

XScape Race Team Stretching Workshop 17 Aug 2008

Why stretch?

- Prevents Injury
- Permanently Increases flexibility
- Increases power through a better range of movement
- Reduce soreness and fatigue after exercise
- Gets you ready to perform as an athlete

Develop a Personal routine

- Stretching shouldn't have to be supervised and/or enforced
- Children, especially girls, are typically flexible but this can be improved as they grow
- Stretching is just as important, and should be looked at, like strength or cardio training
- There are two main types of stretching... Dynamic and Static

DYNAMIC Stretching

What is it?

- Primarily for preparing the muscles for impending action and performance
- Start slowly and increase the range of speeds and movements
- Combines warming up with stretching the muscles you use while skiing

How do we do it?

- For skiing we are assuming we have boots on and have poles available
- Start with the middle of the body and major muscles, finishing with smaller muscles
- Start slowly and finish with more dynamic, explosive moves last

What does it achieve?

- Should gradually increase breathing, heart rate and temperature
- Increases blood circulation and warms up muscles
- Loosens up joints and readies the athlete for movements at the required levels of force and speed

When do we do it?

- Before training or racing!

STATIC Stretching

What is it?

- Slowly taking the muscles to their full range of movement
- Primarily for making permanent improvements to flexibility

How do we do it?

- Hold stretches for 30 seconds to be effective and try to do at least 2 repetitions
- Hold, count, repeat and don't bounce!
- Breathing and relaxation is important, it shouldn't hurt!

What does it achieve?

- A greater range of movement
- Improves performance and power
- Prevents injuries and helps recovery time after exercise (Slalom racing knees and back are problem areas)

When do we do it and what should we stretch?

- Do when warm, ideally after exercise
- Dedicate 30 minutes for doing your static stretching routine
- Skiers should try to work extra hard on calves/ ankles due to wearing boots
- Upper body and back is just as important as legs

Dynamic Stretching/Warm Up routine for Skiers

Do this on the hill just **BEFORE** training or racing and do 8 reps minimum of each exercise

Loosen up / Warm up (3 minutes)

- Walk on toes forward and backwards
- Knees rotations (8 x each direction)
- Ankle rotations –or- Draw circles with one leg

- Hoola Hoops (8 x each direction)
- Trunk twists (8 x each direction)
- Jog in place with high knees until breathing hard

Increase Intensity once warmed and blood flowing (5 minutes)

- Standing squats
- Standing lunges
- Standing lateral lunges 45 degrees –or- sumos

- Knee outs
- Bum kicks
- Hamstring kick to hand -or- leaning on poles swing leg

- Alternate arm swings
- Back slaps
- Neck rotations

You can add some static stretches once warmed up for specific problem areas such as lower back or hamstrings before competing or training. You only need to hold for stretches for 10-15 seconds.

It takes less than 10 minutes of your 2 hr. session to be adequately warmed up / stretched!!

If you are not adequately warmed up / stretched

- You will not perform at your best in a race
- You will probably pick up injuries
- You will probably get stiff and sore
- You wont get the most out of training

Static Stretching routine for Skiers

- Should take around 30 minutes
- Each stretch should be held for at least 30 seconds
- Each stretch should be done at least twice
- There are loads of good stretches, these are particularly good ones for skiers
- Numbers refer to diagrams on following pages

Back

- 24. Cobras
- 25. Twisting cobras
- 3. Lower back, knee(s) to one side
- 4. Lower back knee to chest
- 21. Lumbar rocking with both knees to chest
 - or-
- 22. Kneeling forward reach lumbar

Gluteus

- 20. Gluts laying on knee
- 8. Upper Glut laying on back

Hips and Quadriceps

- 5. Side Lying Upper quads –or- standing hook onto fence or wall
 - or higher difficulty-
- 23. Double lean back quad stretch
- 10. Standing hip stretch leg on wall
 - or- Lying leg tuck hip stretch
- 11. Hip flexor on one knee push hip forward keep back upright
 - or-
- 13. Harder hip flexor, sink lower and go more forward

Hamstrings

- 26. Standing toe raised hamstring- Leg straight and toes up sink into back foot
 - or- 15. lay on back and pull with towel- or – do same with a partner
 - or- 6. simple standing stretch

Adductor (inner thigh)

- 19. Adductor standing, straight back and press to each side
 - or-
- 30. Adductor standing with side stretch.

