



**A Practical Approach to Neuromusculoskeletal Dysfunction**

**Mile End Hospital Physiotherapy Department, London.  
MACP Accredited**

A practical based course to develop advanced clinical reasoning and integrated management, as well as lectures on basic pain sciences, muscle physiology, exercise and functional practical anatomy. For those who have identified the necessity for further CPD in a specific topic attendances at individual weekends is possible.

The course will facilitate the integration of skills into clinical practice by providing individual clinical visits, patient assessments and directed clinical reasoning course work.

October	2008	3	-	5	Theoretical basis underpinning practice
November		7 <sup>th</sup>	-	9 <sup>th</sup>	Lumbar spine
January	2009	9 <sup>th</sup>	-	11 <sup>th</sup>	*Pelvic girdle hip complex
February		27 <sup>th</sup>	-	1 <sup>st</sup>	*Knee
April		3 <sup>rd</sup>	-	5 <sup>th</sup>	Cervical spine
May		15 <sup>th</sup>	-	17 <sup>th</sup>	*Advanced manipulative procedures
June		19 <sup>th</sup>	-	21 <sup>st</sup>	Thoracic
September		4 <sup>th</sup>	-	6 <sup>th</sup>	Shoulder
October		9 <sup>th</sup>	-	11 <sup>th</sup>	Elbow / wrist / hand
December		4 <sup>th</sup>	-	6 <sup>th</sup>	*Ankle / foot

\* 2 day attendance (Sat and Sun) for students applying for individual courses

**Venue:** Mile End Hospital Physiotherapy Department, London

**Cost:** £2400 for the whole course  
£280 per 3 day weekend  
£190 per 2 day course

Application forms and full course details are available on [www.puresportsmed.com](http://www.puresportsmed.com) or contact Samantha Leak email [samphysio@btinternet.com](mailto:samphysio@btinternet.com). Full course details are available on [www.macp-online.co.uk](http://www.macp-online.co.uk) under "short courses accredited by MACP" (application forms are not available on this website)

**Closing date for application on the whole course 1<sup>st</sup> July 2008**  
**Closing date for individual weekends is 4 weeks prior to the course date**



## **Course Directors / Tutors**

Linda Exelby BSc (Physio) Grad Dip Man Ther. FMACP

Samantha Leak MA MCSP MMACP

Claire Small BPhy (Hons) MPhty St. MMACP

Andrea Francis MSc BSc (Hons) MCSP MMACP

## **Introduction and philosophy of the course**

The course has been developed for graduate physiotherapists interested in pursuing a career in Musculoskeletal Physiotherapy. It has been designed to consolidate and progressively develop advanced skills in assessment, diagnosis and management of all aspects of neuromusculoskeletal (NMS) dysfunction within the bio-psychosocial framework. Principles of Evidence Based Practise, Clinical Reasoning and Effective Handling are incorporated. Emphasis will be placed on clinical skills and on the formulation of clinical hypotheses, testing, analysing and retesting to facilitate skilful patient focused treatment. The theoretical aspect of pain mechanisms, movement dysfunction and anatomy dissection workshops will be integrated throughout the programme.

The course will facilitate the integration of skills into clinical practice by providing individual clinical visits, patient assessments (on the course) and directed clinical reasoning packages for use within the candidates own clinical settings. The use of reflective practice during the course and between the courses will be actively encouraged, to promote clinical and academic development and a record of learning for candidates to use as evidence for HPC accreditation.

### **Aims of the course:**

To provide a learning environment which will allow physiotherapists to critically develop their skills in assessment, diagnosis and management of all aspects of NMS dysfunction utilising the principles of evidence based practise, clinical reasoning and effective handling.

## **Learning Outcomes**

### **Knowledge and Understanding:**

On completion of the course candidates will have an in depth knowledge and understanding of:

1. The theoretical foundation underpinning the assessment and management of patients with lower and upper quadrant NMS dysfunction.
2. Pathological processes involved in the development of clinical features of lower and upper quadrant NMS dysfunction.
3. Limitations of relevant interventions and when further investigations may be required.

### **Skills and Attributes:**

On completion of the course candidates will be able to:

1. Demonstrate enhanced clinical reasoning through analysis and self reflection applying evident informed practise and current professional issues.
2. Demonstrate expertise in clinical reasoning skills within the assessment and management of patients with lower and upper quadrant NMS dysfunction



3. Justify, plan, implement and critically evaluate assessment procedures for patients with lower and upper quadrant NMS dysfunction
4. Justify, plan, modify and implement appropriate treatment according to the interpretation of assessment findings and guided by continuous critical analytical evaluation.

Clinical visits will be provided to candidates who enrol on the whole programme of weekends.

### **Teaching and learning strategies**

The rich and complex nature of the topic and the experience of the group enables a wide range of learning approaches to be used. A participative ethos allows the contribution of both tutors and students to be equally valued in the exploration, evaluation and creation of theory and its application to the clinical setting. Learning approaches within the course encompass a range of activities designed to achieve the learning outcomes. These include lectures on core topics, large and small group discussion, case studies, patient assessments, practical demonstrations, practical problem solving workshops and student presentations. Each component of the course is associated with a selection of guided reading aimed at enhancing the learning experience and must be completed prior to attendance on each component of the course.

A reflective approach to physiotherapy practice, emphasis on lifelong learning and the ability to transfer skills and knowledge across specialities will be encouraged. To achieve this, strategies used will enable the physiotherapist to develop the ability to become a self directed learner.

### **Formative assessment**

The aim of the assessment is to ensure candidates have fulfilled the programme and individual course aims and objectives, this will be achieved by:

- Clinical reasoning homework, to encourage candidates to put into practice skills attained on the weekend and to encourage reflective practice. This will be reviewed by the course tutors and feedback provided to candidates either orally or in writing.
- Essay on the application of pain theories to clinical practice
- An upper and lower quadrant patient case report
- Directed preparation for the weekends
- Clinical visit with written feedback on strengths and areas for development
- Workshops throughout the course

### **Learning resources**

- Directed preparation will be provided prior to the weekends
- Where references are difficult to find these will be provided to candidates
- Handouts will be provided as necessary by course tutors

Candidates will be encouraged to make use of:

- Online facilities
- Departmental libraries
- University libraries (where access is available)
- CSP library

### **Drop out / refunds**

Course fees are not refundable.

## **INTRODUCTORY WEEKEND**

### **Tutors:**

Linda Exelby BSc (Physio) Grad Dip Man Ther. FMACP  
Samantha Leak MA MCSP MMACP  
Claire Small BPhy (Hons) MPhy St. MMACP  
Andrea Francis MSc BSc (Hons) MCSP MMACP

### **Learning Outcomes:**

#### **On completion of this 3 day course the participant will be able to:**

1. Begin to develop expertise in the examination of neuromusculoskeletal dysfunction
2. Develop an understanding of the theories of clinical reasoning as well as the process itself
3. Develop skills in critical review of the literature
4. Begin to demonstrate more advanced effective clinical reasoning including:
  - *Improved integration of clinical sciences for example:  
Consideration of clinical presentations of pathologies, biomechanics, age changes, physiology of pain and tissue healing.*
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation of movement and interpretation of findings.*
  - *Improved manual palpation and handling skills and interpretation of findings.*
  - *Improved awareness of contra -indications, precautions and indications.*
  - *Improved justification and selection of technique/s and progressive management*

### **Indicative Content**

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences eg: Pain physiology
- Examination skills – subjective / objective / hypothesis
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – posture recognition, analysis of movement, PAIVM, PPIVM, Neurological assessment, palpation and handling

### **Pre course reading / preparation:**

- Review the theory of mvt diagrams. Draw (and bring to the course) a mvt diagram for:
  - 1) A patient with LBP 2) A patient with knee pain
- Be prepared to discuss the following questions:
  - What are the aims of the subjective examination?
  - What information regarding a patient's presenting disorder do the past history and history of the presenting condition provide?
  - Neurological testing for the cervical spine, thoracic spine, and lumbar spine

### **References**

- Butler DS (2000) The Sensitive Nervous System Noigroup Publications Adelaide Australia. Ch7 Ch9
- Jones M (1995) Clinical Reasoning and Pain. Manual Therapy 1:17-24.
- Maitland GD (2001) Maitland's Vertebral Manipulation. 6<sup>th</sup> Edition. Butterworth-Heinemann, London Glossary xiii –xv, pages 60-66, pages 167-178, pages 434-455
- Maitland G. D. Vertebral Manipulation 5<sup>th</sup> Ed Butterworth Heinmann Oxford 1993 pp 351-372
- Norkin C. Leverage P. Joint Structure and Function – A Comprehensive Analysis 2<sup>nd</sup> Ed. F.A. Davis Company Philadelphia 1992 pp92-104

### **Essential Reading: Pain References**



Gifford L and Butler D, 1997 The integration of pain sciences into clinical practice, *Journal of Hand Therapy* **10** (1997), pp. 86–95

Price D.D 2000 Psychological and neural mechanisms of the affective dimension of pain (2000) *Science* 2881769-1772

**Other Pain References:**

Wright A (1999) Recent concepts in the neurophysiological of pain. *Manual Therapy*. 4(4) 196-202.

**Day 1**

TIME	TOPIC	CONTENTS
09.00	Introduction	<b>Interactive discussion:</b> <ul style="list-style-type: none"> <li>• Course philosophy</li> <li>• Learning Outcomes for the entire course</li> <li>• Teaching methods and modes of delivery</li> <li>• Preparation work and critical reading</li> <li>• Participants identify &amp; list their aims and objectives</li> </ul>
09.30	Subjective Examination (1)	<b>Workshop:</b> Small groups to conduct a subjective assessment of a patient model. Observers to note strengths and areas for development. Self reflection and critical analysis by all group members.
10.15	Subjective Examination	<b>Interactive lecture:</b> <ul style="list-style-type: none"> <li>• Aims of the subjective examination.</li> <li>• Role of clinical reasoning</li> <li>• Role of various questions inc special questions</li> <li>• Common errors</li> </ul>
11.00	COFFEE	
11.15	Subjective Examination (2)	<b>Workshop revisited:</b> Development of skills in subjective examination utilising knowledge acquired in interactive lecture. Small groups to conduct a 2 <sup>nd</sup> subjective assessment of a patient model. Observers to note strengths and areas for development. Self reflection and critical analysis by all group members.
12.00	Interpreting the subjective examination and planning the physical examination	<b>Interactive lecture:</b> <ul style="list-style-type: none"> <li>• Interpreting and providing meaning to the subjective findings.</li> <li>• Determination of SIN</li> <li>• Pattern recognition</li> <li>• Physical examination planning</li> </ul>
12.45	LUNCH	
1.45	Critical Analysis of the Literature	<b>Interactive lecture:</b> <ul style="list-style-type: none"> <li>• Concept of Evidence Informed Practise</li> <li>• Value of reviewing the specific literature</li> <li>• Methods/techniques used to analysis the literature</li> <li>• Useful websites/search engines to assist evidence gathering and review</li> </ul>
2.45	TEA	
3.00	Palpation and Surface Anatomy	<b>Practical Workshop:</b> <ul style="list-style-type: none"> <li>• Achieve base level of manual handling and assessment skills by tutor feedback</li> <li>• Identification of various bony landmarks, soft tissue structures, muscles origins and insertions.</li> </ul>
4.30	End	

**Day 2**

TIME	TOPIC	CONTENTS
9.00	Pain Physiology	<b>Interactive Lecture:</b>

	Peripheral pain mechanisms	Mechanisms of nociception in the periphery including nerve fibre types, nerve terminology, excitation/ inhibition, peripheral neural anatomy and physiology. Concepts of hyperalgesia and normal responses to inflammation and to minor peripheral nerve injury (with clinical examples)
<b>10.30</b>	<b>COFFEE</b>	
<b>10.45</b>	Pain Physiology (cont.) Central pain mechanisms – part 1	<b>Interactive Lecture: (cont.)</b> Neurophysiology of pain in spinal cord. Concepts of “wind up”, sensitization and secondary hyperalgesia. Concepts of neuroplasticity (with clinical examples).
<b>12.00</b>	<b>LUNCH</b>	
<b>12.45</b>	<b>Movement Dysfunction</b>	<b>Problem solving/Practical workshop:</b> <ul style="list-style-type: none"> <li>• Discussion of the role of mvt dysfunction in the manifestation of various pathologies</li> <li>• Observation and assessment of functional activities</li> <li>• Interpretation of findings and possible pathologies that may be associated with such dysfunctions</li> </ul>
<b>3.00</b>	<b>COFFEE</b>	
<b>3.15</b>	<b>Neurological Assessment</b>	<b>Practical Workshop:</b> <ul style="list-style-type: none"> <li>• Aim of the neurological assessment</li> <li>• Interpretation of findings</li> <li>• Demonstration of examination techniques</li> <li>• Discussion of use of examination within the context of the total assessment</li> </ul>
<b>4.30</b>	<b>End</b>	

**Day 3**

TIME	TOPIC	CONTENTS
<b>9.00</b>	<b>Interpreting examination findings and objective planning</b>	<b>Workshop:</b> Use of clinical reasoning to interpret a case study. Determination of possible hypotheses with justification followed by determination of an objective plan for physical examination
<b>10.30</b>	<b>COFFEE</b>	
<b>10.45</b>	<b>Movement Diagrams</b>	<b>Workshop:</b> <ul style="list-style-type: none"> <li>• Discussion of movement diagrams and their uses</li> <li>• Interpretation of movement diagrams</li> <li>• Participants draw mvt diagrams for various pathologies</li> </ul>
<b>12.30</b>	<b>Conclusion</b>	<b>Discussion:</b> <ul style="list-style-type: none"> <li>▪ Review course aims and outcomes.</li> <li>▪ Ideas to compliment course &amp; furthering CPD.</li> <li>▪ Preparation for next weekend.</li> </ul>
<b>1.00</b>	<b>End</b>	

**LUMBAR SPINE**

**Tutors:**

Claire Small BPhy (Hons) MPhy St. MMACP

Andrea Francis MSc BSc (Hons) MCSP MMACP

**Learning Outcomes:**

**On completion of this 3 day course the participant will be able to:**

1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the lumbar spine/ lower quadrant and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced effective clinical reasoning including:

- *Improved integration of clinical sciences for example:*
- *Consideration of clinical presentations of pathologies, biomechanics, age changes, physiology of pain and tissue healing.*
- *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
- *Improved observation of movement and interpretation of findings.*
- *Improved manual palpation and handling skills and interpretation of findings.*
- *Improved awareness of contra -indications, precautions and indications.*
- *Improved justification and selection of technique/s and progressive management*

### **Indicative Content**

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. tissue healing, muscle, and pain physiology), anatomy, and biomechanics specific to the lumbar spine region.
- Examination skills – subjective / objective / hypothesis generation.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – posture recognition, analysis of movement, PAIVM, PPIVM, neurodynamics and muscle dysfunction of the lumbar spine
- Pathology of this region – discal pathology, facet joint dysfunction, stenosis, spondylolisthesis
- Integrated treatment techniques – based on clinical reasoning in case scenarios.

### **Pre course reading / preparation:**

1) Review the anatomy, biomechanics and nerve supply of the following structures:

- Lumbar vertebral body and facets
- Intervertebral disc
- End plates
- Spinal nerves

2) Review the insertion/origin/action of the following muscles:

- Transversus abdominis
- Multifidus
- Obliques
- Erector Spinae

3) Review the pathways/area supplied of the following nerves :

- Sciatic
- Femoral
- Obturator
- Saphenous
- Sinuvertebral

**The recommended texts will have answers to all of the above questions.**

### **Articles:**

- Boos NS, Weissbach et al (2002) Classification of age-related changes in lumbar intervertebral discs. Spine 27: 2631-2644.
- Fujiwara A, Tae-Hong L and Howard et al (2000) The Effect of Disc Degeneration and Facet Joint Osteoarthritis on the Segmental Flexibility of the Lumbar Spine. Spine 25: 3036 – 3044.
- Hides JA, Richardson CA, Jull GA 1996 Multifidus muscle recovery is not automatic after resolution of acute first episode low back pain. Spine 21: 2763 –2769.
- Hodges PW, Richardson CA 1996 Inefficient muscular stabilisation of the lumbar spine associated with low back pain: a motor control evaluation of transversus abdominis. Spine 21: 2640-2650.
- Kirkaldy-Willis W.H. (1984) The Relationship of Structural Pathology to the Nerve Root. Spine 9: 49- 52.

