



Speed for Sport



All athletes need speed .. presented are a series of tips to enhance your speed performance
Adapted from: Patrick Beith (US Coach) .. www.FootballSpeed.com

Tip 1: Running Faster .. Complete recoveries

Don't force it .. QUALITY is more important than quantity.
Be sure to have complete rests between efforts .. aim to enhance your "speed",
rather than "speed endurance" .. both are important, but require different approaches.

Tip 2: Drive Phase .. don't force yourself to "stay low"

The drive phase happens right after you react to the gun; your initial 8-10 steps is considered your drive phase.
Athletes know that staying low creates better angles setting up a more productive acceleration phase. The problem is that often athletes try to stay low ...
by breaking at the hips they hold themselves down .. this will limit the amount of force that can be applied to the ground and leads to poor acceleration.
Let your upper body unfold naturally .. you want to keep a straight line from your back ankle all the way to your head.
"Staying low" will occur naturally as you develop strength.

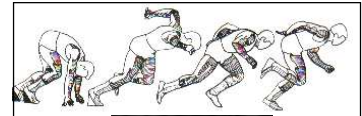


Other cues: - drive out so the body is at a 45° angle to the ground;
- keep the heel recovery low in the first 6-8 strides;
- step over the opposite knee, and drive the foot down into the ground to create maximal force.



Tip 3: Acceleration Phase

The acceleration phase (0-30 metres) is associated with a higher stride frequency than at maximum speed. Often athletes are too concerned with leg speed, so instead of trying to powerfully "drive out" they "spin their wheels". Leg speed is important, but so is power application.
Make sure as you accelerate that you feel your feet behind you.
If you feel your feet driving behind your centre of mass, then you know you are finishing off ("toeing-off") your leg drive.
"Spinning the wheels" (excessively fast leg turnover) will result in not using your "power potential", and can result in a slower performance.



Tip 4: Relaxation

One of the most difficult things involved in running fast, is staying relaxed .. while you run fast.
Many athletes think that in order to run fast, they must run hard. Running "hard" leads to too much tension .. just look at the facial expressions on sprinters to determine their level of relaxation at speed.
A tight face and squinting eyes, clenched fists, elevated shoulders, shortened stride .. all these say: "tension".
But, an athlete with cheeks flopping has mastered the relaxation technique, and is getting the most out of their sprinting. The athlete is letting their muscles work for them and is maximising their speed potential.



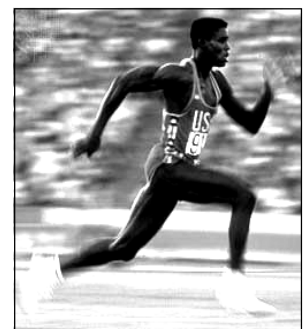
Hint: - relax your fingers (control your clench, but do not strain);
- relax your face (smile even)

Relaxed fingers, relaxed facial expression means absence of tension.
Just before you race: grit your teeth, and open your lips as wide as they will go - feel your lips, chin and neck stretch to their limit; hold for 3-5 seconds — release; repeat.

Relaxation at speed is a skill

Tip 5: Hands: Open v. Closed

Opinions vary. What is best for one athlete is not necessarily the best strategy for another.
If the athlete is not staying relaxed in their arms and shoulders, then perhaps look at their hands. Sometimes, open hands, fingers extended, leads to flexing of the forearms and tension of the upper arm and shoulders.
The same can happen if you make a fist when sprinting.
A suggestion: "pretend you are holding a potato chip in your hands, and, you don't want to break it" .. the relaxation you feel in your hands should carry into the rest of your arm and up into your shoulder. Keep the hands loose, but not open.
Relaxed control of movements is **the key** .. strategies will differ.
Every athlete is an experiment of "one".



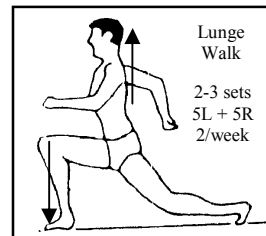
It's what you learn after you think you know it all, that counts .. comments and ideas always welcome

Tip 6: Stride Length

I would advise staying away from too many activities that seek to specifically improve stride length; good technique and strength improvements will facilitate optimum standards; some specific drills can help .. e.g. lunge walk. Avoid downhill runs on too steep a slope (a braking action is encouraged if legs get "out-of-control").

