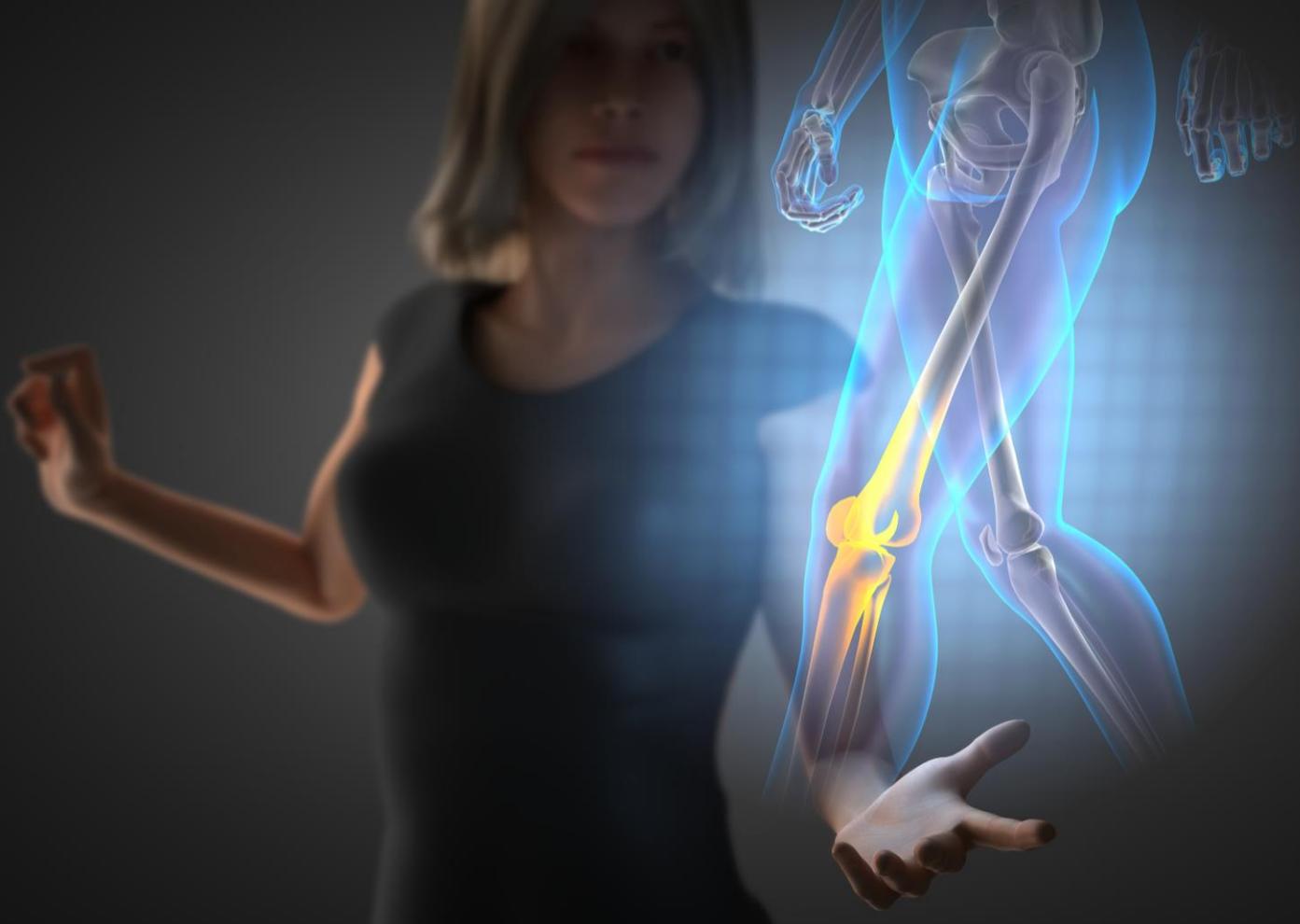


Open and Closed Kinetic Chain Exercise in Early-Stage and Middle-Stage Knee Rehabilitation

New ACL, PCL, MCL, LCL, and Meniscus
Rehabilitation Techniques for the
Sports Knee Specialist





Become a specialist in the most important stages of knee rehabilitation for agility sport athletes

This Sports Knee Specialists Course Includes:

- New Concepts in Open Kinetic Chain and Closed Kinetic Chain Exercise
- Advances in Understanding Knee Functional Joint Stability
- Seven Stages of Sports-Specific Knee Rehabilitation
- Critical Considerations in Knee Functional Rehabilitation
- Neurological Concepts in Open and Closed Kinetic Chain Exercise
- Disinhibitory Modalities and Quadriceps Facilitation
- Evolution of Knee Rehabilitation Techniques
- Biomechanics of Knee Ligaments and Human Grafts
- Myths and Misconceptions in Graft Healing and Remodeling
- Indications for and Timing of Knee Ligament Reconstruction Surgery
- The Hidden Problems with 'Accelerated Rehabilitation'
- Clinical Quantification of Knee Joint Loading
- Squat Exercise Biomechanics and Critical Clinical Modifications
- Strength and Conditioning Guidelines for ACL Injury and Surgery
- Strength and Conditioning Guidelines for PCL Injury and Surgery
- Strength and Conditioning Guidelines for MCL Injury and Surgery
- Strength and Conditioning Guidelines for LCL Injury and Surgery
- Strength and Conditioning Guidelines for Traumatic Meniscus Injury, Meniscus Repair, and Meniscus Transplant Surgery

Be more confident with your knee rehab for agility sport athletes

Course Description

The 'early' and 'middle' stages of knee rehabilitation are the most important stages of the knee rehabilitation process. This is because the early and middle stages of knee rehabilitation lay a solid foundation for the safe and effective implementation of late-stage rehabilitation techniques (e.g. plyometric training). Inappropriate or 'rushed' early- and middle-stage knee rehabilitation can increase the risk of failed late-stage rehabilitation due to re-injury, new injury and premature osteoarthritis (OA). The early and middle stages of knee rehabilitation are often seen by therapists and patients as 'boring' and 'simplistic' stages of knee rehabilitation. While many early- to middle-stage knee rehabilitation exercises can certainly be considered boring, the knowledge and clinical reasoning underlying the selection of the correct rehabilitation exercise for the correct injury at the correct point-in-time is far from simplistic. Different knee injuries and surgeries require the application of different strength and conditioning techniques within different range-of-motion and weight-bearing restrictions. Furthermore, the evidence-base that guides the scientific design and strategic clinical implementation of early- and middle-stage knee rehabilitation exercises has undergone major expansion and evolution in recent years. Modified versions of both open kinetic chain (OKC) and closed kinetic chain (CKC) exercises must now be used for safe, effective and thorough rehabilitation of all types of knee injury.

The purpose of this course is to present you with advanced concepts in OKC and CKC exercise in knee rehabilitation for ACL, PCL, MCL, LCL, and meniscus injury and surgery. Emphasis is placed on presenting you with advanced knowledge and understanding of tissue, joint and exercise biomechanics, neurological mechanisms, clinical outcomes research and advanced clinical reasoning processes that form the foundation for you to become a specialist in knee rehabilitation. As you participate in this course, you'll experience accelerated learning and interactive education techniques proven to help you rapidly acquire the knowledge and skills to confidently and easily make decisions about your athletes' early- to middle-stage rehabilitation.

Past course delegates have included clinicians from the British National Health Service (NHS), private practice, professional rugby union, professional football, elite netball, the British Army and the Royal Navy. Course content is aligned with multiple Sports Physiotherapist core competencies listed by the International Federation of Sports Physiotherapy (IFSP). The course is a British Association of Sports Rehabilitators and Trainers (BASRaT) Approved Continuing Professional Development Course.

Course Aim

To present you with the scientific information and proven clinical techniques necessary for you to always be able to design and apply reasoned and justifiable interventions in early- and middle-stage rehabilitation for ACL, PCL, MCL, LCL and meniscus injury and surgery.

