

The Sports Injuries & Fitness Clinic

Paul McKenzie's Top 10 Exercises for Distance Runners



Important

If you have an injury or you experience pain while doing any of these exercises please seek the advice of your GP or a suitably qualified Sports Therapist (like my self). These exercises are not intended to replace any rehabilitation exercise you are currently following unless I personally assess you and you are no longer under the care of another therapist.

These exercises are for those with at least a moderate level of fitness (regular runners).

Practice all the exercises that require dumbbells, barbells or medicine balls without any of these equipment first to ensure you are happy with the mechanics of the exercises.

Warm up before performing these exercises.

Stretch all your muscles dynamically pre workout and statically post workout.

Running injuries have numerous causes that can be divided into extrinsic (relating to things outside of the body e.g. running technique, over training, poor footwear and inadequate nutrition) and intrinsic (relating to things within the body e.g. muscle imbalances, weakness and joint instability).

This seminar focuses on exercises designed to combat / prevent the intrinsic causes of injury and includes methods of improving performance.

If you are unsure which of these exercises you need to employ, have a **Running Injury Screen**¹ and **Functional Movement Screen**². If you are already injured you will need a full **Orthopaedic Assessment**³, all of which can be arranged with me.

1. Clam (resistance band)

Purpose: strengthen the hip abductors to prevent hip imbalances (especially excessive hip adduction) that often lead to knee pain (e.g. ITB syndrome and patellofemoral knee pain).

Method: place a resistance band around your knees. Lie on your side with your hips and knees flexed to about 30° (fig.1.1). Keeping your heels in contact with each other, lift the top knee until the leg is in a vertical position (fig.1.2).



Fig 1.1



Fig 1.2

2. "Take Off"

Purpose: develop functional strength, balance and stability in your ankles and calves.

Method: start in a modified running position (fig. 2.1) then drive your back leg forwards with a high knee lift, and briefly hold this position while on the ball of your other foot. Use your arms to help with the drive phase (fig. 2.2)



Fig 2.1



Fig 2.2

3. Single Leg Squat-to-Row (cable machine – low pulley)

Purpose: strengthen the entire posterior chain, improve balance, proprioception and co-ordination.

Method: stand on one foot with the other leg flexed at the knee and hips to 90 degrees. Hold the cable in your hand on the same side as the raised leg (fig. 3.1). Now perform a single leg squat by bending the knee and hip of your stance leg while extending the opposite arm (forward) and leg (backwards) under control (fig. 3.2). Try variations (e.g. place the free hand in the small of your back or hold the pulley on the side your are standing or stand on a stability cushion or BOSU or close your eyes).

Fig 3.1



Fig 3.2



4. Bulgarian Split Squat (bench and dumbbells)

Purpose: improve strength and power in your quads, glutes and hamstrings.

Method: stand hip width and place one foot on a bench behind you (fig. 4.1). Keep your torso upright and bend your lead knee until your lead thigh is no more than horizontal and the rear knee is close to the floor (fig. 4.2). If need be adjust your stance so that as you descend, the knee of your stance leg does not go past your toes. Consider using a barbell across your shoulders instead of dumbbells. If you wish to engage your hamstrings more, lean forwards as you descend. Use the TRX for added balance and co-ordination training.

Fig 4.1



Fig 4.2



5. Hip Hitch (step)

Purpose: improve strength and co-contraction of hip abductor and contra lateral QL to stabilise the pelvis in the frontal plane.

Method: stand with one foot on a bench and the other one off it, to the side (fig. 5.1). Keeping both knees straight, allow the foot of the hanging leg to drop below the height of the bench by dropping the pelvis of that side, then use your pelvic / hip muscles to lift the same leg so that the foot is now level with the bench (fig. 5.2)



Fig 5.1



Fig 5.2

6. Glute Kick Back (resistance tube)

Purpose: strengthen the gluteus maximus to assist the hamstring and balance the pelvis in the sagittal plane.

