

PM098 - Clinical Studies 2 - Neuromusculoskeletal 2019/20 (Current Academic Year)

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120 items

Week 8 / Week 24 (8 items)

In week 8/24 you will be introduced to foundational principles of NMSK examination, documenting patient records and outcome measures (e.g. goniometry). Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database.

Consent (2 items)

Consent does not just apply to this clinical setting, however, take some time to review the concepts, importance and areas that need to be considered in relation to consent.

CSP Consent

Document | **Essential** | Document produced by the CSP on consent.

Did You Get Consent? - YouTube

Audio-visual document | **Essential** | This is a resource from Canada but provides a very good summary of the important aspects of obtaining consent. There are some aspects that won't apply to all situations that you will encounter as a student.

NMSK examination (6 items)

Subjective Assessment (2 items)

In Practical 1 we will look at consent, communication and subjective assessment. Ensure you have read this prior to Practical 1.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

Book | **Essential** | Read chapter 2: Subjective Examination (from page 3-34).

This book is available as an electronic copy or a hard copy in the library.

This should be completed before your classes in Week 8.

The Flag System - Physiopedia

Webpage | **Recommended** | In the reading above you will notice that on p19 there is a table that looks at types of clinical flags. Have a look at this webpage to supplement your understanding on clinical flags.
This is a good webpage to refer back to if you need a quick reference.

Outcome Measures (1 items)

In Practical 1 we will consider the importance of outcome measures. Please read this prior to Practical 1.

Outcome Measures - Physiopedia

Webpage | **Essential** | Read this to understand the importance and purpose of an outcome measure in clinical practice.

Objective Assessment (3 items)

In Practical 2 we will start to look at the principles of Objective assessments and aspects that should be included specifically observation and ROM. Please read these resources before Practical 2.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

Book | **Essential** | From chapter 3: Physical Examination

Read from page 35-48 (stop at combined movements)

Read page 52-53 Passive Physiological Movements (stop at Muscle Tests)

Feel free to read more of this chapter however much of the content will be covered later on.

This should be read before your classes in Week 8.

The Goniometer, 27/3/2012

Audio-visual document | **Recommended** | Use this video to help you with practical techniques.

Musculoskeletal assessment: joint range of motion and manual muscle strength, by Hazel M. Clarkson, 2000

Book | **Recommended** | You will be expected to demonstrate use of a goniometer in measuring range of motion of various regions of the body, in the module practical viva and on clinical placement. After the week 8 practical class you should practice this. There are many texts in QMU LRC which you may use to learn how to measure joint range of movement using a manual universal goniometer. Clarkson (2000) is just one of these texts.

Week 8/ Week 24 - Additional Resources (10 items)

These resources are not part of your directed reading but have been added to facilitate

and support your learning. You may want to return to these for revision purposes or whilst you are on placement.

Range of Movement (5 items)

Active Range of Motion: Shoulder, 3/12/2015

Audio-visual document | **Recommended** | Use these videos to help you with practical techniques.

Shoulder Passive Range of Motion (PROM), 18/4/2018

Audio-visual document | **Recommended** | Use these videos to help you with practical techniques.

A comparison of electronic and manual dynamometry and goniometry in patients with fracture of the distal radius and healthy participants - in Journal of Hand Therapy, by Caroline E. Plant; Nicholas R. Parsons; Alison T. Edwards; Hayley Rice; Kate Denninson; Matthew L. Costa, 2016-01

Article | **Recommended** | Within this module we will be searching and using literature to support our knowledge and to underpin our learning. Articles will be used in tutorial classes as discussion aids. Start to have a look at literature related to the topics each week.

Reliability and concurrent validity of knee angle measurement: Smart phone app versus universal goniometer used by experienced and novice clinicians - in Manual Therapy, by Steven Milanese; Susan Gordon; Petra Buettner; Carol Flavell; Sally Ruston; Damien Coe; William O'Sullivan; Steven McCormack, 2014-12

Article | **Recommended** | Within this module we will be searching and using literature to support our knowledge and to underpin our learning. Articles will be used in tutorial classes as discussion aids. Start to have a look at literature related to the topics each week.

Reliability of knee joint position sense measurement: a comparison between ... - in European Journal of Physiotherapy, 2016

Article | **Recommended** | Within this module we will be searching and using literature to support our knowledge and to underpin our learning. Articles will be used in tutorial classes as discussion aids. Start to have a look at literature related to the topics each week.

Outcome Measures (5 items)

This section contains some more information around outcome measures including some examples of commonly used outcome measures.

Patient-reported outcome measures in advanced musculoskeletal physiotherapy practice: a systematic review - in Musculoskeletal Care, by Orna Fennelly; Catherine Blake; François Desmeules; Diarmuid Stokes; Caitriona Cunningham, 2018-03

Article | **Recommended** | Within this module we will be searching and using literature to support our knowledge and to underpin our learning. Articles will be used in tutorial classes as discussion aids. Start to have a look at literature related to the topics each week.