Past course delegates have included clinicians and strength and conditioning coaches from:

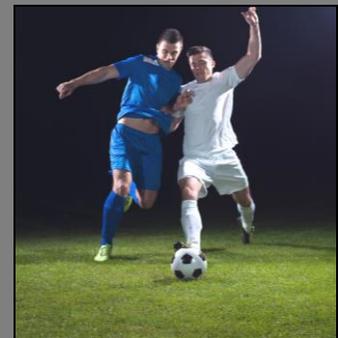
Manchester United Football Club, UK

Arsenal Football Club, UK

Liverpool Football Club, UK

Saracens Rugby Union Football Club, UK

Wasps Rugby Union Football Club, UK



"Course was great, Nick. Wish we had more time... Will have an instant impact on our clinical practice... Highly recommend Nick's knee CPD course... A huge evidence-base and highly clinical-based delivery"

Chris Morgan.
Former Head Physiotherapist,
Liverpool Football Club;
Head Physiotherapist,
Crystal Palace Football Club,
England, UK.



Here's some of what you'll learn about:

New Concepts in Open Kinetic Chain and Closed Kinetic Chain Exercise:

walks you through the 10 differences in defining and classifying open and closed kinetic chain exercise in a way that shows you how to clearly understand the effects of knee rehabilitation exercises on ligaments, grafts, and cartilage so that you can select the best exercise for a specific knee injury at the correct point in time -- when you see how these 10 differences will affect your clinical reasoning in exercise selection, you'll be able to communicate with athletes and colleagues more effectively and justify your treatments in all clinical situations with greater confidence

Discover the critical neuromuscular and biomechanical differences between seven types of squat exercise

Advances in Understanding Knee Functional Joint Stability:

illustrates the nine components of knee functional joint stability in a way that passes you a clear understanding of 'giving way' episodes and builds a solid foundation for how you can accurately diagnose the cause of any knee collapse -- when you grasp how these nine components fit together, you'll know when to start rehabilitation exercise and when to refer your athletes for surgery more than 95% of the time

Stages of Sports-Specific Knee Rehabilitation:

describes the seven stages of knee rehabilitation in a way that hands you the evidence-based model for how to best combine traditional and advanced functional rehabilitation methods so that you can safely and effectively progress all types of knee ligament, meniscus, or cartilage injury -- when you hear about these seven research-proven stages of knee rehabilitation, you'll know how and when to progress all of your knee-injured athletes from acute injury or surgery to return-to-play

Critical Considerations in Knee Functional Rehabilitation:

shines a spotlight on three neuromechanical principles in closed kinetic chain exercise in a way that shows you how incorrect functional rehabilitation techniques can leave the knee vulnerable to re-injury and future new injury so that you can design an appropriate and effective basic and advanced knee functional rehabilitation programme -- as you hear about these three critical principles, you'll discover how to design both basic and advanced knee functional rehabilitation programmes that safely return your athletes to sports-specific training

Neurological Concepts in Open and Closed Kinetic Chain Exercise:

introduces five important concepts in proprioception and neuromuscular control in a way that explains how to integrate open kinetic chain and closed kinetic chain exercise so that you build a strong platform for your athletes to gain optimal sensorimotor control of their knee functional joint stability -- when you hear about these five neurological concepts, you'll get a grasp of how to use different types of kinetic chain exercise to trigger the most important neurological mechanisms necessary for your athletes to develop their optimal knee functional joint stability

Past course delegates have included clinicians and strength and conditioning coaches from:

Royal National Orthopaedic Hospital NHS Trust, England, UK

Chelsea and Westminster Hospital NHS Foundation Trust, England, UK

Royal Infirmary of Edinburgh NHS Lothian, Scotland, UK



"What was most interesting to me was the clinical reasoning regarding the safe application of exercises following ACL/PCL-reconstruction, as well as how to progress the exercises and avoid aggravating the injury/operation site, and ensure the patient is ready to return-to-sport and other physical activities... What I enjoyed the most was the evidence-based theory and clinical reasoning to support rehab progressions and structure... I would recommend the knee course to all clinicians from all spectrums, and particularly those involved in elite sport if they want to justify rehab progressions"

Martin Cunningham.
Elite Development
Physiotherapist, Glasgow
Warriors Rugby Club,
Scotland, UK

The Hidden Problems with 'Accelerated Rehabilitation': uncovers the five hidden problems with 'accelerated rehabilitation' in a way that illustrates why an injured knee joint is not able to safely tolerate certain loading activities in the early and middle stages of rehabilitation and see how there is an increased risk of re-injury, new injury, and osteoarthritis if you return your athlete to sport in six months or less -- as you hear about these five hidden problems, you'll have a solid understanding of the safest way to progress your athletes' knee rehabilitation programmes and be better equipped to confidently answer questions from and manage expectations of athletes, coaches, and managers about when an athlete will be ready to return-to-play

