CHAPTER THREE

Exercise Therapy for Patients with Hip OA

Hip Exercise Protocol
Hip Home Exercise Programme

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Hip Exercise Protocol

General Guidelines

SECTION 1: CORE PROTOCOL EXERCISES
Four components: Aerobic/warmup; Strengthening; Stretching; Neuromuscular control
*Each participant performs all four components of the programme*

**Aerobic:** To be performed for up to 10 minutes at moderate level as warm-up

**Strengthening:** All strengthening exercises must be performed.
  Dose: 3 sets of 10 repetitions with a 3 second hold

**Stretching:** All stretches must be performed each session, until goals are met.
  Dose: 2 minutes total with 20-60 sec hold times
  Goals: The following stretches can be discontinued when the goal is met
  - Hamstring stretch **discontinued** after meeting 90/90 test. Patient must achieve 150° of knee extension (neutral = 180°) or greater with hip at 90°
  - Calf stretch **discontinued** after meeting 10° ankle DF with knee extended and 20° DF with knee bent

**Neuromuscular control:** Choose the 3 most challenging exercises the patient can achieve safely.
  Dose: 6 minutes total exercise, 2 minutes each exercise, 3 exercises. May do 3 different exercises or repeat any exercise more than once, and count the repeat as a new exercise.

SECTION 2: ADDITIONAL IMPAIRMENTS-BASED EXERCISES

**Additional techniques:** For those patients who test positive for additional impairments at the initial assessment, the following exercises may be prescribed based on the clinical judgment of the clinician. Dose parameters follow the guidelines listed above for strengthening and stretching.
AEROBIC EXERCISE

• Cycling or Treadmill walking is performed up to 10 minutes with the patient achieving Level 13 of the Borg Perceived Exertion rate within 2 minutes of activity. Exercise is discontinued if patient reports an increase in pain $\geq$ 2 points on NPRS.

• NOTE: Follow monitoring rules, where applicable, for participants with identified cardiovascular risk.
STRENGTHENING

- **DOSE:** Each strengthening exercise is done for 3 sets of 10 with a 3 second hold or until fatigue. Exercise is discontinued if patient reports an increase in pain ≥ 2 points on NPRS, however this should be avoided by ensuring appropriate starting intensity / resistance.
LEVEL 1 – SUPINE HIP ABDUCTION: Patient lies supine and actively abducts the involved hip through the available ROM.

Progression ➔ Patient is progressed to level 2 when 3 sets of 10 of level 1 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 2 – STANDING HIP ABDUCTION: Patient is standing and actively abducts the involved hip through the available ROM.

Progression ➔ Patient is progressed to level 3 when 3 sets of 10 of level 2 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 3 – SIDELYING HIP ABDUCTION: Patient is positioned in sidelying and actively abducts the involved hip through the available ROM.

**Activity may be progressed with use of ankle weights to increase resistance. HEP modified to standing with theraband**
WEAK HIP EXTENSORS

LEVEL 1 – SUPINE GLUT SETS:
Patient is supine and performs an isometric glut contraction.

Progression ➔ Patient is progressed to level 2 when 3 sets of 10 of level 1 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 2 – SUPINE BRIDGING:
Patient is supine with knees bent 90°. Patient actively performs a glut contraction while lifting the hips and pelvis off the floor to obtain a bridge position.

Progression ➔ Patient is progressed to level 3 when 3 sets of 10 of level 2 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 3 – SUPINE UNILATERAL BRIDGING:
Patient is supine with knees bent 90°. Patient actively performs a glut contraction while lifting the hips and pelvis off the floor to obtain a bridge position. Unaffected knee is extended from flexed position and held.

**Exercise may be progressed with adding cuff weights around ankle**
LEVEL 1 – CLAMSHELLS:
Patient is positioned in sidelying with knees bent 90°. Patient actively externally rotates the upper leg through the available ROM while maintaining the pelvis in neutral alignment and keeping the feet together.

Progression ➔ Patient is progressed to level 2 when 3 sets of 10 of level 1 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 2 – CLAMSHELLS WITH RESISTANCE:
As above with theraband or cuff weight around the knees to increase resistance.

