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- -Amazing athletes

Three Foundational Exercises Explained

For speed development and acceleration development

-Ins and Outs-Acceleration (Stick) Drill-V Max (Wicket) Drill

Appropriate from the earliest to the latest stages of training

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Ins and Outs

PhD level acceleration development <u>and</u> speed development Introduce 7-8 weeks into training Genesis/Inspiration/Reference:
"Thoughts About Sprinting and
Sprint Training (Speed
Development from a Sports
Medicine Viewpoint)"

Professor Manfred Steinbach, M.D. – May 1968

Neurologist – placed 4th in LJ, Rome 1960

Objective:

- -Maximal Velocity (Vmax) speed development
- -Technical refinement and posture retention throughout

Concentration

Testimonial:

- "Taught" in Level 2 school
- It took me 6 years to learn
- -I am still refining my understanding

Observation:

Ins and Outs is <u>not</u> "Sprint-Float-Sprint"

There is no "float"

Components:

- -acceleration segment
- -ins
- -outs
- -finish-coast-stop segment

Each bears clarification

Set up



Demonstrations





Acceleration segment

- -Aggressive, mindful acceleration
- -secondary importance
- -segment length varies 20-35m (25m!)
- -acceleration fundamentals equired

Acceleration rules apply

<u>ln</u>

- -maximal sprint (big hits)
- -tertiary importance
- -segment length varies 10-20m (12m!)
- -sprint fundamentals required

Goal: execute at performance sprint intensity

<u>Out!!</u>

- -Maintain posture & freq'ncy (lesser hits)
- -Primary importance!!
- -outs refine and polish the ins (IMO)
- -segment length varies (10,12,15m)
- -sprint fundamentals required

Goal: execute performance sprint posture and frequency at reduced intensity (ROM will be slighty less)
Intensity (Force application into the ground) is ONLY variable
(downhill analogy/ "freewheeling")



Useful considerations

- -first use 6-7 wks into trng
- 70-120m/2-6 reps
- rest interval 5-10' (no less than 5' for 70m)
- 2-6 peaks / 10-15m (12m!)
- -straight, curve or alternate (!)

70m set up (3 peaks) 25m acceleration zone 15m in 15m out 15m in / finish

Where we start: 2-3x 70m

8om set up (4 peaks) 25m acceleration zone 15m in 15m out 12m in 12m out / finish

First expansion

More Demonstrations







Troubleshoot: -Focused maintenance of sprint fundamentals through the intensity changes

Concentration is both developed and required

Cues:

- sprint tall throughout (hips)
- -'step down from above'
- -rhythm stays constant (ROM and force change <u>subtly</u>)
- -'Freewheel' the outs (downhill)

Observation:

- -Acceleration is often less aggressive before ins -Acceleration love changed
- my view

Applicable principle: Never coach against yourself

Application should polish and reinforce your teaching, not contradict it

Adjust to Outs and Ins??



<u>70m set up (3 peaks) 25m</u> acceleration zone 15m out 15m in 15m out / finish

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8om set up (4 peaks)
25m acceleration zone
15m out
15m in
12m out
12m in / finish
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Acceleration drill (Stick drill / Tape drill)

Front Game – setting up the sprint

Pure acceleration and extended duration of intensity













Genesis/Inspiration/Rationale:
-Taught in Level 2 as "stick drill"
(65cm first stride, progress 15
cm/stride) from crouch start

Pure acceleration exercise

Objective:

- Maximal Acceleration development
- Extend maximum intensities
- Measurable evaluation

Push harder and push longer

Testimonial:

- -"Learned" in Level 2 school
- -Unsuccessful trial
- -Unsuccessful trials with WR holder

Observation: Spacing not performance specific at 65cm + 15cm/str)

.65, .80, .95, 1.10, 1.25, 1.40, 1.55, 1.70, 1.85, 2.00 >>>>>
2'1.5",2'7.5",3'1.25",3'7.25",4'1.25",4'7",5'1",5'7",6'0.75",6'6.75">>
Too choppy for 6 strides, just right for 6 strides, then reach

Set up relative to athlete

Front toe / front pedal is datum









<u>Useful considerations</u>

- -first day of training>>all year
- rest interval 1'/10m for reps
- provide 2-3 differently spaced lanes to optimize
- -straight is best for evaluation

Progression:

- start at 2-3x(10, 20, 30m)
- -Metric volumes 120-300m
- -Grass>track
- -Flats>specialty
- -No pedals>front>both
- -resistance (devices/uphill)



















Troubleshoot:

-Focused maintenance of acceleration fundamentals -"Where did you feel yourself stop pushing and start running"?

Concentration is both developed and required

Cues:

- -Set pre-tense/ clear ready mind
- -Make big hard splits with hands
- -Ankle pass
- -Grow down the track
- -Temporal cues (longer!)

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V Max (Wicket) drill

End Game – Sprint tall!

Pure speed development – Acceleration is nominal/incidental

Genesis/Inspiration/Rationale: -Personal reaction (over-reaction?) to epidemic overstriding

"Step down from above" – Winckler cue

Objective:

- Sprint maximally. Eliminate striding tendencies.
- Re-set the ground strike by stepping down not out

Testimonial:

- Trial and error
- Progressive spacing builds progressive intensities to maximal (depending on how many strides are set up)

Components:

- -hurdle segment (turned down) place first
- -run-in (placed after hurdles)
- -run-out
- -finish-coast-stop segment

Set up











Importance 6 str run-in

3'11", 4'2", 4'5", 4'8", 4'11", 5'2", '5'5" (5'5" wicket space)
4'4", 4'7", 4'10", 5'1", 5'4", 5'7", '5'10" (5'10" wicket space)











-Importance of building the sprint -Get more in the last 6 and run out











Proficiency:

18 str / 3.65 = excellent progress from there

<u>Useful considerations</u>

- -first day of training>>all year
- 4-6 reps / session density 2-4 sessions/ wk
- rest interval 2-3' / rep
- provide 2-3 differently spaced lanes to optimize
- -use 6" hurdles, slats, etc

Progression:

- -start at 2x (12, 14,16 str) progress quickly to 6x18 str
- -Flats>specialty
- -Increased run out
- -Drop a wicket
- -Space increases after mastery





Troubleshoot:

-Focused maintenance of sprint fundamentals as the intensity grows to maximal, then hold.

Concentration is both developed and required







Cues:

- -Hit the run-in
- -Get into tall sprint posture before the wickets
- -Once in / don't look (feel, listen)
- -Keep getting more / don't settle
- -Hit the run-out / finish

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Combination Acceleration and Vmax drill

Effective race modelling. Stay on top of the run!

W 6'5" str after 14 step accel / M 7'2" str after 14 step accel

Genesis/Inspiration/Rationale: -Seeking coaching marks for precise race models beyond 22 strides

Components:

- -acceleration segment placed first
- -hurdle segment (placed last)
- -finish-coast-stop segment









Troubleshoot: Specific coaching marks for precise race modelling

Phd level exercise

Allow minimum 14 acceleration strides before hurdles introduced (prefer 16 or more)

Cues:

- -Stay on top of the run
- -Keep pushing
- -Completion runs seamless (Combining beginning and end)

