DENTAL SEC A ANATOMY, 2ND SEMESTER,FINAL TERM

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Attempt all questions. Every question carries 10 marks.

Q1. Write a note on pituitary gland, its hormones and abnormalities?

pituitary gland:

The pituitary gland is a part of your endocrine system. Its main function is to secrete hormones into your bloodstream. These hormones can affect other organs and glands, especially your:

- thyroid
- reproductive organs
- adrenal glands

The pituitary gland is sometimes called the master gland because it's involved in so many processes.

Pituitary gland anatomy and function

The pituitary gland is small and oval-shaped. It's located behind your nose, near the underside of your brain. It's attached to the hypothalamus by a stalk like structure.

The hypothalamus is a small area of your brain. It's very important in controlling the balance of your bodily functions. It controls the release of hormones from the pituitary gland.

The pituitary gland can be divided into two different parts: the anterior and posterior lobes.

Anterior lobe

The anterior lobe of your pituitary gland is made up of several different types of cells that produce and release different types of hormones, including:

- Growth hormone. Growth hormone regulates growth and physical development. It can stimulate growth in almost all of your tissues. Its primary targets are bones and muscles.
- Thyroid-stimulating hormone. This hormone activates your thyroid to release thyroid hormones. Your thyroid gland and the hormones it produces are crucial for metabolism.
- Adrenocorticotropic hormone. This hormone stimulates your adrenal glands to produce cortisol and other hormones.
- Follicle-stimulating hormone. Follicle-stimulating hormone is involved with estrogen secretion and the growth of egg cells in women. It's also important for sperm cell production in men.
- Luteinizing hormone. Luteinizing hormone is involved in the production of estrogen in women and testosterone in men.
- Prolactin. Prolactin helps women who are breastfeeding produce milk.
- Endorphins. Endorphins have pain-relieving properties and are thought to be connected to the "pleasure centers" of the brain.
- Enkephalins. Enkephalins are closely related to endorphins and have similar pain-relieving effects.
- Beta-melanocyte-stimulating hormone. This hormone helps to stimulate increased pigmentation of your skin in response to exposure to ultraviolet radiation.

Posterior lobe

The posterior lobe of the pituitary gland also secretes hormones. These hormones are usually produced in your hypothalamus and stored in the posterior lobe until they're released.

Hormones stored in the posterior lobe include:

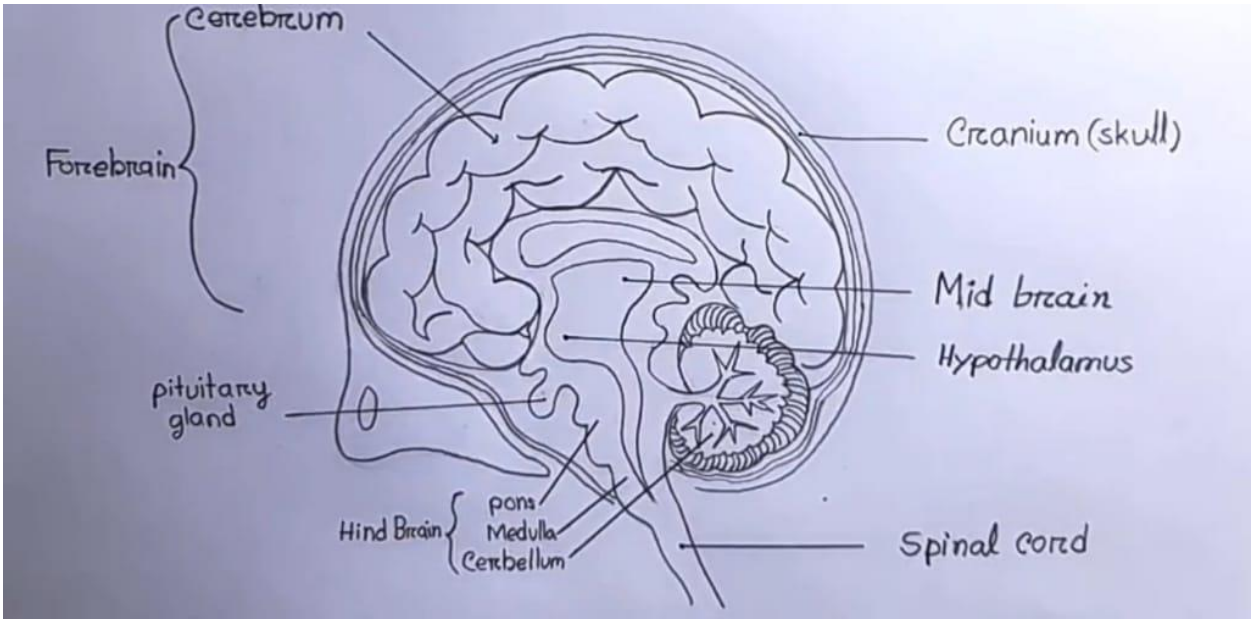
- Vasopressin. This is also called antidiuretic hormone. It helps your body conserve water and prevent dehydration.
- Oxytocin. This hormone stimulates the release of breast milk. It also stimulates contractions of the uterus during labor.

