

Hip Scope Return to Run – General Information

- Initiated approx. 3 months post op
 - Start 4-6 weeks later if undergoing cartilage restoration procedures were performed: microfracture, microdrilling, cell therapy. Or, if patients have underlying dysplasia or borderline dysplasia
- Return to activity based upon functional achievements in strength, gait, and pain
- Key Points:
 - Progress gradually – give time for recovering tissues and joints to adapt
 - Avoid hills and speed in early progressions
 - Start running on soft surface or pavement before progressing to the pavement or road
 - Cross train, especially in initial phases
 - Incorporate adequate recovery between runs
- Symptoms: Acceptable to progress training
 - General muscle soreness
 - Slight joint discomfort after workout or next day that resolves within 24 hours
 - Slight stiffness at beginning of run or walk that dissipates after first 10 minutes
- Symptoms: Unacceptable to progress (back off training)
 - Pain that lasts for 2-3 days after a workout
 - Pain that is evident at the beginning of a run/walk then becomes worse as the workout continues
 - Pain that is keeping the patient awake at night
 - Pain that changes the patient's stride
- Core Running Program
 - Perform strength maintenance exercises and dynamic warm-up exercises coincidentally with progression through each phase
 - Plyometrics
 - Improve muscle reaction and body control
 - Progressed in intensity and volume
 - Reduces energy cost of running when compared with dynamic weight training
 - Strengthening
 - Focus on glute/hip complex, core, and balance
 - Side plank
 - Single leg squat with reach

- Front planks
 - Lateral band walks
 - Single leg supine bridge
- Dynamic Warm-Up
 - Perform before the workout/run to warm up and activate muscles involved in running, ensure mobility necessary to run is available, and to prevent injury
- Plyometrics Program
 - Contains a mix of loading strategies to efficiently handle bilateral, contralateral, ipsilateral loads with a vertical emphasis, similar to loads experienced and resisted while distance running
 - All directions of focus are included in the plyometric program
 - Linear, or sagittal biased loading is the most similar, which loads the specific running pattern, which is about 90% of the plyometric program
 - Lateral, or frontal biased plyometrics layer the resistance of frontal plane forces when partaking in the sport of distance running
 - Rotational, or transverse plane biased plyometrics create anti-rotational patterns that are experienced when running
 - All of these determine tissue tolerance to different loading strategies presented during long distance performance
 - Non-countermovement (NCM)
 - A concentric biased variation of performing a plyometric to be used in the beginning of a program before proper eccentric control is established
 - Countermovement (CM)
 - Eccentric pre-loading is involved in the plyometric, which is specific to loading strategies found in running, usually with higher amplitude than NCM
 - Double contact
 - Introduction to speeds/mechanisms of loading while running with the ankle complex being initiated in stretch shortening cycle (SSC) during the foot strike
 - Force is applied through the kinetic chain now at speeds that are handled by the neuromuscular system
 - Continuous
 - The most demanding on the body as repetitive forces must be absorbed and reproduced throughout the system without compensation or experiencing pain
 - Low and High Amplitude Jumps
 - Lower amplitude jumps proceed higher amplitude jumps within this and most return to performance programs
 - Tissue resilience can be obtained while working with no pain

Hip Arthroscopy Return to Run Protocol

All Phases: Warm-Up

- Strengthening Exercises
 - See Medbridge Template: Hip Return to Run Strengthening Program
 - Front plank 3x30-60s
 - Side plank 3x30-60s ea
 - Single leg supine bridge 3x12 ea
 - Lateral band walks 3x10 yards down and back
 - Single leg squat with reach 3x10 ea
- Dynamic Warm-up
 - See Medbridge Template: Hip Return to Run Dynamic Warm-Up
 - Knee hug to calf raise 2x20
 - In-out heel taps 2x20
 - Swing kicks 2x20
 - Soldier walks 2x20
 - Glute kicks 2x20
 - Walking lunges with reach and rotation 2x10
 - Lunge twist 2x10
 - Quick steps
 - 2x20s in place then forward 20ft
 - 2x20s in place then backwards 20ft
 - Single leg mini squat to calf raise 12x ea
 - Inchworms 5x

Phase I: Walking Program

- Walk for 30 minutes pain-free at 3.5mph or higher
- Start on treadmill for 1-2 weeks before progressing to outdoor surfaces

Phase II: Quick Response and Plyometric Routine

- Goals:
 - Progress to 500-600 foot contacts between 1-2 legs
 - If a runner has an average turnover of 170-180 strides/min, then running for 5-7 minutes would reach 500-600 single foot contacts
- Level I Plyometric Program:

- o See Medbridge Template: Hip Return to Run Plyometrics Program
- o Ladders (40ft)
 - Forward: 2 feet each box
 - Lateral: 2 feet each box
 - Forwards: in-in-out-out
 - Icky shuffle
 - Rest 2 minutes, then repeat 3x
- o Jumping/hopping drills
 - Double foot line jumps front/back with bounce 3x12
 - Alternating hop/hold 3x10 total jumps
 - Alternating single leg hops with bounce 3x10 total jumps
- o Advanced
 - Bounds non-countermovement to box (6-12in) 3x6 ea
 - Bounds off-box 3x6 ea
 - Bounds free/hurdle 3x10 ea
 - Non-countermovement Jump to box 2x10
 - Off-box jump 2x10
 - Non-countermovement jump over hurdle/free 2x8
- Criteria for progression to walk/jog program:
 - o Successful completion of Phase I and II
 - o No pain with daily activities
 - o Walk without a limp

Phase III: Walk/Jog Program

- Goals:
 - o Initiate and gradually progress their running volume without an increase in symptoms
 - o Begin on a treadmill to control speed and distance
 - o Key Points:
 - No hills or incline
 - No speed work

- Work on form
- Run every other day

● Program intervals:

Week	Run Interval (min)	Walk Interval (min)	Reps	Total Run Time (min)	Total Time Spent (min)
1	1	1	x7	7	14
2	2-3	1	x5	10-15	15-20
3	3-5	1	x4	20	24+

- Run until fatigue or form failure, then walk 1-2 min, then repeat for a total run time of 25-30 minutes
- Initiate running outdoors
- Jog every other day with a goal of reaching 30 consecutive minutes
- Depending on patient goals, a patient may continue with Level II and Level III plyometric drills, as well as return to distance running program

Phase IV: Return to Distance Running

- Goals
 - Most important for patients to find their baseline
 - The distance that patients can run without pain and again 48 hours later
 - Figure this out on a treadmill to monitor speed and distance. Run for as long as they are comfortable, stop if it becomes painful. Write down distance, time, and pace to track progress, with ultimate goal of finding an appropriate distance and speed that does not increase pain.
 - Progress to straight-line running on level outdoor surfaces (sidewalk, track) when comfortable
 - Only increase 1 factor per run (distance, speed, hills) to monitor which factors increase symptoms
 - Allow for at least 1 day off between runs, more if needed
- Level II Plyometric Drills
 - Beginner
 - Lateral shuffles
 - High knees

- Forward/backward skips
 - Backpedal
 - Grapevine
 - Boxer shuffles
 - Lateral skips
 - Tap skips
- Advanced
 - Countermovement bound to box 2x8 ea
 - Double contact bound over hurdle (bounce on take off) 2x8 ea
 - Lateral jump to box 2x8 ea
 - Non-countermovement on hop on box 2x6 ea
 - Countermovement hop over hurdle (free) 2x10 ea
- Level III Plyometric Drills
 - Beginner
 - Matrix Jumps 3x30s
 - Single foot forward line hops:
 - 3x12 pause
 - 3x12 no pause
 - Single foot line hops with bounce:
 - 3x10 front/back
 - 3x10 side/side
 - Single foot dot hops 2-3x 3 each way
 - Skater hops 3x45-60s
 - Jump Rope 2-3 sets of:
 - 2 feet 50x
 - R/L alternate 50x
 - R only 15x

● L only 15x

o Advanced

- Continuous bounds 3x6 ea
- Rotational bound in place both ways 3x6 ea
- Continuous countermovement jump 3x12 ea
- Lateral Hops 2x8 ea
- Medial Hops 2x8 ea

● Running Program:

Week	Runs Per Week	Key Points
1-2	2-3	-2 shorter runs at 50-60% baseline distance -1 longer run at the baseline distance
3-4	3	-Each run at baseline distance -Rest day between each run -Increase distance by 10% each week
5+	-	-Reassess baseline, increase running distance accordingly -Monitor pain during and 24-48h after increasing distance -Progress weekly volume and long run distance by no more than 10% each week -Once goal distance is reached, begin to initiate speed work or hills -Be extra cautious of downhill training

STRENGTH

STEP 1



STEP 2



Standard Plank

SETS: 3 | HOLD: 30 | DAILY: 1

Setup

Begin lying on your front, propped up on your elbows.

Movement

Engage your abdominal muscles and lift your hips and legs up into a plank position, keeping your elbows directly under your shoulders. Hold this position.

Tip

Make sure to keep your back straight and maintain a gentle chin tuck during the exercise.

