



NATIONAL ROWING CENTRE OF EXCELLENCE



NRCE FLEXIBILITY EXERCISES

(UPDATED 24/09/10)

Static stretching for rowers

Appropriate flexibility is an essential component of high performance rowing. An athlete's ability to achieve the correct positions during the stroke cycle is closely related to joint and muscle flexibility in certain key areas.

- Important areas to focus on:
 - Gluteals
 - Hip flexors
 - Hamstrings
 - Calf and ankle
 - Combined rowing specific stretch

This program also includes other areas than those listed above, and focuses on static stretching. Flexibility can be gained in ways other than static stretching alone, but these stretches are a good starting point for all athletes.

For guidance on other stretches, or other methods of gaining flexibility please consult a NRCE Physiotherapy Network provider. A list of these is provided at:

http://www.rowingaustralia.com.au/hp_sports-medicine_sports-medicine.shtm

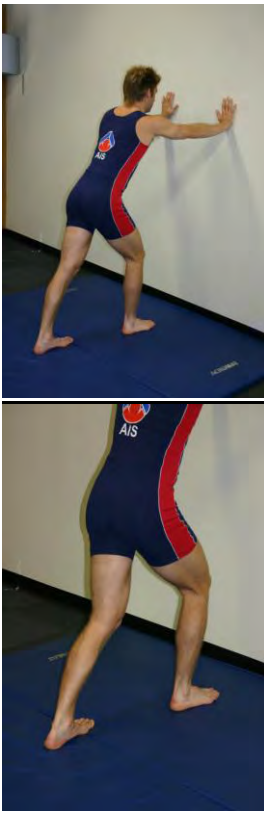
When and how to stretch

- Static stretching is best done after exercise when the body is still warm
- Ideally it should be done after rowing or ergometer training
- Warming up for rowing is best done using a dynamic warm up, which is covered in the *NRCE Dynamic Warm Up* document. This can be found at:

http://www.rowingaustralia.com.au/hp_sports-medicine_physiotherapy.shtm

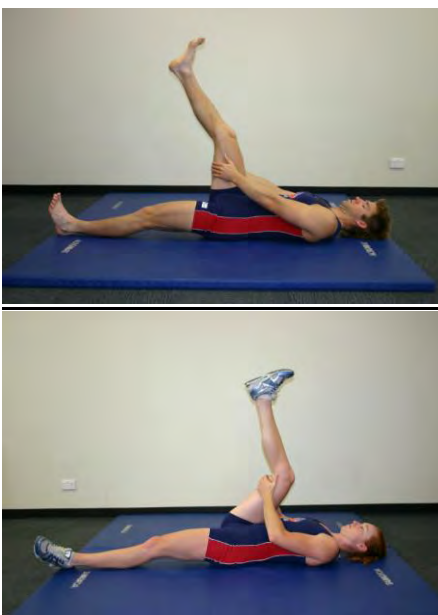
- Take each exercise to the point of mild to moderate stretch
- Stretching should not cause excessive discomfort
- Hold the stretch for 20-30 seconds
- Repeat 3 times each side

Calf and Ankle



- Make sure the back foot is facing straight to the front
- Keep your heel on the floor and your knee straight
- Lean forward so that your knee moves forward relative to your ankle
- The stretch should be felt in the upper calf
- To stretch the lower part of your calf, repeat the stretch with your knee bent 30°

Hamstrings



- Hold your thigh in vertical position with both hands
- Keep your ankle and foot relaxed
- Straighten your knee until you feel a stretch in the back of the thigh
- If you can fully straighten the knee with the thigh vertical, repeat the stretch while the thigh is closer to your chest

Alternate Hamstrings



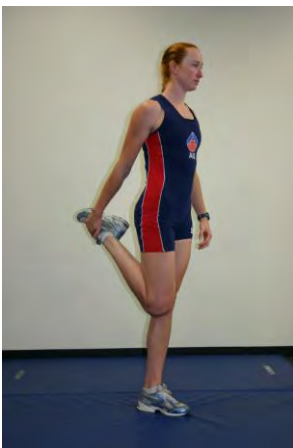
- Place your foot on a low bench or stool
- Lean forward with a flat lower back, bending from the hips
- Grasp around your thigh
- Hold your thigh as you move your body weight away from the bench
- This will cause your knee to straighten and generate a stretch in your hamstrings

Long Hold Hamstrings



- This is an option if the standard hamstring stretches don't give much benefit
- Lie in a doorway, with one leg through the door and the other straight against the edge of the door
- Position your hips a distance away from the door so that you feel a mild hamstring stretch
- Hold this for up to 5 mins per leg
- If your leg gets sore, or goes numb, break up the 5 mins into smaller blocks

Quadriceps

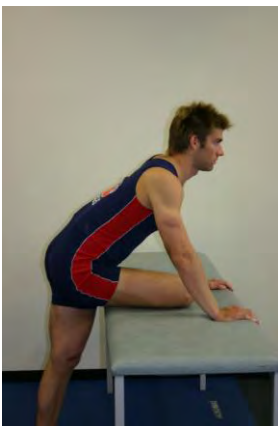


- Grasp your ankle and pull your heel towards your bottom.
- Tighten your stomach and keep your low back flat by tucking your bottom under / tilting your pelvis back
- Pull your knee back so that it is in line with your thigh
- The stretch should be felt in the front of the thigh

Gluteals



- Hold your right knee with your right hand, and your right ankle with your left hand
- Rotate the leg by drawing the right ankle around
- Hold the rotation while pulling your knee to your chest
- Make sure your knee is directed towards the centre of your chest
- The stretch should be felt in the back of your hip



- These two stretches are a good progression from the previous gluteal stretch
- Position your lower leg across the bed or floor underneath you
- Keep your knee in line with your trunk
- Lean forward while keeping your pelvis square to the ground
- Occasionally the third stretch can cause knee pain. If this occurs, use either of the first two stretches and check with your physiotherapist.