Progression ➔ Patient is progressed to level 3 when 3 sets of 10 of level 2 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 3 – CLAMSHELLS WITH INCREASED RESISTANCE:
As above with increased level of resistance using theraband.
WEAK KNEE EXTENSORS

LEVEL 1-LEG PRESS:
Patient is seated holding a resistive band in both hands. Patient places his or her foot against the band, and then straightens the affected knee by pushing the foot down and forward by contracting the gluteal and quadriceps muscles. Unaffected knee is kept bent to avoid stress on low back. Hold for 3 seconds with knee as straight as possible.

Progression ➔ Patient is progressed to level 2 when 3 sets of 10 of level 1 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 2-PARTIAL SQUATS:
Patient is asked to perform a partial squat within the available ROM with or without use of upper extremity support. Support from hands on the back of a chair provides partial weight-bearing.

Progression ➔ Partial squats with the patient’s back against the wall.

Progression ➔ Patient is progressed to level 3 when 3 sets of 10 of level 2 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 3-SIT TO STAND: Patient is asked to sit in a chair of standard height and stand with or without use of upper extremity support. **May be advanced with use of medicine ball**

Management of Osteoarthritis
STRETCHING
DOSE: 2 minute total for each stretch, comprising 20-60 seconds holds
THOMAS TEST POSITION:
The patient sits at the edge of the plinth. Subject is told to place hands under uninvolved knee and bring knee to chest and lay back with assistance from examiner. The knee should only be pulled toward the chest enough to flatten the low back and sacrum on the table. The involved hip/knee is then allowed to extend.

**Modify position to side of bed depending on patient ability**

**Alternatively, or progress to, Quadriceps muscle stretch in standing with affected leg/foot onto chair until stretch is felt (pictured in knee exercise protocol)**
SINGLE KNEE TO CHEST:
Patient lies on his/her back pulling the affected knee toward the chest until a stretch is felt in the buttock. The non-involved leg is kept as straight as possible.

**NB:** This can be achieved at the same time as the above Thomas test position stretch is being performed on the contralateral limb.
HAMSTRING STRETCH: Patient is positioned in either sitting or standing position. Affected leg is kept straight and patient attempts to reach toward the toes keeping the low back in a neutral position until a stretch is felt.

Alternative position in lying.
CROOKLYING/FABER STRETCH:
Patient assumes a supine position with knees bent to 90°. Affected hip is externally rotated until stretch is felt.

**Can be progressed into “figure 4” position or performed in sitting**
ANIMAL PLANTAR FLEXOR/KNEE FLEXOR TIGHTNESS

Calf Stretch:
Patient assumes a standing position with involved lower extremity placed behind the non-involved, toes pointing forward. Patient’s arms are placed on wall and involved knee is kept straight with heel flat to the floor until stretch is felt in back of calf.
NEUROMUSCULAR CONTROL EXERCISES

DOSE: Each patient is to perform 3 of the following exercises for a duration of 2 minutes each. Select exercises that challenge the patient. Exercises can be repeated if unable to perform 3 different activities or if some exercises are too easy. Goal is 6 minutes of neuromuscular exercises. Exercise is discontinued if patient reports an increase in pain ≥ 2 points on NPRS. Progress exercises regularly as performance improves to provide variability and ensure patient is sufficiently challenged.
STANDING WEIGHT SHIFTS

LEVEL 1 – FORWARD AND LATERAL WEIGHT SHIFTS
EYES OPEN:
Patient assumes a standing position with feet side by side or in walking stance. Purpose is to increase proprioception in the affected lower extremity by shifting weight over the involved hip then return to start position. Watch for compensations at the trunk or hip.

Progression ➔ Patient advances to level 2 when 3 sets of 30 seconds are performed with ease and good form.

LEVEL 2 – FORWARD AND LATERAL WEIGHT SHIFTS
EYES SHUT:
As above with eyes closed.

Progression ➔ Patient advances to level 3 when 3 sets of 30 seconds are performed with ease and good form.

