



### 1. Calf

Calf stretch requires you to keep your heel on the ground and your knee straight. Keep your back and leg in one straight line. Slowly bring your shin towards the top of your foot until you feel a stretch in the back of the calf.



### 2. Soleus/Achilles

Now from the calf stretching position, bend the knee and feel the stretch more towards the achilles tendon. Hold for 30sec each side and repeat three times.



### 3. Quadriceps

Lying on your side, grasp the foot and pull the knee towards the buttock until a stretch is felt in the thigh. Remember to keep your thigh in line with your torso as there is a tendency to want to flex the hip slightly. Hold for 30sec each side and repeat three times.



Maintain full hip extension



### 4. Adductors

Keep back straight and feet flat on the ground. Feel the stretch in the groin gently start the further you bend one knee. Keep your body facing forward. Hold for 30sec each side and repeat three times.



Avoid fore/aft sway



## 5. Hamstrings

Be careful to keep back straight in the hamstring stretch, lumbar spine flexion should not be used to compensate for tight hamstrings. Bend knee if you have to but preferably keep knee straight. Bring your chest and your thigh closer together until you feel a stretch in the back of the leg/knee.

Bend opposite knee, do not reach for toes.



Hamstrings (alternative).



## 6. Gluteus

Lean into a stretch of the buttock in the indicated position. Sit down on the forward leg/knee and feel the stretch in the forward buttock. Be careful to not put pressure through your forward knee. Anyone with a previous knee injury should consult Putney Chiropractic Centre for an alternative buttock/gluteus stretch.

Gluteus rear view



## 7. Lower Back

Lie on your back, bring one knee up towards your chest and attempt to rest it on the ground on the opposite side. Grasp that knee with the opposite hand and feel the stretch in the low back and buttock. Keep both shoulders on the ground outstretch the other arm and turn head to that side.



### **8. Lumbar Fascia**

This exercise is the only one where rocking is permitted.



### **9. Hip/Buttock**

Grasp one knee and bring it towards your chest. If you don't feel the stretch then bring your knee towards the opposite shoulder.



### **10. Lumbar Musclature**

The child's pose as seen in yoga.



### **11. Psoas/Hip flexor**

Be careful not to hyper extend the back. Don't have the front knee bent any more than 90 degrees (always keep the ankle in front of the knee). Slowly bring the front of the hip further into extension (closer to the ground). This can also be done with the back knee off the ground if pain is felt in that knee.



Increases the stretch with the arm in this position.



### **12. TFL/Abductors**

Very difficult one to feel a stretch in the lateral/side hip muscles. Consult your chiropractor or personal trainer to be shown how to do this properly.

## ChiroSki: MUSCULAR STRENGTH AND ENDURANCE

These exercises are designed specifically for the skier. It is advisable to start these exercises a minimum of six weeks prior to departure, following a 8-10 minute warm up.



### 1. Phantom chair

Ankle at 90 degrees, knees at 90 degrees, hips at 90 degrees, keep your back straight against the wall and be careful to keep your low back in a strong straight position (suck in the stomach). Do not take knee angle beyond 90 degrees. Hold for as long as possible and time yourself. Aim to beat the time and increase the length of the hold every week. Start with 10 seconds, aim to get to a point where you can hold for 2-5 minutes.



### 2. One leg phantom

From the position above simply lift one leg off the ground a few inches. Do not let your body/torso lean away from the side of the lifted leg.



### 3. Stability squat

Ball starts in the low back hollow as show. Feet out in front of knees so when the squat position is assumed the knee will be directly above the ankle.



Assume the squat position and hold for 5 seconds. Repeat 10 -15 times and feel the ball roll up and down the spine as you repeat the manoeuvre. Hold for longer as you get stronger. Make sure knees are directly above ankles in the squat position.



#### **4. One leg stability squat**

As above, only with one leg off the ground. This is a very difficult exercise and should be done carefully to begin with. You may find you are unable to squat very far in this exercise so just do what you can initially. Make sure knees are directly above ankles in the squat position.



Do not let your torso lean to one side as your body tries to compensate and recruit other muscles.



Keep torso and legs in the same plane.



Avoid lateral movement.



#### **5. Lower limb trunk curls**

Assume push-up position on the ball. Keep wrists directly below shoulders. In one slow and fluid movement roll ball underneath you as shown. Keep core muscles strong and back as straight as possible.



Maintain trunk posture.



### **6. One leg lower limb trunk curls**

From the same starting position lift one leg off the ball and keep the raised leg and back in the same plane. Maintain this through the exercise. Do not arch the back excessively as your body will tend to do.



### **7. Gluteal stability squats**

Lift one leg in this position and maintain torso and thighs in the same plane (not pictured). Then lower buttock and bend the knee to really feel the muscle burn (see next picture).



Lower trunk on one leg, keep ankle directly below the knee.



Maintain trunk posture, keep torso and legs in the same plane.



Avoid lateral movement and pelvic drop.