**Recommended texts** (Any edition of these texts is appropriate):



- Adams MA, Bogduk N, Burton K and Dolan P (2002) The Biomechanics of Back Pain. Churchill Livingstone. Edinburgh.
- Bogduk N Twomey L (1997) Clinical Anatomy of the Lumbar Spine and Sacrum 3<sup>rd</sup> ed. Churchill Livingstone
- Kendall FP, McCreary EK, Provance PG 1993 Muscles Testing and Function. 4<sup>th</sup> ed. Williams and Wilkins. USA.
- Maitland GD Vertebral Manipulation. 5<sup>th</sup> edition. Butterworth Heinemann.
- Sahrman SA 1998 Diagnosis and treatment of movement impairment syndromes.
- Twomey LT, Taylor JR (eds.). 2000 Physical Therapy of the Low Back. 3<sup>rd</sup> edition. McGraw Hill.

**Day 1**

TIME	TOPIC	CONTENTS
09.00	Introduction	<b>Interactive Discussion:</b> Learning Outcomes. Participants to identify & list their LO for the weekend.
09.15	Anatomy and Biomechanics	<b>Interactive discussion-Question and answer session:</b> Group discussion of answers to specific questions prepared prior to course. Feedback and facilitation by tutors utilising graphic diagrams and demonstration.
11.00	COFFEE	
11.15	Clinical Reasoning in the Examination of the Lumbar Spine	<b>Interactive lecture:</b> Red flags, triage, special questions, Pattern recognition. Clinical reasoning associated with assessment technique selection. Contraindications and precautions to assessment techniques. Validity of tests based on current research evidence
12.15	Surface Anatomy and Active Movement Assessment	<b>Practical Workshop:</b> Surface anatomy palpation of bony structures, muscles, neural pathways & interfaces - consider clinical tests used to identify joint and muscle dysfunction & validity & reliability of tests. <b>Be able to:</b> <ul style="list-style-type: none"> <li>• Observe postures &amp; functional activities, interpret clinical significance, relate to subjective findings.</li> <li>• Demonstrate skill in the assessment of active mvt.</li> <li>• Observe muscle function &amp; how it influences mvt locally and in surrounding areas.</li> </ul>
1.1.5	LUNCH	
2.00	Use of Combined Movements in the Assessment and Management of Lumbar Spine Dysfunction	<b>Practical Workshop:</b> Discussion of combined movement theory and nomenclature. Handling skills and performance of testing procedures. <b>Problem solving workshop:</b> Utilising case studies to identify combined movement patterns and appropriate treatment techniques.
3.30	TEA	
3.30	Manual Techniques for the Lumbar Spine	<b>Practical Workshop:</b> <ul style="list-style-type: none"> <li>• Demonstrate the application &amp; handling skills of a minimum of 3 lumbar spine PPIVMS &amp; consider their reliability.</li> <li>• PAIVMS skills and relate to biomechanics</li> </ul>
5.00	End	

**Day 2**

TIME	TOPIC	CONTENTS
9.00	Manual Techniques (cont.)	(cont.)
11.00	COFFEE	
11.15	Technique Selection	<b>Problem solving / Practical Workshop:</b> Demonstrate appropriate reasoning in the selection of testing procedures to examine & differentiate muscle/joint & neural tissue. Be able to identify shortfalls of various testing procedures (false positives).



		Demonstrate skills in the palpation soft tissue, muscle & neural tissue.
<b>1.00</b>	<b>LUNCH</b>	
<b>2.00</b>	<b>Neural Provocation Tests / Mobilisation Techniques</b>	<b>Problem Solving / Practical Workshop:</b> Participants to identify the paths of various nerves of the lower limb and then determine appropriate testing procedures for them. Identification of potential interfaces and techniques to address. Discussion of research evidence regarding assessment and treatment of neural dysfunction.
<b>3.30</b>	<b>TEA</b>	
<b>3.45</b>	<b>Local stability mechanisms – examination and treatment</b>	<b>Interactive lecture:</b> Evidence relating to spinal stability – dysfunction, assessment and effect on low back pain
<b>4.30</b>	<b>Local stability mechanisms – examination and treatment</b>	<b>Practical Workshop:</b> Assessment of transversus abdominis function and multifidus activation in the lumbar spine
<b>5.00</b>	<b>End</b>	

**Day 3**

<b>TIME</b>	<b>TOPIC</b>	<b>CONTENTS</b>
<b>9.00</b>	<b>Revision of examination technique – Integrated management of the lumbar spine</b>	<b>Problem Solving / Practical Workshop:</b> Revision of examination skills – utilising a short case scenario. Identifying necessary tests.
<b>9.45</b>	<b>Effect of Lower limb dysfunction on the Lumbar Spine</b>	<b>Problem Solving / Practical Workshop:</b> Specific dysfunctions provided. Course participants to identify effect of dysfunction and treatment techniques to correct dysfunction.
<b>10.45</b>	<b>COFFEE</b>	
<b>11.00</b>	<b>Effect of Lower limb dysfunction on the Lumbar Spine (cont.)</b>	<b>(cont.)</b>
<b>12.00</b>	<b>Treatment &amp; Management</b>	<b>Problem Solving / Practical Workshop:</b> With more complex case studies demonstrate & justify a variety of treatment interventions e.g. manual therapy, correction of muscle dysfunction, neural, ergonomics, taping & exercises with clinical findings. Justify clinical reasoning, demonstrating knowledge of disease progression and tissue healing. Demonstrate ability to plan & prioritise treatment. Use evidence base as well as own experience
<b>1.00</b>	<b>LUNCH.</b>	
<b>1.45</b>	<b>Treatment &amp; Management (cont.)</b>	<b>(cont.)</b>
<b>3.00</b>	<b>TEA</b>	
<b>3.15</b>	<b>Technique Revision</b>	<b>Practical Workshop:</b> <b>Student led</b> – techniques decided and demons by students with constructive feedback and handling skills and effectiveness.
<b>4.15</b>	<b>Conclusion</b>	<b>Discussion:</b> <ul style="list-style-type: none"> <li>▪ Review course aims and outcomes.</li> <li>▪ Ideas to compliment course &amp; furthering CPD.</li> <li>▪ Preparation for next weekend.</li> </ul>

<b>4.30</b>	<b>End</b>
-------------	------------

## SACROILIAC JOINT

### Tutors:

Claire Small BPhy (Hons) MPhty St. MMACP  
Samantha Leak MCSP MMACP

### Learning Outcomes:

**On completion of this 3 day course the participant will be able to:**

1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the lumbopelvic region and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced effective clinical reasoning including:
  - *Improved integration of clinical sciences for example:  
Consideration of clinical presentations of pathologies, biomechanics, age changes, physiology of pain and tissue healing.*
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation of movement and interpretation of findings.*
  - *Improved manual palpation and handling skills and interpretation of findings.*
  - *Improved awareness of contra –indications, precautions and indications.*
  - *Improved justification and selection of technique/s and progressive management*

### Indicative Content

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. tissue healing, muscle, and pain physiology), anatomy, and biomechanics specific to the cervical spine region.
- Examination skills – subjective / objective / hypothesis generation.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – posture recognition, analysis of movement, PAIVMS and muscle dysfunction associated with lumbopelvic dysfunction
- Pathology of this region – post partum, traumatic injury, sacroiliitis
- Integrated treatment techniques – based on clinical reasoning in case scenarios.

### Pre course reading / preparation:

Review anatomy of:

- Sacroiliac joint – structure and composition
- Pubic symphysis
- Ligaments of the SIJ

Review the insertion/origin/action of the following muscles:

- Piriformis
- Obturator Internus
- Obturator Externus
- Hamstrings
- Adductor muscles
- Gluteus maximus
- Psoas

### Articles:

- Buyruk HM, Snijders CJ, Vleeming A et al (1995) The Use of Colour Doppler Imaging for the Assessment of Sacroiliac Joint Stiffness : a study on embalmed human pelvises. *European Journal of Radiology* 21:112 -116.
- Hungerford BA, Gilleard W, Hodges P (2003) Evidence of Altered lumbopelvic muscle recruitment in the presence of sacroiliac joint pain. *Spine* 28: 1593-1600



- Mens JMA, Vleeming A, Snijders CJ et al (2001) Reliability and validity of the Active Straight Leg Raise Test in posterior pelvic pain since pregnancy. Spine 26: 1167.
- Laslett M, Williams M (1994): The reliability of selected pain provocation tests for sacroiliac joint pathology. Spine 19(11):1243-1249

**Other recommended reading:**

- Lee D. (2004) The Pelvic Girdle 3rd edition. Churchill Livingstone. Edinburgh
- Vleeming et al (1997) Movement, Stability and Low Back Pain: the essential role of the pelvis. Churchill Livingstone.

**Day 1**

TIME	TOPIC	CONTENTS
09.00	Introduction	<b>Interactive Discussion:</b> Learning Outcomes. Participants to identify & list their problems / LO for the day
09.10	Anatomy Dissection: Anatomy Laboratory Charing Cross	<b>Interactive discussion – Question and answer session:</b> Group discussion of answers to specific questions prepared prior to course. Feedback and facilitation by tutors utilising anatomical models. Students will have identified anatomical structures they wish to view and be prepared to discuss the functional anatomy of these structures.
10.30	COFFEE	
10.45	Anatomy Dissection: Anatomy Laboratory Charing Cross (cont.)	<b>Interactive discussion – Question and answer session (cont.)</b>
12.00	LUNCH	
1.30	Patient Assessment	<b>Problem Solving / Practical Workshop:</b> Groups of 4 – assess a patient with clinical mentor. Group discussion of findings, patient treatment & retrospective analysis of session. Use of Clinical reasoning forms to facilitate objective planning and management of conditions covered in previous weekends.
3.00	TEA	
3.20	Patient Assessment	<b>Problem Solving / Practical Workshop:</b> Groups of 4 – assess a patient with clinical mentor. Group discussion of findings, patient treatment & retrospective analysis of session. Use of Clinical reasoning forms to facilitate objective planning and management of conditions covered in previous weekends.
5.00	End	

**Day 2**

TIME	TOPIC	CONTENTS
9.00	Introduction	<b>Interactive Discussion:</b> Learning Outcomes. Participants to identify & list their problems / LO for the weekend.
9.10	Anatomy and Biomechanics	<b>Practical workshop:</b> In pairs - a workshop identifying surface anatomy on each other and model skeleton. Determining orientation, origins and insertions of various muscles relating to the lumbopelvic complex
10.15	Clinical Reasoning in the Subjective and Objective Examination of the Sacroiliac Joint	<b>Interactive Lecture:</b> Discussion of research evidence for subjective and physical features associated with SIJ dysfunction. Discussion of biomechanics of the SIJ including recent research evidence. Concepts of Form and Force Closure. Discussion of Motor Control relating to SIJ dysfunction.
10.45	COFFEE	



11.00	<b>Clinical Reasoning in the Subjective and Objective Examination of the Sacroiliac Joint</b>	<b>Interactive Lecture:</b> Discussion of research evidence for subjective and physical features associated with SIJ dysfunction. Discussion of biomechanics of the SIJ including recent research evidence. Concepts of Form and Force Closure. Discussion of Motor Control relating to SIJ dysfunction
11.45	<b>Objective Assessment of the Sacroiliac Joint</b>	<b>Practical workshop:</b> Demonstrate appropriate reasoning in the selection of testing procedures to examine & differentiate muscle/joint & neural tissue. Be able to identify shortfalls of various testing procedures (false positives). <b>Be able to:</b> <ul style="list-style-type: none"> <li>• Observe postures &amp; functional activities, be able to interpret potential clinical significance &amp; relate to subjective findings.</li> <li>• Demonstrate skill in the Assessment of active mvt and its quality.</li> <li>• Observe muscle function &amp; how it influences movement locally and in surrounding areas.</li> <li>• Be able to undertake an appropriate neuroAx</li> <li>• Demonstrate the application &amp; handling skills of specific testing procedures for SIJ dysfunction &amp; consider their reliability.</li> <li>• PAIVMS skills and relate to biomechanics</li> <li>• Demonstrate skills in the palpation soft tissue, muscle &amp; neural tissue.</li> </ul>
1.00	<b>LUNCH</b>	
2.00	<b>Objective Assessment of the Sacroiliac Joint</b>	<b>Practical workshop: (cont.)</b>
3.00	<b>COFFEE</b>	
3.15	<b>Putting the Assessment Together</b>	<b>Problem Solving/Practical Workshop:</b> Within groups. Subjective Ax provided. Using clinical reasoning forms formulate a hypothesis & plan the examination (must, should, could)
4.15	<b>The SIJ Model: Assessment and Treatment.</b>	<b>Interactive Lecture:</b> The role of SIJ dysfunction within lumbopelvic dysfunction. Use of clinical reasoning to prioritise management. Importance of reassessment.
5.00	<b>End</b>	

**Day 3**

TIME	TOPIC	CONTENTS
9.00	<b>Review of Assessment Principles</b>	<b>Practical Workshop:</b> Review of SIJ assessment.
9.30	<b>Treatment techniques in the Management of SIJ Dysfunction</b>	<b>Practical Workshop:</b> Demonstration of manual techniques used in the management of SIJ dysfunction. Discussion of current research evidence regarding the techniques and their role in the management of SIJ dysfunction
10.45	<b>COFFEE</b>	
11.00	<b>Manipulation techniques in the Management of SIJ Dysfunction</b>	<b>Practical Workshop:</b> Demonstration of manipulation techniques used in the management of SIJ dysfunction. Discussion of current research evidence regarding the techniques and their role in the management of SIJ dysfunction.
11.45	<b>Muscle Release Techniques in the</b>	<b>Practical Workshop:</b>



	<b>Management of SIJ Dysfunction</b>	Demonstration of muscle energy techniques used in the management of SIJ dysfunction. Discussion of current research evidence regarding the techniques and their role in the management of SIJ dysfunction.
<b>12.45</b>	<b>LUNCH.</b>	
<b>1.45</b>	<b>Muscle Release Techniques in the Management of SIJ Dysfunction (cont.)</b>	<b>Practical Workshop:</b> Demonstration of muscle energy techniques used in the management of SIJ dysfunction. Discussion of current research evidence regarding the techniques and their role in the management of SIJ dysfunction.
<b>2.45</b>	<b>Integrated Management of the SIJ</b>	<b>Problem Solving / Practical Workshop:</b> Use of examination skills & clinical reasoning to execute examination of case study. <i>Revise examination skills</i>
<b>4.15</b>	<b>Conclusion</b>	<b>Discussion:</b> <ul style="list-style-type: none"> <li>▪ Review course aims and outcomes.</li> <li>▪ Ideas to compliment course &amp; furthering CPD.</li> <li>▪ Preparation for next weekend.</li> </ul>
<b>4.30</b>	<b>End</b>	

## HIP/KNEE JOINT

### Tutors:

Claire Small BPhy (Hons) MPhy St. MMAPCP

Dylan Morrissey MSc MMAPCP MCSP SRP

### Learning Outcomes:

#### On completion of this 3 day course the participant will be able to:

1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the knee complex and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced effective clinical reasoning including:
  - *Improved integration of clinical sciences for example: Consideration of clinical presentations of pathologies, biomechanics, age changes, physiology of pain and tissue healing.*
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation of movement and interpretation of findings.*
  - *Improved manual palpation and handling skills and interpretation of findings.*
  - *Improved awareness of contra –indications, precautions and indications.*
  - *Improved justification and selection of technique/s and progressive management*

### Indicative Content

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. healing and repair, muscle, pain physiology), anatomy and biomechanics specific to the knee complex.
- Examination skills – subjective / objective / hypothesis generation.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – recognition of lower quadrant/trunk posture & function, analysis of movement, stability tests, accessory testing, neurodynamics and muscle dysfunction of knee complex.
- Pathology of this region - link to assessment findings – pattern recognition.
- Awareness of when further investigation is indicated and which investigations are appropriate
- Awareness of surgical management of this region and how this affects manual therapy / rehabilitation (i.e. TKR; surgical fixation of #, ligament / capsular repair, ACL reconstruction).
- Integrated treatment techniques – based on clinical reasoning and applied in case scenarios.