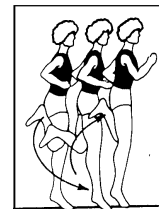
In general: short down hill runs on <3% (gentle) slope; (i.e. 3m even descent in every 100)

See: www.nwaswimaths.com .. Programs ► Athletics Programs .. Power Activities



Tip 7: Other Cues

- # Refine all basic drills: e.g. A&B-Skip, A&B-Run, Alt. Butt Kicks, ...
Basic cue: (A&B) *Toe Up—Heel Up—Knee Up* .. *step over the knee of the support leg.*
- # Foot strikes on forefoot, and under the centre of mass: foot may hit a short distance in front of the COM (Centre of Mass), but the further in front of the COM the foot strikes, the higher the braking force.
(*Negative foot speed* .. foot travelling backwards as it strikes the ground)
- # Tight stomach, flat back, hips forward.
- # Shoulders down and relaxed.
- # Face and neck relaxed.
- # Sprints .. short distances (<40m) / complete recoveries.
- # Learn and use 3-pt. starts.
- # Practice starts from blocks at the start of the session at least once a week.



Very few athletes run really "fast" ... but, **all** can seek to run their fastest .. fundamental drills are an essential focus

There are many other issues that require attention .. **every athlete is an experiment of one** .. refine and apply your activities, adapting to the needs of your athlete and the circumstances in which you are competing / practising.

A few ideas you may consider for your program:

1. Stick Drill ..

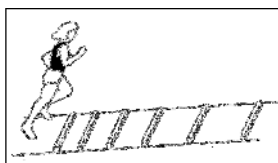
How often: 1-2 times per week

Distance: sprint out to 20-30meters

Reps: 4-6 (after introductory efforts)

Recovery: 2-4 min.

When: after your w/u .. before speed endurance sets or longer runs.



www.nwaswimaths.com ► Athletics Programs

Acceleration Ladder .. *The Stick Drill*

(settings outlined .. various session ideas)

Ins & Outs ... *Outs & Ins*

Striking Paper

2. Short Uphill Runs .. Steep incline, duration of effort should be 4-6 seconds; stadium stairs ..

fast steps (8-16 steps) .. explode ► contact with every step



How often: 1-2 times per week

Distance: sprint out to 15-35m

Reps: 4-6

Recovery: 2-4 min.

When: at the end of your session, being careful not to over-strain.

Steep slopes can take the body beyond desired postural sprint alignment; not too many

Resistance Runs (once a week) may include tyre tows, resisted starts/runs contrast training, e.g. ankle weight drills ► release.

3. Ins & Outs .. Outs & Ins ... see separate sheet (www.nwaswimaths.com .. Programs ► Athletics Programs)

4. Hurdle Bounds

In general, work with hurdle heights you can straddle stand over

Maximum of 20 contacts per set; 2-3 Sets.
5 Hurdles (poly pipe, cardboard, foam): 40 - 76 cm.
4 x 5H with pre-jump.

4 x 5H **Explosive** .. **only** after rhythm and confidence established.

Knees to chest, rather than chest to knees:
aim for maximum clearance (*Knees Up*)

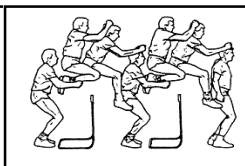
Head (eyes) Up: however, retain eye contact with hurdle.

Feet 3-5 cm. apart on landing (balanced landings) ..
if insecure .. step away; start again.

1-2 mins. between each series of bounds; don't race through the sets.

Resistance Bounds: 2 x 5 Ankle Wts.—release (1 x 5)

Variations: Laterals; Spot-the-Landing; Variable Hurdle Heights.



Be careful don't overdo bounds .. finish feeling as if you could do more .. gradual progression. In general 50-60 contacts .. Always in good sneakers .. don't do too much, or rush - **Beware:** pay back day is the next day, or, Day 2.

QUALITY
is more important than
Quantity

Plan your program .. be patient .. conduct and record regular evaluation tests

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