WOLFF ORTHOPAEDICS
ATHLETIC HIP INJURY & HIP PRESERVATION

Post-Op and Non-Op Aqua Therapy Protocol

Please read entire protocol prior to initiating therapy

General Things to Know:

- Rest is a vital component of recovery from hip arthroscopy. **Less is more**.
- Typically it is best to *substitute Aquatic Therapy for a day when you'd be doing land-based therapy*. Do not exceed your daily/weekly activity budget! **Less is more**.
- If aqua therapy is being performed in addition to formal physical therapy, make sure you are checking in regularly with your therapist, especially before advancing through the protocol.
- Utilize the exercise descriptions as a guide. They are not intended to serve as a substitute for clinical decision-making; adjust within given guidelines and precautions as needed.
- Patient's progression will vary widely. **If it hurts, don't do it**! – regardless of the time from surgery or injury.
- **Do not feel obligated to do every exercise in the protocol.**
- **LESS PAIN=MORE GAIN!**
- **Don't do this if you have open surgical incisions (usually need to wait until 2 weeks after surgery or have a secure waterproof dressing).**
- Please do not hesitate to contact Dr. Wolff with questions or concerns.

What you should know about water-based exercises:

- These exercises are appropriate for those who need to strengthen or improve balance.
- They allow for ROM in an environment that is shielded from the immediate effects of gravity. Water provides buoyancy (amount of flotation) as the level of the water increases, therefore the deeper you go, the less you will perceive what you weigh.

Benefits of an aquatic therapy program:

- Unloading of the joints
- Balance-assisted exercises via water
- Amount of resistance determined by the individual
- Low impact exercises

Prior to engaging in aquatic therapy:

- Consult your primary care physician to ensure an aquatic therapy program is appropriate for you.
- If you have a surgical site that may not be fully healed, please consult your surgeon/physician prior to engaging in any water-based exercises.

At the beginning of your session:

- Be sure to stretch all appropriate body parts prior to entering the water to loosen your muscle and repeat some of the stretches once you are in the water as well.
- Take a few warm up strokes in the water to elevate your heart rate slightly before exercising. If you are post-op, you may not need to worry about this step if you are not yet at the stages of more intense exercises.
- Once warmed up keeping moving around throughout the session, but do not push yourself to the point of being in pain.
- If once in the water you begin to feel lightheaded, dizzy, nauseous or overly anxious, tell the therapist immediately. If no therapist is present, remove yourself from the water immediately and call for assistance.

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PHASE 1A: Active Range of Motion (AROM)

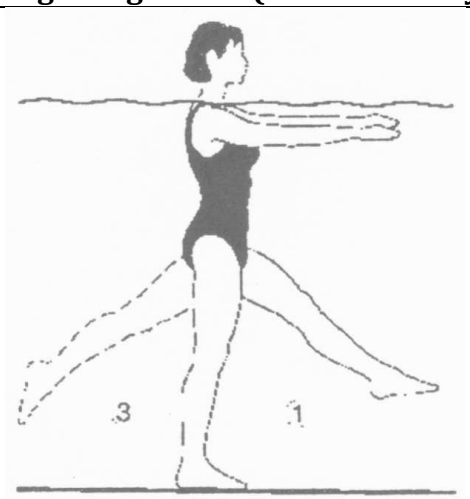
- May begin as early as 2 weeks post-op or sooner if using a water-proof dressing.