### Pre course reading / preparation:



The following are recommended texts to help guide your reading, however you may use any anatomy texts you choose.

Anatomy	Grays Anatomy.
Diagnosis and testing	Orthopaedic Physical Assessment. Magee DJ (4 <sup>th</sup> Ed) June 2002. Saunders Clinical Sports Medicine. Bruckner P, & Khan K (1993). 2 <sup>nd</sup> ed McGraw
Treatment	Athletic Injuries and Rehabilitation Zachazewski JE, Magee DJ and Quillen WS. April 1996. Saunders

- Revise the anatomy of the tibiofemoral, patellofemoral and superior tibiofibular joints.
- Revise the muscles associated with the knee complex
- Revise pathologies commonly associated with the knee complex: ligament tears, meniscal damage, dislocation, patellofemoral dysfunction, tendinopathies
- Prepare a handout (1-2 pages) of a pathology that will be given to you considering these headings -Clinical Presentation, Pathological diagnosis, Differential Diagnosis, Aetiology, Management. Reference text & provide a list of references.
- Prepare a patient model of prepared pathology to role play.

**Articles:**

- Bizzini, M., J. D. Childs, and S. R. Piva (2003) Systematic review of the quality of randomized controlled trials for patellofemoral pain syndrome. *Journal of Orthopaedic & Sports Physical Therapy* 33(1):4-20.
- Woo SL et al (1999) Biomechanics of Kn Ligs American Journal of Sports Medicine: 27: (4) 533-43
- Gray JC (1999) Neural and Vascular Anatomy of the Menisci of the Human Knee. *J Orthop Sports Phys Ther* 29:1, 23-30
- Lephart SM et al (1998) Proprioception of the Ankle and Knee. *Sports Med* 25:3, 1
- Hurley MV (1997) The effects of joint damage on muscle function, proprioception and rehabilitation. *Manual Therapy* 2: 11-17.

**Other recommended reading:**

- McGinty G et al (2000) Biomechanical Considerations for Rehabilitation of the Knee. *Clin Biomech* 15:3, 160-6
- Deyle GD et al (2000) Effectiveness of Manual Physical Therapy and Exercise in Osteoarthritis of the Knee. A Randomized, Controlled Trial. *Ann Intern Med*, 132:3, 173-81
- Grelsamer RP et al (1998) The Biomechanics of the Patellofemoral Joint. 28:5, 286-98

TIME	TOPIC	CONTENTS
09.00	Introduction	<b>Interactive Discussion:</b> Learning Outcomes. Participants to identify & list their LO for the day.
09.10	Anatomy of the Hip and Groin	<b>Interactive discussion – Question and answer session:</b> Questions regarding anatomy and biomechanics of the hip and groin
9.45	Assessment of the Hip and Groin Region	<b>Problem Solving/Practical Workshop:</b> Demonstrate appropriate reasoning in the selection of testing procedures utilised to examine & differentiate between muscle/joint & neural tissue. Be able to identify shortfalls of various testing procedures (false positives). <b>Be able to:</b> <ul style="list-style-type: none"> <li>• Observe postures &amp; dynamic functional activities, be able to interpret potential clinical significance &amp; relate to subjective findings.</li> <li>• Demonstrate skill in the assessment of active movements and their quality.</li> <li>• Observe muscle function &amp; how it influences movements locally</li> </ul>



		<p>and in surrounding areas.</p> <ul style="list-style-type: none"> <li>• Demonstrate the application &amp; handling skills of techniques used to determine the presence of joint dysfunction</li> <li>• Demonstrate skills in the palpation of structures related to the hip and groin complex &amp; be able to interpret findings.</li> </ul>
<b>11.00</b>	<b>COFFEE</b>	
<b>11.15</b>	<b>Assessment of the Hip and Groin Region (cont.)</b>	<b>(cont.)</b>
<b>12.00</b>	<b>Putting it Together</b>	<b>Problem Solving/Practical Workshop:</b> A subjective assessment of a patient is provided. Using clinical reasoning forms formulate a hypothesis & plan the examination (must, should, could)
<b>12.45</b>	<b>LUNCH</b>	
<b>1.45</b>	<b>Treatment techniques for the Hip and Groin Region</b>	<b>Practical Workshop:</b> Demonstration and discussion of specific techniques used in the management of hip and groin pathology. Rationale for use and research evidence discussed
<b>2.45</b>	<b>TEA</b>	
<b>3.00</b>	<b>Pathologies of the Hip and Groin</b>	<b>Problem Solving/Practical Workshop:</b> Each group will prepare and present a separate pathology under the following headings: clinical presentation, mechanism of injury, pathology, etiological factors & current best practice physiotherapy or other management.
<b>4.30</b>	<b>End</b>	

**Day 2**

<b>TIME</b>	<b>TOPIC</b>	<b>CONTENTS</b>
<b>09.00</b>	<b>Introduction</b>	<b>Interactive Discussion:</b> Learning Outcomes. Participants to identify & list their LO for the weekend.
<b>9.10</b>	<b>Anatomy of the Knee Joint Complex</b>	<b>Interactive discussion – Question and answer session:</b> Group discussion of answers to specific questions prepared prior to course. Feedback and facilitation by tutors utilising graphic diagrams and demonstration.
<b>11.00</b>	<b>COFFEE</b>	
<b>11.15</b>	<b>Subjective and Physical Assessment Findings in Knee Dysfunction</b>	<b>Interactive Lecture:</b> Identify subjective presentation of dysfunction in the knee joint via referral patterns, quality, behaviour & history. Pattern recognition. Presentation of various diagnostic pathology findings. Use of investigative procedures.
<b>1.15</b>	<b>LUNCH</b>	
<b>2.00</b>	<b>Biomechanics of the lower limb – Influence on the Knee Joint</b>	<b>Interactive Lecture:</b> Discussion of lower limb biomechanics. Influence of lumbar spine, hip and foot mechanics on structures of the knee joint.
<b>3.15</b>	<b>Examination of the Knee Joint.</b>	<b>Problem Solving/Practical Workshop:</b> Demonstrate appropriate reasoning in the selection of testing procedures utilised to examine & differentiate between muscle/joint & neural tissue. Be able to identify shortfalls of various testing procedures (false positives). <b>Be able to:</b> <ul style="list-style-type: none"> <li>• Observe postures &amp; dynamic functional activities, be able to interpret potential clinical significance &amp; relate to subjective findings.</li> <li>• Demonstrate skill in the assessment of active movement and its quality.</li> <li>• Observe muscle function &amp; how it influences movement</li> </ul>



		<p>locally and in surrounding areas.</p> <ul style="list-style-type: none"> <li>• Demonstrate the application &amp; handling skills of techniques used to identify joint dysfunction</li> <li>• Be able to perform &amp; interpret specific stability and meniscal tests</li> <li>• Demonstrate skills in the palpation of structures related to the knee complex &amp; be able to interpret findings.</li> <li>• Demonstrate skills in accessory movements of the tibiofemoral, patellofemoral and superior tibiofibular joints and relate to biomechanics &amp; pathology.</li> </ul>
<b>4.45</b>	<b>End</b>	

**Day 3**

<b>TIME</b>	<b>TOPIC</b>	<b>CONTENTS</b>
<b>9.00</b>	<b>Manual Techniques for the Knee Joint Complex</b>	<b>Practical Workshop:</b> Demonstration of manual techniques used in the management of knee dysfunction. Discussion of current research evidence regarding the techniques and their role in the management of knee dysfunction
<b>10.00</b>	<b>Other Treatment Techniques for the Knee Joint Complex</b>	<b>Practical Workshop:</b> Demonstration of soft tissues techniques for the management of knee joint dysfunction, including: <ul style="list-style-type: none"> <li>• Meniscal mobs</li> <li>• ITB soft tissue work / stretches</li> <li>• Stretches for lateral retinaculum</li> </ul>
<b>10.45</b>	<b>COFFEE</b>	
<b>11.00</b>	<b>Patient Assessment 1</b>	<b>Problem Solving / Practical Workshop:</b> In pairs -Participant to act as a model using a prepared knee pathology. Assessment performed by a second participant. Clinical reasoning planning sheet completed after subjective. Feedback/discussion. Each participant to have compiled a one page handout about pathology with 3 references.
<b>12.00</b>	<b>Management of Patellofemoral Dysfunction</b>	<b>Workshop:</b> Participants provided with a specific reference relating to patellofemoral dysfunction and muscle activation. In groups – critical review of research work and identification of specific factors. Feedback and discussion regarding pertinent findings.
<b>1.00</b>	<b>LUNCH.</b>	
<b>2.00</b>	<b>Integrated Management of Dysfunction in the Knee Complex</b>	<b>Problem Solving / Practical Workshop:</b> With more complex case studies demonstrate & justify a variety of treatment interventions e.g. manual therapy, correction of muscle dysfunction, neural, ergonomics, taping & exercises with clinical findings. Justify clinical reasoning, demonstrating knowledge of disease progression and tissue healing. Demonstrate ability to plan & prioritise treatment. Use evidence base as well as own experience
<b>3.15</b>	<b>Patient Assessment 2</b>	<b>Problem Solving / Practical Workshop:</b> In pairs -Participant to act as a model using a prepared knee pathology. Assessment performed by a second participant. Clinical reasoning planning sheet completed after subjective. Feedback/discussion. Each participant to have compiled a one page handout about pathology with 3 references.
<b>4.15</b>	<b>Conclusion</b>	<b>Discussion:</b> <ul style="list-style-type: none"> <li>▪ Review course aims and outcomes.</li> </ul>



		<ul style="list-style-type: none"> <li>▪ Ideas to compliment course &amp; furthering CPD.</li> <li>▪ Preparation for next weekend.</li> </ul>
<b>4.30</b>	<b>End</b>	

**CERVICAL SPINE**

**Tutors:**

Linda Exelby B Sc(Physio) GradDipManTher (Perth), FMACP.

Rachel Leary M Sc, MMACP, MCSP.

**Learning Outcomes:**

On completion of this 3 day course the participant will be able to:

1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the cervical spine/upper quadrant and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced effective clinical reasoning including:
  - *Improved integration of clinical sciences for example:*
  - *Consideration of clinical presentations of pathologies, biomechanics, age changes, physiology of pain and tissue healing, vertebral artery and ligament instability presentations.*
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation of movement, handling skills and interpretation of findings.*
  - *Improved awareness of contra –indications, precautions and indications.*
  - *Improved justification and selection of technique/s and progressive management*

**Indicative Content**

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. tissue healing, muscle, and pain physiology), anatomy, and biomechanics specific to the cervical spine region.
- Examination skills – subjective / objective / hypothesis.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – posture recognition, analysis of movement, PAIVM, PPIVM, neurodynamics and muscle dysfunction of the cervical spine
- Pathology of this region (headache, radiculopathy, non specific arm pain, cervical spondylosis, whiplash) - link to assessment findings – pattern recognition.
- Integrated treatment techniques – based on clinical reasoning in case scenarios.

**Pre course reading / preparation:**

**Using any anatomy text:**

- **Review the pathways/area supplied of the following upper cervical nerves :**  
Greater, Lesser Occipital & Greater Auricular Nerve and the brachial plexus interfaces (foramen to Pect Minor).
- **Review the insertion/origin/action of the following muscles:**  
Levator Scapula (NB cervical spine insertion), Scaleni, Pect Minor, Serratus Anterior.
- **Review** anatomy of vertebral artery & upper cervical spine ligaments

**Essential Reading:**

- Mercer S.R (1995) Morphology of the cervical intervertebral disc: implications for McKenzie's model of the disc derangement syndrome. *Manual Therapy* 1 (2) 76-81.
- Kerry R et al (2006) Cervical arterial dysfunction assessment and manual therapy. *Manual Therapy* 11: 243-253

**Pain References:**

- Woolf C 2004 Pain: Moving from symptom control toward mechanism specific pharmacologic management *Ann. Intern. Med.* (2004) 140: 441-451



- Zusman M (2002) Forebrain-mediated sensitisation of central pain pathways: non-specific pain and a new image for MT. *Manual Therapy* 7(2) 80-88

**Other recommended reading / pathology:**

- Gifford L (2001) Acute lower cervical nerve root conditions: symptom presentation and pathobiological reasoning. *Manual Therapy* 6(2) 106-115
- Greening J (1998) Minor peripheral nerve injuries: an underestimated source of pain? *Manual Therapy* 3(4) 187-194
- Jull G (1997) Management of cervical Headache. *Manual Therapy* 2(4) 182-190
- Sterling M.(2004) A proposed new classification system for whiplash associated disorders – implications for assessment and management. *Manual Therapy* 9 (2) 60-70
- Weinstein S.M (1992) Nerve Problems & compartment syndromes in the hand wrist & forearm. *Clinics in Sports Medicine* 11(1) 161-187 OR other text on anatomy of nerves.