STarT Back Screening Tool - Physiopedia

Webpage | **Background** | Example outcome measure used in clinical practice. Familiarise yourself with different outcome measure that can be used in clinical practice. You may see these used in clinical practice. Also, when looking at case studies throughout the module you can consider when they could be utilised.

DASH - Disabilities of the arm, shoulder and hand

Document | **Background** | Example outcome measure used in clinical practice. Familiarise yourself with different outcome measure that can be used in clinical practice. You may see these used in clinical practice. Also, when looking at case studies throughout the module you can consider when they could be utilised.

QuickDASH

Document | **Background** | Shortened version of DASH with extra option of work or sports module. This has 11 questions that assess physical function and symptoms of any upper limb MSK pathology.

Lower Extremity Functional Scale (LEFS) - Physiopedia

Webpage | **Background** | Example outcome measure used in clinical practice. Familiarise yourself with different outcome measure that can be used in clinical practice. You may see these used in clinical practice. Also, when looking at case studies throughout the module you can consider when they could be utilised.

Week 9 / Week 26 (7 items)

In week 9/26 you will be introduced to principles of increasing muscle strength, power and endurance. Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. There are numerous physiotherapy texts that will provide you with comprehensive information on the topics covered this week, so if you feel like reading more then feel free to explore the LRC's database.

Therapeutic exercise (3 items)

Principles of neuromusculoskeletal treatment and management: a guide for therapists, by Nicola J. Petty; Nicola J. Petty, 2011

Book | **Essential** | READ Chapter 5- Principles of muscle treatment, pages 155 - 162 (up to altering motor control)

Therapeutic Exercise : Foundations and Techniques, by Carolyn Kisner and Lynn Allen Colby, 2007

Book | **Essential** | Please read from page 182-186 (from precautions for resistance exercise to contra-indications to resistance exercise)

Therapeutic Exercise Foundations and Techniques : Foundations and Techniques, by Carolyn Kisner , and Lynn Allen Colby, 2012

Book | **Recommended** | Read chapter 6 (from page 157): Resistance Exercise for Impaired Muscle Performance.

This is a really good and informative chapter on resistance exercise. It is also a very long chapter. Use this for further reading or reference if more information is required.

Assessment of muscle function (4 items)

Principles of neuromusculoskeletal treatment and management: a guide for therapists, by Nicola J. Petty; Nicola J. Petty, 2011

Book | **Essential** | READ chapter 4 p115-124

Considerations and Practical Options for Measuring Muscle Strength: A Narrative Review - in BioMed Research International, by Richard W. Bohannon, 2019-01-17

Article | **Essential** | A useful overview of methods for assessment of muscle strength

Assessment of Muscle Function and Physical Performance in Daily Clinical Practice - in Calcified Tissue International, by Charlotte Beaudart; Yves Rolland; Alfonso J. Cruz-Jentoft; Jürgen M. Bauer; Cornel Sieber; Cyrus Cooper; Nasser Al-Daghri; Islene Araujo de Carvalho; Ivan Bautmans; Roberto Bernabei; Olivier Bruyère; Matteo Cesari; Antonio Cherubini; Bess Dawson-Hughes; John A. Kanis; Jean-Marc Kaufman; Francesco Landi; Stefania Maggi; Eugene McCloskey; Jean Petermans; Leocadio Rodriguez Mañas; Jean-Yves Reginster; Regina Roller-Wirnsberger; Laura A. Schaap; Daniel Uebelhart; René Rizzoli; Roger A. Fielding, 2019-7

Article | **Recommended**

Muscles: testing and function with posture and pain, by Florence Peterson Kendall; Florence Peterson Kendall, c2005

Book | **Recommended** | Not available as an ebook but refer to this for more information on muscle testing

Week 11/ Week 28 (4 items)

This week you will be introduced to the physiology of pain and the assessment of pain. Please find your directed reading below. This will provide you with a basis for what will be covered within your tutorial and practical sessions. The reading marked ESSENTIAL is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked RECOMMENDED will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Reading marked BACKGROUND are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. There are numerous physiotherapy texts that will provide you with comprehensive information on the topics covered this week, so if you feel like reading more then feel free to explore the LRC's database.

Types of Pain (4 items)

Read these resources before the practicals in Week 11/28.

Principles of neuromusculoskeletal treatment and management: a guide for therapists, by Nicola J. Petty; Nicola J. Petty, 2011

Book | **Essential** | Read chapter 8: Principles of pain management

On the definitions and physiology of back pain, referred pain, and radicular pain - in Pain, by Nikolai Bogduk, 2009-12

Article | **Essential** | This is a really nice article that summarises types of pain.

TEDxAdelaide - Lorimer Moseley - Why Things Hurt, 2011-11-21

Audio-visual document | **Essential** | This is a really good video around pain mechanisms by Lorimer Moseley who is a guru in this area.

