## TIPS FOR IMPROVED JAVELIN TRAINING

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This article is a compilation of clinic notes assembled by Dr. Harmon Brown from TAC's Development/Elite Athlete Clinic held in Tempe, Arizona this past winter.

REPRINTED FROM TRACK TECHNIQUE #110

- 1. Do enough throws to "groove" the throwing motion, and strengthen the muscles and tendons used in throwing. Up to 1000 throws per week with medicine balls is not unusual, but should be done gradually. These can be done in separate sets, alternating days of one-handed throws three days per week, with two-handed throws 2-3 times a week. Do some throwing all through the year.
- 2. Use a mixture of heavy, standard, and light-weight balls and implements year round. Mix ball-throwing and implement throwing, doing both year-round. Heavier weights are used more in the pre-season and early season. As the season progresses, the percentage of heavy weights decrease, while standard and light weights increase.
- 3. Avoid excessive weightlifting, especially for young throwers. It is too easy to get caught up in the strength-gain "game" as it is easily measurable, but does not necessarily improve performance in the event. It decreases flexibility, especially in males. It takes away from valuable skill-development time, and leaves the athlete too tired to learn properly. However, strength development does need emphasis for girls and women, particularly of the legs and trunk.

- 4. Learn to periodize training. Plan to vary the emphasis in training elements for each week (micro-cycle), month (meso-cycle), and season or year (macro-cycle). Example—3 week cycle; week 1—Lifting x 3; ball-throwing x 3; week 2 and 3—Lifting x 2; throw varied balls and implements x 4.
  - Consider the USSR "block system" of strength training. Emphasis is placed on intensive lifting for a 2-3 week period, with a limited amount of throwing. This is reversed, and throwing and skill-work stressed with minimal maintenance lifting twice a week. For elite-level athletes, modern training theory and experience suggests that several (3-5) brief 0 hour) training sessions daily are better than one or two longer daily sessions. (This is based on empirical experiments with groups of athletes, as well as hormonal studies in weightlifters.)
- 5. Spend more time on training for the approach run-up and throw. Practice year-round on 3-5-9-11 step approach runs and throw, using both implements of varied weights and balls. (A recent Soviet study suggests that too much time is spent on standing and 1-step throws. (Track Technique #106: 3390, 1988).