STEP 1



STEP 2



Side Plank on Elbow

SETS: 3 | HOLD: 30 | DAILY: 1

Setup

Begin lying on your side with your feet stacked, resting on your elbow.

Movement

Lift your hips off the floor so your body is in a straight line and your hips and shoulders are facing forward. Hold this position.

Tip

Make sure to keep your head in line with your trunk, do not let your hips drop toward the floor, and do not roll forward or backward during the exercise.

STEP 1



STEP 2



STEP 3



Single Leg Bridge

REPS: 12 | SETS: 3 | DAILY: 1

Setup

Begin lying on your back with both knees bent and your feet resting on the floor.

Movement

Straighten one leg, keeping it in line with your other leg, then tighten your abdominals and lift your hips off the floor into a bridge position. Then lower yourself back down, and repeat.

Tip

Make sure to keep your abdominals tight and do not let your hips rotate during the exercise.

STEP 1



STEP 2



Monster Walk

REPS: 10 | SETS: 3 | DAILY: 1

Setup

Begin standing upright with a resistance band looped around your ankles. Bend your knees slightly so you are in a mini squat position.

Movement

Slowly step sideways, maintaining tension in the band.

Tip

Make sure to keep your feet pointing straight forward and do not let your knees collapse inward during the exercise.

STEP 1



STEP 2



Single Leg Squat with Forward Reach

REPS: 10 | SETS: 3 | DAILY: 1

Setup

Begin in a standing upright position, holding your arms straight in front of your body. Lift one leg off the ground to a 90 degree angle.

Movement

Squat down on your standing leg, extend your other leg backward, and lean your trunk forward at the same time. Then return to the starting position and repeat.

Tip

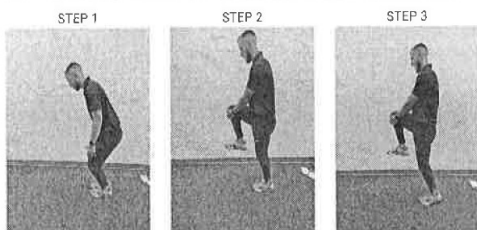
Make sure to keep your knee aligned as you squat and do not let it move forward past your toe. Hinge at your hips and keep your back straight as you lean forward.



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Disclaimer: This program provides exercises related to your condition that you can perform at home. As there is a risk of injury with any activity, use caution when performing exercises. If you experience any pain or discomfort, discontinue the exercises and contact your health care provider.

DYNAMIC WARM-UP

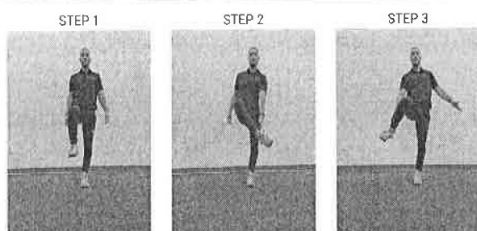


Knee Hug to Calf Raise

REPS: 20 | SETS: 2 | DAILY: 1

Movement

Standing tall, bring one knee up to your chest using your hands
While holding the knee, perform a calf raise on the opposite foot
Switch between sides

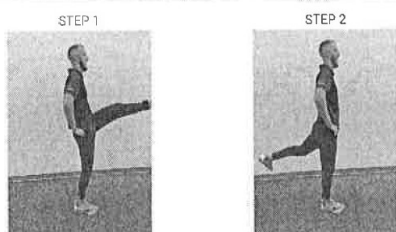


In Out Heel Taps

REPS: 20 | SETS: 2 | DAILY: 1

Movement

Standing on one foot, bring your opposite hip up to 90 degrees
Move your foot up and in, tapping the foot with the opposite hand
Then move your foot up and out to the other side, tapping the foot with the same hand
Switch between feet

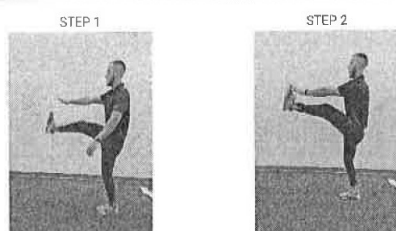


Swing Kicks

REPS: 20 | SETS: 2 | DAILY: 1

Movement

Standing tall, swing one leg forwards, then backwards, then back slightly forwards (taking a step where it lands)
Switch between sides

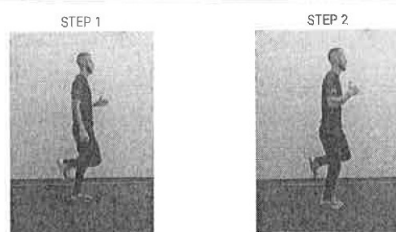


Soldier Walks

REPS: 20 | SETS: 2 | DAILY: 1

Movement

Standing tall, swing one leg up in front of you, touching your toes with the hand on the same side
Switch between sides



