

CARNEGIE SPORTS PHYSIOTHERAPY CLINIC

RUNNING DRILLS:

FOR OPTIMAL TRIATHLON RUNNING PERFORMANCE

ASSESSMENT EXERCISE DRILL

Single leg balance with an extra twist!

Stand on one leg, knee slightly bent and turn the head only from side to side (as if viewing surroundings whilst running) whilst saying the days of the week or generally talking.

This will assess dynamic balance combined with the ability to dissociate movement of the neck from the thoracic spine, an important psychomotor coordination skill for proficient triathlon running

....and for extra practice.....

If you find it difficult to stand on one leg, balance, and talk, or are screwing your toes up inside the shoes, this is an exercise that can be done as often as one likes; several times per day, or even before a run to wake up the receptors in the feet and legs to feel the ground, or as you start to tire in a run and the feet start to work less well. It is very effective to do this as often as possible during the day such as when making a cup of tea while the kettle is boiling etc,

Difficulty holding balance and talking freely indicates poor recruitment of dynamic muscle stabilisers for balance and movement control and inappropriate fixing to gain balance, eg by clenching the teeth or screwing up the toes.

By carrying out regular practice of the following running drills you will further address any problems you may have along with developing triathlon running proficiency in the specific points identified with each drill.

RUNNING DRILLS

Practice the following drills at least 1 x week either before a run or as a specific training activity, and incorporate the ones that you find most difficult into your regular runs.

Fast feet roll throughs

Maintains ankle mobility, promotes foot and calf muscle strength and function.

Prevention and rehabilitation of calf and shin problems, Achilles injuries

- **Start position:** Bend both knees
- On alternate feet, roll through each foot from heel to toe, making sure you push through the big toe, before lifting the heel off the floor
- When bringing the foot through for the next step, ensure the toes are pulled up towards the knee (ie ankle at 90°)
- Make the movement a definite rolling through the ankle joint, feeling the muscles in the calf and foot working
- Knee should remain bent at all times and the angle should not change. Hips should not go up and down (ie remain parallel with the floor from the initial start position) All movement should come from the ankle joint itself
- Perfect Posture
- Running arms

High knee walking, front knee bent

Promotes and trains postural control, stability and balance. Encourages co-contraction and strengthening of gluts, hamstrings and calf muscles. Helps prevent loss of technique

- **Start position:** Stand on left leg, with the right knee at hip height, thigh parallel with the floor. Right knee is bent, with knee at 90°, ankle at 90°, and toes pulled up towards the knee
- Go up onto toes on the left leg, holding for one second at the top, straightening the left knee and contracting the gluts
- Walk through onto right foot and repeat
- Running arms
- Perfect posture

High knee walking, front knee straight

Promotes and trains postural control, stability and balance. Encourages co-contraction and strengthening of gluts, hamstrings and calf muscles. Helps prevent loss of technique.

Encourages active hamstring lengthening whilst engaging postural control and lumbar stability

- **Start position:** Stand on left leg, with the right knee at hip height, thigh parallel with the floor. Right knee is bent, with knee at 90°, ankle at 90°, and toes pulled up towards the knee
 - Go up onto toes on the left leg, holding for one second at the top, with the left knee straight, contracting the gluts.
 - Straighten the right knee, maintaining posture
 - Walk through onto right foot and repeat
 - Running arms, Perfect posture
- NB if poor flexibility in hamstrings, only have upper knee at a height that you can straighten knee and maintain posture

Walking lunges

Trains postural control, gluts strength and hip control through range. Encourages co-contraction and strengthening of gluts and hamstrings, whilst lengthening quads and hip flexors. Also encourages rotational control

- **Start position:** Stand on left leg, with the right knee at hip height, thigh parallel with the floor. Right knee is bent, with knee at 90°, ankle at 90°, and toes pulled up towards the knee
- Go into lunge, with right leg in front
- Posture perfect, pelvis level and straight, front knee and foot in line with right hip. Right hip, knee and ankle at 90°. Running arms
- Use gluts of front leg to lift self up onto front leg. Maintain posture and go into start position on other leg i.e. left knee at hip height, knee bent at 90°, ankle at 90°
- DO NOT let front knee fall inwards
- Maintain perfect posture throughout the movement
- Running arms

Toes up/ Straight legs fast

Encourages ankle mobility and calf strength and power. Also encourages good foot contact with the ground, to enable good push off through feet. Encourages extensor muscle activation

- Standing up on toes, knees straight
- On alternate feet, push off through the toes and ankles, driving off the floor, pulling toes towards your shin as you drive off the floor

- Aim for height off the floor and not distance
- Perfect posture
- Running arms

With the fast foot drill it is an explosive dorsiflexion/plantar flexion (toes up/toes down). You start on the toes, and then on alternate foot, push off the floor explosively and pull those toes towards the shin, (similar to Irish dancing but going for height). The explosiveness comes from the dorsiflexion and the fact that you then land on the mid foot so you have range to push off through.

Piston hamstring

Promotes hamstring activation and correct movement patterning. Also helps co-ordination and prevents loss of technique. Good for rehabilitation of hamstring injuries and hamstring re-activation after back injury

- Do single sided initially
- Keep left (stance) leg straight, up on toes
- Draw right heel up under buttock, and knee up in front of hip
- Right thigh and lower leg should be almost horizontal
- Right ankle at 90°
- Alternate left leg toes up/ straight knee drill with right leg piston hamstring
- When able to do well, can progress to alternate legs piston hamstrings or two piston hamstrings on right/two on the left
- Posture
- Running arms

Stick men

Encourages postural control and maintenance of technique. Activates extensor pattern of muscle firing, encouraging co-contraction of gluts, hamstrings and calf muscles. Good for co-ordination. Initial start position as for high knee drill

- **Start position**- Stand on left leg, with the right knee at hip height, thigh parallel with the floor. Right knee is bent, with knee at 90°, ankle at 90°, and toes pulled up towards the knee
- Go up onto toes on the left leg, holding for one second at the top, straightening the left knee and contracting the gluts
- DO NOT push off the left foot, but swap legs by driving the right foot down towards the floor
- IMPORTANT – do not push up off the stance leg, but concentrate on driving the top leg downwards, maintaining a solid knee on ground contact, landing on the midfoot. Feel the buttock on the extending leg
- Posture
- Running arms
- Pause for a second before repeating