Outcome Measures

Document | **Essential** | This is a good introductory document to outcome measures used in pain assessment. Read this before Practical 2.

Week 10/ Week 27 (5 items)

This week you will be introduced to soft tissue healing, fracture healing as well as palpation and accessory movements. Please find your directed reading below. This will provide you with a basis for what will be covered within your tutorial and practical sessions. The reading marked ESSENTIAL is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked RECOMMENDED will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Reading marked BACKGROUND are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. There are numerous physiotherapy texts that will provide you with comprehensive information on the topics covered this week, so if you feel like reading more then feel free to explore the LRC's database.

Soft Tissue and Fracture Healing (3 items)

We will be looking at this material within Practical 1. Please make sure you have read this prior to class.

Physical agents in rehabilitation: an evidence-based approach to practice, edited by Michelle H. Cameron, 2018

Book | **Essential** | Read chapter 3 "Inflammation and tissue repair" from page 25.

Physiotherapy in orthopaedics: a problem-solving approach, by Karen Atkinson; Fiona Coutts; Anne-Marie Hassenkamp, 2005

Book | **Essential** | Read Chapter 5 - Management of Fractures p89-96.

Bone Fracture - Types, Fracture Repair and Osteomyelitis, 2012-10-23

Audio-visual document | **Essential** | This video may not contain all the detail but is a nice

summary of fractures and fracture healing.

Palpation and Accessory Movements (2 items)

We will be looking at this material within Practical 2. Please make sure you have read this prior to class.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

Book | **Essential** | Read Chapter 3 pages 94 starting at Palpation(paragraph continued on page 100. Accessory movements on p100-106 (stopping at movement diagrams) this describes accessory assessment of joints.

There is an individual section in each chapter on accessory movements for each of the different body areas within the above textbook. Each individual chapter will give you more detail on how to perform these in each body area and can be used for reference for revision and after the practical classes.

Week 19/ Week 35 (5 items)

This week you will be introduced to interventions used in the physiotherapy management of pain. Please find your directed reading below. This will provide you with a basis for what will be covered within your tutorial and practical sessions. The reading marked ESSENTIAL is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked RECOMMENDED will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Reading marked BACKGROUND are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. There are numerous physiotherapy texts that will provide you with comprehensive information on the topics covered this week, so if you feel like reading more then feel free to explore the LRC's database.

Interventions to manage pain (5 items)

Condition Dictionary

Look up this weeks 3 conditions and take notes for your condition dictionary.

Principles of neuromusculoskeletal treatment and management: a guide for therapists, by Nicola J. Petty; Nicola J. Petty, 2011

Book | **Essential** | Please review Chapter 8: Principles of Pain Management. This will be revision from Week 11/28. Think more specifically about interventions used in the management of pain.

Musculoskeletal pain and exercise—challenging existing paradigms and introducing new - in British Journal of Sports Medicine, by Benjamin E Smith; Paul Hendrick; Marcus Bateman; Sinead Holden; Chris Littlewood; Toby O Smith; Pip Logan, 2019-07

Article | **Recommended** | This is a nice review article discussing pain free versus painful exercise in chronic musculoskeletal pain.

The mechanisms of manual therapy in the treatment of musculoskeletal pain: A comprehensive model - in Manual Therapy, by Joel E. Bialosky; Mark D. Bishop; Don D. Price; Michael E. Robinson; Steven Z. George, 2009-10

Article | **Recommended** | This is a classic paper detailing the proposed effects of manual therapy.

Electrotherapy: evidence-based practice, by Tim Watson, 2008

Book | **Background** | It would be useful to review Chapter 9 Heat and Cold application (up to page 132). This will not be specifically covered in class. Also Chapter 16 TENS as these are other modalities that can be used in the management of pain.

Week 20/ Week 36 (5 items)

In week 20/36 you will be introduced to interventions used to improve range of movement. Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database

Interventions to improve range of movement (5 items)

Principles of musculoskeletal treatment and management: a handbook for therapists, edited by Nicola J. Petty; Kieran Barnard, 2018

Book | **Essential** | Please read Chapter 3: Principles of Joint Treatment. This will consolidate what we covered in Week 35 and also be helpful for this weeks class.

Classification, definitions, and descriptions of the basic massage strokes and relaxed passive movements - in Beard's massage: principles and practice of soft tissue manipulation, by G. De Domenico, 2007

Chapter | **Essential** | This is a scanned chapter from Beard's Massage: principles and practice of soft tissue manipulation. Please read this document to appreciate underlying principles and basic massage techniques. There are also 8 copies of this book available in the library with an accompanying DVD to assist with the specific techniques.
Module: PM098 (Scanned Extract)

Soft-tissue injuries simply need PEACE and LOVE - in British Journal of Sports Medicine, by Blaise Dubois; Jean-Francois Esculier, 2019-08-03

Article | **Essential** | Please read this short editorial from the BJSM discussing the revised guidelines for the management of soft tissue injuries.