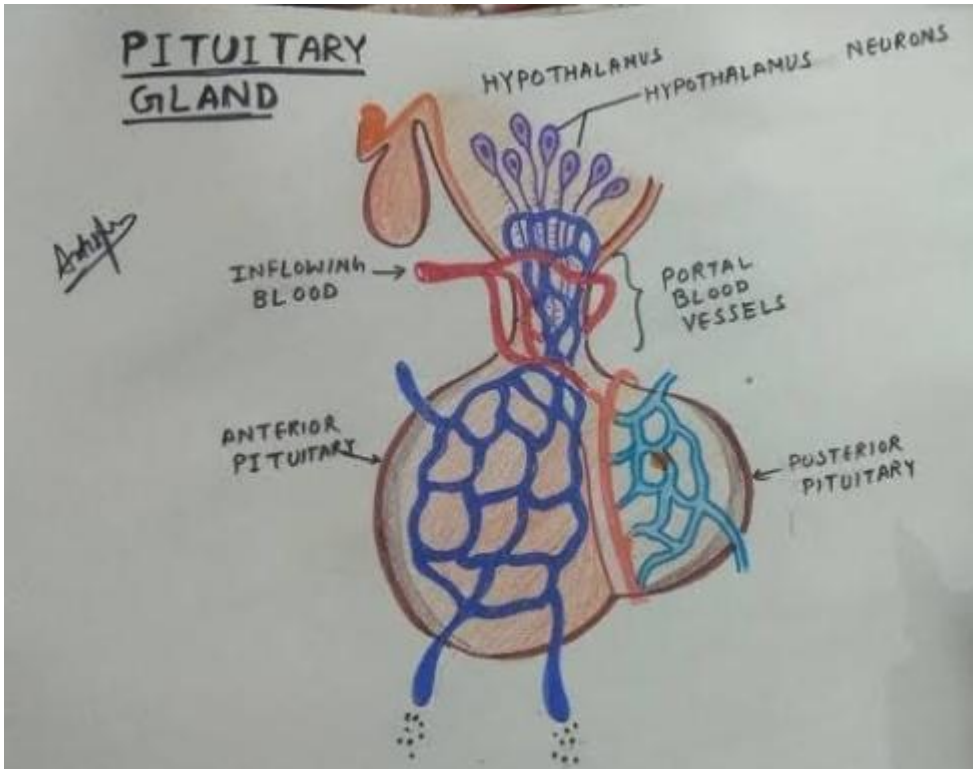
Pituitary gland conditions

Several conditions can affect your pituitary gland. Most are caused by a tumor in or around the pituitary gland. This can impact the release of hormones.

Examples of pituitary gland disorders include:

- Pituitary tumors. Pituitary tumors are usually non cancerous. However, they often interfere with the release of hormones. They can also press against other areas of your brain, leading to vision problems or headaches.
- Hypopituitarism. This condition causes your pituitary gland to produce very little or none of one or more of its hormones. This can affect things like growth or reproductive system function.
- Acromegaly. In this condition, your pituitary gland produces too much growth hormone. This can lead to excessive growth, especially of your hands and feet. It's often associated with pituitary tumors.
- Diabetes insipidus. This can be caused by a problem with the release of vasopressin. It's usually due to a head injury, surgery, or a tumor. As a result, people with this condition pass large amounts of heavily diluted urine. They may also feel like they need to drink a lot of water or other fluids.
- Cushing's disease. The pituitary gland releases too much adrenocorticotropic hormone in people with this condition. This can lead to easy bruising, high blood pressure, weakness, and weight gain. It's often caused by a tumor near or in the pituitary gland.
- Hyperprolactinemia. In this condition, your blood contains an unusually high amount of prolactin. This can lead to infertility and a decreased sex drive.
- Traumatic brain injury. This involves a sudden blow to your brain. Depending on the injury, it can sometimes damage your pituitary gland and cause problems with memory, communication, or behavior.


Cerebrum
Forebrain
Cranium (skull)
Mid brain
Hypothalamus
pituitary gland
Hind Brain
pons
Medulla
Cerebellum
Spinal cord


PITUITARY GLAND
HYPOTHALAMUS
HYPOTHALAMUS NEURONS
INFLOWING BLOOD
PORTAL BLOOD VESSELS
ANTERIOR PITUITARY
POSTERIOR PITUITARY

Q2.write a note on shoulder joint and wrist joint?

The shoulder joint (glenohumeral joint) is a ball and socket joint between the scapula and the humerus. It is the major joint connecting the upper limb to the trunk.

It is one of the most mobile joints in the human body, at the cost of joint stability. In this article, we shall look at the anatomy of the shoulder joint and its important clinical correlations.

