

**Manual Therapy in Early-Stage Knee Rehabilitation:**

Evidence-Informed Multi-Modal Intervention for Knee Joint Mobility, Proprioception, Neuromuscular Control, and Functional Joint Stability

**Name and qualifications of tutor:**

Dr Nicholas Clark, PhD (Rehab. Sci.), MSc (Man. Ther.), MCSP, MMACP, CSCS.

**Course length:**

One full day.

**Course Description:**

Following acute knee injury and surgery, the early-stage of knee rehabilitation is the most important stage of a rehabilitation process intended to restore knee functional joint stability. The early-stage of knee rehabilitation lays the foundation for safe and effective implementation of middle- and late-stage rehabilitation techniques. Inappropriate or ‘rushed’ early-stage knee rehabilitation can increase the risk of a failed overall knee rehabilitation process and poor clinical and patient-relevant outcomes. Manual therapy and taping can be effective interventions to rapidly reduce pain and improve an injured patient’s knee joint mobility, proprioception, and neuromuscular control. Rapid improvement of knee joint mobility, proprioception and neuromuscular control can then facilitate exercise therapy for more long-term adaptations that contribute to enhanced knee functional joint stability. The aim of this theory and practical course is to present you with a rational, evidence-informed, multi-modal approach to integrating manual therapy, taping and exercise therapy. Emphasis is placed on clinical reasoning, practical manual therapy and taping techniques, and exercise therapy that is targeted at enhancing knee joint mobility, proprioception and neuromuscular control in early-stage knee rehabilitation for acute injury and surgery.

**Style of teaching:** Combination of interactive lectures, large group discussion, small group discussion, live demonstrations, small group practice, real case studies.

**Course Aim:**

The aim of this theory and practical course is to present a rational, evidence-informed, multi-modal approach to integrating manual therapy, taping, and exercise therapy that is targeted at enhancing knee joint mobility, proprioception, and neuromuscular control in early-stage knee rehabilitation for acute injury and surgery.

**Course Objectives:**

At the end of this course, participants will be able to:

1. Organise and integrate critical thinking and clinical reasoning processes using a variety of physiological, biomechanical, and clinical evidence for a range of acute knee injury and surgery clinical presentations.
2. Integrate and apply a variety of manual therapy (neuromechanical) techniques for a range of acute knee injury and surgery clinical presentations.
3. Integrate and apply a selection of sensorimotor taping techniques for a range of acute knee injury and surgery clinical presentations.
4. Integrate and apply a variety of joint mobility and sensorimotor exercises for a range of acute knee injury and surgery clinical presentations.
5. Organise and apply manual therapy, taping, and exercise therapy techniques in evidence-informed multi-modal interventions for a range of acute knee injury and surgery clinical presentations.

**Course Outline:**

1. Current concepts in knee stability and instability: implications for manual therapy assessment and treatment.
2. Sensorimotor control of knee functional joint stability: proprioception, CNS processing and neuromuscular control.
3. Effects of injury and surgery on knee sensorimotor control: understanding and identifying manual therapy treatment indications and priorities.
4. Stages of knee rehabilitation and priorities of treatment: role of manual therapy in prehabilitation and early-stage rehabilitation.
5. Role of manual therapy in knee nociception and pain modulation: hands-on intervention for bottom-up and top-down effects.
6. Evidence-informed clinical reasoning in knee manual therapy: manual therapy progression, regression and termination criteria.
7. Clinical application of knee manual therapy: neuromechanical techniques and progressions for regaining joint mobility and enhancing sensorimotor control.
8. Taping and bracing in knee sensorimotor rehabilitation: neurophysiological mechanisms and clinical techniques and progressions.
9. Rational integration of manual therapy, taping/bracing and exercise therapy in knee sensorimotor rehabilitation: single- and multi-session intervention models.
10. Safe and effective implementation of knee exercise therapy: critical within- and between-session clinical considerations following manual therapy treatments.
11. Small group work: clinical scenarios and case studies

**Biography:**

As a Knee Consultant Physiotherapist with more than 21 years of clinical experience, Nick has practiced in London teaching hospitals, at Saracens Rugby Union Football Club, with the British Army Infantry and Parachute Regiments, and in private practice. Prior to studying Physiotherapy, Nick qualified as a YMCA Gym Instructor and then secondary school Physical Education teacher. Later, in 2000, Nick also qualified as one of the first NSCA Certified Strength and Conditioning Specialists in the United Kingdom. Nick’s past teaching roles have included being a Visiting Lecturer and External Examiner to the MSc Manual Therapy and MSc Sports Physiotherapy degrees at University College London and King’s College London, a Clinical Tutor and Examiner for the Musculoskeletal Association of Chartered Physiotherapists, being contracted to teach Exercise Rehabilitation Instructors and Physiotherapists for the Ministry of Defence, and teaching on sports medicine Master’s and Doctoral degrees in the United States. Currently, Nick’s main role involves being a Lecturer and Researcher at a university in England. Other current roles include being a Knee Consultant Physiotherapist in private practice (The Knee Rehab Lab), a Lower Limb Injury Prevention and Rehabilitation Consultant for the consultancy Integrated Physiotherapy and Conditioning, and serving as a Manuscript Reviewer for scientific and clinical journals including The Knee, Physical Therapy in Sport, and Musculoskeletal Science and Practice. Nick has taught knee rehabilitation continuing professional development courses across the United Kingdom, wider European Union, and Asia for more than 19 years.

**Information for venues:**

The cost for the participant will be:

£120 for MACP members

£150 for non-members

This is the cost for 2023 and will be reviewed annually.

There is one free space available to whoever organises the course locally.