Goals:

- Begin to regain motion in chest deep water
- Avoid pain with all motions while maintaining a level pelvis

Exercises:

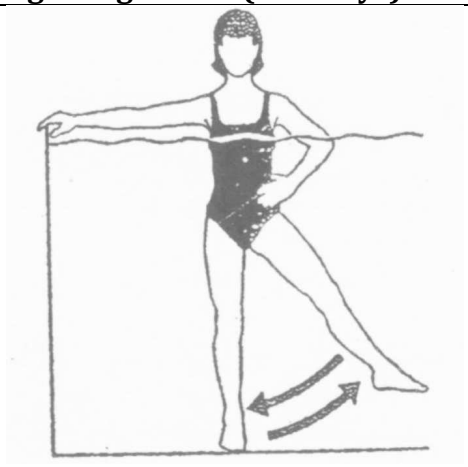
Straight Leg Raises (Backward only)



- Standing next to pool wall, raise one leg straight out in front to a comfortable level and then swing leg back through the middle and straight behind you.
- Your hips and shoulders should remain upright and facing forward.
- The motion should be occurring from the hip and not the knee.

Note: When performed fast in the water, these exercises create more resistance and are more strenuous.

Straight Leg Raises (Sideways)



- Standing next to pool wall, bring one leg out to the side then back to starting position.

Note: When performed fast in the water, these exercises create more resistance and are more strenuous.

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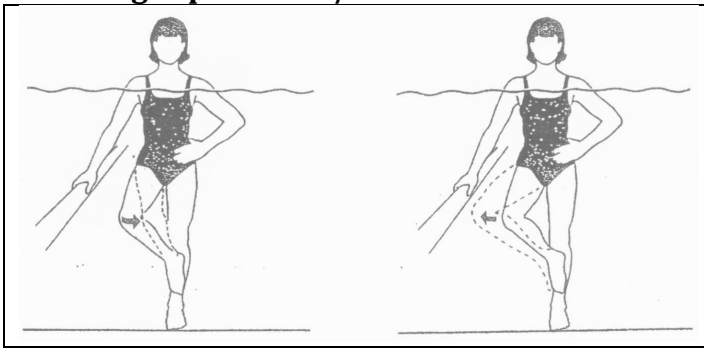
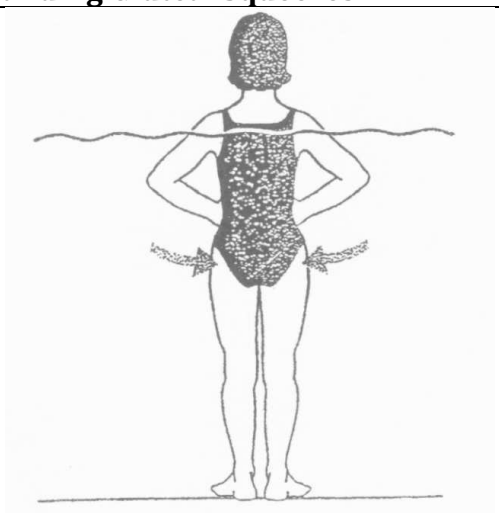
Standing Hip Internal/External Rotation Stretch



- Stand next to pool wall and hold on with one hand. Bend knee of involved leg and place foot on opposite shin.
- Gently press involved leg out toward the wall and hold for 30 seconds.

Standing Gluteal Squeezes



- Stand facing wall with hands on hips. Slowly contract your buttock muscles and hold for 30 seconds.

Hip Circumduction

- Stand next to wall and slowly raise involved leg out to the side and slowly make circles with your leg while keeping your leg straight.
- Perform 10 circles.
- Repeat circles going in the opposite direction.

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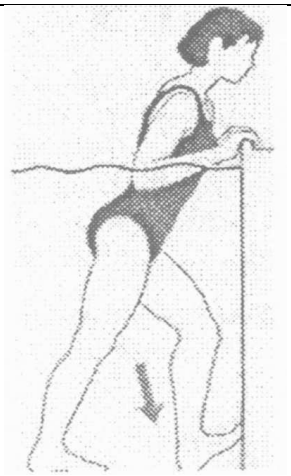
Calf Stretch

	• Facing pool wall, place both feet so that your toes are on the wall. • Slowly move your hips towards the walk while straightening out your legs until you feel a stretch. • Hold for 30 seconds. • Repeat 3 times.

