



SPEED

*A free e-magazine for speed coaches available from
tonylett1@gmail.com UKA Level 4 speed,
strength and conditioning coach*

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FITNESS AND INJURIES

Ranalph Finnes needed to be fit to complete his many treks across the Antarctic. Edmund Hilary had to be extremely fit to climb Mount Everest before he said, 'It's not so much the mountain we conquer, it's ourselves,' and indeed I had to be fit in 2014 when I climbed in the High Atlas mountains of Morocco, and finally, 40 year old sprinter Kim Collins said at the recent IAAF Indoors, that the reason he was still running so well was down to his fitness. The point is, for all of the above reasons, and many more besides, the emphasis is on fitness in order to achieve a goal, not just on the ability to do sport well; which is why I use a lot of this magazine space on fitness and leave the high achievers to depend upon their genes and natural talent. To my mind, fitness achieves three major roles.

- Improved health
- Reduces the risk of injury
- Improved athletic performance

Improved Health

Exercise boosts the immune system by raising the white blood cell count, which in turn reduces the chances of weakness, fends off colds and the likelihood of catching diseases. Bounding strengthens the bones and reduces the chance of developing stress fractures such as Osgood Schlatter

Reducing the risk of injury

Stretching and warming up the muscles to make them ready for action beyond their norm, and by practicing the stretch-shortening action of plyometrics along with increasing muscle strength will all reduce the risk of injury and keep an athlete in the sport for longer. Keep a good posture and the correct athletic action. Just because it is summer does not mean that plyometrics can go by the board until winter comes around. Here are a few exercises that can be incorporated into an outdoor schedule

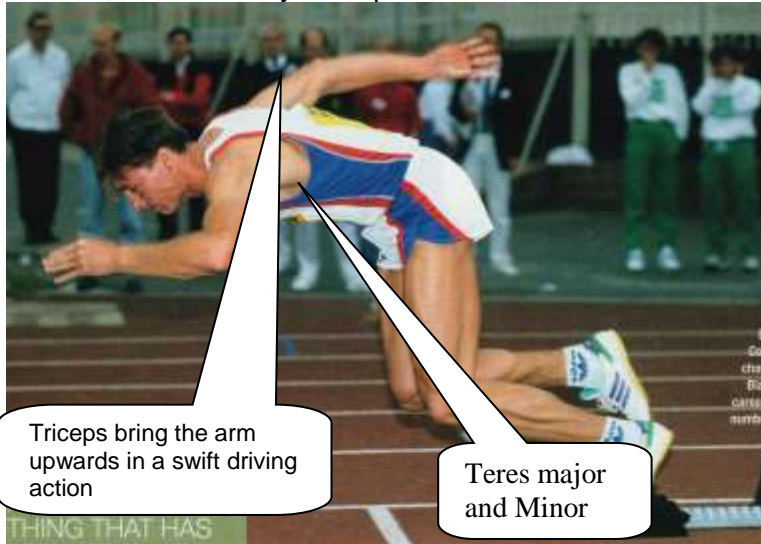
- Bounding for height off alternate legs for 20-25m
- Bound high 4 times while advancing, run 20-30m and repeat 4 bounds and run
- None stop bunny hops over 20-40m depending on age and ability
- None stop bunny hops over widely spaced cones.
- Bound for length for 20-30m
- Single leg takeoff Box bounding for height landing on sand or a mat.
- Standing start box bounding with stick landing
- Standing start box bounding with squat landing with reaction jump for height
- As above but with a reaction bound for length
- On the spot upward squat bounds with medicine ball held low at arms length
- Med ball bounding in a series of consecutive bounds.
- As above with a set number of bounds in each direction
- Bounding race carrying a med ball.
- Squat bounding onto and off a box
- As above but using multiple boxes with ever increasing spacing.
- As above but holding a medicine ball, with stick or squat landing
- Squat bound onto a box with med ball, bounding off and throwing the ball for height
- As above but throw the ball for length, then run to catch it up
- Multiple box bounding with a med ball and throwing it off the last box using either a chest throw or bucket toss from between the legs
- As above but throwing or tossing the ball following a squat landing off the last box

Improving Athletic performance

You can take a horse to water etc, but if you pay attention to detail in your programme planning and execution then performance will follow until you reach the limit of the athletes ability

STRENGTH

Last month I did a little bit about the importance of the hamstring in straightening the knee and this Mark Shearman photograph from Athletics Weekly highlights the muscle in action. It also shows the calf muscles in action and the necessity of maintaining triceps strength with the TERES Major and Minor muscles that join the body to the underside of the arm, so necessary in a sprint start.



The Triceps Kick Back replicates this action where the shoulders are above the supporting arm and the upper arm maintains its position while the forearm that is holding a dumbbell is driven smartly through an arc of 90°. Meanwhile the Teres muscles will benefit from pull ups done in a similar position except that the dumbbell is lifted directly upwards from as close to the floor as possible. On the track it is possible to do triceps dips using a steeplechase barrier.

Performance



Note Allison Felix's arm action is in the direction of running and not across the body which can be counter productive. There is good leg extension and knee lift with good hip mobility keeping the legs in line rather than turning in at the knee.

I have a number of books to give away to a good home. The problem may be that I live in Cornwall and they would have to be collected.

LILLIAN (Board - Olympic silver medallist) a fairly rare book
THE 1983 IAAF CHAMPIONSHIPS BOOK
TRACK AND FIELD. A rare GDR manual translated into English
BORN TO RUN
IAAF 1990 quarterly magazine for June
INJURED RUNNERS
SEB COE

PS In last months issue I mentioned that bringing the centre of mass ahead of the hips can result in a hamstring injury, well now I have learnt that Adam Gemeli suffered the same fate when lunging for the finish which would put a lot of extra stress on the h/s if it was in tension while driving forwards.