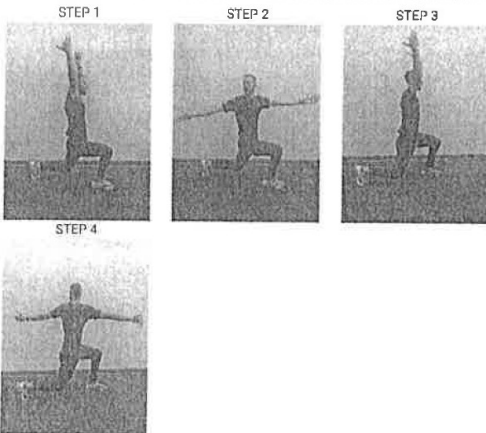
Glute Kicks

REPS: 20 | SETS: 2 | DAILY: 1

Movement

Standing on one foot, kick your opposite foot back towards your behind
Quickly switch feet - alternate between both sides

DYNAMIC WARM-UP

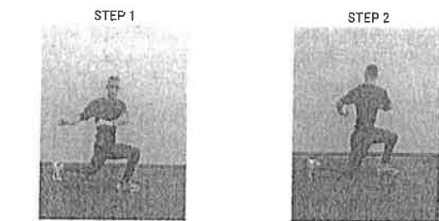


Walking Lunge with Reach and Rotation
REPS: 20 | SETS: 2 | DAILY: 1

Movement

Perform a lunge

Lift both arms above your head, then bring your arms down while moving your trunk into a rotated position, extending your arms out to your sides - facing the direction of the front leg
Stand up, then perform again to the opposite side



Lunge Twist

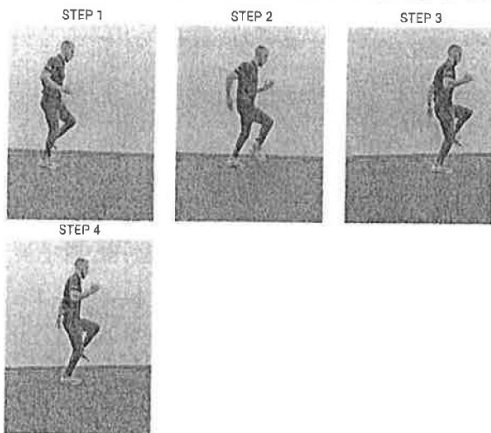
REPS: 20 | SETS: 2 | DAILY: 1

Movement

Step forward into a lunge position, then twist your upper body towards the side of your front leg

Stand up

Step forward with your other leg, twisting your upper body towards the side of that front leg



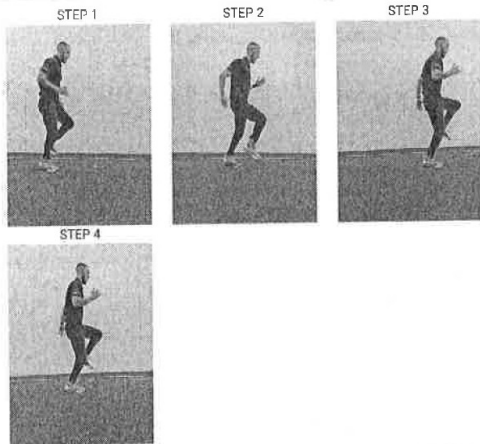
Quick Steps - Forward

REPS: 20 | SETS: 2 | DAILY: 1

Movement

Step between both feet quickly while moving in a forward direction

DYNAMIC WARM-UP

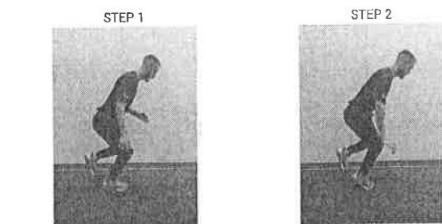


Quick Steps - Backward

REPS: 20 | SETS: 2 | DAILY: 1

Movement

Step between both feet quickly while moving in a backwards direction

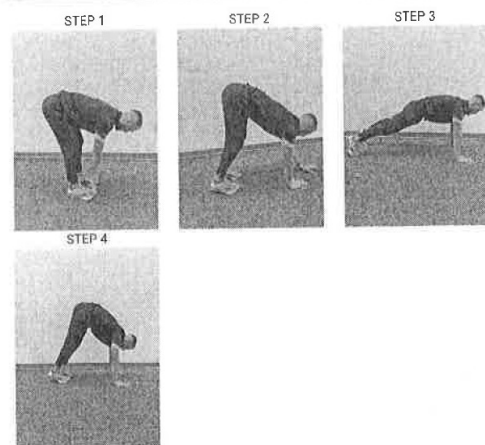


Single Leg Mini Squat to Calf Raise

REPS: 12 | SETS: 1 | DAILY: 1

Movement

Perform a single leg mini squat on one leg, holding the opposite leg in the air
While in the squat position, perform a calf raise on the leg in the squat position
Switch between sides



