

Speed, Quickness & Agility Training

Sample Training Template

	Monday	Wednesday	Friday
Work	Agility and Acceleration Drills	Speed	Agility & Speed Endurance
Distance	8-60 sec drills 10-20 m sprints	30-100 m sprints	20-50 m sprints and agility drills
Recovery	1 - 4 minutes	4 - 7 minute between sprints	1:1 - 1:3 work/rest ratio
Bouts	8 - 15 repetitions	4 - 10 sprints	10 - 20 sprints

- First 3 training sessions perform two short sprints followed by two longer sprints.
 - Add one short sprint and one long sprint every 2 training sessions.
- Speed, quickness, and agility program should be based upon several factors:
 - Specific sport requirements
 - Distances (eg: 5-15 m)
 - Work : rest ratios (eg: 1:2 to 1:4)
 - Event duration (eg: 10 to 45 minutes)
 - Intensities (sprint to jog)
 - Agility factors (eg: specific direction changes, body positioning, surfaces),
 - Cues (eg, visual, auditory, kinesthetic)
 - Athletes strengths and weaknesses
 - Test periodically for agility, acceleration, flying speed, and speed endurance
 - Scheduling and recovery restraints
 - Training goals within the time season
- If sport requires greater aerobic conditioning, speed and agility work can be reduced to twice per week
 - See [Energy Systems for Selected Sports](#)
 - See [Sports Conditioning Program](#)

Speed Training

Speed can be improved by an increase in stride length and frequency. Exercises to improve these components include:

- high knee kicks
- glute kickers
- resisted running
- high speed sprints.

Craig BW (2004) What is the scientific basis of speed and agility. Strength and Conditioning Journal, 26(3), 13-14.

Recovery Periods

Short recovery period between sprint intervals for the purpose of phosphogen energy system adaptation do not appear to be effective and enhancing motor skill development. Rest period lasting in excess of 6 minutes may improve speed more effectively (Merlau 2005).

Merlau S (2005). Recovery time optimization to facilitate motor learning during sprint intervals. Strength and Conditioning Journal, 27(2), 68-74.

Sandblasting

Sandblasting, or running in the sand was advocated by following athletes:

- Walter Payton, considered by many to be the best blocking backs in NFL history;
- Ben Tabacknik, Ph.D. head coach of the 1988 U.S.S.R. Olympic Sprinting team;
- and the late Steve Prefontaine, one of the greatest runners of all time including records in the mile, two mile, three mile, and the 5000 meter race.

Benefits include:

- Improved hamstring conditioning
- Exaggerated stride length, height, and rate
- Improved adaption for ankle stability

Sandblasting. National Strength and Conditioning Association Journal, Vol. 13, Num. 4, 1991

Speed Analysis

Percent of maximum speed					
Meters	10	20	30	40	50-60
%	45	84	93	97	100

Subjects: 22 male 100 m sprint finalists and semifinalists at the 1988 Olympic Games. (mean = 11.49 m/s)

Bruggemann, G.F., Glad, B.: Time analysis of the sprint events. Scientific research project at the games of the XXXIV Olympiad-Seoul 1988-final report. New Studies in Athletics, suppl., 1990.

Agility Training

Agility is the ability to rapidly change directions without the loss of speed, balance, or body control. As with other fitness components, agility is specific to a particular movement pattern. One problem with agility training is that an athlete can learn to anticipate the next movement. Therefore, the athlete should be required to respond to a directional order.