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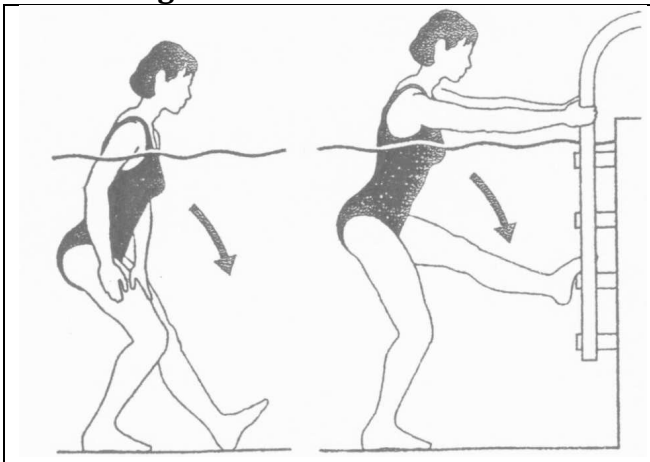
Hamstring Stretch

	• Stand in water near a bottom stair/ladder rung in at least waist deep water. • Raise foot of involved leg onto bottom of rung/stair while keeping leg straight. If not stretch is felt, slowly lean trunk forward. • Hold position for 30 seconds

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PHASE 1B: Gait Training

- May begin as early as 3 weeks post-op using waterproof bandage if needed.

Goals:

- Begin in chest deep water and progress to waist deep water after 1-2 weeks of no pain.
- Focus on maintaining level pelvis.

Exercises:

Forward/Backward Walking

- Standing near wall, begin by walking forward in water, making sure to lift foot off the ground by bending at the knee and hip.
- To walk backward, stand in place and slowly bend hip and knee before swinging the leg backward and placing foot on the ground.
- Repeat this for 20 paces, 3 sets (for both forward and backward walking).

Sideways Walking

- Stand facing the wall and move involved leg out to the side and place foot on floor. Move uninvolved leg toward the involved leg to return to starting position.
- Repeat this for 20 paces.
- To exercise the uninvolved leg, take same path back to the starting point leading with the uninvolved leg. Otherwise turn and face away from the wall to exercise the involved leg.

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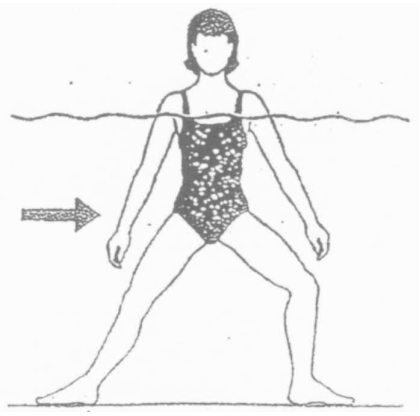
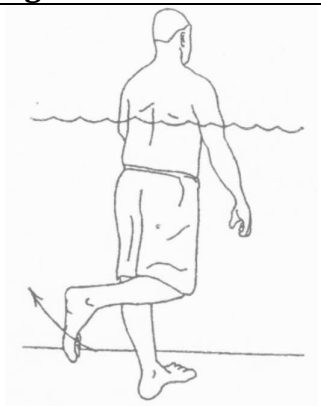
Groin Stretch

	Option 1: • Stand facing pool wall with legs spread wider than shoulder width (within comfortable range). • Lean away from involved leg, so that uninvolved leg is bearing most of the weight. Stretch should be felt in involved leg. • Hold for 30 seconds. Repeat 3 times. Option 2: • Hang vertically in an inner tube • Touch soles of feet together and pull feet upwards while bending knees until stretch is felt in the inner thigh/groin. • Hold for 30 seconds and repeat 3 times.