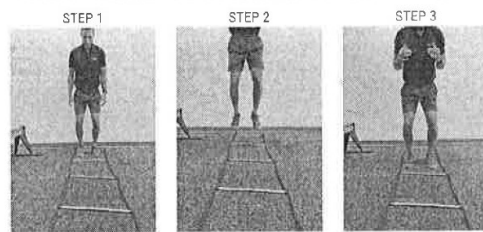
Inchworms

REPS: 5 | SETS: 1 | DAILY: 1

Movement

Stand tall
Bend forward, hinging at the hips
Place your hands on the ground in front of you
Walk yourself forward with your hands until you reach a plank position
Walk yourself forward with your feet until you return to the hip hinging position

PLYOMETRICS



Two Feet Forward Box

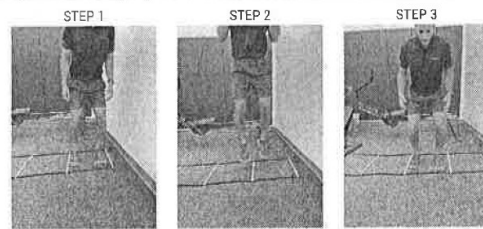
SETS: 3 | DAILY: 1

Setup

Start with both legs in one box

Movement

Jump forward to the next box with both legs



Two Feet Lateral Box

SETS: 3 | DAILY: 1

Setup

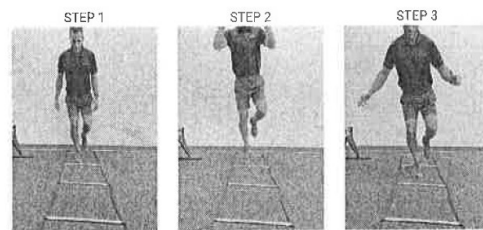
Start standing laterally within a box on the ladder

Movement

Jump up, advancing laterally to the next box

Tip

Perform facing one direction, then turn and face the other direction



One Foot Forward

SETS: 3 | DAILY: 1

Setup

Stand on the left leg in one box

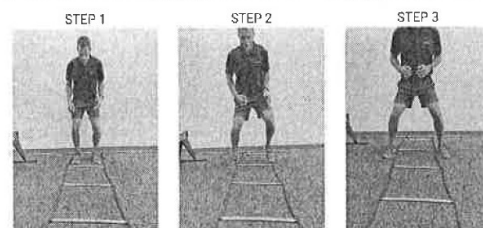
Movement

Jump forward with the left leg

Land on the left leg

Tip

Lead with the left for one length of the ladder, then with the right for another length of the ladder



In In Out Out

SETS: 3 | DAILY: 1

Setup

Start with both feet in one box

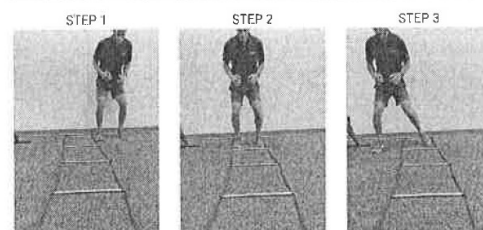
Movement

Move the left foot out of the box laterally, then the right foot out

Move the left foot back into the next box, followed by the right foot

Tip

Lead with the left for one length of the ladder, then lead with the right for another length of the ladder



Icky Shuffle

SETS: 3 | DAILY: 1

Movement

Start with 2 feet out of ladder

Place closest foot into ladder

Place next foot into ladder while moving other foot out of the ladder to the opposite side

Advance the foot still in the box to the next box

Repeat with each box

PLYOMETRICS

STEP 1



STEP 2



Forward Line Jumps

SETS: 3 | DAILY: 1

Setup

Start with both feet in a box, facing a line

Movement

Jump forwards with both feet over the line

STEP 1



STEP 2



Alternating Hip Hold

SETS: 3 | DAILY: 1

Setup

Stand on one leg in a mini squat position

Movement

Jump vertically, landing on the other leg in a mini squat position

Hold 3 sec

Jump vertically back to the starting leg, hold 3 sec



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