If a venue fee is incurred the minimum number of people required to run the course may increase. The minimum number of delegates required to qualify for an additional free place will also increase.

The course requires a minimum of 20 bookings to enable the MACP to cover expenses and will be cancelled 6 weeks prior to the commencement of the course if this number has not been reached.

If the course requires air travel (outside England) for the lecturers the prices quoted / number of bookings required will need to be adjusted to reflect the additional costs.

**What the MACP Provides:**

* Tutors for delivering the courses
* Pays the accommodation for the tutor(s).
* Pays tutor(s) travel.
* Administers the course, taking all bookings and sending all applicants pre- course information.
* £3 per person / day to cover refreshments (tea/coffee/biscuits etc).
* Advertising in: MACP website and social media sites, MACP newsletters.
* One copy of a flyer that you may use to circulate and advertise the course.
* A list of names of those who have booked prior to the course for registration.
* CPD certificates (online).

**You will need to provide:**

* A large room that will seat 26 people for the main body of the lecture.
* Provide us with local information re directions how to get to venue, parking, local accommodation list
* Someone to work on local promotion (including SoMe) to help to ensure that at 6 weeks before the course, the minimum numbers of places are booked onto the course.
* Someone on the on the day to deal with local venue organization (AV, putting up signs, providing refreshments, information about where to get lunch, registering delegates, locking up, this may also include picking up or dropping off tutors from their hotel; taking pictures on the day for SoMe)
* Refreshments as appropriate (to be reimbursed by MACP on production of original receipts – up to £3 per day per person)

|   | **Intended Learning Outcomes (ILO)** | **Delivery Method** | **MSK CCF^** | **IFOMT Dimension of OMT#** |
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|  |  |  |  |
| 1 | Appraise current concepts in knee stability and instability in order to distinguish implications for manual therapy assessment and treatment techniques | Interactive lectures | A1 | D1, D2, D3, D6, D9, D10 |
|   | Small group discussion | B3, B4, B5 |   |
|   | Course readings | C6, C7, C10, C11, C12 |   |
|   |   |   |   |
| 2 | Differentiate concepts in sensorimotor control of knee functional joint stability in order to integrate proprioception, CNS processing, and neuromuscular control in multi-modal interventions | Interactive lectures | B3, B4, B5 | D1, D2, D3, D6, D9, D10 |
|   | Course readings | C6, C7, C10, C11, C12 |   |
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| 3 | Appraise the effects of injury and surgery on knee sensorimotor control in order to distinguish manual therapy treatment indications and priorities | Interactive lectures | B3, B4, B5 | D1, D2, D3, D6, D9, D10 |
|   | Course readings | C6-C12 |   |
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| 4 | Differentiate the stages of knee rehabilitation and priorities of treatment in order to integrate manual therapy in prehabilitation and early-stage rehabilitation | Interactive lectures | B3, B4, B5 | D1, D2, D3, D6, D9, D10 |
|   | Small group discussion | C6-C13 |   |
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| 5 | Distinguish the role of manual therapy in knee nociception and pain modulation in order to plan hands-on interventions for bottom-up and top-down effects | Interactive lectures | B3, B4, B5 | D1-D4, D6, D7, D9, D10 |
|   | Course readings | C6-C12 |   |
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| 6 | Question evidence-informed clinical reasoning in knee manual therapy in order to formulate manual therapy progression, regression, and termination criteria | Interactive lectures | B3, B4, B5 | D1-D6, D9, D10 |
|   | Small group discussion | C6, C7, C10, C11, C12 |   |
|   |   | D14 |   |
|   |   |   |   |
| 7 | Categorise and apply knee manual therapy (neuromechanical) techniques and progressions in order to regain joint mobility and enhance sensorimotor control | Interactive lectures | A1, A2 | D1-D10 |
|   | Live demonstrations | B3, B4, B5 |   |
|   | Small group practice | C6, C7, C10, C11, C12 |   |
|   |   | D14 |   |
|   |   |   |   |
| 8 | Categorise and apply taping and bracing techniques in knee sensorimotor rehabilitation in order to exploit neurophysiological mechanisms and facilitate clinical progress | Interactive lectures | A1, A2 | D1-D10 |
|   | Live demonstrations | B3, B4, B5 |   |
|   | Small group practice | C6, C7, C10, C11, C12 |   |
|   |   | D14 |   |
|   |   |   |   |
| 9 | Appraise and apply the rational integration of manual therapy, taping/bracing, and exercise therapy in knee sensorimotor rehabilitation in order to safely and effectively apply multi-modal interventions within single and across multiple treatment sessions | Interactive lectures | A1, A2 | D1-D10 |
|   | Live demonstrations | B3, B4, B5 |   |
|   | Small group practice | C6-C13 |   |
|   |   | D14 |   |
|   |   |   |   |
| 10 | Examine within- and between-session clinical considerations after manual therapy treatments in order to then safely and effectively implement knee exercise therapy | Interactive lectures | A1, A2  | D1-D6, D9, D10 |
|   | Small group discussion | B3, B4, B5 |   |
|   |   | C6, C7, C10, C11, C12 |   |
|   |   | D14 |   |
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| 11 | Analyse select clinical scenarios and case studies in order to translate new knowledge and skills to real-world patients | Interactive lectures | A1, A2 | D1-D6, D9, D10 |
|   | Real case studies | B3, B4, B5 |   |
|   | Small group discussion | C6-C13 |   |
|   |   | D14 |   |
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| ^ Mapped to First Contact Practitioners and Advanced Practitioners in Primary Care: (Musculoskeletal). A Roadmap to Practice. Accessed September 2021. |
| # Mapped to IFOMPT Educational Standards in Orthopaedic Manipulative Therapy, 2016. |   |   |
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