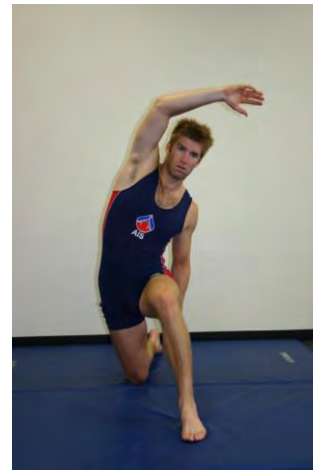


Hip Flexors



- Position your front foot level with your hands
- Support your upper body weight on your hands and front foot
- Your back leg may be bent or straight, or with weight on your knee, depending on what produces the best stretch
- Move the front of your hip towards the floor
- The stretch should be felt in the front of the hip

Alternate Hip Flexors



- Kneeling with the front shin vertical
- Tighten your stomach to keep your lower back flat
- Tuck your bottom under to tilt your pelvis backwards
- Lunge forwards so that you feel a stretch in the front of the hip
- A variation that can help stretch the outside of the hip and side of your trunk is to add a side bend, with arm over head
- The stretch should move to being a bit higher and lateral to the previous stretch

Quadratus Lumborum



- Sitting with the left leg straight and right heel tucked into your groin
- Place your left hand on your right knee, and use this to pull your trunk into rotation
- Your shoulders should align with your straight leg
- Place your right arm over your head and bend towards your left knee
- The stretch should be felt in your right lower back

Lumbar Rotation



- Lying flat on your back
- Rotate your right leg across your body so that you generate a rotation in your low back
- Keep your shoulders flat on the ground
- The stretch should be felt in the right buttock and low back
- Repeat both sides

Lumbar Extension



- Lying on your stomach with hands in a push up position
- While leaving your low back and stomach relaxed, push your shoulders up until you feel tightness in your low back
- Hold for 10 secs and repeat 10 times

Slump



- Sitting on a bench, tuck your chin to chest and drop your shoulders towards your hips so that your spine is as flexed as it can be.
- Pull up your toes and foot.
- Straighten your knee to the point where you feel tightness in your leg, buttocks or low back.
- At the point of tightness, lift your head up as you continue to straighten your knee.
- Repeat 20 times each leg, x 3

Combined rowing specific stretch



- The goal is to achieve a position that involves:
 - Heels on the ground
 - Knees straight
 - Hips flexed with a flat spine
 - Arms and head in line with trunk
- Start with the feet and hands wide apart and gradually move them closer together
- A measurement between the toes and hands can be made to measure progress and improve motivation

Latissimus Dorsi



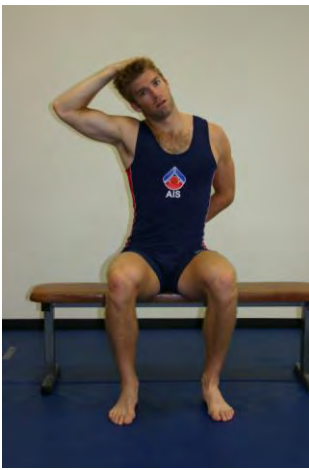
- Kneeling, place both hands out to the front far enough so that when you rock back towards your heels, your thighs are still close to vertical
- Place your right palm facing up on your left hand
- Rock back and drop your right shoulder down and to the right
- The stretch should be felt in the outside of the shoulder and side

Posterior Shoulder



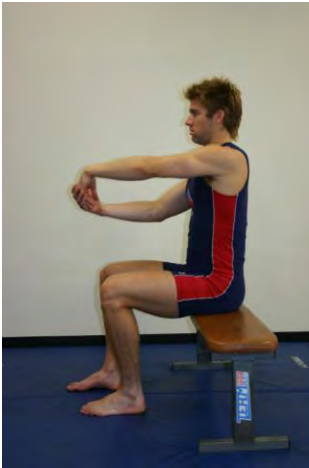
- Grasp your elbow with your opposite hand
- Squeeze your shoulder blades together and hold them back as you do the stretch
- Draw your arm across your body until you feel a stretch in the back of your shoulder
- You may need to vary the height of your elbow to get the best stretch

Scalenes



- Sitting, place your left hand in the small of your back so that your left shoulder stays back
- Use your right hand to draw your ear towards your right shoulder
- The stretch should be felt in the left side of the neck
- Repeat both sides

Forearm stretches



Wrist Extensors

- Left elbow straight with palm facing down, wrist bent and fingers straight
- Reach with right hand from underneath and pull the left hand down
- The stretch should be felt in the top of the forearm
- Repeat both sides



Finger Extensors

- Same positioning as above, except with the hand in a loose fist
- Pull the hand down
- The stretch should be felt in the forearm and closer to the hand
- Repeat both sides



Wrist and Finger Flexors

- Left elbow straight with palm facing up
- Reach with right hand from underneath, grasp the palm and fingers and pull the left hand down
- The stretch should be felt in the inside of the forearm
- Repeat both sides

Warning

- If you experience any unusual discomfort or pain doing any of these stretches please review with your local NRCE Physiotherapy Network provider.



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Additional Stretches prescribed by NRCE Physiotherapy Network Provider



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