Method: place your foot in the middle of a resistance tube or band and adopt a forward flexed position with your fists on a table or against a wall (fig. 6.1). Maintain your body position and extend your hip behind you (fig. 6.2). Engage your abdominals to help maintain lumbopelvic alignment. This can also be done using the cable machine.

Fig 6.1



Fig 6.2



7. Eccentric Calves (step)

Purpose: improve collagen synthesis within the Achilles tendon especially in the presence of (and to prevent) Achilles Tendinosis (often mistakenly called Achilles Tendonitis).

Method: stand on the edge of a step with just the ball of one foot (fig. 7.1). Slowly lower your heel as far as you can (fig. 7.2) then use your other foot to return you to the start position.

Fig 7.1



Fig 7.2



8. Alternate Split Squat With Medicine Ball Twist (medicine ball)

Purpose: Improve strength and coordination in both sagittal and transverse planes, improve lower body muscular endurance and eccentric strength and enhance core stability.

Method: start in a split stance with the medicine ball outside your lead leg (fig 8.1). Jump up and switch legs in mid air while swinging the ball to the other side of your body (fig. 8.2). Try to take off with both feet at the same time and land with both feet at the same time. Maintain correct alignment and keep the heel of the back foot off the floor.

Fig 8.1



Fig 8.2



9. Alternate Split Squat With Clean & Press (dumbbells)

Purpose: Improve strength and coordination in both sagittal and frontal planes, improve lower body muscular endurance and eccentric strength, enhance core stability and develop upper body strength endurance.

Method: start in a split stance with the dumbbells held at the sides of your body (fig. 9.1). Jump up and switch legs in mid air while cleaning the dumbbells to your shoulders (fig. 9.2). Jump up and switch legs in mid air while pressing the dumbbells overhead (fig 9.3). Jump up and switch legs in mid air while lowering the dumbbells to your shoulders (fig. 9.4). Jump up and switch legs in the air while lowering the dumbbells to the start position (fig. 9.5)



Fig 9.1



Fig 9.2

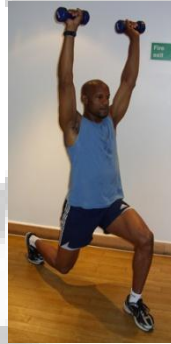


Fig 9.3



Fig 9.4

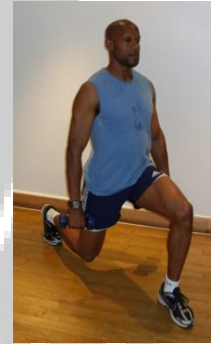


Fig 9.5

10. Stability Ball Roll Out (stability ball)

Purpose: strengthen the anterior abdominal wall especially the rectus abdominis and external obliques isometrically to assist lumbopelvic stability.

Method: kneel behind the stability ball with both hands on top of it (fig. 10.1) Keeping you elbows and hips extended, roll the ball forward allowing your knees to extend and your shoulders to flex (fig 10.2). Try to maintain a straight line from knees to shoulders throughout.

Fig 10.1



Fig 10.2



When combined these exercise train all key running muscles in all three planes. There are a multitude of other exercises that are effective for runners and depending on your current fitness / injury status, you may find some of these ones more effective than others. There is no need to do all 10 in one session however if you wish to, ensure you do no more than two sets of 15 to 20 reps of exercises 3, 4, 8 and 9 since much more than this may overload your quads, glutes, hamstrings and lower back too much.

- 1 **The Running Injury Screen** determines your potential for running related injuries both subjectively (Q & A) and objectively (physical assessment and observation).
- 2 **The Functional Movement Screen** assesses bilateral mobility and flexibility in key movement patterns giving an overview of your ability to move freely and balanced.
- 3 **Orthopaedic Assessments** specifically determine the nature and cause of existing injuries and include a treatment and rehabilitation plan.

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