See how to use proper variations of open and closed kinetic chain exercises for the three different types of MCL injury so that you can correctly implement and safely progress quadriceps and hamstrings rehabilitation strength training

Clinical Quantification of Knee Joint Loading: builds on a three-part technique for quantifying the load imposed on your athletes' knees with each rehabilitation exercise in a way that shows you how to avoid the risk of causing new knee pain so that the design of your rehabilitation programmes keep your athletes moving forwards in the best way possible -- as you walk through this three-part model, you'll have a clear view of exactly why many athletes' knees 'breakdown' and discover how to stop it from ever happening again in your rehabilitation programmes

Squat Exercise Biomechanics and Critical Clinical Modifications: focuses in on seven different types of squat exercise in a way that uncovers the important neuromuscular and biomechanical differences between each exercise so that you can design an optimal closed kinetic chain rehabilitation programme that is truly targeted to your athletes' needs -- as you get a grip of the technique differences across these seven exercises, you'll know which types of squat must be avoided for certain types of knee injury and surgery and which types of squat can be used to safely accelerate your athletes' recovery

Strength and Conditioning Guidelines for ACL Injury and Surgery: looks at up-to-date research from more than 15 leading international research groups and dozens of clinical trials in a way that walks you step-by-step through how quadriceps and hamstrings exercises can be safely performed by athletes with ACL-deficient and ACL-reconstruction knees so that you can design an evidence-based clinically effective ACL rehabilitation programme -- when you see the results of this research, you'll know which open and closed kinetic exercises are really proven safe for your athletes to rapidly recover their knee muscle function and also save time by significantly shortening the rehabilitation process

"This course has given me more knowledgeable, evidence-based, and factual progressions to my rehab programmes..."

I would recommend this course to anyone that works in physiotherapy and/or strength and conditioning... Outstanding knee course... Will make everyone better at their job and has inspired me"

Brian O'Leary.
Former Team Physiotherapist,
Ospreys Rugby Club,
Wales, UK.
Head of Medical Services,
London Irish Rugby Club,
England, UK.



"Nick explained concepts in a way that was very easy to think of in terms of my practice and it made a lot of sense... I'd recommend Nick's seminars to any health or performance professional in contact with patients with reconstructed ACLs... Great seminar and course"

Barry Sigrist.
Sports Therapist, Watford
Football Club, England,
UK.



"Nick's knee course was very detailed... What I enjoyed most about the knee course was that it was challenging, clear, and justified, and will refine my own thinking... Would recommend a knee course with Nick to anyone who deals with improving the physical function of knee-injured patients... Nick progressed my learning like a good knee rehab – good sequencing to a logical conclusion"

Andrew Pallas.
Osteopath, Private Practice,
Scotland, UK.



"I wanted to do this knee seminar because I see female knee injuries regularly... What was most interesting to me was learning about the effect of the menstrual cycle on musculoskeletal injuries... I'd recommend these knee seminars to any colleague in knee rehabilitation"

Lucy Nottingham.
Senior Physiotherapist,
Nuffield Helath,
England, UK.



Strength and Conditioning Guidelines for PCL Injury and Surgery: sums up data from hundreds of participants in worldwide biomechanical research and intervention studies in a way that explains what the critical differences are between PCL and ACL rehabilitation so that you can construct a research-proven rehabilitation programme for athletes with PCL-deficient and PCL-reconstruction knees -- as you hear about the findings of this research, you'll discover how treating PCL injury is more complex than treating ACL injury and learn the quadriceps and hamstrings rehabilitation exercises that can consistently get your best clinical results

Find out which knee rehabilitation exercises are truly best for minimising ACL and PCL ligament and graft stress and strain in a way that can reduce the risk for stretch-out and help your athletes rapidly recover their knee muscle function

Strength and Conditioning Guidelines for Combined ACL and PCL Injury: describes the three advanced concepts for rehabilitation of this complex injury in a way that steers you through the necessary biomechanical modifications for open and closed kinetic chain exercise so that you can maximise your athletes' quadriceps and hamstring recovery whilst protecting their menisci and articular cartilage -- when you see these exercise modifications, you'll discover how to implement early exercise rehabilitation for combined ACL+PCL-deficient and combined ACL+PCL-reconstruction knees