LEVEL 3 – TANDEM STANCE WEIGHT SHIFT EYES OPEN:
Patient assumes heel to toe position with involved hip forward. Weight is to be shifted onto the involved hip keeping the eyes open. **Progress to eyes closed if needed.**
Balance
LEVEL 1 – DOUBLE LEG
FOAM BALANCE:
Participant stands with both feet on a soft foam surface.

Progression ➔ Patient advances to level 2 when 3 sets of 30 seconds are performed with ease and good form.

LEVEL 2 – DOUBLE LEG
Wobble Board:
Participant stands with both feet on a wobble board surface.

Progression ➔ Patient advances to level 3 when 3 sets of 30 seconds are performed with ease and good form.

LEVEL 3 – SINGLE LEG
STANCE ON FLOOR:
Participant stands on involved leg maintaining single leg balance. Perform 3 sets of 30 seconds. Watch for compensation at the hip or trunk.

May be progressed to single leg stance on foam or wobble board.

**May be advanced with addition of ball toss or pertubations**
SIDE-STEPPING

LEVEL 1-SIDE-STEPPING:
Participant steps sideways keeping the toes pointing forward, moving right or left. Repeat by changing direction to return to starting position. Activities are performed along the exercise bar/safety rail along the mirrored wall.

Progression ➔ Patient advances to level 2 when side stepping on level surface with ease.

LEVEL 2-SIDE-STEPPING WITH OBSTACLES:
Same as above but add cones for patient to step over when performing activity.

Progression ➔ Patient advances to level 3 when side stepping on level surface with obstacles can be performed with ease.

LEVEL 3 – CARIOCA (or BRAIDING):
Patient performs front cross-over stepping with side step, b) Back cross-over stepping with side step, and c) Alternate front and back cross-over steps (walking carioca). Repeat by changing direction to return to starting position.
Place 5 plastic cone markers at distances of 2m. The patient walks forward to first marker, then walks backward to return to start. Patient then walks to 4m marker forward, returns to start walking backward. The participant then walks to 6m marker, returns to start walking backward, then finish by walking to the end (8m).
STAIRS

Patient is asked to ascend/descend 3 stairs with alternating step pattern to increase strength and functional activity. May use upper extremity support if needed.

Alternatives:
Start with low step.
Progress to high step.
SECTION 2
ADDITIONAL IMPAIRMENTS-BASED EXERCISES

For those patients with additional impairments identified at the initial assessment, the following exercises may be prescribed based on the clinical judgment of the clinician. Dose parameters follow the guidelines listed above for strengthening and stretching.
WEAK CORE STABILITY

INDICATION: If aberrant lumbar movement including catching, painful arc of motion or Gower’s sign.

LEVEL 1 – SUPINE ABDOMINAL BRACING:
Patient is supine with knees bent and asked to brace the abdomen and hold for 8 seconds. Perform 30 reps.

Progression ➔ Patient is progressed to level 2 when 30 reps of 8 second holds is completed.

LEVEL 2 – SUPINE BRACING WITH HEEL SLIDES:
Same as above while performing an active heel slide keeping the abdomen braced. Hold for 4 seconds, perform 20 reps.

Progression ➔ Patient is progressed to level 3 when 20 reps per leg of 4 seconds holds is completed.

LEVEL 3 – SUPINE BRACING WITH LEG LIFTS:
Same as above while performing an active leg lift. Hold for 4 seconds, perform 20 reps.
WEAK ANKLE PLANTARFLEXORS
OR NOTICEABLE ATROPHY

INDICATION: If inability to perform 3x10 bilateral calf raises (with full height and calcaneal inversion) or noticeable muscle atrophy compared to opposite side.

LEVEL 1 – BILATERAL CALF RAISE AND LOWERING:
Patient is positioned in standing with both feet on the step. Patient rises up on toes as high as possible, holding for 3 seconds, then returns slowly to start position.

Progression ➔ Patient is progressed to level 2 when 3 sets of 10 of level 1 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 2 – BILATERAL CALF RAISE, UNILATERAL LOWERING:
Patient is instructed to go up on toes bilaterally and lower only with the involved side with or without use of upper extremity support.