**Day 1**

TIME	TOPIC	CONTENTS
09.00	<b>Introduction</b>	Learning Outcomes. Participants to identify & list their problems / LO for the weekend.
09.15	<b>Anatomy Problem Solving Workshop:</b> Anatomy Cervical Spine	Clinical anatomy question stations set out, students to work in pairs at stations. Feedback as presentation with tutor input.
10.15	<b>Problems Solving Workshop:</b> Biomechanics C Sp/CT junction joints, related myofascia & neural pathways. <b>Interactive lecture</b> – upper cervical spine <b>COFFEE</b>	In groups analyse lower C Sp joint arthrokinematics (flex,ext,SF,rot). <b>Practical:</b> Surface anatomy palpation of bony structures, muscles, neural pathways & interfaces - consider clinical tests used to identify joint and muscle dysfunction & validity & reliability of tests.
12.00	<b>Interactive lecture/Practical</b> Vertebral Artery testing	What are we testing, subjective signs, guidelines for testing, critical appraisal of current literature. Perform subjective & objective testing on peer.
12.30	<b>LUNCH</b>	
1.15	<b>Lecture / Practical:</b> Upper C Sp ligament testing	Patients at risk. When to assess? Validity of tests, current literature. Subjective signs. <b>Practical:</b> Transverse ligament/Alar ligament tests.
2.30	<b>Interactive Lecture:</b> Headache	Types of headache. Clinical Presentation of cervicogenic headache versus tension H/A & Migraine. Proposed neurophysiology above. Current literature review. Evidence for physiotherapy intervention
3.00	<b>TEA</b>	
3.15	<b>Interactive Lecture: Non –Specific Arm Pain.</b>	Definition & Clinical Presentation of NSAP. Proposed theories & neurophysiology. Current literature review. Evidence for physiotherapy intervention
3.30	<b>Group work / Interactive Presentation:</b> Pathology: whiplash/cervical spondylosis/radiculopathy	Each group will prepare and present one pathology under headings: clinical presentation, mechanism of injury, pathology, etiological factors & current best practice physiotherapy or other management.
4.30	<b>End</b>	

**Day 2**

TIME	TOPIC	CONTENTS
9.00	<b>Interactive lecture /Group work:</b> Central pain mechanisms Part 2	<b>Interactive lecture /Group work:</b> Further mechanisms of pain in the spinal cord and brain centres, including models of understanding eg Mature Organism Model and Neuromatrix and the Descending Inhibitory System (DIS) Patient scenarios identifying peripheral and central pain mechanisms (work shop) (30mins)



		Patient examples – working through peripheral on one example mostly and central on the other.
<b>10.30</b>	<b>COFFEE</b>	
<b>10.45</b>	<b>Practical workshop Multi-structural Assessment</b>	<p>Demonstrate appropriate reasoning in the selection of testing procedures to examine &amp; differentiate muscle/joint &amp; neural tissue. Be able to identify shortfalls of various testing procedures (false positives).</p> <p><b>Be able to:</b></p> <ul style="list-style-type: none"> <li>▪ Observe postures &amp; dynamic functional activities, be able to interpret potential clinical significance &amp; relate to subjective findings.</li> <li>▪ Demonstrate skill in the Ax of active mvts and their quality.</li> <li>▪ Observe muscle function &amp; how it influences mvt of locally and in surrounding areas.</li> <li>▪ Be able to undertake an appropriate neurological assessment</li> <li>▪ Demonstrate the application &amp; handling skills of a minimum of 3 C Sp PPIVMS &amp; consider their reliability.</li> <li>▪ Review PAIVMS skills and relate to biomechanics (AP/PA/combined)</li> <li>▪ Be able to perform at 3 neurodynamics tests for this region and relate validity of test to basic sciences.</li> <li>▪ Demonstrate skills in the palpation soft tissue, muscle &amp; neural tissue.</li> </ul>
<b>12.45</b>	<b>LUNCH</b>	
<b>1.30</b>	<b>Practical workshop Multi-structural assessment.</b>	<b>(Cont)</b>
<b>4.00</b>	<b>Problem Solving/Practical:</b>	Within groups. A subjective assessment is provided. Using clinical reasoning forms formulate a hypothesis & plan the examination (must, should, could)
<b>4.30</b>	<b>End</b>	

**Day 3**

<b>TIME</b>	<b>TOPIC</b>	<b>CONTENTS</b>
<b>9.00</b>	<b>Practical:</b> Examination of case studies.	Use of examination skills & clinical reasoning to execute examination of case study. <i>Revise examination skills</i>
<b>10.15</b>	<b>Interactive Lecture:</b> Integrated Management of the C Spine	Neurophysiological effects of various Rx interventions. Clinical decision making when to discontinue Rx, when other non physiotherapy interventions would compliment or be more appropriate. Consider current evidence base of effect, as well as group's experience.
<b>10.45</b>	<b>COFFEE</b>	
<b>11.00</b>	<b>Problem solving, clinical reasoning:</b> Integrated Management of cervical spine dysfunction.	Planning and practice of various manual therapy techniques. Emphasis on reasoning, handling skills, justification of intervention and reassessment.
<b>12.00</b>	<b>Problem Solving/Practical:</b> Other manual therapy considerations.	Management of a patient with altered neurodynamics. Justify direct or indirect treatment, treatment directed at the upper limb interfaces. Other soft tissue techniques
<b>1.00</b>	<b>LUNCH.</b>	
<b>1.45</b>	<b>Workshop:</b> Comprehensive Treatment & Management	With more complex case studies demonstrate & justify a variety of treatment interventions e.g. manual therapy, correction of muscle dysfunction, neural, ergonomics, taping & exercises with clinical findings. Justify clinical reasoning, demonstrating knowledge of disease



		progression and tissue healing. Demonstrate ability to plan & prioritise treatment. Use evidence base as well as own experience
<b>3.30</b>	<b>Problem Solving:</b> Case Scenarios.	Plan management of case studies examined previously within a group on Day 2.
<b>4.00</b>	<b>Conclusion</b>	<b>Discussion:</b> <ul style="list-style-type: none"> <li>▪ Review course aims and outcomes.</li> <li>▪ Ideas to compliment course &amp; furthering CPD.</li> <li>▪ Preparation for next weekend.</li> </ul>
<b>4.15</b>	<b>End</b>	

### THE THORACIC SPINE & RIB CAGE - EXAMINATION & MANAGEMENT

Tutors:

Linda Exelby B Sc(Physio) GradDipManTher. FMACP.

**Rachel Leary M Sc, MMACP, MCSP.**

#### Learning Outcomes:

##### On completion of the 3 day course the participant will be able to:

1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the thoracic spine (including ribs) and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced effective clinical reasoning including:
  - *Improved integration of clinical sciences for example:*  
Consideration of viscera & somatic neurophysiology and clinical presentations, the mechanics of respiration and how these interrelate with the musculoskeletal dysfunction.
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation of movement, manual handling skills and interpretation of findings.*
  - *Improved awareness of contra –indications, precautions and indications.*
  - *Improved justification and selection of technique/s, exercise and ergonomics and progressive management.*

#### Indicative Content

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. tissue healing, muscle, and pain physiology), anatomy, and biomechanics specific to the thoracic spine region.
- Examination skills – subjective / objective / hypothesis.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – posture recognition, analysis of movement, PAIVM, PPIVM of thoracic spine and ribs, neurodynamics and muscle dysfunction.
- Pathology of this region - link to assessment findings – pattern recognition.
- Treatment techniques – based on clinical reasoning in case scenarios.

#### Pre course preparation:

##### Using anatomy text:

- Review the Anatomy of the Thoracic Outlet (Interfaces of Brachial Plexus– to the Axilla).
- Revise the anatomy of the joints of the T Spine and Ribs Cage.
- Revise the muscles of inhalation & expiration (e.g. diaphragm, Intercostal muscles, Quadratus Lumborum.)
- Revise anatomy of sympathetic and parasympathetic system.

#### Essential References:

- Edmondston E et al (1997) Thoracic Spine: anatomical & biomechanical considerations for manual therapy. Manual therapy 2 (3) 132-143
- Lee, D. (1993) Biomechanics of the Thorax: A Clinical Model of in Vivo Function. J.of Manual and Manip. Therapy.1 13-21.



- Moseley G.L (2003) A pain neuromatrix approach to patients with chronic pain. *Manual Therapy* 8(3), 130 -140
- **Other References:**
- Robertson S (1999) Neuroanatomical Review of Visceral Pain. *The Journal of Manual & Manipulative Therapy.* 7(3) 131-140

**Day 1**

TIME	TOPIC	CONTENTS
9.00	<b>Interactive Lecture:Pain Physiology Prt 3 Management of pain</b>	<b>Interactive Lecture:</b> Management strategies in the clinical setting to prevent chronicity. Psychosocial factors - how to recognise them and what to do about them? What are the neurophysiological effects of manual therapy- peripheral and central. What do we really do as manual therapists? A brief account of the mechanisms of TNS, acupuncture and common pharmacological agents? Management when pain is complex eg. CBT and pain management programmes
11.00	<b>TEA</b>	
11.15	<b>Interactive Lecture:</b> Introduction to Thoracic Spine & Rib Cage.	Somatic referral patterns. Interrelationship of T Sp with visceral, sympathetic systems & Lumbar/cervical structures. Age changes
11.30	<b>Anatomy Practical Workshop:</b> Anatomy of Tx spine/ribs/muscles& respiratory musc	With partners, a workshop identifying surface anatomy on each other and model skeleton.
12.45	<b>LUNCH</b>	
1.30	<b>Biomechanics. Lecture/Workshop:</b>	T Sp /Rib biomechanics of mvt & respiration. Work with partners palpating mvt then relate palpatory findings to current literature. Discuss reasons for variations found
3.00	<b>TEA</b>	
3.30	<b>Patient Examination.</b> (Patient can include any L Sp/SIJ/Hip or cervical spine condition)	Groups of 4 – Ax a patient with a clinical mentor. Group discussion of findings, patient treatment & retrospective analysis of session. Use of Clinical reasoning forms to facilitate objective planning and management. CSE prep
5.00	<b>End</b>	

**Day 2**

TIME	TOPIC	CONTENTS
9.00	<b>Practical workshop Multi-structural Assessment</b>	Be able to: <ul style="list-style-type: none"> <li>▪ Demonstrate appropriate reasoning in the selection of testing procedures to examine &amp; differentiate muscle/joint &amp; neural tissue. Be able to identify shortfalls of various testing procedures (false positives).</li> <li>▪ Observe postures &amp; dynamic functional activities &amp; be able to interpret potential clinical significance &amp; relate to subjective findings.</li> <li>▪ Demonstrate skill in the assessment of active mvts and their quality.</li> <li>▪ Observe muscle function &amp; how it influences mvt of this region.</li> <li>▪ Be able to undertake an appropriate neurological assessment</li> <li>▪ Demonstrate skills in the palpation of ribs and their mvt with respiration and mvt.</li> <li>▪ Demonstrate the application &amp; handling skills of a minimum of 2 T Sp PPIVMS &amp; consider their reliability.</li> <li>▪ Review PAIVMS skills and relate to biomechanics.</li> </ul> Be able to perform at least 1 neurodynamics test for this region and relate validity of test to basic sciences.
12.45	<b>LUNCH</b>	
1.30	<b>Practical workshop Multi-structural Assessment (cont)</b>	<b>(Cont)</b>
3.00	<b>TEA</b>	

<b>3.15</b>	<b>Problem Solving/Practical: Examination case studies.</b>	Use of examination skills & clinical reasoning via short case scenarios. A short subjective assessment is provided. Formulate a hypothesis, plan and execute an appropriate examination.
<b>4.30</b>	<b>End</b>	

### Day 3

TIME	TOPIC	CONTENTS
<b>09.00</b>	<b>Practical:</b> Examination Revision	Revision of examination skills with new partner. Opportunity to review/revise previous day's skills.
<b>10.20</b>	Interactive Lecture: <b>Pathology</b>	Pathologies of T Sp considering red flags. Physiology of visceral versus musculoskeletal presentations & interrelationship.
<b>11.00</b>	<b>TEA</b>	
<b>11.15</b>	<b>Practical / Workshop:</b> Integrated Management of T Sp & Rib Dysfunction	<b>Problem solving, clinical reasoning:</b> Integrated Rx of case scenarios prioritising treatment with clinical findings. Planning and practice of various manual therapy techniques. Emphasis on reasoning, handling skills & justification of intervention.
<b>1.00</b>	<b>LUNCH</b>	
<b>1.45</b>	<b>Workshop:</b> Integrated Rehabilitation of Trunk	<b>Problem Solving/Practical:</b> Progressive treatment of more complex clinical scenarios integrating therapy/exercise and movement pattern correction into function & ergonomics. <i>Include cervical / L Sp revision</i>
<b>3.30</b>	<b>Problem Solving:</b> Case Scenarios.	Plan management of case studies examined previously within a group on Day 2.
<b>4.00</b>	<b>Conclusion</b>	<b>Discussion:</b> <ul style="list-style-type: none"> <li>Review course aims and outcomes.</li> <li>Ideas to compliment course &amp; furthering CPD.</li> </ul> Preparation for next weekend.
<b>4.15</b>	<b>End</b>	

## Manipulation

**Tutors:**  
**Chris McCarthy**  
**Jason Varty**

### Learning Outcomes:

**On completion of this 2 day course the participant will be able to:**

- Identify the indications and contraindications for the use of manipulations.
- Critically evaluate available evidence on the subject and apply to clinical decision making process.
- Demonstrate more advanced effective clinical reasoning including:
  - Improved integration of clinical sciences*
  - Improved observation of movement, handling skills and interpretation of findings.*
  - Improved justification and selection and application of technique/s and progressive management*

### Indicative Content

- Consider current best practice
- Incorporate clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. tissue healing, muscle, pain physiology), anatomy, biomechanics
- Examination skills – subjective / objective / hypothesis.
- Indications / Precautions / Contraindications to assessment and treatment
- Integrated treatment techniques – based on clinical reasoning in case scenarios.



**Pre course reading / preparation:**

- Barker S. et al (2000) Guidance for pre-manipulative testing of the cervical spine. *Manual Therapy* 5(1) 37-40
- Potter, L, McCarthy, C.J. Oldham, J.A.(2005) Physiological Effects Of Spinal Manipulation: A Review Of Proposed Theories. *Physical Therapy Reviews* 2005; 10: 163–170
- Jull G (2002) Use of high and low velocity cervical manipulative therapy procedures by Australian manipulative physiotherapists. *Australian Journal of Physiotherapy* Vol 48 pp 189-193
- Cervical Artery Insufficiency and Manipulative Therapy- A Literature Review: Web link  
<http://www.macpweb.org>
- McCarthy CJ. Spinal manipulative thrust technique using combined movement theory. *Man Ther* 2001; 6(4):197-204.

**Day1**

TIME	TOPIC	CONTENTS
9.00	Introduction	Learning Outcomes. Participants to identify & list their problems / LO.
9.15	Introduction to Combined movements and Manipulation	Lecture – Introducing the concepts of combined starting positions to mobilise and manipulate
11.15	<b>COFFEE</b>	
11.30	Combined PPIVMS and PAIVMS	Be able to undertake combined PPIVMS and PAIVMS including APs
12.30	<b>LUNCH</b>	
1.15	Indications / contraindications Lecture on indications, contraindications, and alternatives to manipulation. Incorporating pathophysiological effects. Cervical Artery dysfunction workshop Anatomy, vulnerability, VBI testing reliability/ validity	
1.45	Practical cervical manipulation (IV- thrusts)	Be able to demonstrate and reason the benefits of use for: <ul style="list-style-type: none"> <li>• Rotation</li> <li>• Side flexion</li> <li>• Transverse Thrust</li> </ul>
2.30	<b>TEA</b>	
2.45	Practical cervical manipulation (IV- thrusts)	Be able to demonstrate and reason the benefits of use for: <ul style="list-style-type: none"> <li>• Rotation</li> <li>• Side flexion</li> <li>• Transverse thrust</li> </ul>
4.45	Close	

**Day 2**

TIME	TOPIC	CONTENTS
9.00	Revision of previous day	
9.30	Practical rib and CT junction	Be able to demonstrate and reason the benefits of the use for: <ul style="list-style-type: none"> <li>• PA rib</li> <li>• Rib 1</li> <li>• Transverse for the CT junction</li> </ul>
10.45	<b>COFFEE</b>	
11.00	Lumbar Spine	Be able to demonstrate and reason the benefits of the use for: <ul style="list-style-type: none"> <li>• Rotations in flexion</li> <li>• Rotations in Extension</li> </ul>
12.45	<b>LUNCH</b>	
1.45	Practical Thoracic grade IV- thrusts's	Be able to demonstrate and reason the benefits of use for:



		<ul style="list-style-type: none"> <li>• PA thrust (mid and upper thoracic)</li> <li>Screw (extension and rotation)</li> </ul>
<b>2.45</b>	TEA	
<b>3.00</b>	Revision of the course	Recap of reasoning and Technique
<b>4.00</b>	Close	

## THE SHOULDER COMPLEX

Tutors:

Linda Exelby B Sc(Physio) GradDipManTher. FMACP.