A process approach in osteopathy: beyond the structural model - in International Journal of Osteopathic Medicine, by Eyal Lederman, 2017-03

Article | **Recommended** | This is a nice review of the use of manual therapy in contemporary practice.

Muscle Energy Technique - Physiopedia

Webpage | **Background** | This is a nice introduction to Muscle Energy Techniques from Physiopedia.

Week 21/ Week 37 (4 items)

In week 21/37 you will be introduced to interventions to improve muscle strength. Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database

Interventions to improve Muscle Strength (4 items)

Therapeutic Exercise Foundations and Techniques: Foundations and Techniques, by Carolyn Kisner; Lynn Allen Colby, 2012

Book | **Essential** | Re-read Chapter 6. You have previously looked at this chapter back in Week 9 refresh your memory and review the content of this chapter.

Principles of neuromusculoskeletal treatment and management: a guide for therapists, by Nicola J. Petty; Nicola J. Petty, 2011

Book | **Essential** | Re-read Chapter 5. You have previously read this chapter back in Week 9. Review the content within this chapter for class this week.

Proprioception in musculoskeletal rehabilitation. Part 1: Basic science and principles of assessment and clinical interventions - in Manual Therapy, by Ulrik Røijezon; Nicholas C. Clark; Julia Treleaven, 2015-06

Article | **Recommended** | Good article looking at proprioception.

Proprioception in musculoskeletal rehabilitation. Part 2: Clinical assessment and intervention - in Manual Therapy, by Nicholas C. Clark; Ulrik Røijezon; Julia Treleaven, 2015-06

Article | **Recommended** | Good article looking at proprioception.

Week 22/ Week 38 (9 items)

In week 22/38 you will start to look at assessment and treatment of spinal conditions, including rehabilitation options. The focus will be on the cervical and thoracic spine.

Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

[Book](#) | **Essential** | Please read Chapter 7: Examination of the cervicothoracic region

International framework for examination of the cervical region for potential of Cervical Arterial Dysfunction prior to Orthopaedic Manual Therapy intervention - in Manual Therapy, by A. Rushton; D. Rivett; L. Carlesso; T. Flynn; W. Hing; R. Kerry, 2014-06

[Article](#) | **Essential** | It is important you are aware of this Framework.

Management of peripheral neuropathic pain: Integrating neurobiology, neurodynamics, and clinical evidence - in Physical Therapy in Sport, by Robert J. Nee; David Butler, 2006-2

[Article](#) | **Essential** | This is an excellent article by one of the gurus in neural dynamics - David Butler

Neck pain - non-specific - NICE CKS

[Webpage](#) | **Essential** | If you click on the link and select: Diagnosis, and 'View full scenario' you will be able to view all relevant information. Do the same for: management, view full scenario Note: you do not need to read the detail of medicines for prescription nor do you need to read about management of Acute Torticollis (many patients with this condition find that it resolves within a few days and they do not present to physiotherapy for treatment.

The efficacy of manual therapy and exercise for treating non-specific neck pain: A systematic review - in Journal of Back and Musculoskeletal Rehabilitation, by Benjamin Hidalgo; Toby Hall; Jean Bossert; Axel Dugeny; Barbara Cagnie; Laurent Pitance, 2017-11-06

[Article](#) | **Essential**

Physiotherapy management of whiplash-associated disorders (WAD) - in Journal of Physiotherapy, by Michele Sterling, 2014-03

[Article](#) | **Recommended**

Factors predicting outcome in whiplash injury: a systematic meta-review of prognostic factors - in Journal of Orthopaedics and Traumatology, by Pooria Sarraimi; Elizabeth Armstrong; Justine M. Naylor; Ian A. Harris, 2017-3

[Article](#) | **Recommended**

Exercises for mechanical neck disorders: A Cochrane review update - in Manual Therapy, by A.R. Gross; J.P. Paquin; G. Dupont; S. Blanchette; P. Lalonde; T. Cristie; N. Graham; T.M. Kay; S.J. Burnie; G. Gelley; C.H. Goldsmith; M. Forget; P.L. Santaguida; A.J. Yee; G.G.

Radisic; J.L. Hoving; G. Bronfort, 2016-08

Article | **Recommended**

An Evidence-Based Approach to Differentiating the Cause of Shoulder and Cervical Spine Pain - in The American Journal of Medicine, by Steven L. Bokshan; J. Mason DePasse; Adam E.M. Eltorai; E. Scott Paxton; Andrew Green; Alan H. Daniels, 2016-09

Article | **Background** | This is a concise article describing the differentiation of neck and shoulder pain.

Week 23/ Week 39 - Electrotherapy (9 items)

During this week, there are no contact classes but directed learning is scheduled. The directed learning aims to give you an awareness of a number of areas that may be used as an adjunct to rehabilitation: (1) superficial heat and cold, (2) EMG & Diathermy (3) ultrasound and (4) electrical currents for pain control. These techniques are not practiced and are not applied in this module. The outcome of this reading is to give you an awareness and overview knowledge of these areas. This is not sufficient learning to allow you to practice and apply these areas. In addition to this directed learning, please use this week to review/consolidate your module learning to date.