Progression ➔ Patient is progressed to level 3 when 3 sets of 10 of level 2 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 3 – UNILATERAL CALF RAISE, UNILATERAL LOWERING:
Patient is instructed to raise up on involved side, lower with involved side with or without use of upper extremity support. **Exercise discontinued when patient is able to perform 20 unilateral calf raises through full range with good form**
WEAK HIP FLEXORS

INDICATION: If unable to perform supine active SLR to contralateral flexed knee without quad lag.

LEVEL 1 – STANDING STRAIGHT LEG RAISE:
Patient is standing on the noninvolved lower extremity while actively flexing the involved hip through the available ROM.

Progression ➔ Patient is progressed to level 2 when 3 sets of 10 of level 1 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 2 – SUPINE STRAIGHT LEG RAISE:
Patient is supine with noninvolved hip and knee bent with involved lower extremity extended. Patient actively flexes the hip to meet the contralateral side while keeping the knee straight.

Progression ➔ Patient is progressed to level 3 when 3 sets of 10 of level 2 exercise is no longer challenging and patient is performing activity with ease and good form.

LEVEL 3 – SUPINE STRAIGHT LEG RAISE WITH RESISTANCE:
As above but with added ankle weights to increase resistance.
TRUNK SIDE FLEXION TIGHTNESS
INDICATION: If visual observation of trunk side flexion limitation/tightness.

TRUNK SIDE FLEXION STRETCH:
Patient positioned in standing with affected side toward the wall. Patient then stretches away from the involved side to achieve a stretch. May also be performed in sitting.

PRESCRIPTION OF ASSISTIVE DEVICE
Patient is prescribed an appropriate assistive device if safety is a concern of the assessing clinician.
Hip Home Exercise Programme

Introduction

General Information

Frequency: 2 sessions per week (~30 minutes per session) or more if you are no longer attending treatment. Spread them out through the week.

Perform on both legs or worse leg only if short on time

Perform these exercises when you are warm and not too stiff, perhaps after a short walk.

Warnings:
– mild muscle or joint pain and stiffness following exercise is normal
  It should settle within an hour
– If the exercise makes your symptoms worse, either cease the exercise,
  or go down a level, or don’t push yourself quite as hard

Wear comfortable clothing and flat shoes during exercise in a safe environment (i.e. Away from clutter and close to a table)

Drink a glass of water following exercise
HIP EXERCISES 1 (GLUTEAL MUSCLES) – STRENGTH

LEVEL 1
While lying on your back, bring right/left leg out to side contracting buttock muscles and hold for 3 seconds. Return keeping the knee straight.

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 2
Standing on right/left leg with upper limb support, lift your right/left leg out to the side while contracting buttock muscles and hold for 3 seconds. Keep your leg straight.

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 3
As above with addition of theraband around ankle.

Repeat 10 times per set.
Do_____sets per session.
HIP EXERCISES 2 (GLUTEAL MUSCLES) – STRENGTH

LEVEL 1
While lying on your back, actively squeeze your buttock muscles together and hold for 3 seconds

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 2
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Hold for 3 seconds.

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 3
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Slowly extend your right/left knee. Hold for 3 seconds and return to lying.
HIP EXERCISES 3 (GLUTEAL MUSCLES) – STRENGTH

LEVEL 1
While lying on your back, actively squeeze your buttock muscles together and hold for 3 seconds

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 2
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Hold for 3 seconds.

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 3
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Slowly extend your right/left knee. Hold for 3 seconds and return to lying.

Repeat 10 times per set.
KNEE EXERCISES (FRONT THIGH MUSCLES) – STRENGTH

Do_____ sets per session.

LEVEL 1
While lying on your right/left side, bend your knees to 90 degrees. Keeping your heels together, point your right/left knee toward the ceiling. Hold for 3 seconds and lower. Keep pelvis steady throughout movement.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 2
As above with addition of theraband around knees.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 3
As above with increased resistance theraband.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 1
Sit on your bed or floor with legs straight. Place your foot against the band and straighten your knee by pushing the
STRETCHING PROGRAMME – HIP STRETCHES

LEVEL 1
While lying on your back, actively squeeze your buttock muscles together and hold for 3 seconds
Repeat 10 times per set. Do _____ sets per session.

