

# **Weeks 1 & 2: Anatomical terminology, basic layout and major structures**

## **Learning Outcomes**

After producing the presentation on your topic, attending and taking notes at the other presentations, and revising these notes before the examination you should be able to:

1. Use anatomical terminology to describe locations within the body.
2. Use anatomical terminology to describe the movements that the body can perform.
3. Identify, locate and use the major surface landmarks on the torso and limbs.
4. Describe the locations and sizes of the major organs of the body.

This practical is not assessed directly but the material covered in this practical will form part of the examination.

## **Problem 1.**

Anatomical terminology is the only way to unambiguously describe locations within the body. You will use this language throughout the degree course so you need to be clear what the terms mean and when they are used. Produce a presentation illustrating the anatomical terminology used to describe location. This should include the basic anatomical position; the terms proximal & distal; medial & lateral; anterior & posterior; superior & inferior; superficial & deep; cranial & caudal; dorsal and ventral; and the sagittal, coronal and transverse planes. Examples of how these terms are used should be given, and clear and precise illustrations of exactly what each term means (and does not mean) should be created.

## **Problem 2.**

Anatomical terminology is the only way to unambiguously describe the movements that the body can perform. You will use this language throughout the degree course so you need to be clear what the terms mean and when they are used. Produce a presentation illustrating the anatomical terminology used to describe movement. This should include flexion, extension, rotation, protraction, retraction, elevation, depression, circumduction, abduction, adduction, pronation, supination, inversion, eversion, plantarflexion, dorsiflexion. The movements available at the major joints of the body should be illustrated and demonstrated especially in cases where the movement is either unusual or unexpected.

### **Problem 3.**

Surface landmarks are the best way of locating anatomical structures. They are widely used in biomedical fields (for example in locating underlying blood vessels for injection, or joint centres for motion capture). Produce a presentation illustrating the locations of surface landmarks of the head, neck and torso and the underlying structures responsible for them. This should include the pectoral region (clavicle, sternum, suprasternal notch, sternal angle, xiphoid process, sternoclavicular joint, acromial process, areola and nipple, ribs, intercostal spaces, lower costal margin); the back (occipital protuberance, mastoid process, spinous process of 7th cervical vertebra, spine of scapula, medial and lateral margins of the scapula, sacrum, iliac crest, ischial tuberosities); the abdomen (anterior superior iliac spine, pubic tubercle, pubic crest, pubic symphysis, umbilicus). The talk should also illustrate how to palpate the various landmarks and discuss how easy they are to find. Diagrams and X-rays should be used to illustrate underlying structures.

## **Problem 4.**

Surface landmarks are the best way of locating anatomical structures. They are widely used in biomedical fields (for example in locating underlying blood vessels for injection, or joint centres for motion capture). Produce a presentation illustrating the locations of surface landmarks of the upper and lower limbs and the underlying structures responsible for them. This should include the upper limb (greater tuberosity of the humerus, axilla, greater tuberosity of humerus, olecranon process, medial and lateral epicondyles, styloid process, head of radius, 1st carpo-metacarpal joint, metacarpophalangeal joints, interphalangeal joints); lower limb (ischial tuberosity, greater trochanter, medial and lateral epicondyles of femur, patella, tibial tuberosity, medial and lateral malleolus, calcaneus, metatarsal heads, MTP joints, IP joints). The talk should also illustrate how to palpate the various landmarks and discuss how easy they are to find. Diagrams and X-rays should be used to illustrate underlying structures.

## **Problem 5.**

You need to be familiar with the sizes and locations of the major components of the human body. Produce a presentation illustrating the locations of the major organs of the body. This should include the brain, tongue, nose, eyes, ears, lungs, heart, diaphragm, breast, stomach, small intestine, large intestine, liver, kidneys, pancreas, spleen, bladder, uterus, ovary, testicle. This should include demonstrations on how to palpate or percuss the lungs, heart, liver, stomach, spleen, kidneys, bladder, and discuss how easy this is to do. Diagrams and X-rays should be used to illustrate the locations and sizes of these organs.