**Andrea Francis MSc, BSc (Hons), MCSP, MMACP**

### Learning Outcomes:

#### On completion of the 3 day course the participant will be able to:

1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the shoulder complex and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced clinical reasoning including:
  - *Improved integration of clinical sciences for example:*
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation and manual palpation handling skills.*
  - *Improved handling skills and interpretation of findings.*
  - *Improved awareness of contra –indications, precautions and indications.*
  - *Improved justification and selection of technique/s and progressive management*

### Indicative Content

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. healing and repair, muscle, pain physiology), anatomy, biomechanics specific to the shoulder complex.
- Examination skills – subjective / objective / hypothesis.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – recognition of upper quadrant/trunk posture & function, analysis of mvt, stability & impingement tests, accessory testing, neurodynamics and muscle dysfunction of shoulder complex.
- Pathology of this region - link to assessment findings – pattern recognition.
- Awareness of when further investigation is indicated and which investigations are appropriate
- Awareness of surgical management of this region and how this affects manual therapy / rehabilitation (i.e. TSR/ Hemiarthroplasty; surgical fixation of #; rotator cuff repair; stabilization for dislocations).
- Treatment techniques – based on clinical reasoning and applied in case scenarios.

### Pre course reading /preparation:

#### Using Anatomy text:

- Revise the anatomy of the SC, AC and glenohumeral joints.
- Revise the muscles associated with the shoulder complex
- Revise shoulder pathologies: tendinopathy / impingement, instability / dislocation; shoulder capsulitis.

### Essential References

- Matava M.J et al (2005) Partial Thickness Rotator tears. American J of Sports Medicine. 33 (9) 1405-1417
- Halder A.M et al (2000) Anatomy & Biomechanics of the shoulder. Orthopaedic Clinics of North America 31(2) 159-177
- Johnson G.et al (1994) Anatomy & Actions of the Trapezius Muscle Clin Biomechanics. 9(1)44-50.



- Margery M.E et al (2003) Dynamic evaluation and early management of altered motor control around the shoulder complex. Manual Therapy 8(4) 195-206

**Other References:**

- McClure P.W et al (2001) Direct 3- dimensional measurement of scapula kinematics during dynamic movements in vivo. J of Shoulder Elbow Surgery 10(3) 269-277
- David G et al (2000) EMG & strength correlates of selected shoulder muscles during rotations of the glenohumeral joint. Clinical Biomechanics 15: 95-102

**Day 1**

TIME	TOPIC	CONTENTS
09.00	Introduction to weekend.  Subjective assessment & differentiation of shoulder symptoms.	<b>Interactive Lecture:</b> Learning Outcomes Participants to identify & list their problems / LO are for the weekend. <b>Interactive Lecture/Groups :</b> Identify subjective presentation of shoulder dysfunction via referral patterns, quality, behaviour & history. Functional, mechanical & neurophysiological relations of CSp - shoulder -T Sp. Pattern recognition.
09.40	Scapula Biomechanics.	<b>Lecture/Workshop:</b> Lecture normal biomechanics current literature considered. Observation of posture & movement of scapula in groups of 3 – noting various mvt patterns. Identify movement dysfunction – alter – note effect.
11.00	<b>TEA</b>	
11.15	Glenohumeral Biomechanics	<b>Workshop/Lecture:</b> Critical appraisal of current knowledge of capsule and ligaments and their effects on arthrokinematics of GH mvt. In groups of 3 observe GH mvt. Identify movement dysfunction – alter/differentiate – note effect. In groups work out the mechanics of throwing. Rotator cuff testing considering specificity and sensitivity.
12.45	<b>LUNCH</b>	
1.45	Investigative procedures for diagnosis of shoulder pathology.	<b>Interactive lecture:</b> Presentation of various diagnostic pathology findings (fracture/dislocation/tendon tears/ frozen shoulder/labral injuries etc), when to use X-ray, MRI and US.
3.00	<b>TEA</b>	
3.15	<b>Patient Assessment</b>	<b>Practical /Group Work:</b> Groups of 4 – assess a patient with clinical mentor. Group discussion of findings, patient treatment & retrospective analysis of session. Use of Clinical reasoning forms to facilitate objective planning and management of conditions covered in previous weekends.
4.45	<b>End</b>	

**Day 2:**

TIME	TOPIC	CONTENTS
9.00	Integrated examination of the shoulder complex.  <b>TEA</b>	<b>Practical:</b> Be able to: <ul style="list-style-type: none"> <li>▪ Demonstrate appropriate reasoning in the selection of testing procedures to examine &amp; differentiate muscle/joint &amp; neural tissue. Be able to identify shortfalls of various testing procedures (false positives). Consider validity of testing procedures.</li> <li>▪ Observe postures &amp; dynamic functional activities &amp; be able to interpret potential clinical significance &amp; relate to subjective findings.</li> </ul>



		<ul style="list-style-type: none"> <li>▪ Demonstrate skill in the assessment of the quality of active mvts locally &amp; in surrounding areas.</li> <li>▪ Observe &amp; test muscle function &amp; how it influences mvt of this region.</li> <li>▪ Be able to perform &amp; interpret specific stability. Demonstrate skills in the palpation of structures related to the shoulder complex &amp; be able to interpret findings.</li> <li>▪ Demonstrate skills in accessory movts of the GH, AC, SC joints and relate to biomechanics &amp; pathology.</li> </ul>
<b>12.45</b>	<b>LUNCH</b>	
<b>1.30</b>	<b>Practical</b>	Examination continued
<b>3.00</b>	<b>TEA</b>	
<b>3.15</b>	<b>Pathology</b> (Instability, cuff pathology, impingement, frozen shoulder, neck shoulder pathology).	<p><b>Group work &amp; group presentation of a specific shoulder pathology with tutors facilitating groups.</b></p> <p>Groups will be given a case scenario &amp; must formulate/&amp; support their hypothesis. They will consider the clinical presentation, mechanism of injury, pathology, etiological factors &amp; physiology of the case scenario. From this they will plan an examination (must,should,could). Current best practice physiotherapy or other management will be discussed interactively.</p>
<b>4.30</b>	<b>Conclude: Discussion</b>	<b>Review previous 2 days in groups</b> – summarise 3 points of “new knowledge & new skills - how will this affect clinical practise?”
<b>4.45</b>	<b>End</b>	

**Day 3**

<b>9.00</b>	Examination revision	<p><b>Practical/Workshop</b></p> <p>New partner: Revision of examination skills – utilising a short case scenario. Identifying necessary tests. <i>Revision of any new examination techniques on request.</i></p>
<b>10.15</b>	Shoulder Complex Rehabilitation  COFFEE	<p><b>Practical:</b></p> <p>Planning and practising progressive strengthening for scapula and rotator cuff muscles integrating into function. Proprioception training. Rehabilitation for case scenarios: instabilities, impingement &amp; tears. Various taping procedures for scapula and GH</p>
<b>12.45</b>	<b>LUNCH.</b>	
<b>1.30</b>	Mobilising the GH /AC/SC joints	<p><b>Practical:</b></p> <p>Problem solving approach to mobilising the GH joint considering capsular restraint patterns. Physiological/Accessory (taping)</p>
<b>2.45</b>	Integrated Management of complex case scenarios	<p><b>Group Work:</b> Planning examination &amp; progressive management /rehabilitation of various clinical presentations considering current evidence and justify intervention.</p>
<b>3.30</b>	Feedback/conclusion	Reflect on own self needs & furthering CPD. Homework/Preparation for next course
<b>3.45</b>	End	

**ELBOW/WRIST & HAND WEEKEND**

TUTORS:

Linda Exelby B Sc(Physio) GradDipManTher. FMACP.

Alison Lingwood GradDipManTher. MMACP.

**Learning Outcomes:**

**On completion of the 3 day course the participant will be able to:**



1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the elbow, wrist / hand and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced effective clinical reasoning including:
  - *Improved integration of clinical sciences.*
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation of movt, handling skills and interpretation of findings.*
  - *Improved awareness of contra –indications, precautions and indications.*
  - *Improved justification and selection of technique/s and progressive management*

**Indicative Content**

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. tissue healing, muscle, and pain physiology), anatomy, and biomechanics specific to the forearm region.
- Examination skills – subjective / objective / hypothesis.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – recognition of upper quadrant, trunk posture & function, analysis of movement, special tests, accessory testing, neurodynamics and muscle dysfunction of elbow, wrist/hand.
- Pathology of this region - link to assessment findings – pattern recognition.
- Treatment techniques – based on clinical reasoning and applied in case scenarios.

**Pre course preparation:**

- Review the Anatomy of the elbow, wrist and hand.
- Review the biomechanics of elbow, and wrist.
- Prepare a handout (1-2 pages) of a pathology that will be given to you considering these headings (Clinical Presentation, Pathological diagnosis, Differential Diagnosis, Aetiology, Management). Please reference text & provide a list of references. You will give a short presentation.
- Prepare a patient model of prepared pathology to role play.

**Anatomy text**

- Norkin C.C et al (3<sup>rd</sup> or 4th edition) Joint Structure and Function Publishers:F.A Davis (Elbow and wrist)  
OR
- Lockard M (April – June 2006) Clinical Biomechanics of the Elbow. Journal of Hand Surgery pg 72-81

**Further references elbow:**

- Frostick SP (1999) Sport Injuries of the elbow. British J of Sport Medicine 33: 301-311
- Dilorenzo C.E. et al (March 1990) The importance of Shoulder and Cervical Dysfunction in the Etiology and Treatment of Athletic Elbow Injuries.JOSPT. 11 (9) 402-409.
- Vicenzino B et al (2003) Lateral epicondylalgia: a musculoskeletal physiotherapy perspective. Manual Therapy 8(2) 66-79

**Further references wrist/hand**

- Cober S.R et al (2001) Arthroscopic repair of triangular fibrocartilage complex injuries. Orthopaedic Clinics of North America 30(2) 279-293
- LaStayo P. et al (1995) Clinical Provocative Tests used in Evaluating Wrist Pain. A Descriptive Study. J. of Hand Therapy. 8. 10-15.
- Chin H.W et al (Aug.1993) Ligamentous Wrist Injuries. Emergency Medicine Clinics of North America. 11 (3).

**Day 1**

TIME	TOPIC	CONTENTS
9.00	Charing cross – Anatomy dissection.	



<b>12</b>	<b>LUNCH</b>	
<b>1.30</b>	<b>Anatomy: Group Workshop – Elbow, Wrist, Hand</b>	Within groups - functional anatomy/identifying surface anatomy questions – use of anatomy texts, references, homework preparation.
<b>2.15</b>	<b>Group Workshop: Biomechanics elbow</b>	Within groups students will analyse arthrokinematics of elbow movt, considering stabilising structures, muscles & effects of common traumas on the integrity of the joint/s. The effects on the elbow of dysfunction/s in other parts of the kinetic chain a throwing athlete will be considered via a case scenario.
<b>3</b>	<b>TEA</b>	
<b>3.15</b>	<b>Lecture/Group workshop: Movement Dysfunction around the elbow</b>  <b>Homework case study</b>	Students shown a movt dysfunction at elbow. Within groups work out; structures at fault, possible contributing factors e.g. occupation/sport, where symptoms could occur, treatment – exercises and ergonomic changes.
<b>4.30</b>	<b>Revision session</b>	

**Day 2**

<b>TIME</b>	<b>TOPIC</b>	<b>CONTENTS</b>
<b>9.00</b>	Case Study	Group work discussing clinical reasoning and planning from paper scenario
<b>9.45</b>	<b>Practical:</b> Integrated Assessment of the Elbow	<p>Be able to demonstrate appropriate reasoning in the selection of testing procedures to examine &amp; differentiate muscle/joint &amp; neural tissue. Be able to identify shortfalls of various testing procedures (false positives). Consider validity of testing procedures.</p> <p><b>Be able to:</b></p> <ul style="list-style-type: none"> <li>▪ Observe postures &amp; dynamic functional activities &amp; be able to interpret potential clinical significance &amp; relate to subjective findings.</li> <li>▪ Demonstrate skill in the assessment of active movts and their quality.</li> <li>▪ Observe muscle function &amp; how it influences movt of this region &amp; surrounding areas.</li> <li>▪ Demonstrate skills in the palpation of muscle, ligament, joint line &amp; nerves related to the elbow.</li> <li>▪ Review accessory testing skills and relate to biomechanics.</li> <li>▪ Demonstrate special tests for the e.g. elbow – ligament, loose body.</li> <li>▪ Be able to perform neurodynamics testing for this region and relate validity of test to basic sciences.</li> </ul>
<b>11.00</b>	<b>COFFEE</b>	
<b>11.15</b>	<b>Practical/ Problem Solving:</b> Differentiation  Joint treatment techniques (Flex, Ext, Pro/Sup)	<p>Aim of session is to further develop clinical reasoning and practical skills to accurately differentiate structures around the elbow using specific case scenarios.</p> <p>Develop manual techniques for the treatment of elbow joint restrictions using physiological or accessory techniques.</p> <p><b>Demonstration and feedback by fellow students/tutors</b></p>
<b>12.45 –</b>	<b>LUNCH</b>	
<b>1.30</b>	<b>Case Scenarios / Practical:</b> Multi-structural Treatment of the Elbow region.	<p>Progressive planning &amp; application of appropriate manual therapy, soft tissue, neural techniques and exercises with justification to peer and course leader. Subsequent practice of various manual therapy techniques.</p> <p>Emphasis on reasoning, handling skills and evidence base.</p>
<b>2.45–</b>	<b>TEA</b>	



<b>3.00</b>	<i>Practical:</i> Role play patient.(? present pathology) Planning sheet. Case studies	Student to model prepared elbow pathology - is assessed by peer - use of clinical reasoning planning sheet after subjective. Feedback/discussion. Presentation pathologies 5min
-------------	--	---

**Day 3**

TIME	TOPIC	CONTENTS
<b>9.00–</b>	<b>Workshop /Lecture: Biomechanics of Wrist</b>	Lecture on normal wrist stability – (ligaments, bony integrity & muscles). The types of various wrist instabilities, mechanism of injury and treatment. Within groups students will analyse arthrokinematics of wrist movt (flex/ext/RD/UD)
<b>10.00</b>	<b>Lecture/Workshop: Muscle dysfunction around the wrist</b>	Students shown a movt dysfunction at wrist. Within groups work out; structures at fault, possible occupation/activity that could cause, where symptoms could occur, treatment – exercises and ergonomic changes.
<b>10.45</b>	<b>COFFEE</b>	
<b>11.00</b>	<b>Practical: Assessment wrist/hand</b>	Be able to demonstrate appropriate reasoning in the selection of testing procedures to examine & differentiate muscle/joint & neural tissue. Be able to identify shortfalls of various testing procedures (false positives). Be able to: <ul style="list-style-type: none"> <li>▪ Observe postures &amp; dynamic functional activities &amp; be able to interpret potential clinical significance &amp; relate to subjective findings.</li> <li>▪ Demonstrate skill in the assessment of active movts and their quality.</li> <li>▪ Observe muscle function &amp; how it influences movt of locally and surrounding regions.</li> <li>▪ Demonstrate skills in the palpation of muscle, ligament, joint line &amp; nerves related to the wrist/hand.</li> <li>▪ Review accessory testing skills and relate to biomechanics.</li> <li>▪ Demonstrate special tests for the e.g. wrist – ligament instability testing.</li> <li>▪ Be able to perform neurodynamics testing for this region and relate validity of test to basic sciences.</li> </ul>
<b>12.30</b>	<b>LUNCH</b>	
<b>1.15</b>	<b>Problem Solving/Practical :</b> Multi-structural Treatment of the wrist /hand	Progressive planning & application of appropriate manual therapy, soft tissue, neural techniques & exercises with justification to peer and course leader. Subsequent practice of various manual therapy techniques. Emphasis on reasoning, handling skills and evidence base.
<b>2.30</b>	<b>Practical/Problem Solving:</b> Assessment of a Role play pathology/ Case study	Student to model a prepared wrist/hand pathology - is assessed by peer – use clinical reasoning planning sheet after subjective. Feedback/discussion.
<b>3.30</b>	<b>Presentation: Pathology</b>	Each student to give 5 minute presentation of their pathology under headings identified from course preparation.
<b>4.00</b>	<b>Conclusion</b>	Discussion: Review course aims and outcomes. Ideas to compliment course & furthering CPD. Preparation for next weekend.