LEVEL 2
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Hold for 3 seconds.
Repeat 10 times per set. Do _____ sets per session.

LEVEL 3
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Slowly extend your right/left knee. Hold for 3 seconds and return to lying.
Repeat 10 times per set.
Do_____sets per session.

LEVEL 1
While lying on your right/left side, bend your knees to 90 degrees. Keeping your heels together, point your right/left knee toward the ceiling. Hold for 3 seconds and lower. Keep pelvis steady throughout movement.

Repeat 10 times per set.
Do_____sets per session.

LEVEL 2
As above with addition of theraband around knees.

Repeat 10 times per set.
Do_____sets per session.
LEVEL 1
While lying on your back, actively squeeze your buttock muscles together and hold for 3 seconds.
Repeat 10 times per set. Do _____ sets per session.

LEVEL 2
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Hold for 3 seconds.
Repeat 10 times per set. Do______ sets per session.

LEVEL 3
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips.
and pelvis off the floor. Slowly extend your right/left knee. Hold for 3 seconds and return to lying.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 1
While lying on your right/left side, bend your knees to 90 degrees. Keeping your heels together, point your right/left knee toward the ceiling. Hold for 3 seconds and lower. Keep pelvis steady throughout movement.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 2
As above with addition of theraband around knees.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 3
As above with increased
LEVEL 1
While lying on your back, actively squeeze your buttock muscles together and hold for 3 seconds.

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 2
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Hold for 3 seconds.

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 3
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Slowly extend your right/left knee. Hold for 3 seconds and return to lying.

Repeat 10 times per set.
NEUROMUSCULAR PROGRAMME – STAIRS
BALANCE AND AGILITY

Do_____ sets per session.

LEVEL 1
While lying on your right/left side, bend your knees to 90 degrees. Keeping your heels together, point your right/left knee toward the ceiling. Hold for 3 seconds and lower. Keep pelvis steady throughout movement.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 2
As above with addition of theraband around knees.

Repeat 10 times per set.
Do_____ sets per session.
LEVEL 1
While lying on your back, actively squeeze your buttock muscles together and hold for 3 seconds.

Repeat 10 times per set.
Do _____ sets per session.

LEVEL 2
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Hold for 3 seconds.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 3
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Slowly extend your right/left knee. Hold for 3 seconds and return to lying.

Repeat 10 times per set.
Do_____ sets per session.

LEVEL 1
While lying on your right/left side, bend your knees to 90 degrees. Keeping your heels together, point your right/left
knee toward the ceiling. Hold for 3 seconds and lower. Keep pelvis steady throughout movement.

Repeat 10 times per set.
Do_____sets per session.

LEVEL 2
As above with addition of theraband around knees.

Repeat 10 times per set.
Do_____sets per session.

LEVEL 3
As above with increased resistance theraband.

Repeat 10 times per set.
Do_____sets per session.

LEVEL 1
Sit on your bed or floor with legs straight. Place your foot against the band and straighten your knee by pushing the foot down and forward by contracting your buttock and thigh muscles. Hold for 3 seconds keeping knee as straight as possible. Opposite knee is kept bent.

Repeat 10 times per set.
LEVEL 1
While lying on your back, actively squeeze your buttoc muscles together and hold for 3 seconds.

Repeat 10 times per set.
Do ______ sets per session.

LEVEL 2
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Hold for 3 seconds.

Repeat 10 times per set.
Do ______ sets per session.

LEVEL 3
While lying on your back, bend your knees to 90 degrees. Squeeze your buttock muscles together and lift your hips and pelvis off the floor. Slowly extend your right/left knee. Hold for 3 seconds and return to lying.

Repeat 10 times per set.
Do_____sets per session.

LEVEL 1
While lying on your right/left side, bend your knees to 90 degrees. Keeping your heels together, point your right/left knee toward the ceiling. Hold for 3 seconds and lower. Keep pelvis steady throughout movement.

Repeat 10 times per set.
Do_____sets per session.