Abductor (outer thigh / hip)

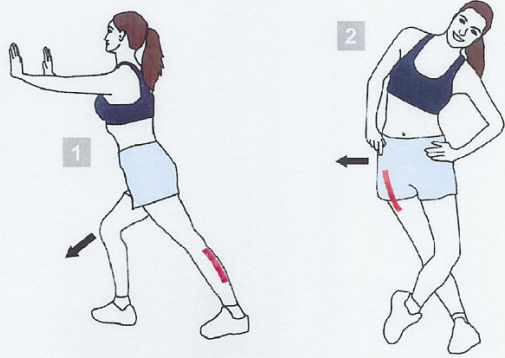
- 2. Standing leg cross abductor
- 31. Tensor stretch

Calves

- 1. Calf stretch press against wall, flex toes up and push into wall/ step
- 16. Double heel drop on stairs w/straight leg (upper calf)
- 17. Double heel drop on stairs w/bent knee (lower calf)
- 27. Ankle side stretch

Neck / shoulders

- 28. Neck rotations and pulls to one side
- 29. Shoulder stretch

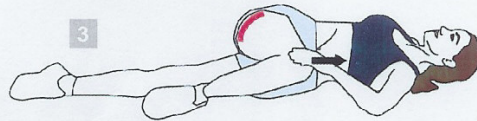


1. CALF STRETCH

- lean into wall, immovable object with arms
- keep rear leg straight at the knee
- keep heel down, stretch upper calf in back leg

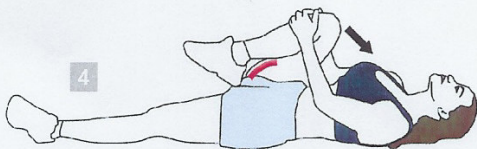
2. UPPER, OUTSIDE THIGH (IT Band) STRETCH

- cross legs over in front of body
- lean into straight leg
- stretch in upper, outer thigh of straight leg



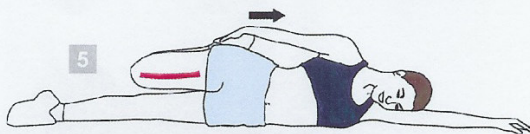
3. BACK CROSSOVER STRETCH

- lie on back, bend knee and hip, pull upper leg towards head
- keep shoulders flat on floor
- stretch low back and glute



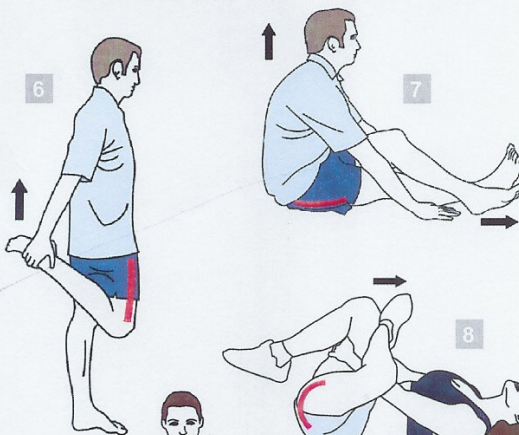
4. LOWER BACK KNEE TO CHEST

- lie flat on back, clasp hands on top of one shin
- pull up towards chest
- stretch glute and low back



5. UPPER LEG QUADRICEPS (SIDE LYING STRETCH)

- lie on one side, bend upper leg at knee
- clasp around ankle and pull into bottom
- stretch felt in front thigh

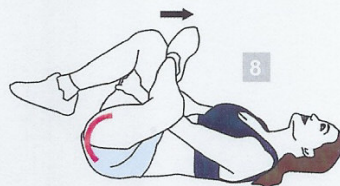


6. ALTERNATIVE QUADRICEPS

- standing, bend one leg at knee
- clasp around ankle and pull slowly into bottom
- feel stretch in front thigh

7. SIMPLE HAMSTRING STRETCH

- cross legs, places hands flat on floor
- keep back straight, slide hands forward slowly
- feel stretch in rear thigh



8. UPPER LEG (GLUT STRETCH)

- lie flat on back, cross legs
- pull up on uncrossed leg
- stretch in glute



9. UPPER LEG GROIN (BUTTERFLY) STRETCH

- sit up straight, heels together
- pull feet into groin, keep knees down
- stretch along inner thigh



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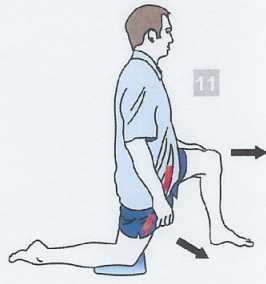
	Direction of movement
	Where stretch is felt

Profeet stretching guide (hold each stretch for 30-45 seconds, ease into stretch and don't bounce, best done when warm)



10. ILIOTIBIAL STRETCH

- place outside of one foot up on a step, chair or ledge
- with a bent knee and hip, 'sit' weight into leg on chair
- feel stretch in glutes and outside thigh



