



Δρ. Χρήστος Κ. Γιαννακόπουλος

Ορθοπαιδικός Χειρουργός, Διδάκτωρ Πανεπιστημίου Αθηνών

Πύργος Αθηνών, Κτίριο Γ', 2^{ος} όροφος, Λεωφ. Μεσογείων 2-4, Αθήνα 115 27

Τηλ.: 210 7712792 | **Κινητό:** 697 20 999 11 | **E-mail:** cky@orthosurgery.gr

HIP ARTHROSCOPY

- Minimise post-operative pain and swelling
- Restore hip and pelvic functional stability and strength
- Restore hip ROM
- Restore proprioception for return to work and sport
- Address pre-disposing factors

Rehabilitation Program:

The rehabilitation program is not a recipe. Modifications and considerations should be made according to;

- Patient goals
- Patient age and pre-operative level of fitness
- Pre-existing contributing factors to labral tear
- Any associated concurrent dysfunction in the hip and pelvic region (including lumbar spine or SIJ dysfunction, osteitis pubis and adductor problems)

Assessment and rehabilitation of the hip and pelvic area is a complex and requires thorough analysis of the pelvis, hip and lower limb. All times and exercises provided in this protocol are to serve as guidelines. Actual progress may be faster or slower depending on the individual patient.

An early goal is to restore a normal gait pattern based on symptoms and functional pelvic-hip control. For this reason it may be beneficial to use crutches in the first week only if a limp is present, until normal gait pattern is restored.

Typically 4 to 6 weeks is needed to recover from the aspects of surgical intervention including intra-articular effusion. Therefore pushing end range of movement during this time can be counterproductive to a patient's recovery. Hip ROM is encouraged only to tolerance.

Throughout rehabilitation manual therapy by the physiotherapist (such as massage) may be appropriate for patients with a tendency to hypertonicity in piriformis, TFL or hamstrings. Manual therapy for lumbar or SIJ articular restriction may also be appropriate providing care is taken to avoid hip traction, end range hip flexion and end range internal rotation.

Gradual resumption of activities over a 6 to 16 week period is expected. During this time low-impact closed chain exercises can be progressed to a functional hip and pelvis rehabilitation program. Modifications to exercises should be considered according to the patients pre-disposing factors and addressing these factors is essential during this

time frame. This will incorporate retraining motor patterns around the hip and pelvic region, which has more emphasis on motor control than power or strength of individual muscles. Rehabilitative exercises should not be painful within the hip joint or labrum. Return to sport will depend on the patient's pre-operative level of function and their ability to control the hip and pelvis in single leg balance. Stationary bike or cycling (if pain free) may be appropriate in the early stages of rehabilitation (2 to 6 weeks) if the patient wants to maintain cardio fitness. Light jogging may be appropriate following the 8 to 12 week mark. Returning to hip challenges such as change of direction or speed work should be assessed on an individual basis.

Phase 1: 0-14 days

Goals:

- Reduce swelling and pain
- Restore normal gait pattern
- Restore normal standing and sitting postural alignment
- Regain ROM within tolerance

Treatment guidelines:

- Ice or NSAIDS as required
- Crutches if required and training on correct gait pattern
- Analysis of standing postural alignment
- Improve patient awareness of correct standing hip and pelvic alignment (without posterior or lateral tilt) and exercises to improve postural endurance, which should begin with inner unit and basic core contractions.
- Start supine active assisted and active hip ROM exercises within tolerance. This should include patient awareness of maintaining hip centered and lumbar-pelvic control with accurate activation of lumbar-pelvic stability muscles (transversus, multifidus and pelvic floor). Care is to be taken with flexion and rotation ROM.



Poor standing alignment with hip anterior of base of support



Hip ROM with core control

Phase 2: 2-6 weeks

Goals:

- Start addressing any pre-disposing factors to labral tear including poor motor control around the hip and pelvis, articular dysfunction in the lumbar spine or SIJ
- Restore hip and pelvic stability and strength with low load closed chain functional exercises

Treatment guidelines:

- Assessment of lumbar-pelvic region. This should include:
 - 1) Assessment and manual therapy treatment as appropriate for articular restriction in the lumbar spine or SIJ
 - 2) Analysis of motor control around the lumbar spine and pelvis including accurate activation and timing of pelvic floor, multifidus and transversus, without substitution of more global muscles (such as external oblique or posterior pelvic floor and piriformis)
- Assessment of the pelvic-hip region. This can include:

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- 1) Analysis of dynamic hip stability including single leg balance watching for excessive lateral shift or pelvic tilt that may indicate dysfunction with gluts control
 - 2) Analysis of hip motor recruitment patterns watching for signs of excessive use of global muscles including adductors, TFL and hamstrings

