



Applicant Pre-reading

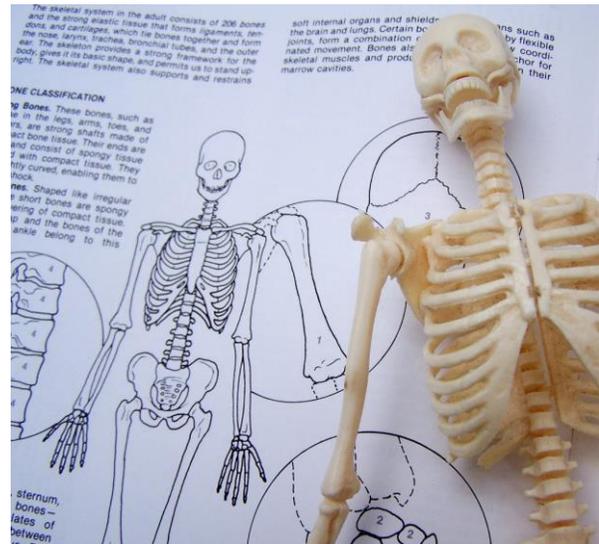
TO HELP YOU PREPARE FOR ENTRY INTO YEAR 1
OF THE MCHIRO PROGRAMME

MChiro (Hons) | September 2017 entry

Introduction

This is the suggested reading for you to do before you start your studies on the chiropractic programme in September. This reading is intended to help you prepare for your studies and by doing this you should find the first few weeks a little bit easier.

For the units listed below the unit leaders have put together some reading from books that you will need for the course and some study notes. They have also listed “Learning outcomes” which outline what you should know, or be able to do, once you have completed the reading. It is recommended that you look at these learning outcomes before you start the reading so that you know what you are aiming for!



UNIT 101 CLINICAL MANAGEMENT I

Reading

The pre-reading for this unit comes from Kapit, W. and Elson, L.M., 2013. *The Anatomy Coloring Book*. 4th edition. Harlow: Pearson (please read pages 10, 17-20, 22, 25-29 and 35-37) as well as the [Introduction](#) to the unit which can be found at the end of this guide.

Learning outcomes

After completing this reading you should be able to....

1. Describe body planes, body directions and body movements in anatomical language.
2. Name the regions of the body.
3. Locate bony landmarks of the trunk, skull, pectoral girdle and pelvis.

UNIT 102 CASE-BASED LEARNING I

Reading

Please read Chapter 1, pages 1-26, from Bickley, L.S. and Szilagy, P.G., 2017. *Bates' pocket guide to physical examination and history taking*. 8th edition. Philadelphia, Pennsylvania, USA: Wolters Kluwer.

Learning outcomes

After completing this reading you should be able to....

1. Define what clinical problem solving is and why it is important.
2. Recognise and appreciate the principles of identifying a clinical problem.
3. Recognise the steps of clinical problem solving.

UNIT 104 HUMAN FUNCTION & DYSFUNCTION I

Reading

The pre-reading for this units comes from Marieb, E.N. and Hoehn, K., 2016. *Human Anatomy and Physiology*. 10th edition. Harlow: Pearson Education Ltd.

Please read Unit 1, Organisation of the Body, Chapters 1-4.

Learning outcomes

After completing this reading you should....

1. Understand the organisation and functions of a cell
2. Understand the ways cells are connected to form tissues

UNIT 105 HUMAN STRUCTURE I

Reading

Please read pages 1-70, from Moore, K.L., Dalley, A.F. and Agur, A.M.R. 2013. *Clinically Orientated Anatomy*, 7th edition. Wolters Kluwer/Lippincott Williams and Wilkins.

Learning outcomes

After completing this reading you should be able to....

1. Recognise the normal anatomical appearance and imaging characteristics of the tissues of the human spine, trunk and related structures
2. Identify and describe the normal anatomy of the human spine, trunk and related structures and apply this knowledge in the understanding of functional relationships between
3. Apply their knowledge of the normal anatomy of the human spine and trunk to discuss the functional relationships of these areas during movement

Enjoy your summer and
we look forward to seeing
you in September!



INTRODUCTION TO CLINICAL MANAGEMENT 1:

LEARNING OUTCOMES:

By the end of this section:

1. The student should be able to describe body planes, body directions and body movements in anatomical language.
2. The student should be able to name the regions of the body.
3. The student should be able to locate bony landmarks of the trunk, skull, pectoral girdle and pelvis.

BODY PLANES:

In order to describe the direction of movement, the body is divided into planes. The body is positioned in the **anatomical position**, which means the body is facing forward, hands at the side with the palms facing forwards and feet pointing straight ahead. The **sagittal plane** is vertical and extends from front to back. The **coronal plane** or frontal plane is vertical and extends from side to side. The **transverse plane** is a horizontal plane and divides the body into upper and lower components.

