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SPEED

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RELAYS

Relays often make the difference between winning and losing a league match, and at the risk of repeating myself, practice on training nights can make all the difference.



Here are a few reminders
'HAND' the incoming runner calls for the hand of the outgoing runner when their speeds are synchronized. The outgoing runner puts their arm back to near horizontal, thumb down, and never looks round. The change should take place within the box with room for the incoming runner to run alongside if necessary. If the baton is dropped it is the responsibility of the incoming runner to pick it up.

When things go wrong



The incoming runner has the baton in the wrong hand with the danger of tripping over the heels of the outgoing runner. Bend runners have the baton in the right hand; straight runners hold it in the left hand



Calling 'HAND' too late results in a pile up, slowing of the baton and a low level change.

The relay box is 20m long with an acceleration zone of 10m where no baton change can take place

The best 200m runner usually performs best on the second leg which can often be 140m of sprinting

IN THE 4X400 RELAY, the order of lane position for the 2nd and 3rd change over is controlled by the position of the incoming runner passing the 200m mark.

MAXIMUM VELOCITY is affected by the position of the hips, the down-force applied to the ground, and the gastroc and soleus muscles of the calf, therefore the wise coach will ensure that these areas are covered in each week's training schedule.

A study of 33 sprinters at the 1996 Olympic Games it was shown that regardless of speed, the actual swing time of the legs was pretty much the same; so if it wasn't this that made one athlete faster than another, it must be something else – stride length and 'down-force'. For the latter, the muscles *switch on* just before ground contact (GC)

Stride length is controlled by the high position of the hips, their ROM and therefore flexibility of the hips, making pre stretching of the glutes in warm up a **must**. Exercises include hip swing extensions, high knee drills and strong abdominals will all help to improve GC force, reduce GCT and increase ground reaction force.

From this it can be concluded that lower hips will result in a longer GCT and a lower GRF.

With so many Diamond League matches on TV I make a point of picking out one athlete on the start line and studying his or her style, start position, reaction movements of the arms and legs, time to come upright and ultimate result sometimes I learn nothing, but sometimes I see just one variation to the norm that is worth exploiting.

For younger athletes at the county championships, I did a 'watch and learn' technique with some none competing runners as we watched a standing start race. I told the young athletes to watch the movement of the legs/feet when the gun went. As expected they all raised the leading leg and put it down again without any forward movement. We then thought about how this waste of time could be avoided, before suggesting that the leading leg was obviously their favoured leg, so why not switch legs and lean into the start so that their favoured leg came through immediately with a driving stride. Then I told them to go off and practice it before they forgot.