Key Concepts in Electrotherapy

Webpage | **Recommended** | The Tim Watson website is an excellent resource for electrotherapy literature. Please read this article, but also feel free to have a look at more resources available on his website www.electrotherapy.org

Heat & Cold (2 items)

Physical agents in rehabilitation: an evidence-based approach to practice, by Michelle H. Cameron, 2018

Book | **Recommended**

Heat: Read the following pages from Chapter 8 of the text: 146 (starting from the heading "Thermotherapy") to 149 (stopping before the section "Accelerated Healing". Read from page 149 (starting from section "Contraindications for the use of thermotherapy") to page 153 (stopping before the section "Application techniques". Read the section headed "Documentation" on page 162.

Cold : Read the following pages from Chapter 8 of the text: 127 - 132 , stopping before the heading "modification of spasticity". Read pages 133 (starting at contraindications and precautions for cryotherapy) to page 135 (stopping before the section on "Application Techniques". Read the section headed "Documentation" on page 141

EMG and Diathermy (2 items)

Physical agents in rehabilitation: an evidence-based approach to practice, by Michelle H. Cameron, 2018

Book | **Recommended**

Read the following pages from Chapter 15: 289 – 303

Read the following pages from Chapter 10: 200-211

Ultrasound (2 items)

Physical agents in rehabilitation: an evidence-based approach to practice, by Michelle H. Cameron, 2018

[Book](#) | **Recommended**

Read the following pages from Chapter 9 of the text: 172 - 179 (stopping before the heading "Bone Fractures " on page 179). Page 181 (starting from the section on "Contraindications and Precautions for Ultrasound") to page 184 (stopping before the section "Application Technique". Read the section headed "Documentation" on page 186.

Electrical Currents for pain control (2 items)

Physical agents in rehabilitation: an evidence-based approach to practice, by Michelle H. Cameron, 2018

[Book](#) | **Recommended**

Read the following pages from Chapter 13: 258 - 262 (stopping before the heading "Application Technique"). Read the section headed "Documentation" on page 264.

Week 24/ Week 40 (13 items)

In week 24/40 you will continue to look at assessment and treatment of the lumbar spine, including rehabilitation options. Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked: **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

[Book](#) | **Essential** | For this week please read Chapter 2 page 19-25 and Chapter 12.

Clinical Decision-Making in Chronic Spine Pain: Dilemma of Image-Based Diagnosis of Degenerative Spine and Generation Mechanisms for Nociceptive, Radicular, and Referred Pain - in BioMed Research International, by Eloqayli, Haytham, 2018

[Article](#) | **Essential** | Please read the following: Introduction, Case Study 1,2 and 3; and Discussion

Management of a Patient With Chronic Low Back Pain and Multiple Health Conditions Using a Pain Mechanisms-Based Classification Approach - in Journal of Orthopaedic & Sports

Physical Therapy, by Craig P. Hensley; Carol A. Courtney, 2014-06

Article | **Essential** | This is a case study that can help you to think about your clinical reasoning when approaching a patient with chronic back pain with multiple health conditions. This will consolidate your class discussion around potential treatment choices.

Lancet Back Series - Low back pain: a call for action - in The Lancet, by Rachelle Buchbinder; Maurits van Tulder; Birgitta Öberg; Lucíola Menezes Costa; Anthony Woolf; Mark Schoene; Peter Croft; Rachelle Buchbinder; Jan Hartvigsen; Dan Cherkin; Nadine E Foster; Chris G Maher; Martin Underwood; Maurits van Tulder; Johannes R Anema; Roger Chou; Stephen P Cohen; Lucíola Menezes Costa; Peter Croft; Manuela Ferreira; Paulo H Ferreira; Julie M Fritz; Stéphane Genevay; Douglas P Gross; Mark J Hancock; Damian Hoy; Jaro Karppinen; Bart W Koes; Alice Kongsted; Quinette Louw; Birgitta Öberg; Wilco C Peul; Glenn Pransky; Mark Schoene; Joachim Sieper; Rob J Smeets; Judith A Turner; Anthony Woolf, 2018-06

Article | **Essential**

Lancet Back Series - What low back pain is and why we need to pay attention - in The Lancet, by Jan Hartvigsen; Mark J Hancock; Alice Kongsted; Quinette Louw; Manuela L Ferreira; Stéphane Genevay; Damian Hoy; Jaro Karppinen; Glenn Pransky; Joachim Sieper; Rob J Smeets; Martin Underwood; Rachelle Buchbinder; Jan Hartvigsen; Dan Cherkin; Nadine E Foster; Chris G Maher; Martin Underwood; Maurits van Tulder; Johannes R Anema; Roger Chou; Stephen P Cohen; Lucíola Menezes Costa; Peter Croft; Manuela Ferreira; Paulo H Ferreira; Julie M Fritz; Stéphane Genevay; Douglas P Gross; Mark J Hancock; Damian Hoy; Jaro Karppinen; Bart W Koes; Alice Kongsted; Quinette Louw; Birgitta Öberg; Wilco C Peul; Glenn Pransky; Mark Schoene; Joachim Sieper; Rob J Smeets; Judith A Turner; Anthony Woolf, 2018-06