Structures of the Shoulder Joint

Articulating Surfaces

The shoulder joint is formed by the articulation of the head of the humerus with the glenoid cavity (or fossa) of the scapula. This gives rise to the alternate name for the shoulder joint – the glenohumeral joint.

Like most synovial joints, the articulating surfaces are covered with hyaline cartilage. The head of the humerus is much larger than the glenoid fossa, giving the joint a wide range of movement at the cost of inherent instability. To reduce the disproportion in surfaces, the glenoid fossa is deepened by a fibrocartilage rim, called the glenoid labrum.

Joint Capsule and Bursae

The joint capsule is a fibrous sheath which encloses the structures of the joint.

It extends from the anatomical neck of the humerus to the border or 'rim' of the glenoid fossa. The joint capsule is lax, permitting greater mobility (particularly abduction).

The synovial membrane lines the inner surface of the joint capsule, and produces synovial fluid to reduce friction between the articular surfaces.

To reduce friction in the shoulder joint, several synovial bursae are present. A bursa is a synovial fluid filled sac, which acts as a cushion between tendons and other joint structures.

The bursae that are important clinically are:

- Subacromial – located deep to the deltoid and acromion, and superficial to the supraspinatus tendon and joint capsule. The subacromial bursa reduces friction

beneath the deltoid, promoting free motion of the rotator cuff tendons. Subacromial bursitis (i.e. inflammation of the bursa) can be a cause of shoulder pain.

- Subscapular – located between the subscapularis tendon and the scapula. It reduces wear and tear on the tendon during movement at the shoulder joint.

There are other minor bursae present between the tendons of the muscles around the joint, but this is beyond the scope of this article.

Ligaments

In the shoulder joint, the ligaments play a key role in stabilising the bony structures.

- Coracohumeral ligament – attaches the base of the coracoid process to the greater tubercle of the humerus. It supports the superior part of the joint capsule.
- Transverse humeral ligament – spans the distance between the two tubercles of the humerus. It holds the tendon of the long head of the biceps in the intertubercular groove.]
- Coraco–clavicular ligament – composed of the trapezoid and conoid ligaments and runs from the clavicle to the coracoid process of the scapula. They work alongside the acromioclavicular ligament to maintain the alignment of the clavicle in relation to the scapula. They have significant strength but large forces (e.g. after a high energy fall) can rupture these ligaments as part of an acromio-clavicular joint (ACJ) injury. In severe ACJ injury, the coraco-clavicular ligaments may require surgical repair.

The other major ligament is the coracoacromial ligament. Running between the acromion and coracoid process of the scapula it forms the coraco-acromial arch. This structure overlies the shoulder joint, preventing superior displacement of the humeral head.

Movements

As a ball and socket synovial joint, there is a wide range of movement permitted:

- Extension (upper limb backwards in sagittal plane) – posterior deltoid, latissimus dorsi and teres major.
- Flexion (upper limb forwards in sagittal plane) – pectoralis major, anterior deltoid and coracobrachialis. Biceps brachii weakly assists in forward flexion.
- Abduction (upper limb away from midline in coronal plane):
  - The first 0-15 degrees of abduction is produced by the supraspinatus.
  - The middle fibres of the deltoid are responsible for the next 15-90 degrees.

- Past 90 degrees, the scapula needs to be rotated to achieve abduction – that is carried out by the trapezius and serratus anterior.

- Adduction (upper limb towards midline in coronal plane) – pectoralis major, latissimus dorsi and teres major.
- Internal rotation (rotation towards the midline, so that the thumb is pointing medially) – subscapularis, pectoralis major, latissimus dorsi, teres major and anterior deltoid.
- External rotation (rotation away from the midline, so that the thumb is pointing laterally) – infraspinatus and teres minor.

Mobility and Stability

The shoulder joint is one of the most mobile in the body, at the expense of stability. Here, we shall consider the factors that permit movement, and those that contribute towards joint structure.

Factors that contribute to mobility:

- Type of joint – ball and socket joint.
- Bony surfaces – shallow glenoid cavities and large humeral heads – there is a 1:4 disproportion in surfaces. A commonly used analogy is the golf ball and tee.
- Inherent laxity of the joint capsule.

Factors that contribute to stability:

- Rotator cuff muscles – surround the shoulder joint, attaching to the tuberosities of the humerus, whilst also fusing with the joint capsule. The resting tone of these muscles act to compress the humeral head into the glenoid cavity.
- Glenoid labrum – a fibrocartilaginous ridge surrounding the glenoid cavity. It deepens the cavity and creates a seal with the head of humerus, reducing the risk of dislocation.
- Ligaments – act to reinforce the joint capsule, and form the coraco-acromial arch.
- Biceps tendon – it acts as a minor humeral head depressor, thereby contributing to stability.

