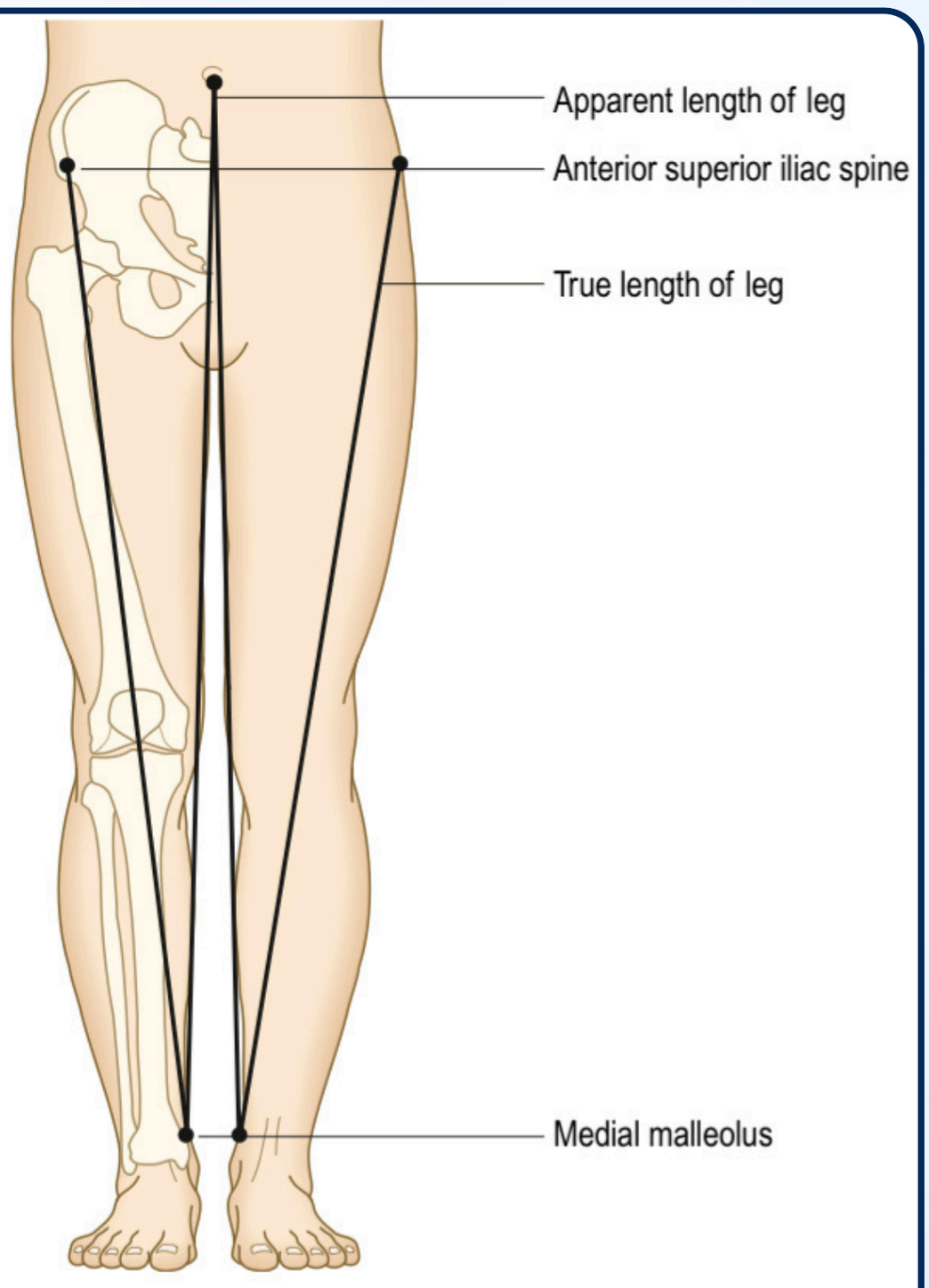


Fig. 13.37 True and apparent lengths of the lower limbs.

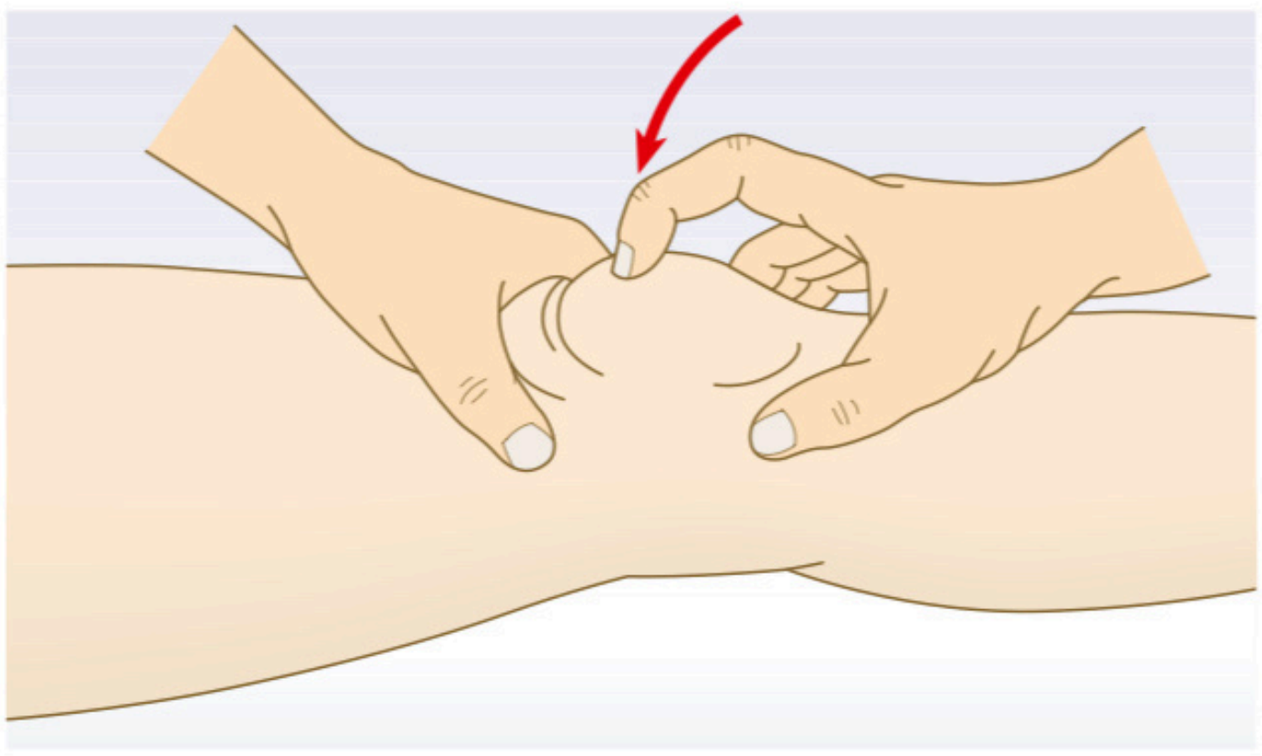


Fig. 13.40 Testing for effusion by the patellar tap.