Hamstring Curl

	• While standing on one leg, bring heel of opposite leg to your rear. • Return foot to starting position. • Repeat 10 times, 3 sets. *Note: When performed fast in the water, these exercises create more resistance and are more strenuous.*

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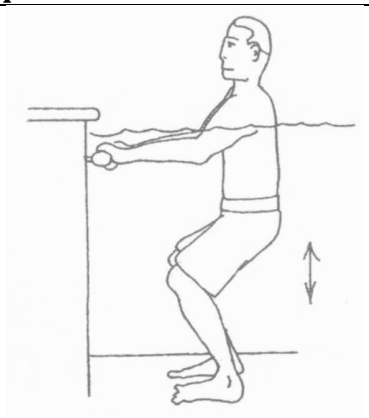
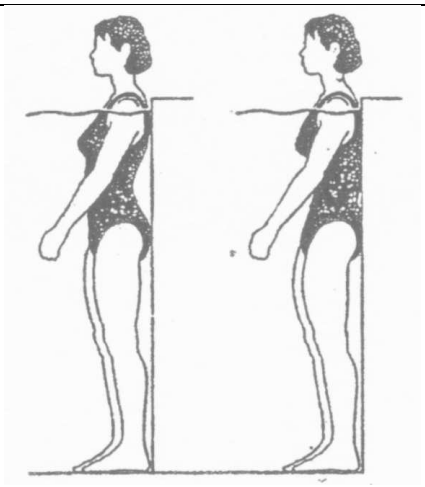
Mini Squats

	• Stand facing the wall with feet shoulder width apart using both arms for support. • Slowly bend knees and lower torso into water until the hips are hallway between the surface of the water and your knees. • Slowly arise back into standing keeping torso straight and heels on the floor. • Repeat 15 times, 3 sets.

Pelvic Tilt

	• Stand with back against pool wall with feet shoulder width apart and knees over the toes. • Contract the lower abdominals, pulling the pubic bone forward and up toward the navel (posterior pelvic tilt). • Hold for 10 seconds, then relax. • Repeat 10 times, 3 sets.

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PHASE 2: Intermediate Training

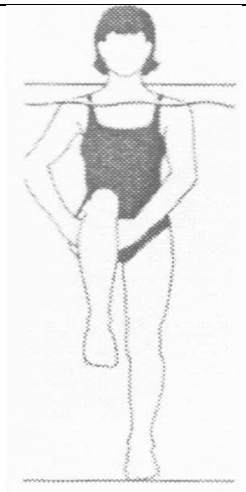
- May begin as early as post-op week 4/5 per MD approval

Goals:

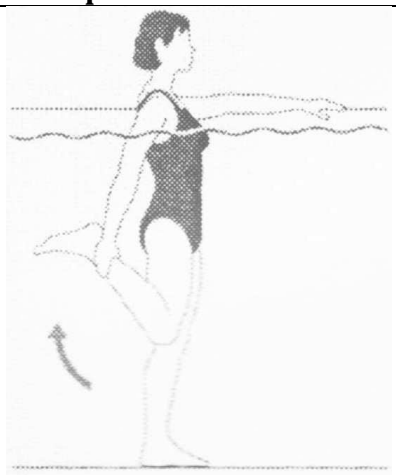
- Begin to incorporate components of strength training in the water.
- Add in low load stretches to increase muscle flexibility.
- Continue to increase endurance.

Exercises:

Knee to Chest Stretch

	• Standing with back against the pool wall, grasp behind your thigh and pull your knee to your chest. • Hold for 30 seconds. Return to starting position and perform on opposite leg. Repeat once more on each leg.

Quadriceps Stretch

	• Holding on to pool wall with one hand, use the other to pull the ankle of one leg towards your rear until a stretch is felt. • Hold for 30 seconds. Perform same on opposite leg. Repeat on both legs.