Strength and Conditioning Guidelines for the Three Types of MCL Injury and Surgery: reviews current research in a way that translates how open and closed kinetic chain exercises need to be specifically modified for the three different types of MCL-injury and MCL-reconstruction so that you can correctly implement and safely progress quadriceps and hamstrings exercises -- as you get a feel of this research and current clinical recommendations, you'll see how to use proper variations of open and closed kinetic chain exercises for different types of MCL injury and surgery and avoid unknowingly increasing MCL laxity and tibiofemoral instability

Strength and Conditioning Guidelines for Medial Versus Lateral Meniscus Injury and Surgery: looks at biomechanical and clinical outcome studies from some of the world's most published research groups in a way that categorises critical exercise modifications for the medial versus lateral meniscus so that you can select the correct open or closed kinetic chain rehabilitation exercise for your athletes with medial versus lateral partial meniscectomy or meniscal repair -- when you learn about these critical clinical modifications, you'll be able to confidently discuss biomechanically-sound and research-driven post-surgery rehabilitation recommendations with all of your athletes and orthopaedic surgeons

Your Course Tutor



Dr Nicholas C. Clark, PhD, MSc, MCSP, MMACP, CSCS

Knee Consultant Physiotherapist.
Lower Limb Injury Prevention & Rehabilitation Consultant.
Clinical Specialist Sports & Military Physiotherapist.
Certified Strength & Conditioning Specialist.

Integrated Physiotherapy and Conditioning
Website: www.integratedphysiotherapy.com
Email: enquiries@integratedphysiotherapy.com
Twitter: @DrNickCC

I became interested in the human body more than 20 years ago after I dislocated one of my joints playing football and was admitted to hospital to undergo surgery. I remember being in pain, feeling afraid and wondering if I would ever get back to normal again. Because I wanted to learn about what had happened to me, I got my hands on every anatomy and sports injuries textbook I could find. My interest in the human musculoskeletal system began.

Five years later, I started my physiotherapy undergraduate degree and began to go on student clinical placements and got very confused very fast. Two patients on the same orthopaedic ward would have the same operation by two different surgeons, and the different surgeons would dictate different rehabilitation programmes for the same operation. I had to be sure I treated the patients with the correct surgeons' rehabilitation programme or I was 'in trouble'. Some of my Clinical Educators told me an exercise was essential for a specific knee injury, but were then unable to explain how the exercise was thought to work. As a result of these experiences and as time passed, it became more and more difficult for me to know what was best for my patients. I decided to keep an open mind and research things further myself, to form my own opinion grounded in pathology, anatomy, biomechanics, neurophysiology, objective clinical reasoning, and evidence-based practice.

As a Chartered Physiotherapist with more than 18 years of clinical experience, I've now practiced in London teaching hospitals, at Saracens Rugby Union Football Club, with the Parachute Regiment and Royal Marines, and in private practice. 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, 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. My current roles include being a Senior Lecturer and Researcher at a London university, a Knee Consultant Physiotherapist in a central London private practice, and serving as a Manuscript Reviewer for scientific and clinical journals including *The Knee*, *Physical Therapy in Sport*, and *Manual Therapy*.

To date, I've assembled the most up-to-date and useful research and effective practical techniques into every aspect of my work. As a result, I can show you how to quickly and easily implement cutting-edge scientific evidence, practical techniques and clinical systems into your practice tomorrow, in a way that quickly gets you your best possible real-world results, while saving you time and effort, and increasing your patients' and clients' health, satisfaction and success.

Example Publications

Clark, N.C. (2015) The Role of Physiotherapy in Rehabilitation of Soft Tissue Injuries of the Knee. *Orthopaedics and Trauma*. 29, 1, 48-56.

Röijezon U., **Clark N.C.**, Treleaven J. (2015) Masterclass: Proprioception in Musculoskeletal Rehabilitation. Part 1. Basic Science and Principles of Assessment and Clinical Intervention. *Manual Therapy*. 20, 3, 368-377.