Macleod's Pictures

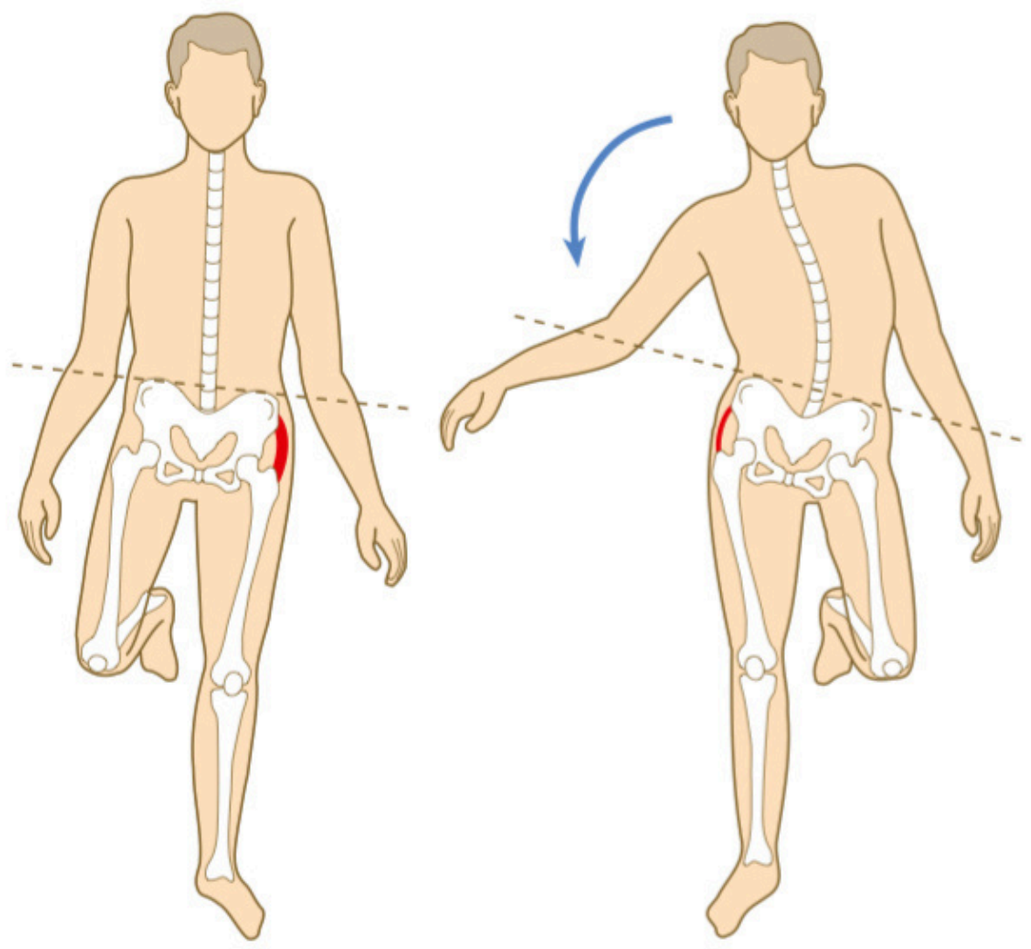


Fig. 13.38 Trendelenburg's sign. Powerful gluteal muscles maintain the position when standing on the left leg. Weakness of the right gluteal muscles results in pelvic tilt when standing on the right leg.

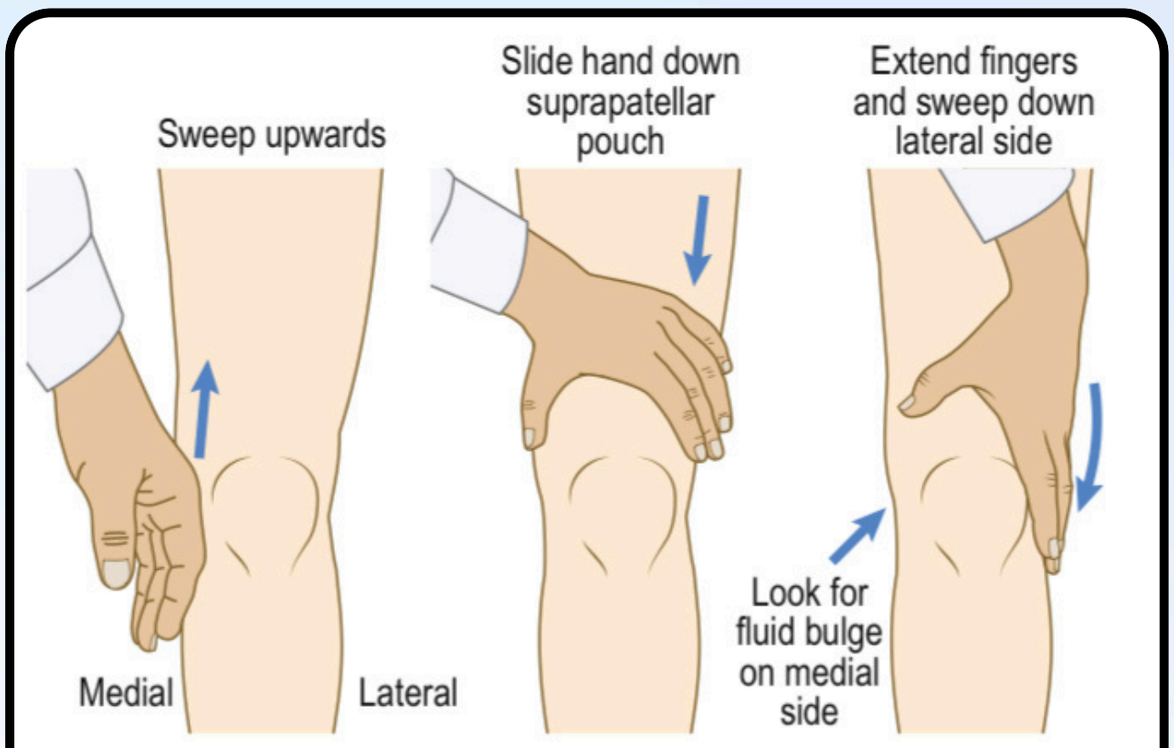


Fig. 13.41 Bulge or ripple test to detect small knee effusions.