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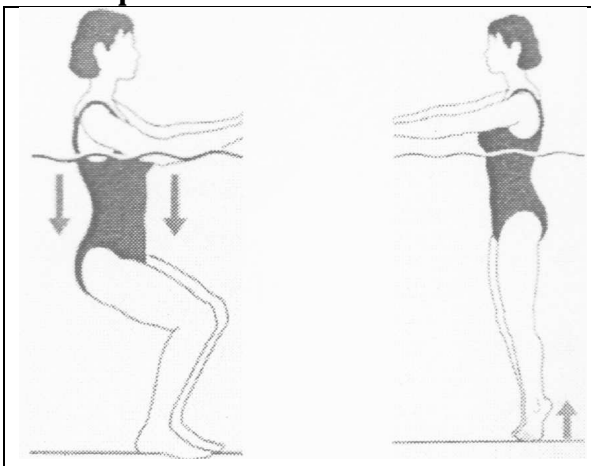
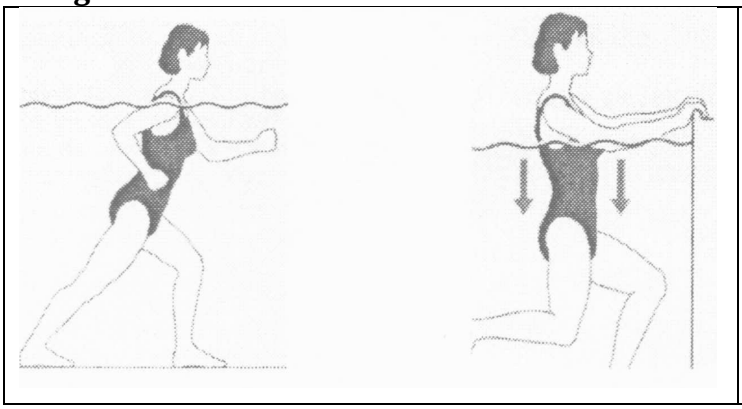
Mini Squats with Heel Raise



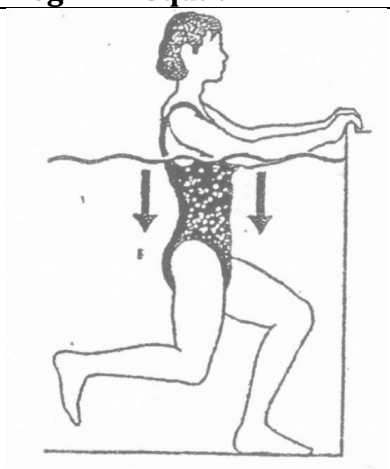
- With feet shoulder width part squat down keeping your head and shoulders over your hips.
- Raise yourself back up to standing position, then up onto your toes.
- This exercise should be one continuous motion from start to finish.
- Repeat _____times.

Lunge



- Start in standing position and take one step forward with one foot.
- Kneel down as far as you are comfortable.
- Return to start position and repeat with opposite leg.
- Repeat _____times.

Single Leg Mini Squat



- Stand facing pool wall with feet shoulder width apart.
- Bend knee of unaffected leg and slowly lower yourself into the water while balancing yourself on the involved leg.
- The knee should go no lower than the level of your hip.
- Repeat this _____times, _____sets.

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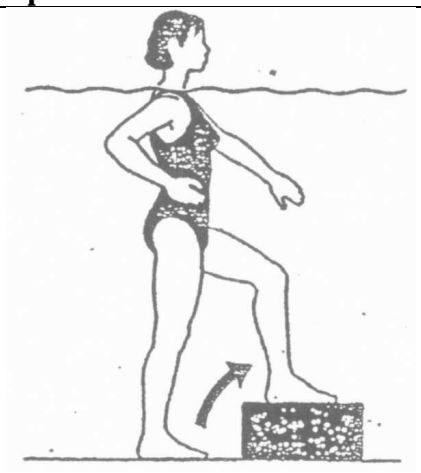
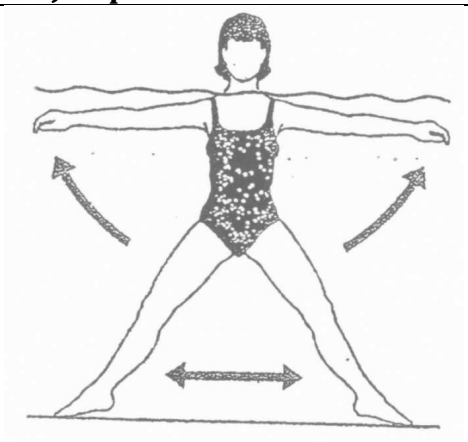
Step Ups