Article | **Essential**

Lancet Back Series - Prevention and treatment of low back pain: evidence, challenges, and promising directions - in The Lancet, by Nadine E Foster; Johannes R Anema; Dan Cherkin, 2018-06

Article | **Essential**

Diagnostic triage for low back pain: a practical approach for primary care - in Medical Journal of Australia, by Lynn D Bardin; Peter King; Chris G Maher, 2017-04

Article | **Recommended**

Rehabilitation management of low back pain - it's time to pull it all together! - in Journal of Pain Research, by Yannick Tousignant-Laflamme; Marc Olivier Martel; Anand Joshi; Chad Cook, 2017-10

Article | **Recommended**

Back rehabilitation - The 3R's approach - in Journal of Bodywork and Movement Therapies, by Christopher M. Norris, 2020-01

Article | **Recommended**

Cognitive Functional Therapy: An Integrated Behavioral Approach for the Targeted Management of Disabling Low Back Pain - in Physical Therapy, by Peter B O'Sullivan; J P Caneiro; Mary O'Keeffe; Anne Smith; Wim Dankaerts; Kjartan Fersum; Kieran O'Sullivan, 2018-05-01

Article | **Recommended**

Musculoskeletal pain and exercise—challenging existing paradigms and introducing new - in British Journal of Sports Medicine, by Benjamin E Smith; Paul Hendrick; Marcus Bateman; Sinead Holden; Chris Littlewood; Toby O Smith; Pip Logan, 2018-06-20

[Article](#) | [Background](#)

Recommendations | Low back pain and sciatica in over 16s: assessment and management | [Guidance](#) | NICE

[Document](#) | [Background](#)

NHSL Pathway flow overview v1.1

[Webpage](#) | [Background](#)

Week 25/ Week 41 (11 items)

In week 25/41 you will start to look at assessment and treatment of upper limb conditions, including rehabilitation options. The focus will be on the shoulder. Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

[Book](#) | [Essential](#) | Read chapter 9 "Examination of the shoulder region" from page 249

Combining orthopedic special tests to improve diagnosis of shoulder pathology - in Physical Therapy in Sport, by Eric J. Hegedus; Chad Cook; Jeremy Lewis; Alexis Wright; Jin-Young Park, 2015-05

[Article](#) | [Essential](#) | You will begin to understand that shoulder "special" orthopaedic tests are only helpful under some circumstances. There are hundreds of special tests available and you are not expected to learn all of them.

Bess :: Patient care pathways and guidelines

[Webpage](#) | [Essential](#) | Here you will find the British Elbow and Shoulder Society published guidelines on shoulder pain. Click on specific conditions for more information.

Rotator cuff related shoulder pain: Assessment, management and uncertainties - in Manual Therapy, by Jeremy Lewis, 2016-06

[Article](#) | [Recommended](#) | This paper describes a shoulder symptom modification procedure for assessing and managing shoulder pain. It is not essential to memorise it but it is important to note that there are several classification and management systems available. A recent study has suggested that this system is not reliable and therefore it is up to you to decide whether or not it will be clinically valuable to your practice.

Psychological factors are associated with the outcome of physiotherapy for people with

shoulder pain: a multicentre longitudinal cohort study - in British Journal of Sports Medicine, by Rachel Chester; Christina Jerosch-Herold; Jeremy Lewis; Lee Shepstone, 2018-02

Article | **Recommended** | This article highlights the importance of psychosocial factors in the assessment and management of patients with shoulder pain.

Shoulder pain - NICE CKS

Webpage | **Recommended** | This is an overview of shoulder conditions and NICE guidelines for assessment and management.

Rotator Cuff Disorders: A Survey of Current Uk Physiotherapy Practice - in Shoulder & Elbow, by Chris Littlewood; Anna Lowe; John Moore, 2012-01

Article | **Recommended** | This is a useful article discussing current management of rotator cuff disorders.

Frozen shoulder contracture syndrome - Aetiology, diagnosis and management - in Manual Therapy, by Jeremy Lewis, 2015-02

Article | **Recommended** | This is a good review article on Frozen shoulder a pathology you will regularly see in clinical practice.

NHS Lothian shoulder pathway

Webpage | **Background** | This is an example of a Physiotherapy Shoulder Pathway.

PE #021 Shoulder pain, rotator cuff tendinopathy and frozen shoulder with Dr Jeremy Lewis - physioedge

Audio document | **Background** | Podcast with Jeremy Lewis (>1 hour). This is a very interesting discussion about shoulder pain - feel free to listen in your own time.