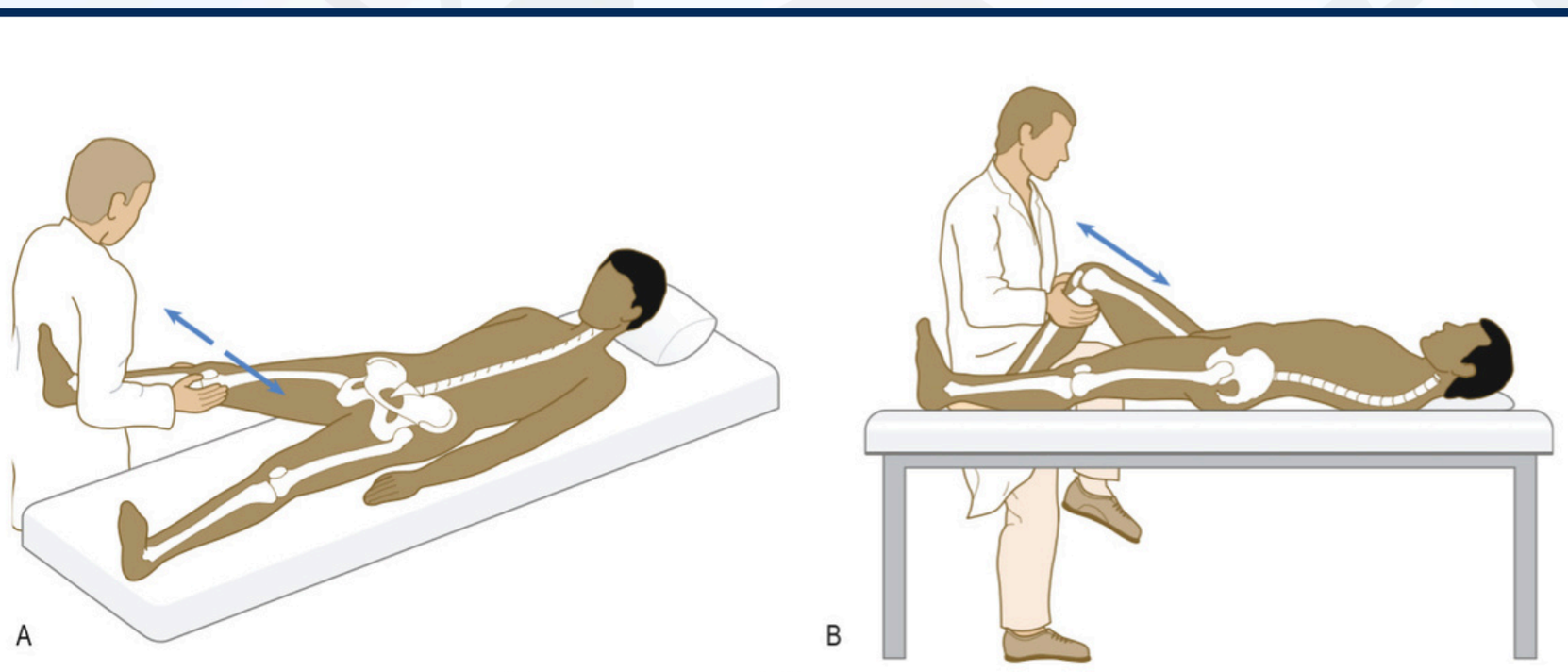
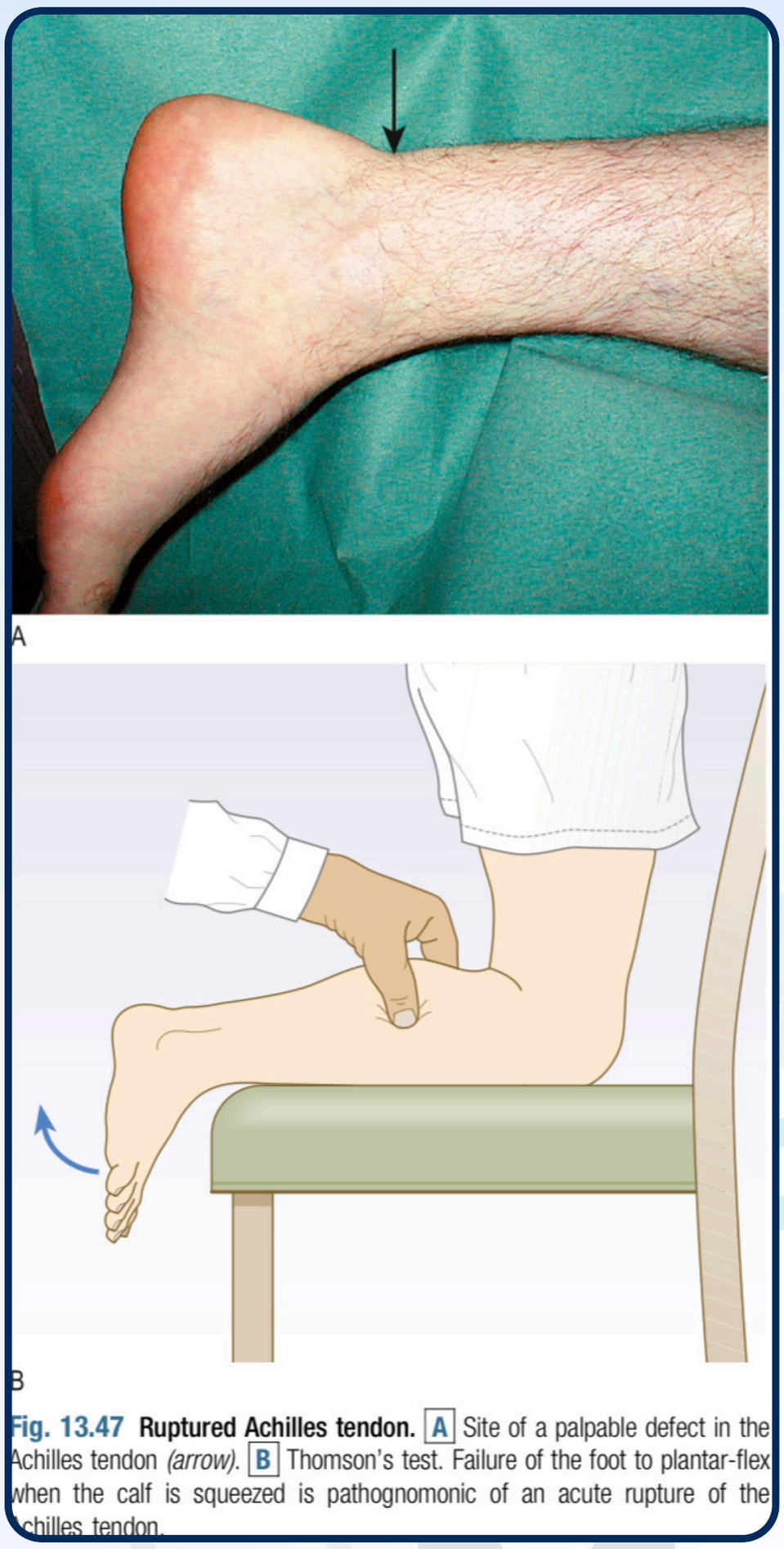


