

Stretching & Injury Prevention
(Talk by Mitchell Phillips from StrideUK, 17/2/10)

Hip Flexors

People who spend large portions of their day seated (working behind desks; with computers; driving) are prone to issues with their hip flexor muscles. Prolonged periods of sitting down cause these to constrict and they need to be full stretched to prevent both permanent shortening effects and the risk of injuries when exercising.

The recommended exercises are lunge or long stance ones:



STEP 1: Kneel down with your back straight.

STEP 2: Step forward with your right foot while keeping your left knee on the floor. Put your hands on top of your right thigh.

STEP 3: Slide your back leg behind you until you feel the stretch in the front of the hip. To intensify the **leg stretches**, push your hip forward, straighten your body, and put your hands on your front knee. Hold for 10-12 seconds and then change sides.

See the following website for further details & an animation of the movement:
<http://www.abc-of-fitness.com/leg-stretch/hip-flexor-stretch.asp>

The exercise demonstrated during the talk was just the last step – the pose was held for around 30 to 40 seconds and then the legs reversed. Repeat a couple of times, alternating between legs. In addition to the hip flexor, this stretch should also help with back pain during and after running.

Quadriceps

The next most important muscle to stretch, this is connected to the pelvis at one end and to/below the knee at the other. The quads take the impact each time your foot lands and get constricted. If this constriction happens continually and you don't counteract it, the muscles can become shortened, affecting your posture by pulling your pelvis forwards and down.

The opposing muscle behind the leg is the hamstring and in many cases where runners complain of hamstring problems, the trouble is actually due to the quads. When these are tight, they can pull the hamstring as well.

The recommended exercise is to stretch the quad by bending the leg at the knee and holding the ankle behind the back:



STEP 1: Stand up with your left, supporting leg bent slightly. Bend your right leg and hold your right foot.

STEP 2: Holding your right foot with your right hand, pull your foot up towards your bottom. Keep your back as straight as possible, your hips pointing forward, and your knees together. To intensify the stretch, push the knee of the stretched leg slightly further. Hold for about 8-10 seconds and then repeat on the other leg.

See the following website for further details & an animation of the movement:
<http://www.abc-of-fitness.com/leg-stretch/standing-quadriceps-stretch.asp>

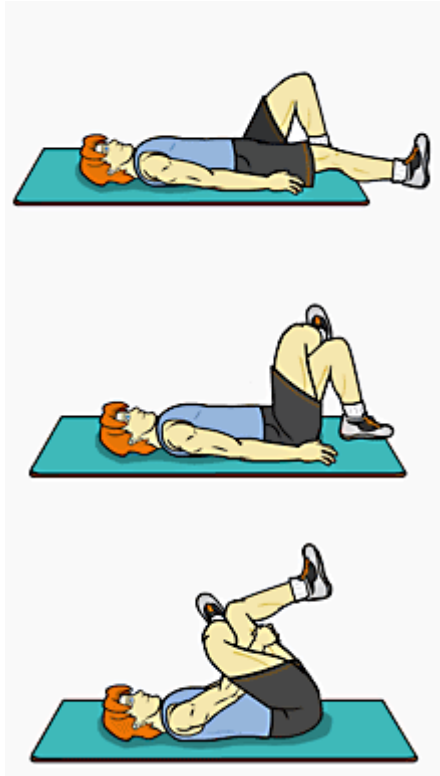
The guidance from the talk was to pull the foot as close to your body as possible and lean slightly forwards. The standing leg can be bent, but the stomach should be kept tight. Again, the suggested time was 30 to 40 seconds and repeat, switching legs between each repetition.

If preferred, this exercise can also be performed from a prone position. Lay flat on your front and lift each leg in turn behind you.

Glutes

As with the quads, if these muscles become constrained or overly tight, they will have an impact on posture. This impact comes from lateral rotation, which can have a large affect whilst running. If your leg becomes laterally rotated and it hits the ground during a strike, the pressure/stress is not evenly distributed through it as it is meant to be, causing pain and possible damage.

The recommended exercise is to stretch from a prone position:



STEP 1: Lie on your back (on the mat or on the floor). Bend your left knee.

STEP 2: Cross your right leg over your left knee so your right ankle rests just above your left knee.

STEP 3: Hold behind the left thigh with both hands and gently pull towards you until you feel the stretch in your bottom and outer thigh. Hold for 8-10 seconds then repeat on the other leg.

See the following website for further details & an animation of the movement:
<http://www.abc-of-fitness.com/leg-stretch/glute-stretch.asp>

Once again, the suggested times from the talk were about 30-40 seconds and repeat, switching legs each time.

Calves & Achilles

Another key area to stretch, the focus from the talk was on static stretching to be performed after runs.

The recommended exercise is to use a wall or other vertical surface and put your foot against it at an angle, aiming to get your heel as close to the surface as possible. Bend your back leg and keep the front one straight. Hold for between 30 and 90 seconds, switch legs and repeat – twice per leg.

To stretch the lower calf and Achilles, do the same again with the front leg bent.

Foam Roller

Offered for sale on the StrideUK website for £15 and £4 p&p, these are high density polyetherlene tubes that provide a similar effect to sports massage and are good for all the muscles covered above, along with the IT band (a muscle connected to the pelvis and knee along the outside of the leg which is prone to injuries).

The technique is to rest face down in a press up position, but on the elbows rather than hands and with the roller just above the knees, so that the quads are resting on it. You move your body backwards so that it rolls up the quads to the pelvis and back again, moving your elbows backwards or forwards as required. Keep the stomach tight as you use it and lift your toes from the floor. The back needs to be protected by keeping it up slightly. Once you have rolled straight on, turn so that you are resting on the outside of one leg and inside of the other, then reverse.



See the following website for further information on the roller and on the gait analysis options offered by StrikeUK:
<http://www.strideuk.com/equipment.php>