**FOOT AND ANKLE COMPLEX**

**Tutors:**

Claire Small BPhy (Hons) MPhy St. MMAPC

Caroline Alexander Phd. MSc. MMAPC MCSP

## **Learning Outcomes:**

### **On completion of this 3 day course the participant will be able to:**

1. Further develop expertise in the examination of neuromusculoskeletal dysfunction of the foot and ankle complex and differentially diagnose structures.
2. Critically evaluate available evidence on the subject and apply to clinical decision making process.
3. Demonstrate more advanced effective clinical reasoning including:
  - *Improved integration of clinical sciences for example:  
Consideration of clinical presentations of pathologies, biomechanics, age changes, physiology of pain and tissue healing.*
  - *Improved ability to interpret assessment findings with knowledge base into developing a clinical diagnosis/evolving hypothesis.*
  - *Improved observation of movement and interpretation of findings.*
  - *Improved manual palpation and handling skills and interpretation of findings.*
  - *Improved awareness of contra –indications, precautions and indications.*
  - *Improved justification and selection of technique/s and progressive management*

## **Indicative Content**

- Consider current best practice, CPD and clinical reasoning
- Ongoing integration of basic sciences learnt through course– physiology (e.g. tissue healing, muscle, and pain physiology), anatomy, and biomechanics specific to the foot and ankle region.
- Examination skills – subjective / objective / hypothesis.
- Indications / Precautions / Contraindications to assessment and treatment
- Assessment skills – posture recognition, lower limb biomechanics, analysis of movement, joint mobilisations, neurodynamics, foot biomechanics, gait assessment
- Pathology of this region – eg: ligament sprains, fractures -link to assessment findings – pattern recognition.
- Awareness of when further investigation is indicated and which investigations are appropriate
- Awareness of surgical management of this region and how this affects manual therapy / rehabilitation (i.e. surgical fixation of , ligament repair)
- Integrated treatment techniques – based on clinical reasoning and applied in case scenarios.

## **Pre course reading / preparation:**

### **Using any anatomy text:**

#### **Review anatomy of the following articular structures:**

- Talocrural joint
- Subtalar joint
- Midtarsal joint
- Metatarsophalangeal joint

#### **Review the pathways/area supplied of the following nerves:**

- Medial and lateral plantar nerve
- Sural nerve
- Calcaneal branch of the tibial nerve
- Deep and superficial peroneal nerve

#### **Review the insertion/origin/action of the following muscles:**

- Peroneals
- Tibialis anterior and posterior
- Flexor Hallucis longus



- Flexor digitorum longus
- Gastocnemius / Soleus
- Lumbricals

**Articles:**

- Eng & Pierrynowski (1994) The effect of soft foot orthotics on three dimensional lower limb kinematics during walking and running. Physical Therapy 74(9) 836-844.
- McPoil, Cornwall. (2000) The effect of foot orthoses on transverse tibial rotation during walking. J Am Podiatric Medical Assoc 90(1): 2-11
- Pahor & Toppenberg (1996) An investigation of neural tissue involvement in ankle inversion sprains. Manual Therapy 1(4), 192-7.
- Prior T (1994) The biomechanical evaluation of the foot Physiotherapy in Sport. Vol XIX No.4 p6-14

**Other recommended reading / pathology:**

- Batt ME, Kemp S and Kerslake R (2001) Delayed union stress fractures of the anterior tibia: conservative management . British Journal of Sports medicine 35: 74-77.
- Cook JL, Khan KM, Purdam C. Achilles Tendinopathy. Manual Therapy 2002 7(3): 121-130.
- Crawford F, Atkins AD and Edwards J (2000) Interventions for treating plantar heel pain (Cochrane Review) The Cochrane Library, Issue 3, 2000. Oxford: Update Software.
- Kavanagh J. (1999) Is there a positional fault at the inferior Tibiofibular joint in patients with acute or chronic ankle sprains compared to normals? Manual Therapy 4(1), 19-24.

Day 1

TIME	TOPIC	CONTENTS
09.00	Introduction	<b>Interactive Discussion:</b> Learning Outcomes. Participants to identify & list their problems / learning outcomes for the anatomy and revision sessions. Participants to have prepared a list of techniques / questions to direct revision
9.10	Anatomy Dissection	<b>Practical Workshop:</b> List of anatomical structures identified by students to be reviewed. Tutor facilitated.
12.30	LUNCH	
1.30	Patient scenarios	<b>Problem Solving / Practical Workshop:</b> List of short patient problem solving questions provided for students to plan intervention. Tutor led.
2.30	Treatment Technique Revision	<b>Problem Solving / Practical Workshop:</b> List of techniques and scenarios provided for students identify areas that need to be reviewed and developed. Tutor facilitated.
3.15	TEA	
3.30	Patient Assessment	<b>Problem Solving / Practical Workshop:</b> Groups of 4 – assess a patient with clinical mentor. Group discussion of findings, patient treatment & retrospective analysis of session. Use of Clinical reasoning forms to facilitate objective planning and management of conditions covered in previous weekends.
5.00	End	

Day 2

TIME	TOPIC	CONTENTS
09.00	Introduction	<b>Interactive Discussion:</b> Learning Outcomes. Participants to identify & list their problems / learning outcomes for the weekend.
09.15	Anatomy and biomechanics	<b>Interactive workshop:</b> In pairs – Surface anatomy, manual palpation of bony structures, muscles, neural pathways & interfaces, identification of bony



		landmarks. Active palpation to identify biomechanics of the foot and ankle.
<b>10.30</b>	<b>COFFEE</b>	
<b>10.45</b>	<b>Biomechanical Assessment</b>	<p><b>Practical Workshop:</b> Demonstrate appropriate testing procedures to examine &amp; differentiate foot types and structural differences. Be able to identify shortfalls of various testing procedures</p> <p><b>Be able to:</b></p> <ul style="list-style-type: none"> <li>Identify the anatomical structures involved in determining foot type</li> <li>Demonstrate skill in the assessment of foot biomechanics</li> </ul>
<b>12.45</b>	<b>LUNCH</b>	
<b>1.30</b>	<b>Mobilisation techniques for the foot and ankle</b>	<p><b>Practical Workshop:</b> Clinical tests to identify and treat joint dysfunction. Discussion of validity &amp; reliability of tests.</p> <p><b>Be able to:</b> Demonstrate skills in the palpation of soft tissue, muscle &amp; neural tissue.</p>
<b>3.00</b>	<b>COFFEE</b>	
<b>3.15</b>	<b>Compensations</b>	<p><b>Interactive lecture / Practical Workshop:</b> Discussion of how and why compensations for structural foot types occur. Be able to identify foot types and the resulting compensations.</p>
<b>4.15</b>	<b>Pathologies of the foot and ankle and the relationship with foot biomechanics</b>	<p><b>Interactive lecture:</b> Relating foot types to compensation mechanisms and consequences of common foot types in terms of pathological patient presentations</p> <p><b>Be able to:</b></p> <ul style="list-style-type: none"> <li>Observe postures &amp; dynamic functional activities, be able to interpret potential clinical significance &amp; relate to subjective findings.</li> </ul>
<b>5.00</b>	<b>End</b>	

**Day 3**

<b>TIME</b>	<b>TOPIC</b>	<b>CONTENTS</b>
<b>9.00</b>	<b>Common pathologies and common management</b>	<p><b>Interactive lecture:</b> Discussion of pathologies with illustrated information. Pathologies will be discussed under the following headings: differential diagnosis, clinical presentation, investigations &amp; current best practice physiotherapy or other management. Supported by appropriate reference material</p>
<b>10.00</b>	<b>Ligament testing in the foot and ankle complex</b>	<p><b>Interactive workshop:</b> Student led. Students to determine appropriate techniques for assessing ligamentous integrity utilising knowledge of the anatomy of the region. Tutor facilitation and demonstration where required.</p>
<b>10.45</b>	<b>COFFEE</b>	
<b>11.00</b>	<b>Revision of compensations &amp; orthotics (cont.)</b>	<b>(cont.)</b>
<b>12.00</b>	<b>Gait Analysis and Correction</b>	<p><b>Problem Solving/Practical Workshop:</b> Assessment of gait and discussion of the ways of altering gait patterns with various modalities / treatment techniques. Discussion of the way in which various foot types may influence gait patterns</p> <p><b>Be able to:</b></p> <ul style="list-style-type: none"> <li>Observe muscle function &amp; how it influences movement locally and in surrounding areas.</li> <li>Identify possible problems with gait patterns and identify treatment</li> </ul>



		techniques that may affect the pattern
<b>1.15</b>	<b>LUNCH.</b>	
<b>2.00</b>	<b>Putting it all Together</b>	<b><i>Problem Solving/Practical Workshop:</i></b> A subjective assessment of a patient is developed through a question and answer session. Using clinical reasoning forms formulate a hypothesis & plan the examination (must, should, could) and treatment
<b>3.15</b>	<b>COFFEE</b>	
<b>3.30</b>	<b>Problem Solving in the Foot and Ankle Complex</b>	<b><i>Problem Solving / Practical Workshop:</i></b> With more complex case studies demonstrate & justify a variety of treatment interventions e.g. manual therapy, correction of muscle dysfunction, neural, taping & exercises with clinical findings. Justify clinical reasoning, demonstrating knowledge of disease progression and tissue healing. Demonstrate ability to plan & prioritise treatment. Use evidence base as well as own experience
<b>4.30</b>	<b>Conclusion</b>	<b><i>Discussion:</i></b> <ul style="list-style-type: none"> <li>▪ Review course aims and outcomes.</li> <li>▪ Ideas to compliment course &amp; furthering CPD.</li> </ul>
<b>5.00</b>	<b>End</b>	



*Curriculum Vitae*

Linda Exelby.

**Clinical Specialist Physiotherapist.**  
**Pinehill Hospital, Benslow Lane, Hitchin, N Herts**  
**Telephone: 01462 701 293 (am) 01462 427 215 (pm)**

**HPC number:** Ph 33637.

.....  
**Academic and Professional Qualifications:**

1975 – 1978: University of Cape Town. Obtained BSc Physiotherapy (Grade 2)  
1988: Membership of the Manipulation Association of Chartered Physiotherapists (MACP).  
1990: Post Graduate Diploma in Manipulative Therapy – Curtin University West Australia.  
Present Posts:

2006 – Present Senior Lecturer at the University of Hertsfordshire.  
**1997 - Present Clinical Specialist. Pinehill Hospital. Nth Herts.**

**1994 – Present Visiting lecturer MSc. Physiotherapy at UCL, Birmingham, Coventry.**

1991 – Present. National / International Lecturer on Manipulative Therapy Concepts offering 2-day courses with an emphasis on examination, clinical reasoning & integrated management programmes particularly on upper quadrant /thoracic spine. Courses: Clinical Effectiveness. Run an Evidence Based Workshop for Ramsey – (the health company I work for).

**Recent Posts:**

1993 -1997 Clinical Specialist (Supt 3). Lister Hospital. Stevenage. N Herts

1991-1993. Superintendent GP Access Out-patient Physiotherapy Centre

1989 -1990 Senior I Out patient. St Helens Hospital, Merseyside.

1986-1989 Superintendent Physiotherapist (Out patients) Lister Hospital, Stevenage. Acting Superintendent II in charge at Lister Hospital.

Responsible for management and running of a department with a staff of twenty.

**Professional Activities:**

- Member of Mulligan Teachers Association -MCTA. (UK).
- A past lecturer on the MACP self-directed pathway neuromusculoskeletal (NMS) course leading to membership – upper quadrant and thoracic spine.
- Examiner of MACP & UCL M Sc.
- Past Clinical Supervisor to M Sc and MACP NMS courses.
- Past Executive Committee member, Manipulation Association Chartered Physiotherapists (Chairperson of Continuing Professional Development committee & Vice Chairperson).
- In capacity of PDC chairperson have organised a number of National and International Physiotherapy Conferences & Courses.
- Reviewer for Journal of Manual Therapy.

*Membership of Professional Organisations:*

1988 – Present Chartered Physiotherapist

1988 – Present Manipulative Association Chartered Physiotherapy.

**Publications:**

- “The effect of Physiotherapy Treatments During Ultramarathons” – SA Journal of Physiotherapy. November



1985

- Mobilisations with Movement: A Personal View. *Physiotherapy*. (1995) 81 (12), 724-729.
- Peripheral Mobilisations with Movement. *Manual Therapy*. (1996) 1 (3) 118-126.
- "Manual Therapy – An Evolving Species". In *Touch – OCPPP* (2000) Spring Issue No 93 23-29.
- The Locked Facet Joint: intervention using mobilizations with movement. *Manual Therapy* (2001) 6(2) 116-121
- The Mulligan concept: its application in the management of spinal conditions. *Manual Therapy* (2002) 7(2) 64-70
- Postgraduate Thesis - The Specificity of the Multifidus Muscle – unpublished.

*Attendance at Course on Presentation Skills:*

- Presentation skills – by Pentland Training & Consultancy - one day course for MACP lecturers 1995
- Power point course -1997.
- Self learnt the use of powerpoint / digital pictures /videoing into lecturing presentation.
- Continual Professional Development in Academic Development in Learning and Teaching – 15 credit points at Masters level (2007)

*Courses – Management (1986-1989):*

- Management of Change - 2 days - NHS (North Herts).
- Management of People.
- Communication Skills.
- Interviewing Skills.
- Counselling.
- Problem Solving and Time Management. North Herts (NHS).
- Management - Core Skills Management - 1 week (Run for middle managers of North Herts).

---

*Curriculum Vitae*

Caroline Martha Alexander PhD, MSc, MCSP, MMACP, SRP.  
48 Ashlone Road  
Putney  
London SW15 1LR  
020 8788 0511 (h)

e-mail: [CMAlexander@hhnt.nhs.uk](mailto:CMAlexander@hhnt.nhs.uk) (w)  
[c.alexander@ucl.ac.uk](mailto:c.alexander@ucl.ac.uk) (w)  
[c.alexander@breathemail.net](mailto:c.alexander@breathemail.net) (h)

**Qualifications:**

2002 PhD Physiology. University College London, WC1. – Reflex control of shoulder girdle muscles in humans.  
1994 Member of Manipulation Association of Chartered Physiotherapists (MACP).  
1994 MSc in Musculo-skeletal Physiotherapy. University College London, WC1.  
1987 Graduate of the Diploma in Physiotherapy. Guy's Hospital London SE1.

**Present Employment:**

Dec 2002 - Clinical specialist and Research Physiotherapist, Hammersmith Hosps NHS Trust, London.  
Honorary Research Fellow, UCL and IC.

**Previous Employment:**

Jan 2002 – Oct 2002 Clinical specialist Out-patient Physiotherapy Department, a short term contract at St. George's Hospital, London SW17.  
Jan 2000 – Dec 2001 Senior research assistant and PhD student. Department of Physiology, UCL.

## Pure Sports Medicine

Focused Treatment for Focused Individuals

Telephone 08447 700 800 www.puresportsmed.com



Jan 1999 – Dec 1999 Research assistant and PhD student. Department of Physiology, UCL.  
July 1998 – Dec 1998 Part time PhD student. Department of Physiology, UCL.  
June 1998 – Dec 1998 Senior I Physiotherapist, Chelsea & Westminster Hospital. London SW7.  
1997-1998 Private Physiotherapist, Roehampton Physiotherapy Practice. London SW15.  
1995-1997 Lecturer at the Middlesex Hospital School of Physiotherapy. London WC1. Part time clinical physiotherapist (private clinic at the Middlesex Hospital School of Physiotherapy).  
1994-1995 Lecturer at the Middlesex School of Physiotherapy (part time).  
1994-1995 Senior I Physiotherapist, Queen Mary's Hospital, London SW15 (part time).  
1990-1993 Senior II Physiotherapist, St. George's Hospital, London SW17.  
1987-1990 Physiotherapist, St. George's Hospital, London SW17.