Fig. 13.42 Testing the ligaments of the knee. A Collateral ligaments. B Cruciate ligaments.

Fig. 13.45 Stress fracture of second metatarsal. Fracture site and callus *(arrow)*.

Fig. 13.46 Hallux valgus overriding the second toe.

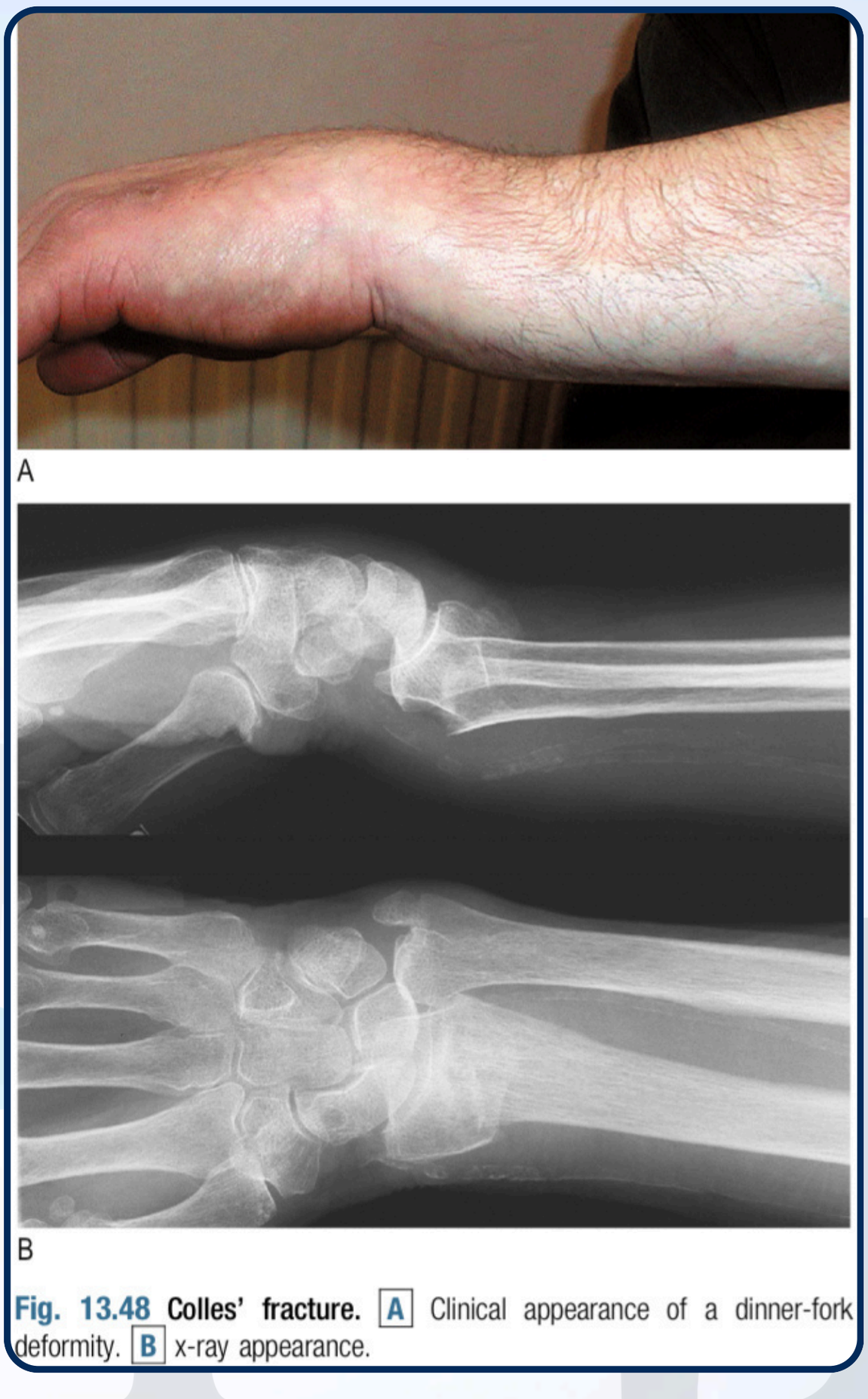
Macleod's Pictures



A

B

Fig. 13.47 Ruptured Achilles tendon. A Site of a palpable defect in the Achilles tendon *(arrow)*. B Thomson's test. Failure of the foot to plantar-flex when the calf is squeezed is pathognomonic of an acute rupture of the Achilles tendon.



A

B

Fig. 13.48 Colles' fracture. A Clinical appearance of a dinner-fork deformity. B x-ray appearance.