Therapeutic Exercise Foundations and Techniques: Foundations and Techniques, by Carolyn Kisner; Lynn Allen Colby, 2012

Book | **Background** | There are some good shoulder exercise ideas from page 588 'Exercise Interventions for the Shoulder Girdle'. Some of the terminology used in the 'Shoulder Disorders' section is a little out of date so please be mindful of this. Please note that post surgical rehabilitation will depend on your local department policy and guidelines.

Week 26/42 (10 items)

In week 26/42 you will continue to look at assessment and treatment of upper limb conditions, including rehabilitation options. The focus will be on the elbow, wrist and hand. Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

[Book](#) | **Essential** | Read Chapter 10 Examination of the Elbow Region from p273

Lateral and medial non-articular elbow pain - in Orthopaedics and Trauma, by Ward Koot; Bertram The; Denise Eygendaal, 2016-08

[Article](#) | **Essential** | Please read this article on common causes of medial and lateral elbow pain.

Is tendon pathology a continuum? A pathology model to explain the clinical presentation of load-induced tendinopathy - in British Journal of Sports Medicine, by J L Cook; C R Purdam, 2009-06-01

[Article](#) | **Essential** | Please read this key text on the contemporary model of tendinopathy. This will be applicable to all tendinopathies in the upper and lower limb

Revisiting the continuum model of tendon pathology: what is its merit in clinical practice and research? - in British Journal of Sports Medicine, by J L Cook; E Rio; C R Purdam; S I Docking, 2016-10

[Article](#) | **Background** | This article re-visits the theories presented in the previous article.

Comparison of effects of eccentric training, eccentric-concentric training, and eccentric-concentric training combined with isometric contraction in the treatment of lateral elbow tendinopathy - in Journal of Hand Therapy, by Dimitrios Stasinopoulos; Ioannis Stasinopoulos, 2017-01

[Article](#) | **Recommended** | This is a useful contemporary study comparing different types of exercise in the management of lateral elbow tendinopathy.

Lateral elbow tendinopathy: Evidence of physiotherapy management - in World Journal of Orthopedics, by Stasinopoulos Dimitrios, 2016

[Article](#) | **Background** | Short summary article.

Early mobilisation for elbow fractures in adults - in Cochrane Database of Systematic Reviews, by Paula Harding; Tshepo Rasekaba; Lorena Smirneos; Anne E Holland, 2011-06-15

[Article](#) | **Recommended**

Hand Disorders | The British Society for Surgery of the Hand

[Webpage](#) | **Recommended** | This is a useful website. Please read the sections on De-Quervain's Syndrome and Carpal Tunnel Syndrome in the Hand Disorders Section. There is also a section on Hand Injuries which you may find interesting.

Rehabilitation for distal radial fractures in adults - in Cochrane Database of Systematic Reviews, by Helen HG Handoll; Joanne Elliott, 2015-09-25

[Article](#) | **Recommended**

Exercise and mobilisation interventions for carpal tunnel syndrome - in Cochrane Database of Systematic Reviews, by Matthew J Page; Denise O'Connor; Veronica Pitt; Nicola Massy-Westropp, 2012-06-13

[Article](#) | **Background**

Week 27/43 (11 items)

In week 27/43 you will be introduced to the assessment and treatment of lower limb conditions, including rehabilitation options. Please find your directed reading below. The reading below will provide you with a basis for what will be covered within your tutorial and practical sessions. The readings marked **ESSENTIAL** - is required reading before your classes for that week to ensure participation and ability to follow the tutorial and practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

Book | **Essential** | Please read Chapter 14 Examination of the Hip Region and Chapter 15 Examination of the Knee Region

Gluteal Tendinopathy: A Review of Mechanisms, Assessment and Management - in Sports Medicine, by Alison Grimaldi; Rebecca Mellor; Paul Hodges; Kim Bennell; Henry Wajswelner; Bill Vicenzino, 2015-8

Article | **Essential** | Review article on pathology, diagnosis and treatment of greater trochanteric pain syndrome/gluteal tendinopathy.

Education plus exercise versus corticosteroid injection use versus a wait and see approach on global outcome and pain from gluteal tendinopathy: prospective, single blinded, randomised clinical trial - in BMJ, by Rebecca Mellor; Kim Bennell; Alison Grimaldi; Philippa Nicolson; Jessica Kasza; Paul Hodges; Henry Wajswelner; Bill Vicenzino, 2018-05-02

Article | **Recommended** | Contemporary research on treatment of gluteal tendinopathy.

Patellar Tendinopathy: Clinical Diagnosis, Load Management, and Advice for Challenging Case Presentations - in Journal of Orthopaedic & Sports Physical Therapy, by Peter Malliaras; Jill Cook; Craig Purdam; Ebonie Rio, 2015-11

Article | **Recommended** | Article on assessment and treatment of patella tendinopathy.

