

ARTHRITIS PROGRAM FUNCTIONAL EXERCISE

The WaterART™ Arthritis program has been developed to make life easier for people with arthritis to function more efficiently on land. Activities such as shopping, climbing stairs, enjoying social and sporting activities can all be simulated in the water with just a little imagination on the part of the Instructor. When planning your classes think about suggestions you can make to your participants to relate the exercise to something that they might do on land. If you plan an inventory of joint actions, the muscles involved and then think of a water movement. Then decided how it can be useful on land. You will soon find how easy it is to come up with more exercise ideas for your class. Here are a few examples to get you going:



Basic Moves: Back kick or lunge in stationary position; cross-country movements, walking backwards with large stride.

Suggested working positions, Extended, Neutral, Suspended (advanced)

Action in water will help stretch iliopsoas muscles that are naturally tight.



People with low back problems should always be advised to use a stride length that is comfortable. For beginners or people with balance problems – work facing a partner to guide them safely and provide a comfort zone.

EXERCISE INVENTORY FOR THE LOWER BODY

HIP FLEXION: muscles involved – Iliopsoas & rectus femoris

DAILY FUNCTION: This action is needed to climb stairs – get in and out of chairs, cars etc.

Basic Moves: – walking forward and/or backward with leg lift, gentle jogging; kicking forward (beware of buoyancy and use arms in opposition for best balance) cross-country; rocking.

Suggested working positions: Extended, Neutral or Modified rebound.

Action in water performs active stretching for the hamstring and lower back muscles.

Avoid: straight legs if there is any sciatic irritation and lifting beyond 90 degrees if client has a hip replacement.

HIP EXTENSION: muscles involved: Gluteus Maximus, Medius & Hamstrings

DAILY FUNCTION: This action is needed for improved stride length

HIP ABDUCTION: muscles involved Gluteus Medius (Abductor)

DAILY FUNCTION: Needed for balance and stabilization for body - walking in a more functional and efficient manner.

Basic Moves: Jacks (side-stepping or using both legs at the same time), Rocking (side pendulum movements), cross walking (not for hip replacements)

Suggested working positions: Extended, Neutral, Suspended (advanced)

Action in water will stretch the inner thighs (adductors)

Avoid leaning to side – start with smaller lever (ie bent leg)

Watch buoyancy (especially for hip replacements). Keep feet close to pool floor for maximum efficiency and in good alignment: keep feet, knees, hip facing forward.

HIP ADDUCTION: muscles involved the adductor group.

DAILY FUNCTION: Agility and mobility – change of direction

Basic Moves: – same as above as these muscles work in opposition to the Abductors. Performing a front cross-walk will stretch the outer thigh (Abductor) muscles. Performing a back cross-walk will stretch the Iliotibial band.

Note: People with hip replacements should not cross the midline of the body (i.e. cue to bring feet together on a side stepping action).

HIP INTERNAL & EXTERNAL ROTATION:

muscles involved Gluteus Medius (Internal – anterior portion; External – posterior portion)

DAILY FUNCTION: Needed for better balance on land, mobility & agility.

Basic Moves: Walking or gentle jog: Charlie Chaplin walk or twizzle walk. Rocking, Jacks.

Balance exercises: Gate swing with knee bent to side – this can be done standing on one leg and sculling for balance or with a noodle for support.

Suggested Working positions: Extended, Neutral

Each movement works in opposition to the other for strength and stretching.

Note: People with hip replacements should not internally rotate hip past the midline.

KNEE FLEXION: muscles involved Hamstrings

DAILY FUNCTION: Needed for bending to pick up an object; stair climbing, walking, stepping up a curb, bicycling

Basic Moves: Jog -Touching heels behind back. Walking forward or backward with knees bent, rocking;

Strengthening exercises: forward bicycle on noodle, one leg bicycle forward in stationary position or suspended on noodle.

Suggested Working positions: Extended, Neutral, Modified Rebound, Suspended (with equipment)

Allowing the knee to bend behind the body will stretch the quadriceps muscles.

Be aware of buoyancy especially for people with knee replacements.

KNEE EXTENSION: muscles involved quadriceps

DAILY FUNCTION: Needed for functional walking, stepping over objects, off a curb, or go down stairs.

Basic Moves: Kicking - Small kick from knee lifts, walking backward or forward with knee extensions, Cross-country.

Strengthening exercise: backward bicycle in stationary position or with noodle.

Suggested Working positions: Extended, neutral. Modified Rebound, Suspended (with equipment) Beware of buoyancy when knee extension is combined with hip extension.



DORSIFLEXION- ankle flexion: muscles involved Tibialis anterior

DAILY FUNCTION: Needed for functional walking to lift toes off ground.

Basic Moves: Walking – on heels, kicking heels forward, cross-country – with heel down on front leg, jacks – heels to side.

Strengthening exercise: backward bicycle.

Suggested Working positions: Extended, Modified rebound, Neutral and suspended (advanced)

Walking backwards on heel stretches the calf muscles

PLANTAR FLEXION-ankle extension – muscles involved Gastrocnemius and soleus.

DAILY FUNCTION: Needed for functional walking to push off to take a step

Basic moves: Walking, kicking, cross country, jumping, jogging; jacks – all pointing toes.

Suggested Working positions: Extended, Neutral Modified rebound and suspended (advanced)

It is important to cue to bring the heels down to contact the pool floor. Buoyancy lift the heels and some participants can spend all their time in the water on the toes which can over train the calf muscles and cause cramping.

Prepared by Drusilla Leitch, Master Trainer and Certification Director Speedo sponsored WaterART™ Training and Certification Programs