A

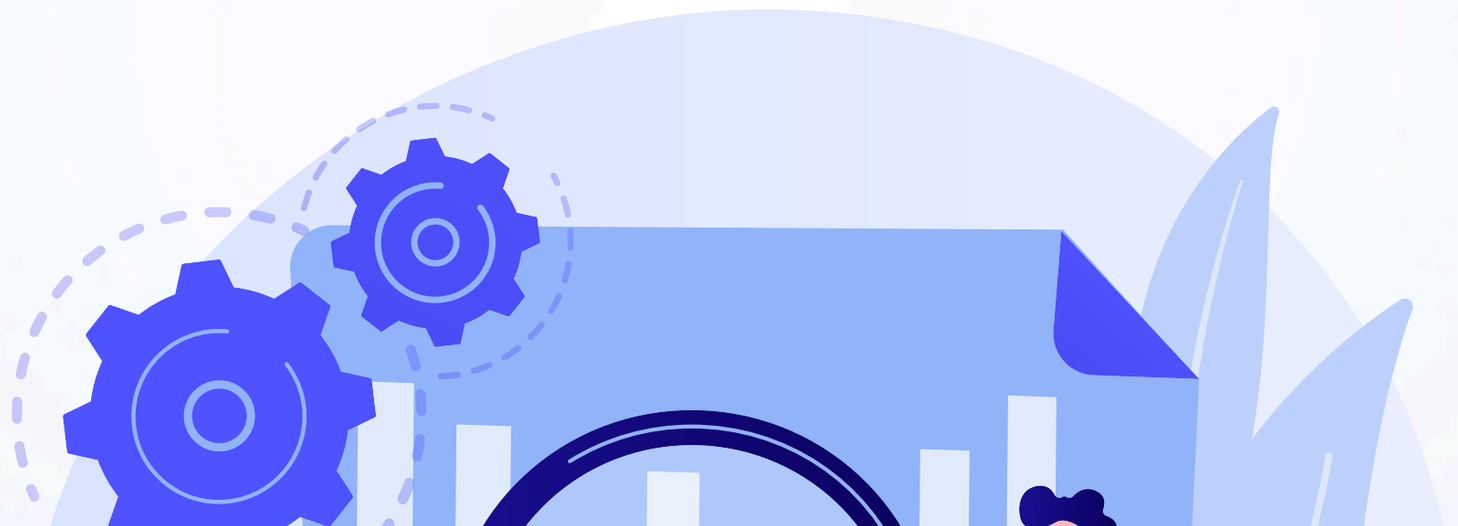
B

Fig. 13.49 Ankle deformity. A Clinical appearance. B Lateral x-ray view showing tibiotalar fracture dislocation.

MINI-OSCE

MACLEOD

RENAL



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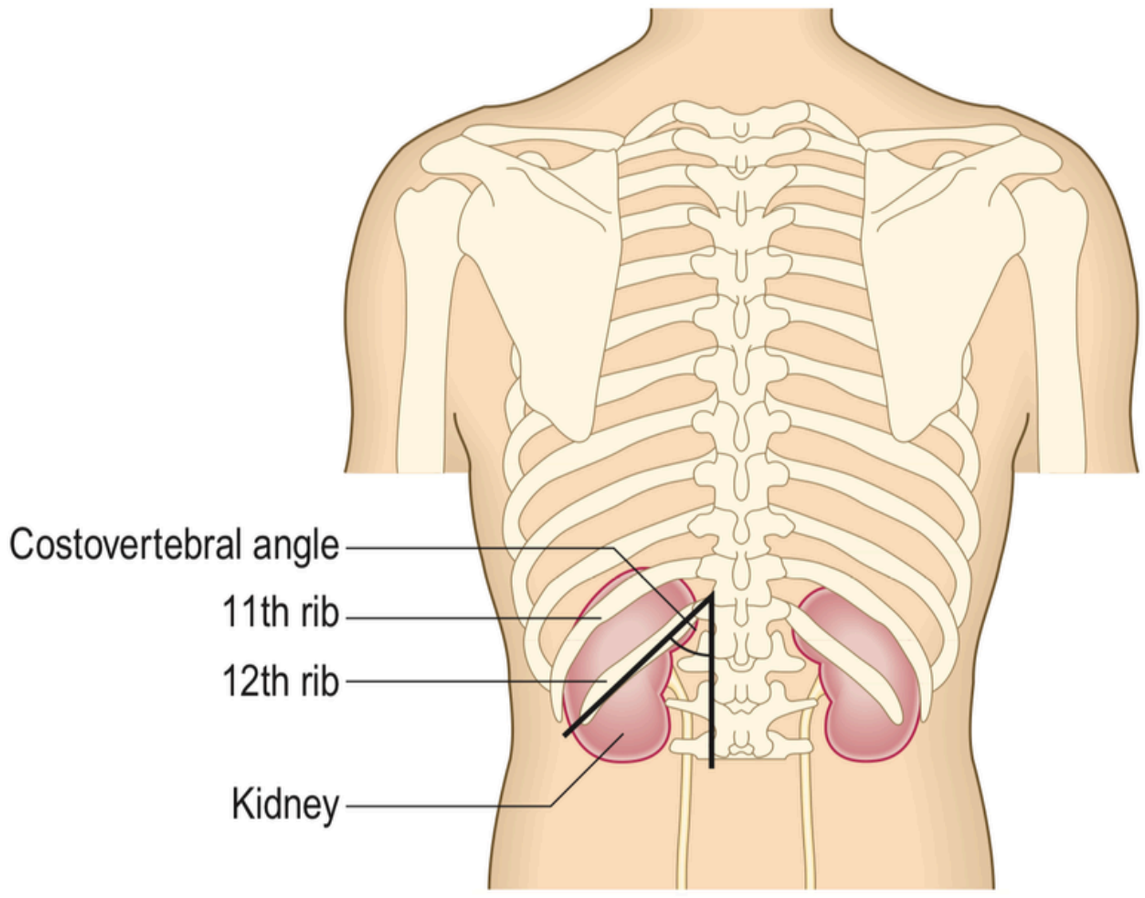

Fig. 12.1 The surface anatomy of the kidneys from the back.

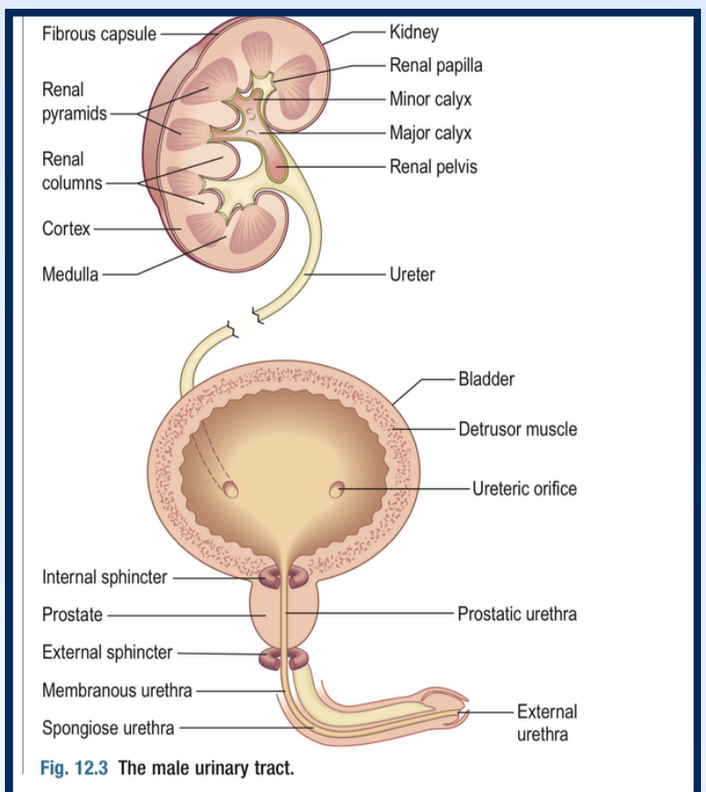

Fig. 12.3 The male urinary tract.