Diagnostic validity of physical examination tests for common knee disorders: An overview of systematic reviews and meta-analysis - in Physical Therapy in Sport, by Simon Décary; Philippe Ouellet; Pascal-André Vendittoli; Jean-Sébastien Roy; François Desmeules, 2017-01

Article | **Essential** | Review article on validity of Orthopaedic Specials Tests used in the assessment of the knee.

(vii) The role of physiotherapy in rehabilitation of soft tissue injuries of the knee - in Orthopaedics and Trauma, by Nicholas C. Clark, 2015-02

Article | **Essential** | Good review article.

Overview | Osteoarthritis: care and management | Guidance | NICE

Document | **Essential** | Read the sections on diagnosis, education and self management, non-pharmacological management.

Therapeutic Exercise Foundations and Techniques

Book | **Recommended** | Read from Chapter 11, page 341 (Osteoarthritis: Degenerative Joint Disease) to page 344, ending and including the section titled 'Focus on evidence'

Patellofemoral pain - in British Journal of Sports Medicine, by Kay M Crossley; Michael J Callaghan; Robb van Linschoten, 2016-02

Article | **Background** | Useful summary article

2016 Patellofemoral pain consensus statement from the 4th International Patellofemoral Pain Research Retreat, Manchester. Part 2: recommended physical interventions (exercise, taping, bracing, foot orthoses and combined interventions) - in British Journal of Sports Medicine, by Kay M Crossley; Marienke van Middelkoop; Michael J Callaghan; Natalie J Collins; Michael Skovdal Rathleff; Christian J Barton, 2016-07

Article | **Recommended** | Good review on management of patellofemoral joint pain

A comprehensive review of hip labral tears - in Current Reviews in Musculoskeletal Medicine, by Megan M. Groh; Joseph Herrera, 2009-6

Article | **Background** | Useful summary article

Week 28/44 (9 items)

In week 28/44 you will continue to look at assessment and treatment of lower limb conditions, including rehabilitation options. The focus will be on the ankle and foot. The reading marked **ESSENTIAL** is required reading before your classes for that week to ensure participation and ability to follow the practical classes. Readings marked **RECOMMENDED** will enhance the knowledge and competence you have gained from the essential readings and will ensure you are developing a good depth of knowledge in the topic area. Readings marked **BACKGROUND** are further information that will contribute further to your knowledge in this area and can be used as references for the future but are not necessarily essential to read in the current week. If you feel like reading more about certain topics then always feel free to explore the LRC's database.

Musculoskeletal examination and assessment: a handbook for therapists, Volume 1, edited by Nicola J. Petty; Dionne Ryder, 2017

Book | **Essential** | Please read Chapter 16, p418, Examination of the Foot & Ankle

Treatment and prevention of acute and recurrent ankle sprain: an overview of systematic reviews with meta-analysis - in British Journal of Sports Medicine, by Cailbhe Doherty; Chris Bleakley; Eamonn Delahunt; Sinead Holden, 2017-01

Article | **Essential** | Useful summary and review of treatments for ankle sprains

Proprioception in musculoskeletal rehabilitation. Part 1: Basic science and principles of assessment and clinical interventions - in Manual Therapy, by Ulrik Røijezon; Nicholas C. Clark; Julia Treleaven, 2015-06

Article | **Essential** | Excellent introduction to proprioceptive assessment techniques for upper/lower limb and spinal conditions.

Proprioception in musculoskeletal rehabilitation. Part 2: Clinical assessment and intervention - in Manual Therapy, by Nicholas C. Clark; Ulrik Røijezon; Julia Treleaven, 2015-06

Article | **Essential** | Excellent review article

CURRENT CONCEPTS OF PLYOMETRIC EXERCISE - in International Journal of Sports Physical Therapy, 2015

Article | **Essential** | A useful article discussing current concepts in plyometrics

Walking aids - prescription and assessment

Chapter | **Recommended** | This may be a useful chapter in preparation for the viva and also placement.

Effect of unsupervised home based proprioceptive training on recurrences of ankle sprain: randomised controlled trial - in BMJ, by M. D W Hupperets; E. A L M Verhagen; W. v. Mechelen, 2009-07-09

Article | **Recommended** | Study demonstrating beneficial effects of home based proprioceptive exercises.

High-load strength training improves outcome in patients with plantar fasciitis: A randomized controlled trial with 12-month follow-up - in Scandinavian Journal of Medicine & Science in Sports, by M. S. Rathleff; C. M. Mølgaard; U. Fredberg; S. Kaalund; K. B. Andersen; T. T. Jensen; S. Aaskov; J. L. Olesen, 2015-06

Article | **Recommended** | Interesting study on treatment of plantar fasciitis

The manual stress test may not be sufficient to differentiate ankle ligament injuries - in Clinical Biomechanics, by Tadashi Fujii; Zong-Ping Luo; Harold B Kitaoka; Kai-Nan An, 2000-10

Article | **Background** | Article discussing the accuracy of the anterior drawer and talar tilt tests.