

Streeech... in ten favourite ways

By Paula Shingler, BSc, MCSP

The bush season for orienteers is about to arrive. Great for some but for others it brings back feelings of fatigue, frustration (especially me) and stiffness. Improving your flexibility will improve your efficiency, strength and endurance by increasing joint range. This, in turn, will reduce recovery time and post-event stiffness which makes the whole experience more pleasant.

So what happens when we stretch? Muscles are made up of fibres which are thin microfilaments that overlap with additional connective tissue. When stretching the overlap of the microfilaments decreases, the fibres elongate and the connective tissue aligns itself to the same angle as the fibres. The more fibres that are stretched the longer the muscle. Muscles also have sensory nerve endings that relay messages to the brain about the muscle length and will trigger the muscle to contract when this position is reached. As we stretch the muscle the new position is relayed to the brain so the muscle can stretch further before the stretch reflex triggers a contraction. If a *sudden* extra stretch occurs, this reflex triggers a contraction to prevent over stretching. So basically stretching teaches muscles to elongate and allow more movement, teaches the stretch reflex not to kick in too early but also allows it to kick in to prevent excess movement. Clever really!

When should you stretch?

Stretching should never be done without a 10 minute warm up jog first and a warm down 10 minute jog after. Prior to competing or a heavy training session, it is now not recommended to stretch but instead complete a series of drills to warm up all muscle groups. You will need to do a separate stretching session that is *not* part of another training session. My favourite stretches focus on the pelvis and the muscles surrounding it. This is because, as orienteers, we rely on trunk stability and flexibility for fighting our way over and through thick vegetation. Here they are:

1. Head, neck and shoulders- flexibility here will affect the whole spine – if this is tight it has repercussions all the length of the spine. Try sitting or standing, relax shoulders, then chin to chest x5, rotate head to right x5, then to left x5, then do circles with shoulders making sure you pull your shoulder blades together - try 5 each way
2. Lumbar spine extensions - to get us all out of the slumped position we all love to adopt. Lie face down on the floor, keep your hips on the floor, extend up onto your elbows first and then up onto your hands if able to - do make sure your hips remain in contact with the floor or you will not be extending properly, 5 at a time is plenty to start with.



3. Glutei (buttocks) – sit on the floor, bend up one knee, leave your other leg on the floor, cross bent knee over straight leg. If this is not tight then apply extra pressure from opposite leg



4. Psoas - muscle within the pelvis that runs from the lower lumbar spine through the pelvis to attach on the inside of the femur (thigh bone). It is a stabiliser for the trunk. Get into the lunge position, stretch forward until you feel tightness in your abdomen.



5. Hamstrings - there are many hamstring stretches but I like this one as you are not using your body weight to apply force so you have more control of the stretch. That means you are less likely to overdo it. Lie on your back, bend up one leg and leave the other flat on the floor, grasp the bent up leg behind the thigh and try to straighten your knee



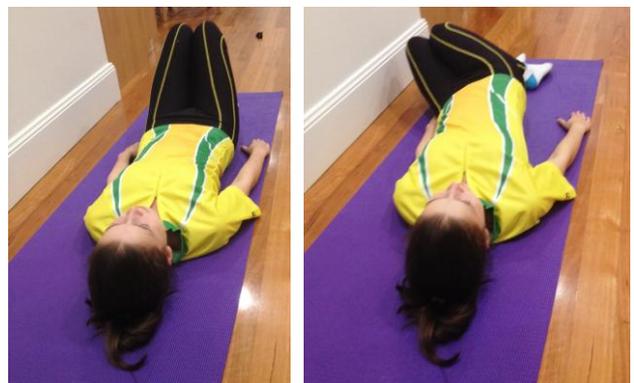
6. Quadriceps (thigh muscle) - runs from the hip to below the knee. It lies over 2 joints, the hip and knee, so in order to stretch it both these joints must be bent too. Lie on your stomach, bend up one knee, reach back and grasp your foot, gently apply pressure.



7. ITB (ilio tibial band) - this runs down the outside of the leg from the hip to just below the knee. If it is tight it can cause knee pain and is often misdiagnosed. Standing cross one leg over the other, then lean to the opposite side and you will feel the stretch down the side of the leg. You can also increase the stretch by turning the foot onto its side.



8. Low back- this stretches all the lumbar area and into the buttocks. Lie on your back, bend up knees, let knees fall towards one side, keeping hips and shoulders flat on floor.



9. Piriformis – this runs from the sacrum (very bottom of the spine) to the head of the femur and travels through the pelvis. This is a pelvis stabiliser and prone to tightening. Lie on your back, bend up both knees, put one knee over the top of the other, then grab the underneath thigh and stretch up



10. Calves (gastrocnemius) - sitting with your back supported, bend up one knee and then let it drop out to the side, then, keeping upright, pull the toes on the straight leg up towards you. If this does not stretch then grab a belt or strap and hook it over your foot and pull to gently apply pressure.



So that is a few of my favourite basic stretches. There are many ways to stretch each muscle but these are the ones that I feel are the most effective and least likely to be over done! Some of these can be progressed as your flexibility improves. Please remember that all stretches are just that- a stretch, and should be done gently until the point of tension is reached, held at that point for a count of 3 and then released. Each stretch should be repeated 5 times in a session and this number can be increased as you improve but start gently. Never force the range of movement or nibble into the end of the range - you run the risk of tearing those muscle fibres which is a bit of a shame really.

So just be careful. Get professional advice if you are not sure about how to do stretching, if you should be stretching, and ensure you get stretches that are specific for your particular needs. Stretching can make you feel really good but only if done right - if not you will quickly not feel quite so good!

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[AO E-News Editor would like to assure readers that no junior squad members were hurt in the preparation of this article]