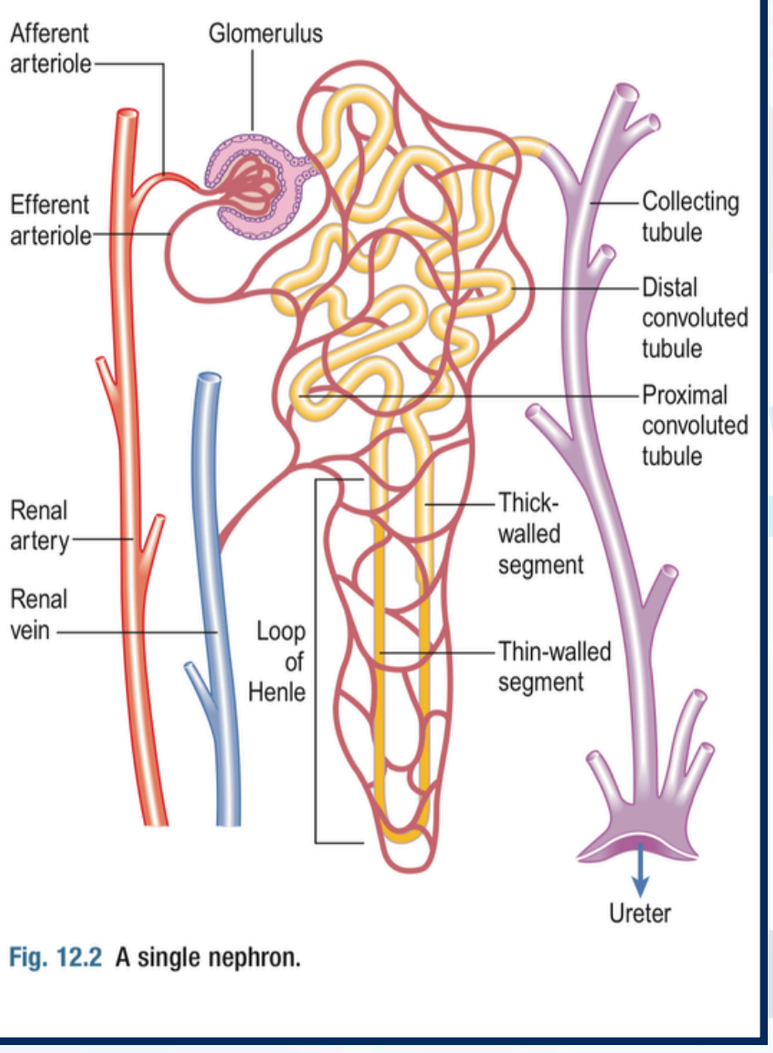

Fig. 12.2 A single nephron.

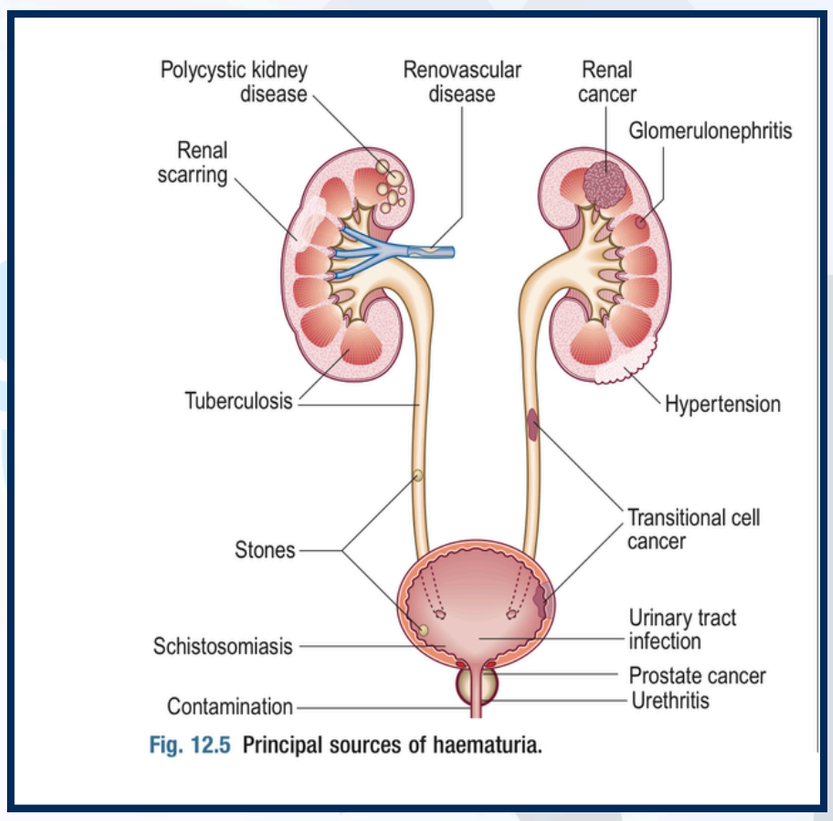

Fig. 12.5 Principal sources of haematuria.