Neurovasculature

The shoulder joint is supplied by the anterior and posterior circumflex humeral arteries, which are both branches of the axillary artery. Branches of the suprascapular artery, a branch of the thyrocervical trunk, also contribute.

Innervation is provided by the axillary, suprascapular and lateral pectoral nerves.

The wrist joint (also known as the radiocarpal joint) is a synovial joint in the upper limb, marking the area of transition between the forearm and the hand.

In this article, we shall look at the structures of the wrist joint, the movements of the joint, and the relevant clinical syndromes.

Structures of the Wrist Joint

Articulating Surfaces

The wrist joint is formed by:

- Distally – The proximal row of the carpal bones (except the pisiform).
- Proximally – The distal end of the radius, and the articular disk (see below).

The ulna is not part of the wrist joint – it articulates with the radius, just proximal to the wrist joint, at the distal radioulnar joint. It is prevented from articulating with the carpal bones by a fibrocartilaginous ligament, called the articular disk, which lies over the superior surface of the ulna.

Together, the carpal bones form a convex surface, which articulates with the concave surface of the radius and articular disk.

Joint Capsule

Like any synovial joint, the capsule is dual layered. The fibrous outer layer attaches to the radius, ulna and the proximal row of the carpal bones. The internal layer is composed of a synovial membrane, secreting synovial fluid which lubricates the joint.

Ligaments

There are four ligaments of note in the wrist joint, one for each side of the joint

- Palmar radiocarpal – It is found on the palmar (anterior) side of the hand. It passes from the radius to both rows of carpal bones. Its function, apart from increasing stability, is to ensure that the hand follows the forearm during supination.

- Dorsal radiocarpal – It is found on the dorsum (posterior) side of the hand. It passes from the radius to both rows of carpal bones. It contributes to the stability of the wrist, but also ensures that the hand follows the forearm during pronation.

- Ulnar collateral – Runs from the ulnar styloid process to the triquetrum and pisiform. Works in union with the other collateral ligament to prevent excessive

lateral joint displacement.

- Radial collateral – Runs from the radial styloid process to the scaphoid and trapezium. Works in union with the other collateral ligament to prevent excessive lateral joint displacement.

Neurovascular Supply

The wrist joint receives blood from branches of the dorsal and palmar carpal arches, which are derived from the ulnar and radial arteries (for more information, see Blood Supply to the Upper Limb)

Innervation to the wrist is delivered by branches of three nerves:

- Median nerve – Anterior interosseous branch.
- Radial nerve – Posterior interosseous branch.
- Ulnar nerve – deep and dorsal branches.

Movements of the Wrist Joint

The wrist is an ellipsoidal (condyloid) type synovial joint, allowing for movement along two axes. This means that flexion, extension, adduction and abduction can all occur at the wrist joint.

All the movements of the wrist are performed by the muscles of the forearm.

Flexion – Produced mainly by the flexor carpi ulnaris, flexor carpi radialis, with assistance from the flexor digitorum superficialis.

Extension – Produced mainly by the extensor carpi radialis longus and brevis, and extensor carpi ulnaris, with assistance from the extensor digitorum.

Adduction – Produced by the extensor carpi ulnaris and flexor carpi ulnaris

Abduction – Produced by the abductor pollicis longus, flexor carpi radialis, extensor carpi radialis longus and brevis.

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Q3.what is axilla and cubital fossa and its important contents?

The cubital fossa is an area of transition between the anatomical arm and the forearm. It is located as a depression on the anterior surface of the elbow joint.

In this article, we shall look at the borders and contents of the cubital fossa, including any clinical relevance.

Borders

The cubital fossa is triangular in shape, and thus has three borders:

- Lateral border – medial border of the brachioradialis muscle.
- Medial border – lateral border of the pronator teres muscle.
- Superior border – hypothetical line between the epicondyles of the humerus.

The floor of the cubital fossa is formed proximally by the brachialis, and distally by the supinator muscle. The roof consists of skin and fascia, and is reinforced by the bicipital aponeurosis. Within the roof runs the median cubital vein, which can be accessed for venepuncture (see clinical relevance below).

Contents

The contents of the cubital fossa include vessels, nerves and the biceps tendon (lateral to medial):

- Radial nerve – this is not always strictly considered part of the cubital fossa, but is in the vicinity, passing underneath the brachioradialis muscle. As it does so, the radial nerve divides into its deep and superficial branches.
- Biceps tendon – runs through the cubital fossa, attaching to the radial tuberosity, just distal to the neck of the radius.
- Brachial artery – supplies oxygenated blood to the forearm. It bifurcates into the radial and ulnar arteries at the apex of the cubital fossa.
- Median nerve – leaves the cubital between the two heads of the pronator teres. It supplies the majority of the flexor muscles in the forearm.

The axilla is a pyramidal space, situated between the upper lateral part of the chest and the medial side of the arm.