BODY DIRECTIONS:

Some terms to be aware of:

Term	Meaning
Anterior	At the front
Distal	Furthest from the midline
Inferior	Towards the feet
Lateral	Away from the midline
Medial	Towards the midline
Posterior	At the back
Proximal	Closest to the midline of the body
Superior	Towards the head

REGIONS OF THE BODY:

Please look up the following body regions so that you know where they are:

- Cranial
- Facial
- Cervical
- Thoracic
- Acromial
- Pectoral
- Sternal
- Scapula
- Interscapula
- Abdominal
- Brachial
- Cubital
- Antibrachial
- Palmar
- Dorsum of hand
- Carpal
- Umbilical
- Inguinal
- Sacral
- Gluteal
- Lumbar
- Pubic
- Femoral
- Popliteal

BASIC SPINAL ANATOMY:

- **Cervical spine:** Consists of seven vertebrae, numbered C1-C7 (from superior to inferior). C1 is sometimes referred to as Atlas. C2 is sometimes referred to as Axis. The cervical spine connects with the skull superiorly and the thoracic spine inferiorly.
- **Thoracic (dorsal) spine:** Consists of twelve vertebrae, numbered T1-T12 (from superior to inferior). The thoracic spine connects with the cervical spine superiorly and the lumbar spine inferiorly.
- **Lumbar spine:** Consists of five vertebrae, numbered L1-L5 (from superior to inferior). The lumbar spine connects with the thoracic spine superiorly and the sacrum inferiorly.
- **Sacrum:** The sacrum articulates (connects) with L5 superiorly, with the Ilium (part of the pelvis) bilaterally and with the coccyx inferiorly.
- **Coccyx:** The coccyx articulates with the sacrum superiorly.

Definitions:

- Lordosis: The term lordosis refers to the normal inward curvature of the lumbar and cervical regions of the spine.
- Kyphosis: The term kyphosis refers to the normal outward curvature of the thoracic and pelvic/ sacral regions of the spine.

If a curve is increased it is referred to as hyper – for example: lumbar hyperlordosis is an increase in the lumbar lordosis.

If a curve is decreased it is referred to as hypo – for example: thoracic hypokyphosis is a decrease in the thoracic kyphosis.

BONY LANDMARKS:

You only need to know the bony landmarks of the trunk and head at the moment. Either of the following books may be of help or you can search online.

1. Field, D., Hutchinson, J. O., 2006. *Field's Anatomy Palpation and Surface Markings* (Fourth Edition). Elsevier: London.
2. Lumley, J. S. P., 2008. *Surface Anatomy* (Fourth Edition). Churchill Livingstone: London.

Bony landmarks you are expected to know are:

Head and neck:

- External Occipital Protuberance (EOP)
- Mastoid process
- Angle of the mandible
- Hyoid bone
- Transverse process of C₁
- Spinous process of C₂ & of C₇

Areas of the skull:

- Frontal bone
- Parietal bone
- Temporal bone
- Occipital bone

Anterior Trunk:

- Clavicle
- Coracoid process of scapula
- Suprasternal notch
- Manubrium sterni
- Rib 2
- Manubriosternal joint
- Body of sternum
- Rib 7
- Xiphoid process
- Costal margin
- Crest of ilium
- Anterior Superior Iliac Spine (ASIS)

Posterior Trunk:

- Scapula
- Medial border of scapula
- Inferior angle of scapula
- Lateral border of scapula
- Spine of scapula
- 12th rib/ rib margin
- Posterior superior iliac spine (PSIS)
- Posterior inferior iliac spine (PIIS)
- Sacrum

- Sacral base
- S₁ sacral tubercle
- S₂ sacral tubercle (which is in line with the PSIS)

MOVEMENT:

Some definitions, and examples of, terms used to describe body movement are:

- **Flexion:** The act of bending / being bent. Reduces the angle between bones or parts of the body.
- **Extension:** The act of straightening / being straightened. Increases the angle between bones or parts of the body.
- **Lateral Flexion:** Sideways bending.
- **Rotation:** Movement of a body part about its axis. Internal rotation involves movement towards the midline. External rotation involves movement away from the midline.
- **Supination:** This is movement towards a supine position. In the forearm and hand it involves bringing the forearm / hand into a position where the palm is turned forwards. In the foot it involves turning the medial part of foot upwards / inwards.
- **Pronation:** Pronation is the opposite of supination. It is movement towards a prone position. In the forearm and hand it involves bringing the forearm / hand into a position where the palm is turned backwards. In the foot it involves turning the medial part of foot downwards / outwards.
- **Abduction:** Often applied to limbs, this involves movement away from the mid-sagittal plane.
- **Adduction:** This is the opposite of abduction and involves movement towards the mid-sagittal plane.