LEVEL 2
As above with addition of theraband around knees.

Repeat 10 times per set.
Do_____sets per session.

LEVEL 3
As above with increased
**HIP STRETCHES**

**SINGLE KNEE TO CHEST**
Lie on your back and bring your right / left leg toward your chest. Use your arms to assist you bring your leg as close to your chest as possible. If you are unable to reach with your arms use a towel to assist you.

Hold ___ secs. Repeat _____ times.

**STRETCH TO BACK AND OUTSIDE OF HIP**
Lie on your back and bring your right / left knee toward your opposite shoulder. You can also perform this stretch while sitting. You should feel a stretch in the back and outside of your hip.

Hold ___ secs. Repeat _____ times.

**PIRIFORMIS STRETCH**
Lie on your back with your knees bent and your feet flat on the surface. Cross your right / left leg over your other leg. You may feel a stretch at this stage. To increase the stretch grab your non-affected hip and pull toward your chest as shown. A stretch should be felt at the back or outside of your hip.

Hold ___ secs. Repeat _____ times.
HIP STRETCHES

STANDING HIP EXTERNAL ROTATION STRETCH
Stand in front of a chair that is positioned in front of your right/left. The seat of the chair should be facing you. Place your foot on the chair. You may feel a stretch at this stage. To increase the stretch lean your trunk forward.

Hold ____ secs.
Repeat _____ times.

STANDING HIP EXTENSION WITH OVER-PRESSURE
Stand with your right / left leg behind you. Keep your knee straight and heel on the ground. You may feel a stretch at this stage. To increase the stretch, place your hands on your hips and lean into the stretch. You should feel a stretch at the front of your hip.

Hold ____ secs.
Repeat _____ times.
SINGLE KNEE TO CHEST
Lie on your back and bring your right / left leg toward your chest. Use your arms to assist you bring your leg as close to your chest as possible. If you are unable to reach with your arms use a towel to assist you.

Hold____ secs. Repeat____ times.

STRETCH TO BACK AND OUTSIDE OF HIP
Lie on your back and bring your right / left knee toward your opposite shoulder. You can also perform this stretch while sitting. You should feel a stretch in the back and outside of your hip.

Hold____ secs. Repeat____ times.

PIRIFORMIS STRETCH
Lie on your back with your knees bent and your feet flat on the surface. Cross your right / left leg over your other leg. You may feel a stretch at this stage. To increase the stretch grab your non-affected hip and pull toward your chest as shown.
STRETCHING PROGRAMME

A stretch should be felt at the back or outside of your hip.

Hold____secs. Repeat______
times.

STANDING HIP ER STRETCH
Stand behind a chair that is positioned in front of your right / left. The seat of the chair should be facing you. Place your foot on the chair. You may feel a stretch at this stage. To increase the stretch lean your trunk forward.

Hold____secs. Repeat______
times.

STANDING HIP INTERNAL ROTATION STRETCH
Stand behind a chair that is positioned in front of your right / left leg. The seat of the chair should be facing you. Place your foot on the chair; allow your thigh to drop toward the midline of your body. You should feel a stretch at the front of your hip.

To increase the stretch move your body away from the chair.

Hold____secs. Repeat______
times.
STRETCHING PROGRAMME

SINGLE KNEE TO CHEST
Lie on your back and bring your right / left leg toward your chest. Use your arms to assist you bring your leg as close to your chest as possible. If you are unable to reach with your arms use a towel to assist you.

Hold ____ secs. Repeat ____ times.

STRETCH TO BACK AND OUTSIDE OF HIP
Lie on your back and bring your right / left knee toward your opposite shoulder. You can also perform this stretch while sitting. You should feel a stretch in the back and outside of your hip.

Hold ____ secs. Repeat ____ times.

PIRIFORMIS STRETCH
Lie on your back with your knees bent and your feet flat on the surface. Cross your right / left leg over your other leg. You may feel a stretch at this stage. To increase the stretch grab your non-affected hip and pull toward your chest as shown. A stretch should be felt at the back or outside of your hip.

Hold ____ secs. Repeat ____ times.