Boundaries.—The *apex,* which is directed upward toward the root of the neck, corresponds to the interval between the outer border of the first rib, the superior border of the scapula, and the posterior surface of the clavicle, and through it the axillary vessels and nerves pass. The *base,* directed downward, is broad at the chest but narrow and pointed at the arm; it is formed by the integument and a thick layer of fascia, the **axillary fascia,** extending between the lower border of the Pectoralis major in front, and the lower border of the Latissimus dorsi behind. The *anterior wall* is formed by the Pectoralis major and minor, the former covering the whole of this wall, the latter only its central part. The space between the upper border of the Pectoralis minor and the clavicle is occupied by the coracoclavicular fascia. The *posterior wall,* which extends somewhat lower than the anterior, is formed by the Subscapularis above, the Teres major and Latissimus dorsi below. On the *medial side* are the first four ribs with their corresponding Intercostales, and part of the Serratus anterior. On the *lateral side,* where the anterior and posterior walls converge, the space is narrow, and bounded by the humerus, the Coracobrachialis, and the Biceps brachii.

Contents.—It contains the axillary vessels, and the brachial plexus of nerves, with their branches, some branches of the intercostal nerves, and a large number of lymph glands, together with a quantity of fat and loose areolar tissue. The axillary artery and vein, with the brachial plexus of nerves, extend obliquely along the lateral boundary of the axilla, from its apex to its base, and are placed much nearer to the anterior than to the posterior wall, the vein lying to the thoracic side of the artery and partially concealing it. At the forepart of the axilla, in contact with the Pectorales, are the thoracic branches of the axillary artery, and along the lower margin of the Pectoralis minor the lateral thoracic artery extends to the side of the chest. At the back part, in contact with the lower margin of the Subscapularis, are the subscapular vessels and nerves; winding around the lateral border of this muscle are the scapular circumflex vessels; and, close to the neck of the humerus, the posterior humeral circumflex vessels and the axillary nerve curve backward to the shoulder. Along the medial or thoracic side no vessel of any importance exists, the upper part of the space being crossed merely by a few small branches from the highest thoracic artery. There are some important nerves, however, in this situation, viz., the long thoracic nerve, descending on the surface of the Serratus anterior, to which it is distributed; and the intercostobrachial nerve, perforating the upper and anterior part of this wall, and passing across the axilla to the medial side of the arm.

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Q4.write a note on the lower limb and its main important structures briefly?

Femur (The Thigh)

The femur—the bone of the upper leg—is the longest bone in the human body and one of the strongest.

The femur or thigh bone is found in the upper leg and is the longest bone in the body. The femur articulates proximally with the acetabulum of the pelvis to form the hip joint, and distally with the tibia and patella to Proximally, the femur exhibits four key regions. The femoral head projects medially and superiorly and articulates with the acetabulum of the pelvis to form the hip joint. Immediately lateral to the head is the neck that connects the head with the shaft. It is narrower than the head to permit a greater range of movement at the hip joint.

Located superiorly on the main shaft, lateral to the joining of the neck, the greater trochanter is a projection to which the abductor and lateral rotator muscles of the leg attach.

Also located on the main shaft, but inferiorly to the neck joint, is the lesser trochanter. A much smaller projection than the greater trochanter, the psoas major and iliacus muscles attach here.

Shaft

The shaft descends in a slightly medial direction that is designed to bring the knees closer to the body's center of gravity, increasing stability. Due to the widening of the female pelvis this angle is greater in women and can lead to increased knee instability.

Two key features of the shaft are the proximal gluteal tuberosity to which the gluteus maximus attaches, and the distal adductor tubercle to which the adductor magnus attaches.

Distal

Distally, the femur exhibits five key regions. Two rounded regions, termed the medial and lateral condyles, articulate with the tibia at the most anterior projection of the patella.

Between the two condyles lies the intercondylar fossa, a depression in which key knee ligaments attach; this significantly strengthens the knee joint and protects it against torsional damage.

Finally, the two epicondyles, the medial and lateral, lie immediately proximal to the condyles; they are also regions where key internal knee ligaments attach.

Patella (The Knee)

The patella (knee cap) is the bone between the fibula and femur.

The patella or knee cap is the bone between the fibula and femur. Each leg has a patella to protect its knee joint. The patella serves two functions:

1. To protect the knee from physical trauma.
2. To enhance the leverage that the quadriceps tendon can exert on the femur, thereby increasing muscle efficiency.

The apex of the patella faces inferiorly and connects to the tibia tuberosity through the patella ligament that attaches to the anterior surface. The base of the patella faces superiorly and is the attachment point for the quadriceps tendon.

The posterior surface of the patella contains the medial and lateral facets that articulate with the condyles of the femur. The lower posterior region of the patella has vascular canaliculi, small channels within the bone, which form the infrapatellar fat pad.

Tibia and Fibula (The Leg)

The tibia and the smaller fibula bones comprise the lower leg and articulate at the knee and ankle.

The tibia and fibula are the two bones of the lower leg. The tibia is located medially to the fibula and is much larger. Both are bound together with the interosseous membrane.

