Principles of Speed Development
Boo Schexnayder

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1. A horizontal jumper's speed and power capabilities are the greatest determinants of success.

2. Elite horizontal jumpers show remarkably similar levels of speed and power development, so the primary goal of an athlete aspiring to this level should be developing comparable levels.

3. The speed and power development training program is therefore the most crucial element of the training program for the emerging athlete wishing to achieve elite status.

4. While not the primary subject of this presentation, the strength training program is crucial as well, because strength levels are a component of and a supporting quality of speed and power.

5. Strength training, like speed and power training, is a neuromuscular type of training. Therefore errors in the planning and administration of the strength program will harm the achievement of speed and power improvement.

6. We will call other training modalities general training. The general training program serves as a support system for the speed and power development program.

7. While failure in these areas may affect performance, they do not necessarily affect the potential for performance. While speed and power development is our primary concern, development of the support systems is important and may take precedence at times, especially when high speed power training levels have already been achieved.

8. The neuromuscular system consists of the central and peripheral nervous systems and associated skeletal muscle. Its efficiency at creating efficient neural signals and recruiting muscle tissue determines the ability to perform.

9. Training the neuromuscular system requires training at high intensities. This high intensity may take the form of high speeds of movement, overcoming great resistance, or anything in between.

10. Training the neuromuscular system requires long rest periods. These periods must be long enough to guarantee the intensity of effort.

11. Most successful training programs show 50-60% of training time dedicated to this type of work. Most 6 day training weeks devote 3-4 days to this type of work.

12. Generally, speaking, neuromuscular training and general training should not be mixed in the same session.

13. The specificity of adaptation dictates that training intensities be high and training specific to improve jumping performances.

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14. Adaptation time frames show high levels of adaptation in 21-28 days. For this reason training shifts are needed periodically o insure continued progress.

15. A certain volume of training is needed to attain elite status. However, training overload through volume increases is not specific to the jumping events and fails. For this reason we must conclude that initial volumes must be high, with intensities sufficiently low to achieve these volumes. Then, intensity can be progressively increased in a specific manner as volumes remain constant or drop.

16. Run training for speed and power development must be of very high quality to achieve gains in these areas.

17. Run training modalities include:

- Acceleration Development (runs of 10-40m, 250-300 meters per session, 1'-3' recoveries)
- Speed Development (Runs employing 1-3 second periods of maximal velocity, 300-500 meters per session, 4'-6' recoveries)
- Speed Endurance (Runs of 80-150 meters, 700-900 meters per session, 5'-10' recoveries)

18. The training program should address acceleration development, speed development, and speed endurance in that order. Significant time should be spent in the development of each zone before advancement.

19. Review of previously trained zones is valuable and should be continuously employed in the training program.

20. Speed endurance work is generally used too much and too often. This type of work should be used sparingly because of its demand and because if its negative effects on speed and skill development.

21. The goals of speed endurance work are not metabolic. Speed endurance work is highly specialized coordination training, and to realize this goal insures proper scheduling.

22. Olympic lifting is a crucial component of the speed and power training program. These lifts improve power, improve coordination, and harmonize and blend other training components. Relatively constant volumes of this work should be included at all times.

23. Resisted running, while falling under the category of acceleration development, is a valuable tool for specific power development and to provide contrast in the training regimen.

24. Multiple jumping is an essential tool for speed and power development. In addition to specificity, the jumps provide valuable rhythmic shifts and address mechanical variables.

25. The multiple jumping program should be designed carefully with respect to volumes and intensity. This type of work is generally done too intensely, too much and too often.

26. Multiple throwing is a valuable power training tool. The combination of intensity and safety make it a useful tool at times of fatigue or peaking.

27. The coach should make sure that power output in training does not fall over the course of a repetition, set, or session.

28. The coach should make sure that rest intervals are sufficiently long to guarantee maintenance of these power output levels.

29. Because of variability of training, subjective monitoring of training loads is crucial when administering the program. No formula or set of guideline for training intensities can cover all of the variables involved in training.

30. Strength is a crucial component and supporter of speed and power abilities. The strength training program must be planned in accordance with the speed and power development program.

31. Likewise, the neuromuscular development attained through speed and power training can greatly assist in strength gains, if maximal strength work is scheduled correctly.

32. Variety and contrast must constantly be included in the training program to foster adaptation, increase motor learning, and prevent injury. This contrast is employed through a variety of training activities that vary many factors, including contact times, rhythms, movements, direction of force application, and resistance.