### Additional Post Graduate Courses:

1988-2004 over 100 courses covering the application of musculoskeletal treatment and assessment skills. Attended and presented at international and national conferences, meetings and lectures. These include Physiological Society meetings, British Neuroscience Association meetings, Society For Neuroscience meetings, Physiotherapy Research Society conferences, MACP lectures, lectures arranged by the Chartered Physiotherapists in Education Group, UCL physiology and anatomy department seminars and lectures.

### Professional Activities:

2004- Alternate to research representative on the council of CSP.  
2003 - Member of Research and clinical effectiveness committee, CSP.  
2002 - Peer reviewer for Physiotherapy Research Foundation  
2001 - Examiner and lecturer for MSc in neurological Physiotherapy, UCL.  
2000 - Peer reviewer for Physiotherapy Journal  
1999 - 2000 Graduate Representative of the Department of Physiology UCL.  
1997 - Examiner for MACP.  
1996 - Lecturer and examiner for physiotherapists from abroad who seek state registration.  
1996 - Deliver lectures and courses on physiotherapy, physiology and research topics.  
1994 - Examiner and lecturer for MSc in musculo-skeletal Physiotherapy, UCL.  
1991 - 2000 Established local physiotherapy study group.  
1997 - 1999 Vice chair of the South East Branch of the MACP.  
1996 Peer Reviewer for a Research and Development Department within the NHS.  
1996 - 1997 Weekend course organiser of the South East Branch of the MACP.

### Financial scholarships and awards:

2004 Project Grant. Stroke Association £56,798.46. [The use of dynamic lycra orthoses to maximise hand function in people recovering from a stroke](#). Co-applicant.  
2004 Small projects grant HHNHS Trust research award £10,000. An investigation of the motor control of shoulder muscles in those with shoulder instability.  
2004 Travel award £500 MACP National/International conference bursary  
2004 Elsevier and MACP presentation award £500  
2004 Travel award £200 CSP branch  
2003 Travel award £500 CSP branch  
2003 Travel award £550 Brain  
2002 Travel award £500 from Brain  
2002 Affiliate grant £400 from Physiological Society  
2000 Travel awards £700 from Arthritis Research Campaign and Brain  
1999 Travel award £300 from the Arthritis Research Campaign.  
1998 - 2001 Salary and equipment grant from Wellcome Trust as a named research assistant.  
1998 - 2001 PhD fees + £500 from the Arthritis Research Campaign.  
1993 £6,000 from the Arthritis and Rheumatism Council in support of MSc.  
1993 Additional £2,000 in total from the following; King's Fund, CSP, Ian Karten Charitable Trust.

### Publications:



**Alexander CM (2005) Reflex control of shoulder girdle movement. Synapse**

**Alexander CM, Miley, R, Stynes, S, Harrison, PJ. (2005) H reflexes of the serratus anterior muscle. J Physiol Proceedings In press.**

**Alexander (2005) International conference bursary report. MACP online newsletter**

Alexander CM, Miley R, Harrison, PJ (2005) Functional modulation of shoulder girdle stability. Exp Brain Res. 161(4):417-22.

Alexander CM, Chase H, Reynolds C, Harrison PJ. (2004) The effect of mental effort on the amplitude of shoulder girdle reflexes? Proceedings of the 34nd Annual meeting of the Soc. for neuroscience. San Diego, Ca 417.12

Morrissey, N; Guyon, P; Alexander, C.M. (2004) [An audit of an evidence-based assessment tool for the blue badge disabled parking scheme](#). Int Journal of Therapy and Rehab. 11: 324 - 328

Alexander CM, Harrison PJ. (2003) Do tasks requiring manual dexterity increase reflex gain of shoulder girdle muscles? Proceedings of the 33nd Annual meeting of the Soc. for neuroscience. New Orleans La. 186.7

Alexander CM, Harrison PJ. (2003) Reflex connections from forearm and hand afferents to shoulder girdle muscles in humans. Exp Brain Res. 148: 277-282

Alexander CM, Stynes S, Thomas A, Lewis J & Harrison PJ. (2003) Does tape facilitate or inhibit the lower fibres of trapezius? Man Ther. 8 (1): 37-41.

Alexander CM, Harrison PJ. (2002) Bilateral reflex control of the trapezius muscle in humans. Exp Brain Res 142: 418-424

Alexander CM, Harrison PJ. (2002) Reflex connections from forearm and hand afferents to shoulder girdle muscles in subjects with shoulder dysfunctions. Proceedings of the 32nd Annual meeting of the Soc. for neuroscience. Orlando Ca. 667.11

**Alexander, C.M. (2002) Reflex control of shoulder girdle muscles in humans. PhD Thesis, UCL**

Alexander CM, Harrison PJ. (2001) Reflexes from arm afferents contribute to shoulder stability. Proceedings of the 31st Annual meeting of the Soc. for neuroscience. San Diego Ca. 936.7

Alexander CM, Thomas A. Stynes S, Lewis JS & Harrison PJ. (2001) Does tape facilitate trapezius reflexes? 1st joint conference of the MACP and Kinetic Control. Edinburgh, UK.

Harrison PJ & Alexander CM (2001) Group I muscle afferent reflexes from the arm and hand to the trapezius muscle in humans. Proceedings of the 34<sup>th</sup> IUPS meeting, Vol XX, Christchurch, NZ.

Alexander CM, Harrison PJ. (2000) Reflex connections from forearm muscles to trapezius. Proceedings of the 7th Scientific Conference of IFOMT. Ed K. Singer. Pub. UWA, Perth, Australia. p15-17.

Harrison P.J, Alexander C.M., Beith I.D., Myriknas S.E., Zheng R.(2000) Crossed reflexes in the human shoulder girdle and trunk muscles – is there a monosynaptic component? J-Physiol-Lond 523 69P

Alexander C.M., Zheng R., & Harrison P.J. (1999) Ipsilateral and crossed stretch reflexes of the trapezius muscle in humans. Proceedings of the 29<sup>th</sup> Annual meeting of the Soc. for neuroscience. Miami, Fl. 53.3



Alexander C.M., & Harrison P.J. (1997) Reflexes evoked in the Trapezius muscle by electrical stimulation of the third and fourth cervical nerves in humans. *J-Physiol-Lond* 505 82P.

---

*Curriculum Vitae*

Dylan Morrissey MSc MMAPC MCSP SRP

Employment:

2001- date Senior Clinical Lecturer in Sports and Exercise Medicine, Queen Mary UL  
2001-date Extended Scope Physiotherapist, Tower Hamlets PCT  
1997- 2001 Specialist / Senior 1 Sports Physiotherapist, Tower Hamlets PCT  
1993-1997 Senior Sports Physiotherapist, Crystal Palace NSC, London  
1991-1993 Junior and Senior two rotations at City and Hackney HA

Education:

2001- date PhD, KCL, London: Development of the Kinetic Medial Rotation Test of the Shoulder  
Post-graduate Research Symposium Oral Communications Prize, July 2004  
1994-1997 MSc Manual and Exercise Therapy, UCL, London  
Research Distinction: 'The Kinetic Medial Rotation Test of the Shoulder: A Biomechanical Analysis'  
1997 MACP membership by MSc examination  
1987-1991 BSc(Hons) Physiotherapy, UEL, London. First Class

Publications:

- Morrissey D (2001) 'Rehabilitation of Sinus Tarsi Syndrome' *SportEx Med*, issue 8 pp16-20
- Morrissey D and Padhiar N (2000)a 'Exercise Induced Leg Pain. Assessment and Diagnosis'. (2000)b 'Rehabilitation of Exercise induced Leg Pain' *SportEx Med* Issue 4 p34-37
- Morrissey D (2000) 'Proprioceptive Shoulder Taping' *Journal of Bodywork and Movement Therapies* 4(3) 189-94
- Morrissey D (2001) 'Proprioceptive and Offloading Taping' in Chaitow L 'Positional Release Techniques' Harcourt Brace
- A range of case reports and review articles have also been published in a selection of journals and magazines including nursing magazines, Peak Performance, and GP targeted magazines.
- Hooper DM, Morrissey MC, Drechsler WI, Morrissey D, King JB. Open and closed kinetic chain exercises in the early period after ACL reconstruction: Improvements in level walking, stair ascent and descent. *American Journal of Sports Medicine* 29: 167-174, 2001
- Morrissey MC, Drechsler WI, Morrissey D, Knight PR, Armstrong PW, McAuliffe TB. Immediate effects of open versus closed kinetic chain training on knee pain in the early period after anterior cruciate ligament reconstruction. *Physical Therapy* 82: 35-43, 2002
- Perry MC, Morrissey MC, King JB, Morrissey D, Earnshaw P: Effects of distal fixated versus non-distal fixated knee extensor resistance training on knee laxity and leg function in patients during the 8 to 14 week post-operative period after anterior cruciate ligament reconstruction (ACLR). *Knee Surgery, Sports Traumatology, Arthroscopy*, in press, 2004
- Perry MC, Morrissey MC, Morrissey D, Knight PR, McAuliffe TB, King JB: Effects of distal fixated versus non-distal fixated knee extensor resistance training on knee laxity and leg function in patients with anterior cruciate ligament (ACL) deficiency. *Physical Therapy*, in review, 2004

Grants received

2003 3 summer studentships from the Wellcome Foundation, Nuffield Trust and KCL  
2001 Clinical Research Fellowship from Royal London Hospital Special Trustees £120,000

## Pure Sports Medicine

Focused Treatment for Focused Individuals

Telephone 08447 700 800 www.puresportsmed.com



1999 RAC grant from Royal London Hospital Special Trustees for ACLR project 2 £10,000

1997 RAC grant from Royal London Hospital Special Trustees for ACLR project 1 £11,000

1994 CSP grant towards MSc study £500

### Grants applied for

ARC grant for a longitudinal cohort study measuring the kinematics of adhesive capsulitis, as a means of assessing the natural history and establishing whether there are particular movement abnormalities at which intervention should be directed.

### MSc and BSc projects in progress

- Shoulder laxity and range of motion in elite cricketers. Karunaratne D
- Inter-tester reliability of the Kinetic Medial Rotation Test of the Shoulder. McMenemy J
- Electromyography in normal subjects and patello-femoral pain sufferers with and without McConnell taping. Persuad J
- The diagnostic accuracy of clinical tests of knee injury. Moenks S
- Eccentric retraining in patella tendinopathy. Patel S
- Seven studies investigating the effects of image guided soft tissue injections
- The effect of SIJ bracing on EMG activity of the gluteal muscles in acute low back pain. Jubb C, Hudson D
- The effect of sprint training on dural tension signs. Finn N
- Kinetics of adhesive capsulitis Steel K

---

### Curriculum Vitae

#### Claire Small

*M. Phty St. B Phty (Hons) SRP MCSP MMACP*

#### Clinical Training and Experience

Bachelor of Physiotherapy with First Class Honours – University of Queensland, Australia 1990

Master of Physiotherapy Studies - University of Queensland, Australia 1994 Awarded Australian Postgraduate Award

Associate – The Physiotherapy Centre, Fulham, London. 1995-2003

Director of Physiotherapy – Pure Sports Medicine, London 2003-

#### Recent Positions

Invited lecturer – MSc in Neuromusculoskeletal Physiotherapy, Coventry University 1996-1998

Invited lecturer – MSc in Sports and Rehabilitation Sciences, Queen Mary's University, London. 2003 /04

Curriculum co-ordinator and principal lecturer, Manipulation Association of Chartered Physiotherapists (MACP) Post graduate Programme 1999-2005

Examiner - MSc in Neuromusculoskeletal Physiotherapy, University College London 2003 / 04

Examiner – MACP Self Directed Learning Pathway 2003- 2005

Committee member MACP Professional Development Committee 1998-2002

Executive Committee Member MACP 2002-2004 – Communications Officer

Organising Committee – 1<sup>st</sup> International Conference on Movement Dysfunction, Edinburgh, 2001

## Pure Sports Medicine

Focused Treatment for Focused Individuals

Telephone 08447 700 800 www.puresportsmed.com



Membership of Professional Organisations  
1995 – Present Chartered Society of Physiotherapy

1995 – Present Manipulative Association of Chartered Physiotherapists.

2003 – Present British Association of Sports and Exercise Medicine

### Publications

1992 - Stimulation frequency and force potentiation in the human adductor pollicis muscle.  
*European Journal of Applied Physiology* **65**: 229-232.

---

### Curriculum Vitae

#### John Anthony HAMMOND

Address: 4 Valens House  
Upper Tulse Hill  
London SW2 2RX

Telephone: 020 8674 4619  
Email: jhammond@hscs.sghms.ac.uk  
Date of Birth: 29.02.1968  
Nationality: Australian

### PROFESSIONAL MEMBERSHIP

**MCSP (Chartered Society of Physiotherapy)**

**HPC (Health Professions Council)**

**MMACP (Manipulative Association of Chartered Physiotherapists)**

**MPPA (Physiotherapy Pain Association)**

### EDUCATION

#### Tertiary Qualifications

2002	Kingston University	Post Graduate Certificate in Teaching and Learning in Higher Education
1999	University College London, London UK	MSc Physiotherapy
1987-1990	Lincoln School of Health Sciences La Trobe University, Australia	Bachelor of Applied Science (Physiotherapy)
1986	University of Melbourne Australia	Bachelor of Science (Year One)

#### Secondary Qualifications

1980-1985	Shepparton High School	Higher School Certificate
-----------	------------------------	---------------------------

### PROFESSIONAL ACHIEVEMENTS

Attended (and successfully completed) short courses / conferences in:

Allied Health Professions Conference	March 2005	(1 day)
European Congress on Physiotherapy Education	Nov 2004	(2 days)
CSP Congress	Oct 2004	(3 days)
MACP AGM	Oct 2004	(1 day)
Qualitative Research conference	Sept 2004	(2 days)

**Pure Sports Medicine**

Focused Treatment for Focused Individuals

Telephone 08447 700 800 www.puresportsmed.com



CSP Congress	Oct 2003	(3 days)
MACP AGM	Oct 2003	(1 day)
Managing Tendinopathies ( <i>Tutor - Jill Cook</i> )	May 2003	(2 days)
PPA AGM and conference – Health anxiety and pain	March 2003	(1 day)
Shoulder complex: dissection and biomechanics	Nov 2002	(1 day)
ESP Study Day	Sept 2002	(1 day)
Current trends in knee rehabilitation	May 2002	(1 day)
MACP AGM	Oct 2001	(1 day)
Kinetic Control Conference	Sept 2001	(3 days)
PPA AGM (Placebo / Nocebo)	March 2001	(1 day)
International Forum of Manual Therapists Conference	Nov 2000	(5 days)
MACP AGM – Diagnostic Testing Procedures	Oct 2000	(1 day)
Wrist and Hand – Anatomy and Dissection (MACP)	Sept 2000	(1 day)
Visceral Mobilisation ( <i>tutor – Stuart Roberston</i> )	July 2000	(2 days)
PPA AGM (Management of RSI)	March 2000	(1 day)
Lumbar Pain and Muscle Physiological mechanisms	May 1999	(1 day)
Clinical Biology of Aches and Pains -NOI programme ( <i>tutor -Louis Gifford</i> )	April 1998	(2 days)
Foot Biomechanics ( <i>tutor-Trevor Prior</i> )	Jan 1998	(2 days)
Clinical Management for Senior 1 Physiotherapists	Oct 1997	(4 days)
Whiplash Study Day - Physiotherapy Pain Association	Oct 1997	(1 day)
Current Concepts in Rheumatology	May 1997	(2 days)
Back Pain Management for Senior 1 Therapists ( <i>a BACPIM organised course</i> )	May and Sept 1997	(2 days each)
NOI Introductory Course	Oct 1996	(2 days)
Acupuncture- Musculoskeletal Therapy	Jan 1996	(4 days)
Nags and Snags- Peripheral and Spinal ( <i>tutor-Brian Mulligan</i> )	May 1994	(2 days)
Shoulder Impingement Syndrome – Assessment and Treatment	May 1994	(1 day)

PREVIOUS EMPLOYMENT		
Jan 2001 -Current	St Georges Healthcare NHS Trust Blackshaw Rd. Tooting SW17 0QT	Physiotherapy Lecturer Practitioner
May 1996 -Dec 2000	St. Georges NHS Trust Blackshaw Rd. Tooting SW17 0QT	Senior 1 Outpatients



Sept 1995 HealthCall Euromed  
-Feb1996 6 Heddon St. London W1R 7LH

Senior 1 Outpatients locum  
position

### WORK RELATED ACHIEVEMENTS

#### Extra-curricular activities

- Member of the MACP Professional Development committee
- Taught on the MACP self directed pathway on pain physiology
- Lead in work on developing MACP foundation course – Effective management of lumbar spine dysfunction
- Developed and lead a Study Day for MACP members to help with teaching and learning methods
- Developed clinical educator role development for staff at St Georges Hospital NHS Trust to promote peer learning
- Development of Clinical Issues in Pain course
- Supervision of post-graduate students from UCL post graduate MSc course and external examiner for this course.