The Tibia

The tibia, or shin bone, spans the lower leg, articulating proximally with the femur and patella at the knee joint, and distally with the tarsal bones, to form the ankle joint. It is the major weight-bearing bone of the lower leg.

Proximally, there are five key features of the tibia:

1. It widens and forms two condyles —the lateral and medial—that articulate with the condyles of the femur.
2. Between the two condyles is the intercondylar fossa, a small grove, into which two intercondylar tubercles sit. Numerous internal ligaments of the knee joint attach to these tubercles and strengthen it significantly.
3. On the anterior surface of the proximal region and inferiorly to the condyles is the tibial tuberosity to which the patella ligament attaches.
4. The shaft of the tibia is triangular and the soleus muscle, which gives the calf its characteristic shape, originates on the posterior surface.
5. Distally, the tibia also widens to aid with weight bearing and it displays two key features. The medial malleolus is a bony projection that articulates with the tarsal bones to form the ankle joint. Laterally, there is the fibular notch that articulates with the fibula.

The Fibula

The fibula also spans the lower leg, although proximally it does not articulate with the femur or patella. It serves more as an attachment point for muscles rather than a weight-bearing bone.

Proximally, the fibula head articulates with the lateral condyle of the tibia, and the biceps femoris attaches to the fibula head. As with the tibia, the shaft of the fibula is triangular and numerus muscles are involved in the extension and flexion of the foot. These muscles originate from the fibula's surface and include the extensor digitorum longus, soleus, and flexor hallucis longus, among others.

Distally, the fibula forms the lateral malleolus, which is more prominent than the medial malleolus of the tibia. It also articulates with the tarsal bones to form the ankle joint.

Tarsals, Metatarsals, and Phalanges (The Foot)

The human ankle and foot bones include tarsals (ankle), metatarsals (middle bones), and phalanges (toes).

The foot contains 26 bones that are divided into three regions: the tarsals (or ankle and heel), the metatarsals (forming the sole of the foot), and the phalanges (forming the digits). While sharing a similar underlying structure with the hand, the foot is visibly and structurally different to account for its greater load-bearing and locomotive duties, and reduced fine movements.

Tarsals

The tarsal bones of the foot are organized into three rows: proximal, intermediate, and distal. The proximal row contains the talus, which is the most superior of the tarsals and

articulates with the tibia and fibula to form the ankle joint. The talus is responsible for transmitting forces from the tibia to the heel and acts as an attachment point for numerous ligaments that strengthen the ankle joint.

The calcaneus is the thickest tarsal and forms the heel of the foot. It articulates with the talus superiorly and anteriorly with the cuboid of the distal group. Posteriorly the calcaneal tuberosity is the attachment point for the Achilles tendon.

The intermediate group contains only the navicular bone, which articulates with all of the tarsals—with the exception of the calcaneus. The navicular bone plays a key role in maintaining the medial longitudinal arch of the foot.

There are four distal tarsals: the lateral cuboid and the three cuneiforms, located medially. The distal tarsals articulate with the metatarsals and also maintain the transverse arch of the foot.

