

IGOR TER-OVANESYAN ON THE LONG JUMP

By John Rosenthal, Great Britain

A former World Record holder in the long jump, and one-time head national coach of the USSR, Ter-Ovanesyan expounds his ideas on his old event. The perspective he offers—that of a former champion and leading coach—is especially valuable. The ideas Ter-Ovanesyan presents will challenge some of the traditional beliefs about training and technique for the long jump. This article originally appeared in "The Jumper," a British AAA publication composed of notes from a series of clinics on jumping events sponsored in Britain by Minolta. Rosenthal was a British National Junior long jump coach.

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TAKEOFF

A. A jumper should concentrate in the last few strides on the "swing of leg." By this very simple phrase, Ter-Ovanesyan communicated the idea that a jumper should try to concentrate not on the leg that is to be planted for takeoff, but on the loose, upward drive generated by the swing of the free leg. The swing of the free leg begins on the ground and should be very vigorous.

B. As a corollary to the above, the takeoff leg which is planted on the board should always run. Concentration on the act of planting the takeoff leg on the board (and not on the free leg) makes the last strides very slow. The action should always be a run on to and a run off the board. (Run on/Run off). Any takeoff leg which is planted in the way a pole vaulter plants his pole in the box is a very slow way of long jumping. It makes the jump very high and kills the speed element.

C. An ideal runup should consist of three phases: accelerating start of 8 strides, a middle element with little or no acceleration, and a final last 5-6 speed strides taken from a cue mark.

D. The penultimate strides should be on the toes and very active; 90% of all long jump errors are in the last 2-3 steps. It is a great mistake to try and shorten them. There should only be a maximum difference of 10-15 cms between the last stride and the penultimate stride. Bob Beamon had a very active stride with a high knee action. Many jumpers make the mistake of reaching out and preparing for takeoff.

The jumper should fly from the takeoff with head and shoulders ahead of the hips and lower body, an action

very close (if not identical) to that of a hurdler taking off in front of the hurdle.

E. A controversial point regarding the planting of the foot at takeoff is that heel contact should be kept to a minimum. This obviously requires a very strong and well conditioned athlete with a very specific strength training element needed. The action is kept on the ball of the foot, and likened to that of a stone skimming off the surface of water.

F. Air technique is not very important; however, from a psychological point of view the hitch-kick concentrates the mind on speed and is a very natural style of jumping. Hitch-hand is also a very good method of flight. (It is simple and the new brand of long-legged and long-levered women jumpers, such as Drechsler and Chistyakova, all seem suited to this technique.)

G. A big mistake in landing is to have the shoulders going down. The shoulders should be continuing the jump to take the jumper out of the pit. Landing with the heels up and a last moment poking out of the leg shoot can add 5-10 cms the jump.

RUNUP TRAINING

A. Many short approach jumps are used with a distance as small as 10 meters from the board for flat-out jumping. Frequently these short approach jumps have the athlete running from a conventional crouch start position; e.g., to your marks, set, jump. This gives the athlete very little time to think of anything other than speed development. It also places the body in a forward jumping position in a very short space of time.

B. Times are taken on full approach runs plus the jump itself; e.g., from the start of the runup to the time of landing in the sand (not from the start of the runup to the hitting of the take off board.) This encourages faster jumping and is a more accurate measure of an athlete's abilities.

C. Also available and used at all full runup sessions in the USSR are photo-electric cells measuring the time taken for the last two 5-meter sections of the runup. In these sessions, 3 runups are taken at a medium speed to get the feel of the technique. This is followed by one runup with a jump which is taken as fast as possible and timed.

D. Ter-Ovanesyan described a technique training system aimed at increasing the rhythmic awareness of the athlete over the last five strides. This is a system which also regulates the length of these strides in which foam rubber strips are placed on the runup at intervals corresponding to the required stride length. The foam rubber is soft and of such a height that it does not inhibit the athlete from stepping over the strips. The athlete runs at the five marks to induce a rhythm: "ta-ta-ta-ta-jump" (say in a staccato manner).

CONDITIONING WORK FOR LONG JUMP

General Conditioning Trends

A. Ter-Ovanesyan expressed a general, and perhaps personal, philosophy on weight training. He feels that slow exercises accumulate energy, and that fast exercises dissipate energy. In the new and modern training regimes, he feels there is less of the heavy-weight sessions that build up gross strength.

B. In the USSR they see nothing wrong with the following training unit: heavy weights, followed by sprints, followed by bounding. Many coaches would probably point out immediately that all sprint/fast work should be carried out prior to a heavy and therefore relatively slow and tiring weight session. The idea expressed was the "dirty work followed by clean work built on tiring muscles."

C. Many Soviet athletes do heavy weight work in the last few days prior to major competitions. Light weight work is also part of the preparation of the jumper's few hours prior to the competition or as part of the warm-up, the philosophy and practice being to make the athletes more aware of the power and strength available in each muscle group.

Specific Long jump Training With Weights

A. With men jumpers approaching speeds of 11 meters per second, and women jumpers approaching 10 meters per second at takeoff, muscles have to react and change positions very quickly at takeoff. Many of the strength exercises are made, therefore, to relate as closely



Soviet national coach Ter-Ovanesyan (left) with 1974 European long jump champion Valeriy Podluzhniy.

as possible to the actual event, in order to educate the neuromuscular pathways.

B. Many of the exercises were event specific in that they contained a bouncing and jumping element. These were all performed with a bounce from the ball of the foot, and not in the conventional heels-down manner of a weightlifter. (From this fact alone it became rapidly apparent that all the young athletes in the squad doing the demonstration did not have the background strength to perform the exercises adequately. Years of solid preparation on top of natural talent are needed to produce a world class jumper.)

C. Other exercises concentrate on building up the strength in the trunk region. They frequently involved an element of balance and static/ isometric holding.

D. Exercises for power with weights of up to 90%

maximum are carried out with a time taken. Five repetitions is the smallest number used for this.

E. Depth jumping/plyometrics are carried out from one-meter heights, and these stress the right bouncy nature of the event. Perhaps the most interesting of these which Ter-Ovanesyan demonstrated was: running from a box (or in this case a pile of mats) at a height of one meter, to hop down and then to hop over a hurdle. Again this hop is to be on the ball of the foot with the landing and subsequent takeoff over the hurdle stressing the skimming/forward

moving nature of the movements which has already been referred to in (d).

F. Testing for specific long jump strength and speed was carried out with giant strides (bounds) over 100 meters distance. A check is taken not only on the number of bounds used to cover the 100 meters, but also the time. (The dual comparisons of time and stride length is an excellent measure of the power an athlete is able to generate.)