#### Current Work Achievements

- Module leader for Management of neuromusculoskeletal dysfunction module and common foundations module.
- Lead in research in Peer assisted learning in the school of Physiotherapy
- Mentor for staff member undertaking PGCert in Teaching and Learning.
- 

### RESEARCH EXPERIENCE

**MSc research project 1999**– see publication below

Involved in RCT at SGH NHS Trust for LBP management 1997-1999

Involved in study into Depression in patients with pain 2001

Peer Assisted Learning

Evaluation of student satisfaction – ongoing

Qualitative research into learning experiences in PAL sessions

### PUBLICATIONS / PRESENTATIONS

**Hammond J, Jones L, Horgan T, Bithell C (2004)** Poster: Evaluation Of Peer Learning In The Clinical And University Environments In Physiotherapy at: European Congress on Physiotherapy Education, Portugal

**Hammond J, Jones L, Bithell C (2004)** Presentation: A Novel Development Of Peer Assisted Learning In An Undergraduate Physiotherapy Programme at: European Congress on Physiotherapy Education, Portugal

**Jones L & Hammond J (2004)** Poster: Use of Discussion Boards in the School of Physiotherapy at: Faculty of Health and Social Care Sciences Conference April 2004

**Jones L & Hammond J (2004)** Poster: Pain Quiz: A review of a current and a past Cohort at: Faculty of Health and Social Care Sciences Conference April 2004

**Hammond JA (2000)** Vibration sense using a tuning fork in keyboard workers: changes associated with cumulative load, stress and preventative exercise. In Singer KP [ed] Proceedings of the 7th Scientific Conference of the IFOMT in conjunction with the MPAA. The University of Western Australia, Perth, Australia, November 6-10 2000

Awaiting publication:

**Butt A, Axford JA, Bolton J & Hammond J (2004)** Osteoarthritis and depression: Can the Hospital Anxiety and Depression Scale be used as a screening tool?

### AWARDS

**MACP Research Presentation Award** – granted award for presentation of the above paper to the IFOMT conference in November 2000

## Pure Sports Medicine

Focused Treatment for Focused Individuals

Telephone 08447 700 800 www.puresportsmed.com



### Samantha Victoria Leak MA MCSP.MMACP.

---

#### PERSONAL DETAILS

**Address** Flat 1, 8 Eaton Crescent, Clifton, Bristol BS82EJ

**Home telephone** 0117 923 7987

**Email** [samphysio@btinternet.com](mailto:samphysio@btinternet.com)

**Work Telephone** 0117 928 2201

**Work Email** Samantha.Leak@ubht.nhs.uk

---

#### PROFESSIONAL MEMBERSHIP

Chartered Society of Physiotherapy Membership number 51859

Health Professions Council (HPC) Membership number PH 44874

Member of the Manipulation Association of Chartered Physiotherapists (MACP)

#### EDUCATION

Sept 2003 – Sep 2006 University of the West of England

Sept 1994 - Aug 1995 Coventry University, Priory Street, Coventry

Sept 1989 - July 1992 Royal Orthopaedic Hospital, School of Physiotherapy, Birmingham

1974 - 1989 Westholme School, Meins Road, Blackburn, Lancashire

#### QUALIFICATIONS

September 2006 MA Management

September 1995 Post Graduate Diploma in Manual Therapy

September 1995 Membership of the Manipulative Association of Chartered Physiotherapists

September 1992 Graduate Diploma in Physiotherapy

---

#### EMPLOYMENT

September 2003 – to present

May 2003 – August 2003

Dec 1999 – May 2003

June 1998 – Dec 1999

June 1997 - June 1998

April 1996 - June 1997

Oct 1995 - April 1996

Sept 1995 - Oct 1995

Aug 1995 - Sept 1995

Sep 1994 - July 1995

March 1994 - Sept 1994

Sept 1992 - March 1994

**Lead Musculoskeletal Physiotherapist** (Band 8a) Bristol Royal Infirmary

**Private Outpatients** Chelsea and Westminster Hospital London

**Head of Musculoskeletal Outpatients and Trauma and Orthopaedics**

**Superintendent I** Hammersmith Hospitals NHS Trust London

**Superintendent III** Musculoskeletal Outpatients Hammersmith Hospital

**Physiotherapy Research Clinician** Hammersmith Hospital

**Senior I** Musculoskeletal Outpatients Hammersmith Hospital

**Senior II** Musculoskeletal Outpatients Hammersmith Hospital

**Locum Senior I** Musculoskeletal Outpatients Blackburn Royal

**Locum Senior II** Musculoskeletal Outpatients Selly Oak Birmingham

**Senior II** (Part time) Musculoskeletal Outpatients Sandwell Hospital

**Senior II Rotational** Sandwell Hospital

**Junior Rotational** Sandwell Hospital

#### ADDITIONAL EMPLOYMENT

September 2003 – to present

Oct 1995 – May 2003

Private Musculoskeletal Outpatients Bristol Royal Infirmary

Private Musculoskeletal Outpatients Hammersmith Hospital

---

#### COURSES ATTENDED

Numerous Physiotherapy clinical courses

---

#### LECTURING

2004 to present

1998 to present

1997 to present

Undergraduate Physiotherapy at University of West of England

London MACP Course

MSc Physiotherapy Students University College London

---

#### MENTORSHIP



1998 - present **MACP Clinical Tutor** Mentoring MACP students on clinical placement  
1997 - present **MACP Marker / Examiner**  
1997 - present **University College London MSc Clinical Mentor** for clinical placements

---

**PUBLICATIONS**

**Leak S.** (1998) Intertester and intratester reliability of vibratory sensibility testing using the tuning fork. *Manual Therapy* 3 (2) 90-94

**COMMITTEES**

2003 - 2004 **MACP Course Approval Board**

1998 - 2002 **MACP Executive Committee**  
1998 - 2002 **MACP Professional Development Committee** (Chair)  
1998 - 1999 **MACP South East Branch Committee**

---

**CURRICULUM VITAE**

**ANDREA FRANCIS RICHARDSON**

MSc BSc (Hons) MCSP MMACP

11 Bristol Mews, Little Venice, London, W9 2JF  
(H): 020 7286 5345, (W): 020 7830 2090  
[andalrich@aol.com](mailto:andalrich@aol.com); [andrea.francis@royalfree.nhs.uk](mailto:andrea.francis@royalfree.nhs.uk)

---

**PROFESSIONAL QUALIFICATIONS**

1987	BSc (Hons) Physiotherapy 1 <sup>st</sup> class
1987	Member of the Chartered Society of Physiotherapy 46665
1987	Member of HPC PH37429
1993	Member of the Society of Orthopaedic Medicine
1997	Member of the Manipulation Association of Chartered Physiotherapists
1997	Certificate in Management Studies: Distinction (University of Kent)
1997	Certificate in Health Management Studies (The Institute of Health Service Management)
2002	MSc Physiotherapy

**EMPLOYMENT HISTORY**

<b>Superintendent II ESP / CPD Facilitator</b>	<b>02/04 -date</b>
The Royal Free Hampstead Hospitals NHS Trust	
<b>Superintendent II Head of Musculoskeletal Physiotherapy/ ESP Shoulder</b>	<b>03/00 – 02/04</b>
The Royal Free Hampstead Hospitals NHS Trust	
<b>ESP Spinal Clinics</b>	<b>11/98 – 03/00</b>
The Royal Free Hampstead Hospitals NHS Trust	
Superintendent Physiotherapist / Research Fellow	11/97 – 11/98
ICSM / Hammersmith Hospitals NHS Trust	
Senior I Physiotherapist, Outpatients	07/93 – 11/97
Hammersmith Hospitals NHS Trust	
Acting Superintendent III Physiotherapist, Outpatients	03/95 - 09/95
Hammersmith Hospitals NHS Trust	
Senior Physiotherapist, Outpatients	05/89 - 07/93
The London Independent Hospital	
Physiotherapist	09/87 - 05/89
City and Hackney Health Authority	



## **RESEARCH**

Publications and Presentations:

- Anterior Cruciate Ligament Rupture: Reconstruction Surgery and Rehabilitation. A Nationwide Survey of Current Practice. *"The Knee"* 8:13-18, 2001.
- "The Reliability And Validity Of The KT2000 Knee Joint Arthrometer: Does Muscle Activity Affect Results?" Abstract and poster presentation, ESSKA conference, September 2000
- "Is An Exercise Programme Effective For Patients With Osteoporosis?" Oral presentation at International Osteoporosis Conference, Bath, December 2001.
- Single case study into the effectiveness of manual therapy in the treatment of low back pain. Abstract and poster presentation at the 1997 Annual Congress of the CSP.

## **PROFESSIONAL ACTIVITIES**

- Member of the MACP, SOM, ESP and AACP clinical interest groups.
- Guest lecturer on MSc courses UCL, University of Hertfordshire
- Guest lecturer on MACP self-directed learning pathway
- MACP clinical mentor
- Member of the CSP CPD Facilitators network.
- Past member of the MACP PDC committee (1997)
- Past MACP Executive Committee member (Honorary Treasurer 1998 – 2003)

## **ADDITIONAL POST-GRADUATE COURSES**

Regular attendance of courses and national and international conferences related to neuromusculoskeletal dysfunction.

---

### *Curriculum Vitae*

SUMMARY CURRICULUM VITAE: RACHEL LEARY MSc MCSP MMACP

*RL PHYSIOTHERAPY CLINICS 1 SNOW HILL COURT SNOW HILL  
LONDON EC1A 2EJ*

**Tel: 020 7248 3818      Email : [rachel.leary@rl-physio.co.uk](mailto:rachel.leary@rl-physio.co.uk)**

### Academic and Professional Qualifications

1989 Member of the Chartered Society of Physiotherapy Bath School of Physiotherapy  
1993 Membership of the Manipulation Association of Chartered Physiotherapists  
1993 MSc. Physiotherapy University College London

### Present Posts

2003 – present Managing Director and clinical specialist of private clinic specialising in the management, treatment and prevention of musculoskeletal disorders.  
2002 – present International guest lecturer on Minor Nerve Injuries, to include repetitive strain injury and whiplash  
1998 – present Expert witness in cases that predominantly involve whiplash in road traffic accidents.  
1995 – present Visiting post graduate lecturer MSc. Physiotherapy and Sports courses at UCL, UEL and Hertfordshire.

## Pure Sports Medicine

Focused Treatment for Focused Individuals

Telephone 08447 700 800 www.puresportsmed.com



### Recent Posts

- 1998 – 2001      Research Assistant at University College London.  
1997 – 2003      Clinical Specialist in musculoskeletal disorders, Snow Hill Medical Centre, private clinic, London.  
1994-1997        Specialist Clinician in NHS, Hinchingsbrooke Hospital in Neuro-musculoskeletal injuries.  
1991-1992        Senior Clinician in Neuro-musculoskeletal, Chelsea and Westminster Hospital, London.

### Professional Activities

- Guest lecturer on Cervical spine and Pain physiology weekend courses for MACP self directed pathway neuromusculoskeletal course.
- Guest Lecturer on various MSc programmes.
- Past member of the Executive Committee of the MACP.
- Assisted on MACP self directed pathway neuromusculoskeletal course.
- Research into minor nerve injuries, such repetitive strain injuries (RSI), at UCL provides in depth knowledge of pain physiology.

### Membership of Professional Organisations

- 1989    present    Chartered Physiotherapist and Health Professions Council.  
1993 – present    Manipulation Association of Chartered Physiotherapy.

### Publications ( date order)

Greening J, Smart S, Leary R, O'Higgins P, Hall-Craggs M, Lynn B. Reduced movement of the median nerve at the carpal tunnel during wrist flexion in patients with non specific forearm pain: a magnetic resonance imaging study. (1999) *The Lancet* Vol 354: 217-218.

Greening J, Lynn B, Leary R, Warren L, O'Higgins P, and Hall-Craggs M. The use of ultrasound imaging to demonstrate reduced movement of the median nerve during wrist flexion in patients with non-specific arm pain. *J Hand Surgery* (2001).

Bruce Lynn, Jane Greening, Rachel Leary, Lorraine Warren, Paul Higgins, Sean Smart and Margaret Hall-Craggs. The use of high-frequency ultrasound imaging to measure nerve movements that occur during limb movements in healthy volunteers and in patients with non-specific arm pain. *The Journal of Physiotherapy*, 523P, pp. 136 (2001).

Dilley A, Greening J, Lynn B, Leary R, Morris V. The use of cross-correlation analysis between high-frequency ultrasound images to measure longitudinal median nerve movement. *Ultrasound in Med. & Biol.*, Vol. 27, No. 9, pp. 1211-1218, (2001).

Greening J, Lynn B, Leary R. Sensory and autonomic function in the hands of patients with non-specific arm pain (NSAP) and asymptomatic office workers. In *Pain* 104 (2003) 275-281.

### Continuing Professional Development

I have regularly kept up to date to extend my professional practice to include assisting others through post graduate lecturing at local, national and international level since 1995. I have attended relevant courses ( portfolio available on request) and regularly read journals and facilitate CPD for staff within my clinic.

## **CURRICULUM VITAE**

### **ALISON LINGWOOD**

BSc (Hons) MCSP MMACP

Tithe Barn, Stowting Hill, Ashford, Kent TN25 6BE

(H) 01303-863258 (W) 01303-269371

### **PROFESSIONAL QUALIFICATION**

1985 BSc (Hons) Physiotherapy

1985 Member of the Chartered Society of Physiotherapy 44053

1985 Member of HPC PH33813

1991 Grad Dip Manip Therapy, Curtin University, Perth, Western Australia

Distinction and prize for Best Clinical Student

1992 Member of the Manipulation Association of Chartered Physiotherapists

### **EMPLOYMENT HISTORY**

1992- current day

Self employed owner of Physiologic Private Clinic Hythe Kent.

Specialist in complex musculoskeletal problems. NHS contract for 8 years with rheumatology consultant.

### **PROFESSIONAL ACTIVITIES**

\_Contributor to Manual Therapy- Abstract section for 3 years at its initiation.

Guest lecturer on MACP self-directed learning pathway.

Involvement in MACP post-graduate courses since 1993

### **ADDITIONAL POST-GRADUATE COURSES**

Regular attendance on musculoskeletal courses

Regular attendance on functional biochemistry courses including Immunology, Stress, Adrenal dysfunction, Low energy and Hormonal problems. Also nutritional support courses. This information is extremely useful when treating the autoimmune inflammatory disorders and the other complex pain patients that I regularly see .