Metatarsals

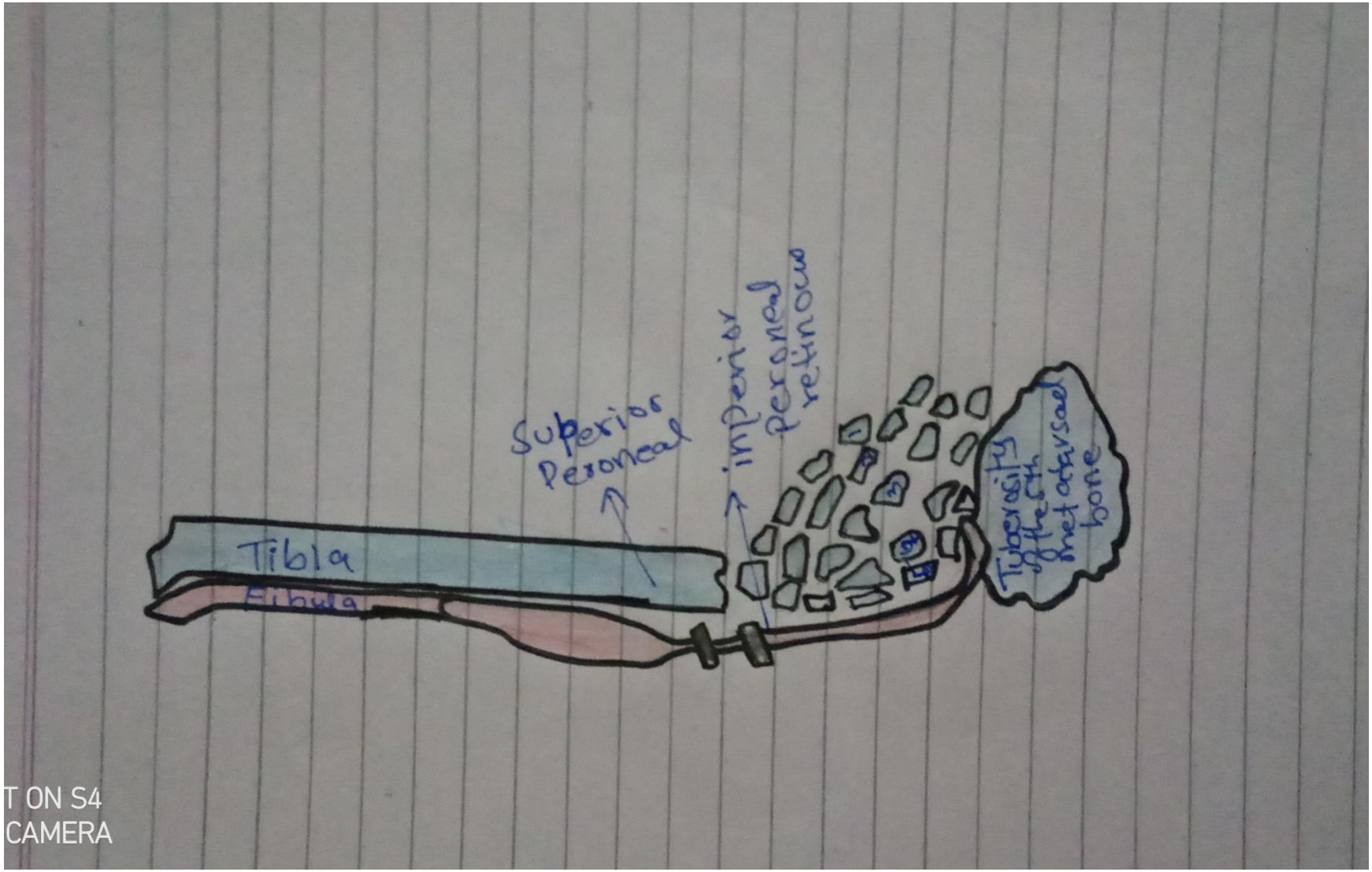
The foot contains five metatarsals that are numbered I–V, moving medial to lateral, big toe to little toe. Each metatarsal consists of a head, shaft, and base.

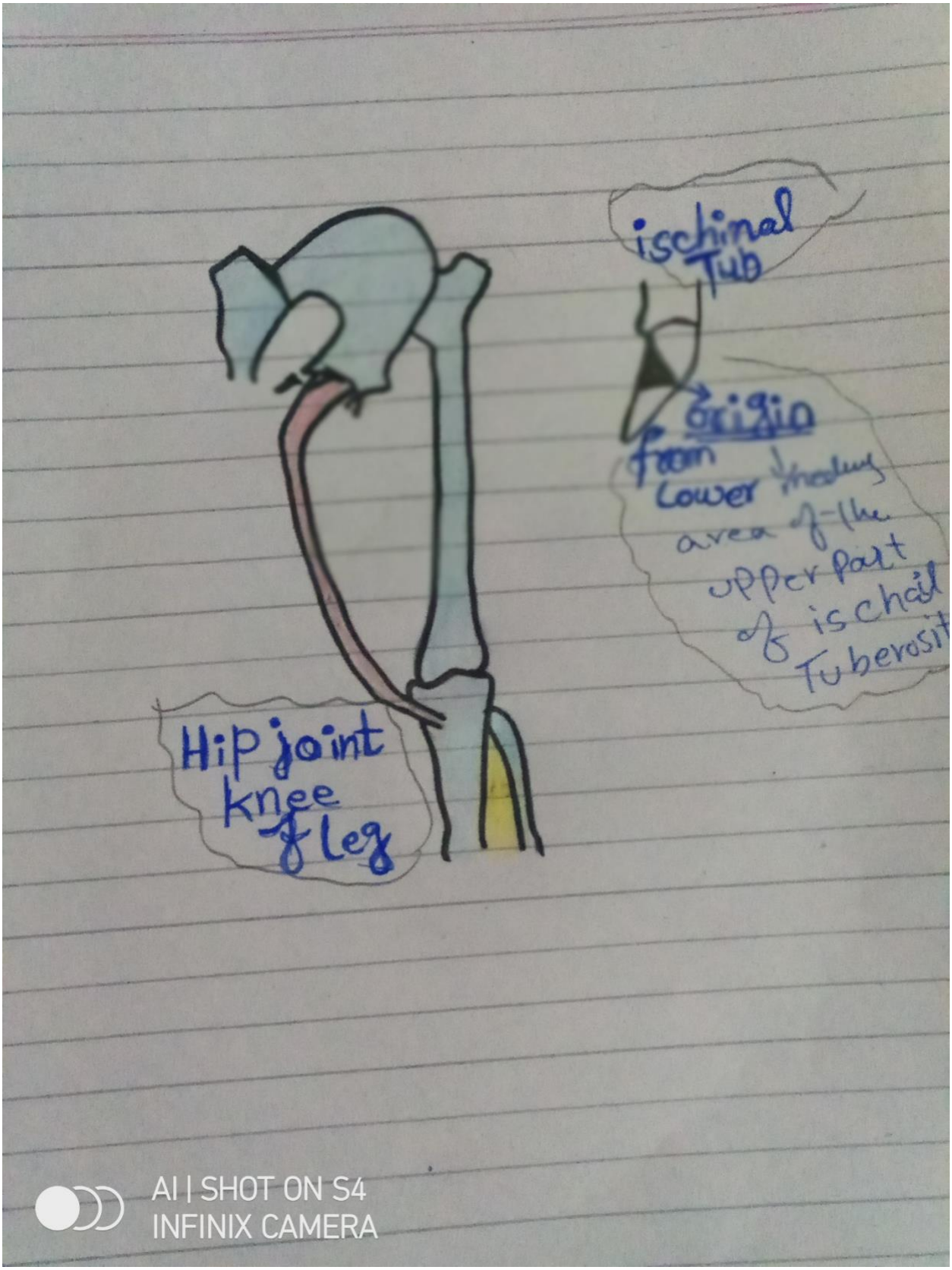
The proximal base articulates with the cuboid bones, and distally with the proximal phalanges, and each metatarsal also articulates laterally with adjacent metatarsals. The interossei of the foot originate from the shafts of the metatarsals.