	• Stand on pool floor near a wall or railing for support. • Step up onto bottom stair leading with the involved leg; straighten involved leg on stair to raise the uninvolved leg up onto the step/stair. • Return to starting position by leading down step with the involved leg onto the pool floor, followed by the uninvolved leg. • Repeat _____times, _____sets.

Stride Jumps

	• Stand with feet together and arms at your sides. • Hop upward and simultaneously bring arms up to the surface of the water and spread legs aware from one another. • Hop up gain and return to the starting position. • Repeat _____times, _____sets.

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PHASE 3: Advanced Aquatic Training

- May begin as early as post-op week 6 if no hip flexor tendinitis.

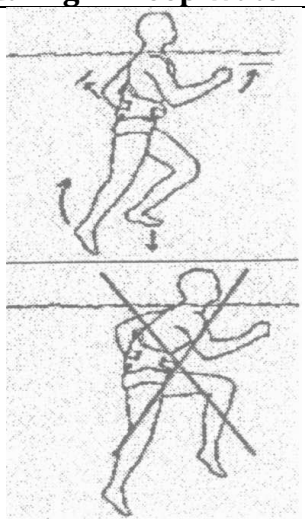
Goals:

- Increase total resistance.

Exercises:

- Kicking with kickboard across pool.
- Kicking with short fins across pool.
- Swimming front crawl/backstroke

Bike Pedaling in Deep Water

	► Using a float belt, go into deep water such that the feet are not in contact with the floor. (OK to stay near a wall just in case). ► While maintaining an upright position, slowly begin to bend knee and hip of one leg. Slightly kick bent leg forward while straightening out leg and simultaneously bent hip and knee of opposite leg. ► Perform this motion continuously for ____seconds.

Straight Leg Kicks/Flutter Kicks

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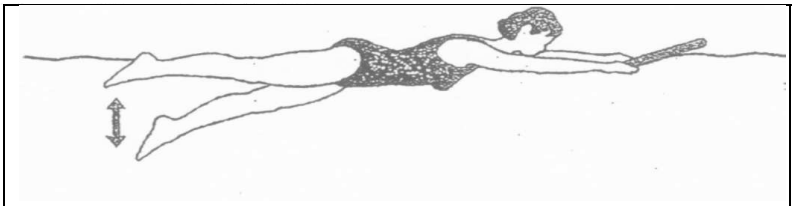	• Lie on stomach in water holding an inner tube or kickboard for support. • Keeping legs straight alternately (and gently) kick legs. • Keep feet under water while kicking, barely making a splash as you move through the water.

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Standing Crunches

- Stand while performing pelvic tilt.
- Hold a wall or flotation device snugly against your chest.
- Gently contract your abdominal muscles to bring your upper body forward.
- Hold the contraction for 5 seconds and then relax for 5 seconds.
- Maintain the pelvic tilt throughout.
- Repeat 10 times, 3 sets.

Pelvic Curl

- Place the back against the pool wall and hold on the edge of the pool with both hands.
- Slowly lift the legs off of the pool bottom until the knees are at 90 degrees and the lower spine is flat against the wall.
- Keeping the knees and hips bent, slowly lift the pelvis off of the wall using the abdominal muscles.
- Release the contraction and allow the pelvis to touch the pool wall again.
- Repeat this _____times, _____sets.

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