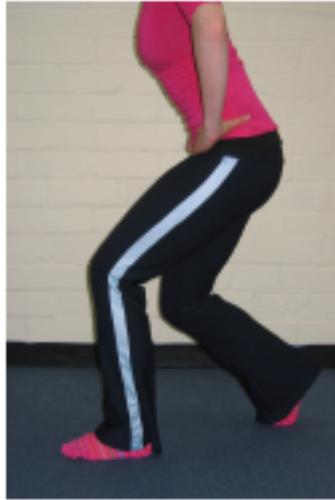
Therapeutic exercise prescription in this phase will be determined by findings of lumbar-pelvic and hip assessment. As a general rule progression of exercises should always include activation of deep stability muscles. Once accurate activation can be maintained exercises can be progressed to include retraining of good functional movement patterns. Foot and knee alignment during these exercises must be also maintained. A focus on low load and higher repetitions will help retrain motor control pattern and endurance.

Exercises can include:

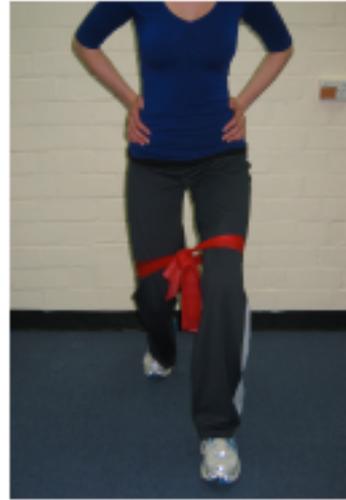
- Supine core activation with hip movements (such as pilates matwork; bent knee fallout, heel slides and single leg heel taps). Accurate activation of inner unit must be maintained with centering of femoral head
- Low load tasks such as quarter and half squats maintaining hip centering and alignment, core activation and body weight toward heels
- Lunges with pelvic and hip control, maintaining foot and knee alignment
- Weight shift and transfer with pelvic and hip control in half squat, quarter squat and upright postures
- Step ups with pelvic, hip and knee control
- Steps downs with pelvic, hip and knee control
- Addition of theraband around the knees to encourage gluts activation during squats, lunges and step ups
- Piriformis stretches



Squats with hip control



Lunges with hip control



Use of resistance band

Phase 3: 6-12 weeks

Goals:

- Restore proprioception
- Progress functional exercises to include more challenges to pelvic and hip control
- Continue addressing pre-disposing factors

Treatment guidelines

- Progress squats and lunges to include proprioceptive challenges such as air cushion or spin discs. Can include hand held weights to build strength.
- Increase weight transfer exercises to balance work, whilst maintaining activation of inner unit muscles and pelvic-hip control
- Gradually increase gluteal challenges with the use of theraband (such as multidirectional leg movements in single leg balance). This is provided the patient can maintain accurate alignment and is not substituting with over active TFL or hamstrings

Phase 4: 12 weeks plus

Goals:

- Improved functional strength and endurance
- Return to sporting activities

Treatment guidelines:

- Increase challenges to proprioception including single leg balance on air cushion or

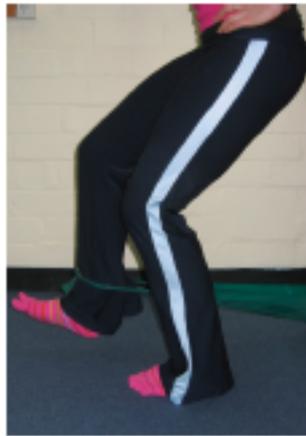
wobble board

- Sports specific retraining with hip and pelvic control

	Phase One Week 1 & 2	Phase Two Week 3- 6	Phase Three Week 6-12	Phase Four Week 12 +
Gait retraining Standing & sitting posture Hip ROM to tolerance	• • •	• • •		
Manual therapy Massage/soft tissue work to: Piriformis TFL and ITB Adductors Joint mobilisation to lumbar if required Joint mobilisation to SIJ if required	•	• • • • •	• • • • •	
Stretches: Piriformis Gastrocs Quads Hamstrings Adductor	•	• • • •	• • • • •	
Inner Unit/ Core Exercises: Eg: Supine pilates matwork Supine reformer level one	• •	• •	• •	• •
Functional gluts exercises: Performed with accurate core activation Squats Lunges Squats with theraband Lunges with theraband Weight transfer Step ups Step Downs		• • • • • •	• • • • • • •	• • • • •
Proprioception Squats on air cushion Lunges on air cushion Balance Balance with theraband challenges			• • •	• • • •



Balance with air cushion



Balance with theraband



Squats & lunges- air cushion