Clark N.C., Röijezon U., Treleaven J. (2015) Masterclass: Proprioception in Musculoskeletal Rehabilitation. Part 2. Clinical Assessment and Intervention. *Manual Therapy*. 20, 3, 378-387.

Akins J.S., Longo P.F., Bertoni M., **Clark N.C.**, Sell T.C., Galanti G., Lephart S.M. (2012) Postural Stability and Isokinetic Strength Do Not Predict Knee Valgus Angle During Single-Leg Drop-Landing or Single-Leg Squat in Elite Male Rugby Union Players. *Isokinetics and Exercise Science*. 21, 1, 37-46.

Hooper D.M., Morrissey M.C., Drechsler, W.I., **Clark N.C.**, Coutts F.J., McAuliffe T.B. (2002) Gait Analysis Six and Twelve Months Following Anterior Cruciate Ligament Reconstruction Surgery. *Clinical Orthopaedics and Related Research*. 403,168-178.

Clark N.C. (2001) Functional Performance Testing Following Knee Ligament Injury. *Physical Therapy in Sport*. 2, 91-105.





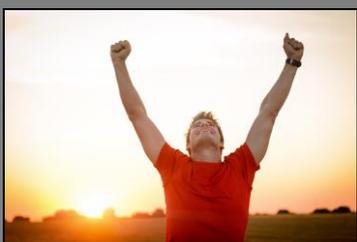
"The guidance on progressions of knee rehabilitation was useful because it was a continuum-based approach as opposed to a strict guideline... I'm confident from the course that the tools I've learned will allow me to be more successful and safe in my practice"

Tracy McAdam.
Senior Sports Physiotherapist,
Scottish Hockey Union, Hearts
Football Academy, Scotland,
UK.



"Nick... Thanks very much for the knee course... The sense of relief that there is a clinician and researcher out there looking at things from such a logical and grounded perspective was enormous... the focus you put on tangible, measureable facts rather than unsupported opinion was inspiring... Thanks again"

James Thomson.
Musculoskeletal Specialist
Physiotherapist, NHS Ayrshire,
Scotland, UK.



Here're the no-cost resources you'll also get:

Course Manual (Value £27.97): an easy-to-read Sports Specialist's Manual with all detailed slides, text, tables, templates, and digital pictures, which you can use for quick and easy reference of all material covered in the course and to take additional notes to review clinical tools and techniques whenever you want in your own time at a later date

Clinical Systems Manual - Essential Concepts in Exercise Therapy and Injury Rehabilitation, 2nd Edition (Value £29.97): a new edition that clearly explains the most important principles of injury rehabilitation in a way that's easy to follow so that you can develop a comprehensive treatment approach to rapidly reduce your patients' pain and solve their functional limitations

Clinical Reasoning Compendium and Technique Toolkit - 3rd Edition (Value £15.97): containing Clinical Reasoning Process Templates, Exercise Programme and Weekly Rehabilitation Plan Templates and Guides, exercise progressions, and published journal articles which you can use as another reference resource to practice your clinical reasoning and further refine your new advanced thinking and reasoning skills

Access Instructions For How To Join The New "Sports Knee Specialists" Expert Clinical Group: reveals the specific information you need to join the new Sports Knee Specialists advanced clinical discussion and networking forum -- after you've attended this seminar you'll qualify to join this experts' professional group as one of the few Global practitioners with advanced knowledge in knee injury prevention, injury rehabilitation, and performance optimisation -- this Sports Knee Specialists forum now has members from most of the World's continents and contains access to more downloadable resources you can use for your day-to-day practice

Your Sports Knee Specialists Advanced CPD Certificate: a signed CPD certificate which you can use to demonstrate you have attended and completed this knee rehabilitations experts' course

Your Course Investment

Early Bird (10% discount to midnight 27th March): [£242.97](#)

Standard (after 27th March): [£269.97](#)

Student (20% discount w. NUS card; max. 3 places): [£215.97](#)

Date and Location:

Saturday 17th - Sunday 18th February 2018.

Physiotherapy Department. Hinchingsbrooke Hospital. Parkway, Hinchingsbrooke, Cambridgeshire, PE29 6NT. England, UK.

[Click here for location map](#): parking available.

[Click here to enrol via Eventbrite](#)

If you have any questions, please email me directly at:
enquiries@integratedphysiotherapy.com