



## Day Five: Thigh & Knee / Integrating Manual Therapy and Movement

### Content Summary

- Review and refine movement analysis and manual procedures practiced on day five
- Knee anatomy and evidence as it relates to examination and treatment
- Interpret knee clinical findings consistent with the ICF-based clinical guidelines
- Manual therapy for knee mobility deficits
- Therapeutic exercises for knee movement coordination impairments and mobility deficits
- Interviewing skills related to effective vs ineffective attending and open inquiry skills

### Knowledge to Review/Acquire Prior to Class

1. CPG Interactive Learning Modules: Knee Ligament Sprain and Knee Injury Prevention  
Knee Meniscal/Cartilage Lesions / Knee Pain and Mobility Impairments  
Patellofemoral Pain
2. CPG-related Procedure Options – Knee Labs – Handout & Videos 7.2, 7.3, and 7.4
3. PhysioU app – Orthopaedics: Knee instability/coordination deficits/Knee ligament sprain  
Knee pain and mobility deficits/Knee meniscal-cartilage lesions  
Anterior knee pain/Patellofemoral pain  
Knee pain and mobility deficits/Knee meniscal-cartilage lesions  
Knee osteoarthritis/Knee stiffness-mobility deficits
4. PhysioU app – Exercise Patterns: Knee osteoarthritis – Knee stretching exercises  
Anterior knee pain – Quadriceps strengthening exercises  
Performance – Injury prevention

### References

Deyle GD, Henderson NE, Matekel RL, Ryder MG, Garber MG, Allison SC. Effectiveness of manual therapy and exercise in osteoarthritis of the knee. *Ann Intern Med.* 2000;134:173-181.

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and 2017 Revision - Knee Stability and Movement Coordination Impairments: Knee Ligament Sprain - *J Orthop Sports Phys Ther.* 2017;47(11):A1-A47

Logerstedt DS, Snyder-Mackler L, Ritter RC, Axe MJ. Knee pain and mobility impairments: meniscal and articular cartilage lesions - clinical practice guidelines linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association. *J Orthop Sports Phys Ther* 2010;40(6):A1-A35

and 2018 Revision – Knee Pain and Mobility Impairments: Meniscal and Articular Cartilage Lesions - *J Orthop Sports Phys Ther.* 2018;48(2):A1-A50

Arundale AJH, Bizzini M, Giordano A, Hewett TE, Logerstedt DS, Mandelbaum B, Scalzitti DA, Silvers-Graneli H, Snyder-Mackler L. Exercise-based knee and anterior cruciate ligament injury prevention lesions - clinical practice guidelines linked to the International Classification of Functioning, Disability, and Health from the Academy of Orthopaedic Physical Therapy and the Academy of Sports Physical Therapy of the American Physical Therapy Association. *J Orthop Sports Phys Ther.* 2018;44(6):A1-A42.

Willy RW, Hoglund LT, Barton CJ, Bolgla LA, Scalzitti DA, Logerstedt DS, Lynch AD, Snyder-Mackler L, McDonough CM. Patellofemoral pain: clinical practice guidelines linked to the international classification of functioning, disability and health from the academy of orthopaedic physical therapy of the American physical therapy association. *J Orthop Sports Phys Ther.* 2019;49:CPG1-95.

## Procedures List

### Movement Analysis

Single Leg Squat - with a focus on trunk/hip/thigh and leg/foot strength & motor control

### Examination Procedures

Knee Special Tests: Varus/Valgus, Lachman's, McMurray's

Knee Extension ROM Exam: (Terminal Extension & Anterior Glides)

Knee Flexion ROM Exam: (Hyperflexion & Posterior Glides)

Patellofemoral / Lower Extremity Static and Dynamic Alignment

Patellar Medial/Lateral Glides

Iliotibial Band Assessment (Length Tests & Palpation/Provocation)

Proximal Tibiofibular Accessory Movement Exam

Fibular (Peroneal) Nerve Mobility Exam: (Tension Tests and Entrapment Provocation)

Palpation/Provocation: Medial Joint Line, Pes Anserine, Patellar Tendon

### Manual Therapy

#### Soft Tissue Mobilization

Lateral Thigh/Iliotibial Band

Lateral Retinaculum

Lateral Leg Nerve Entrapment Sites

#### Joint Mobilization

Patella Medial Glides

Tibiofemoral Extension

Tibial Anterior Glide

Knee Flexion Mobilization with Movement

Fibular Posterior/Medial Glide

Fibular Anterior/Lateral Glide

### Exercise Training

Knee Mobility and Stretching

Quadriceps Activation and Strength Training

ACL and Knee Injury Prevention