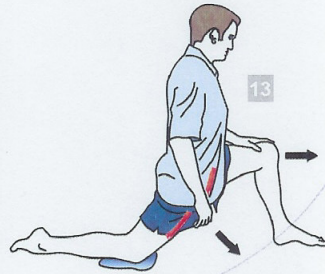
11. EASY HIP FLEXOR STRETCH

- kneel on a towel, hip and knee at 90°
- push forward onto opposite leg and push hips forward
- feel stretch in front and upper thigh



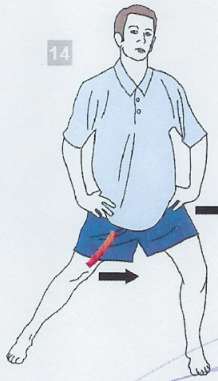
12. GLUT STRETCH

- bring knee up to chest and cross foot over other leg
- 'hug' the thigh and bring into chest
- feel stretch in glute and outside thigh



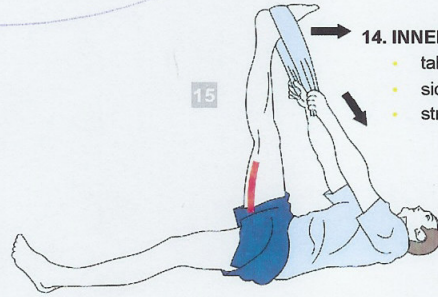
13. HARDER HIP FLEXOR STRETCH

- one legged kneel on a towel
- flex at hip and knee, in addition to a push in hips forward forward onto that side
- feel stretch in front thigh and groin



14. INNER THIGH STRETCH

- take a small step sideways, keeping that leg straight
- side bend at knee and place weight onto opposite leg
- stretch inner thigh of straight leg



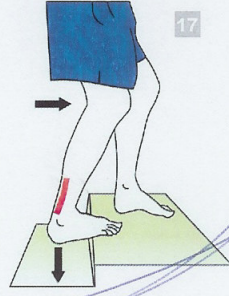
15. HARDER HAMSTRING STRETCH

- lie on back, hook rolled up towel around mid foot of bent leg
- keep flat back, pull on towel slowly
- feel stretch in back of thigh



16. CALF STRETCH

- let heel of one foot hang over edge of a step
- keep knee straight, sink body weight into leg
- feel stretch in upper calf below the knee









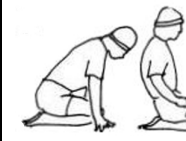
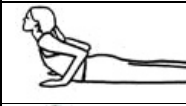

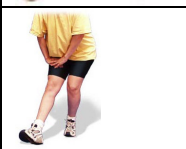

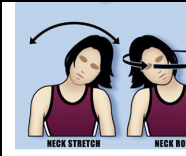

17. LOWER CALF STRETCH



- bend back leg at knee
- keep heel down, sink into stretch
- stretch lower calf into achilles



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KEY	
	Direction of movement
	Where stretch is felt

		<p>11. Hip flexor (better explanation) 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.</p>
		<p>19. 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. Avoid fore/aft sway</p>
		<p>20. Gluteus 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 not do this stretch.</p>
		<p>21. Lumbar Fascia This exercise is the only one where rocking is permitted.</p>
		<p>22. Lumbar Musclature The child's pose as seen in yoga. Stretch forward with arms and lengthen back</p>
		<p>23. Double upper quad stretch. Do this slowly d carefully and do not do if you have knee problems</p>
		<p>24. Cobra Slowly extend upwards keeping hips on the floor and look upwards towards ceiling.</p>
		<p>25. Twisting Cobra Same as cobra but add a twist by looking over each shoulder</p>
		<p>26. Standing toe raised hamstring Leg straight and toe up sink into back foot. Hands can be on either leg. Keep your back straight!</p>
		<p>27. Ankle side stretch While standing roll ankle to outside and press down.</p>
		<p>28. Neck rotations and pulls to one side Try to touch ear to each shoulder. Gentle rolling of the neck and try to look over each shoulder</p>
		<p>29. Shoulder stretch Trap straight arm with bent arm and raise bent elbow as well as drawing elbow into body.</p>

	<p>30. Adductors Straighten and Stretch the knee on the side to be stretched and bend the opposite knee. Lean your upper body to the stretched knee joint until you feel the stretching on the inner side of your thigh.</p>
	<p>31. Tensor (thigh spreader) Stand in a light walking stance with your right leg forward and lean on the wall with your left forearm. Cross your left leg with the right. Then push your hips towards the wall. Should that not stretch enough, place your left leg a bit farther away from the wall.</p>