Phalanges

The digits are named in a similar fashion to the metatarsals, medial to lateral from the big toe. With the exception of the big toe, each digit contains a proximal, intermediate,

and distal phalange; the big toe lacks an intermediate phalange. The length of the phalanges decreases distally.





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Q5.(i) A person fell down from a tree and became unconscious, with bleeding from head, what will you do as a first aid?

Falls are a major cause of older people needing to be admitted to hospital. They can have a major impact on their confidence and future mobility. Older people frequently fracture their hips as part of the fall. They may result in them losing their independence and needing to be cared for.
Older people are at a far greater risk of falling.
• This is often due to them failing to identify risks and being fiercely independent.
• If they begin to get muddled and confused that also puts them at a greater risk.
• Home hazards are frequently a cause of accidents. Loose stair carpets and rugs and poorly fitting footwear and slippers that no longer have sufficient grip.
• Often their eyesight is beginning to fail and they particularly struggle in low light. They may fail to see the top step of the stairs or tripping over things that they had placed in a dangerous position.
• If they have an urgency to go to the toilet, this can result in them rushing. If it is too late, they might be on a wet floor.
• Medication to reduce high blood pressure can result in them feeling dizzy if they get up too quickly and causing them to wobble or possibly collapse. Anyone on blood pressure reducing tablets should be encouraged to get up very slowly whilst holding onto something.
Carers should consider all these risks. They should work with the person they are caring for and with any external organisations to assess the likelihood of falling and minimise the risks.

First Aid for Falls:

- Approach them calmly and reassuringly be alert to any dangers to either you or the casualty
- Do not rush to move them. Get onto the floor so you are the same level as them and immediately assess:
    - are they responsive?

    - Not responsive – are they breathing?
    - They are breathing. Look closely how they have fallen and carefully put them into the recovery position to keep their airway clear
    - They are not breathing: start CPR immediately and act according to your organisation's emergency policy. Request a defibrillator immediately if there is one available.

- If the person is responsive
    - Talk to them. Try and ascertain how the accident happened and if there could be any medical cause such as a fit or stroke – do not stress them if they are confused
    - Try and work out where it hurts most and look at them closely to see if there is any obvious bleeding, bruising or contorted limbs indicating a particular injury.
    - If they are conscious and you think they may have fallen from a height or could have injured their neck or spine – Do not move them. Try and keep them as still as possible and discourage them from twisting. Phone an ambulance and calmly keep reassuring them until paramedics arrive.
    - If you are aware of any bleeding apply firm pressure with a clean pad whilst awaiting the First Aid kit.
    - If they start to show signs of clinical shock – lie them back and raise their legs and get medical help

- If there is no obvious injury or medical cause for the fall

- Carefully and very slowly help them into a sitting position – watch them carefully for any signs of pain, discomfort or dizziness
- With help, carefully assist them into a chair, or back to bed.
- Very carefully and reassuringly check them over completely to ensure that there is no unseen injury – this is particularly important with diabetics when they may not feel where they have hurt themselves.
- Monitor them carefully for the next 24 hours, inform their next of kin and fill in an accident form.

(ii) you have to meet with your friend and you came to know he is covid positive, what precautionary measures will you take?

i will suggest him or her to isolate him or herself i will use sops and will gpt for test as you know corona spread so fast through air and social distance is must sothat will be the main reason to do check up and i well try to isolate as well

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