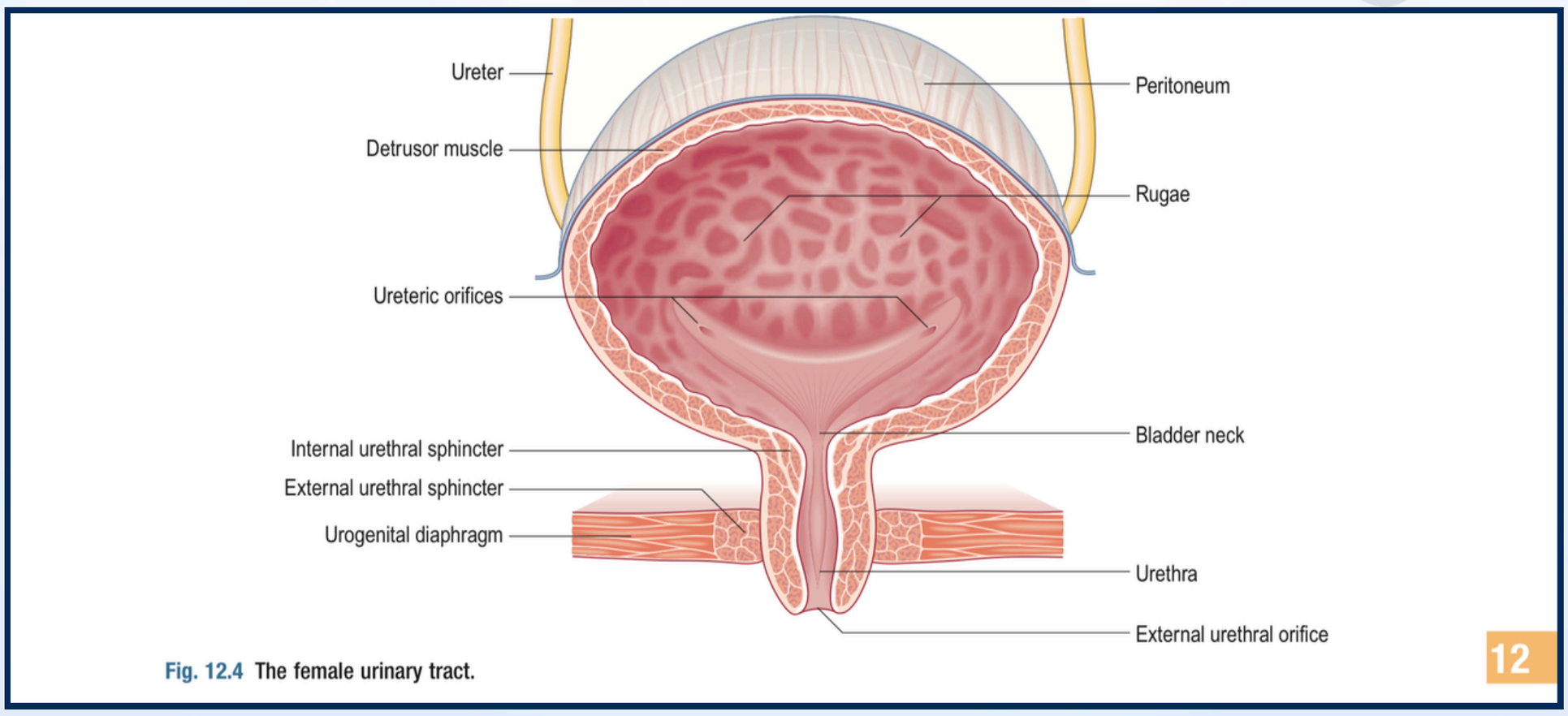

Fig. 12.4 The female urinary tract.

Fig. 12.6 **Muehrcke's lines.** *From Short N, Shah C. Muehrcke's lines. American Journal of Medicine 2010; 123(11):991–992, Elsevier.*

Fig. 12.7 **Half-and-half (Lindsay's) nails.**

. 12.8 Haemodialysis fistula.

Fig. 12.10 Vasculitic rash.

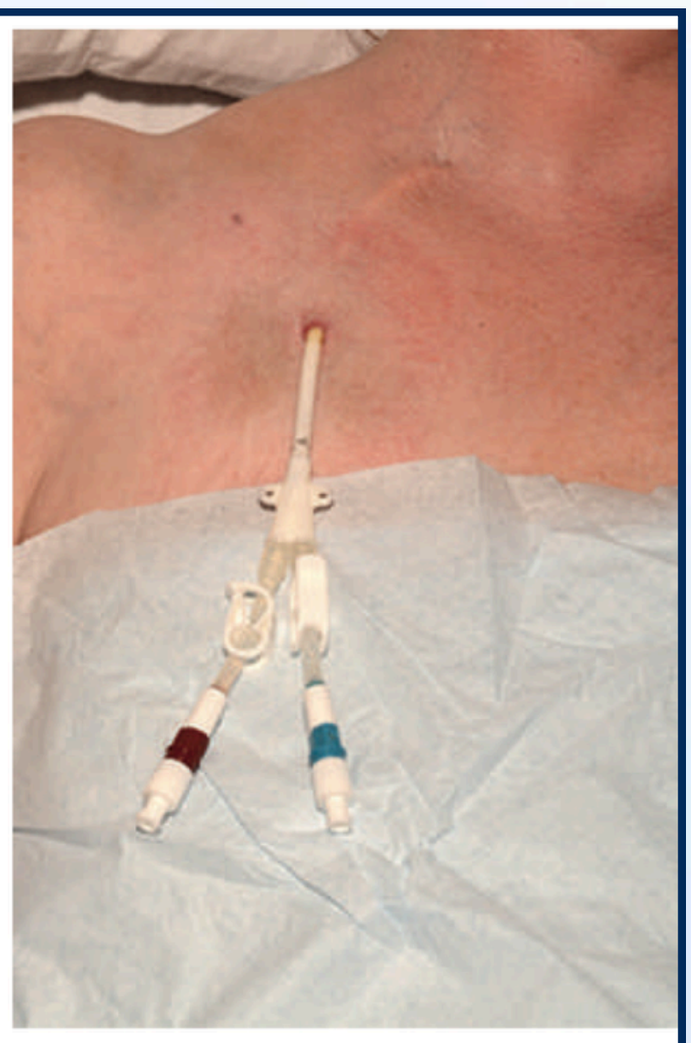

Fig. 12.9 Tunnelled venous access catheter.

Fig. 12.11 Renal transplant scar in the right iliac fossa.

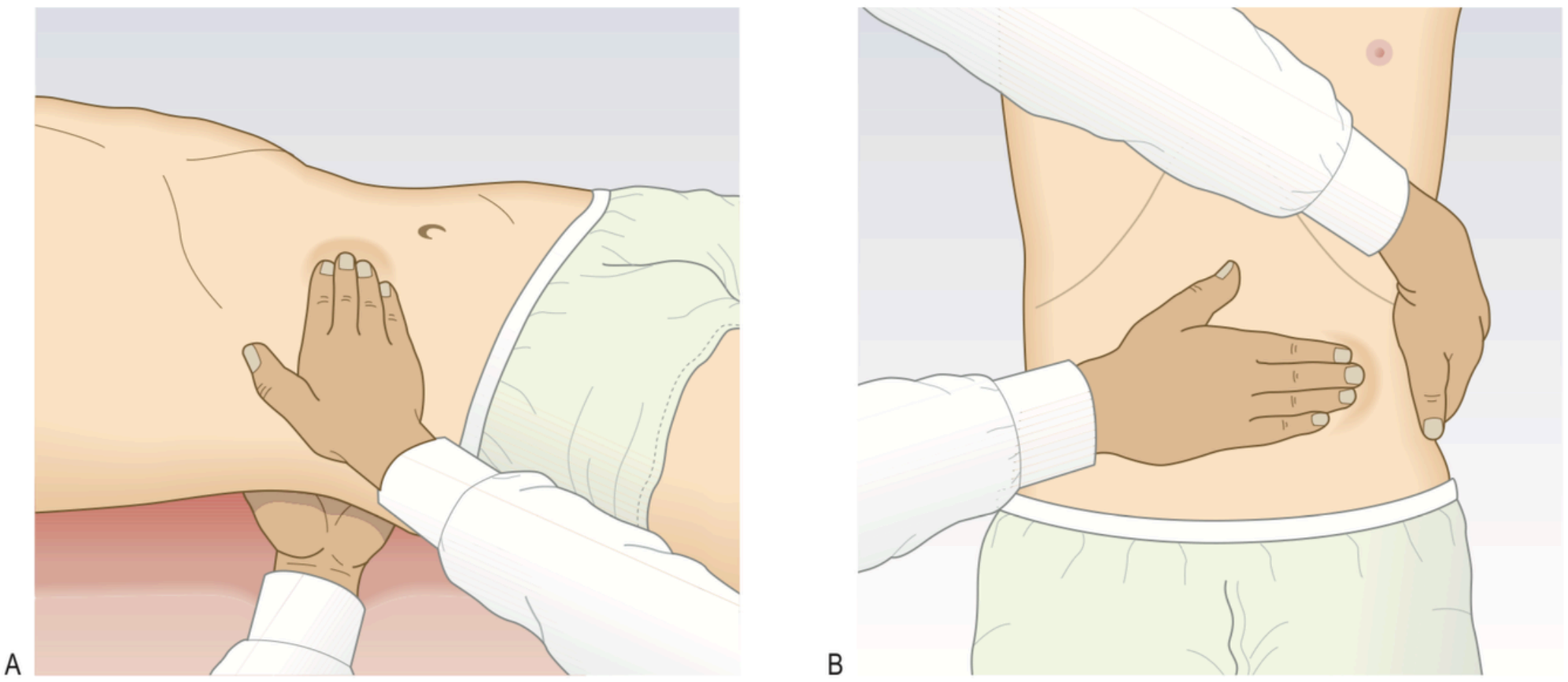

Fig. 12.12 **Palpation of the kidney.** A Right kidney. B Left kidney.

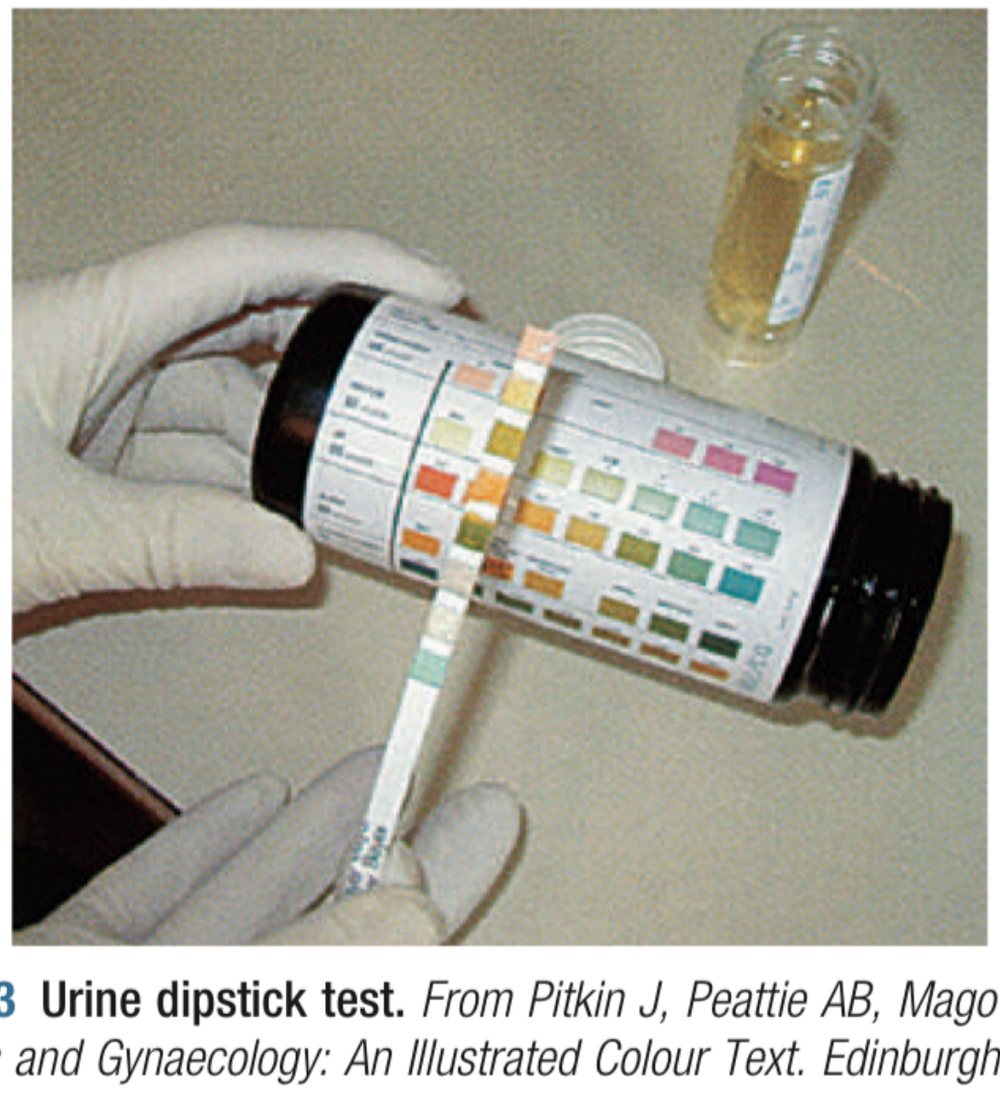

Fig. 12.13 Urine dipstick test. *From Pitkin J, Peattie AB, Magowan BA. Obstetrics and Gynaecology: An Illustrated Colour Text. Edinburgh: Churchill Livingstone; 2003.*