

# AN INTRODUCTION TO THE HIGH JUMP

By Dr. Wolfgang Lohmann

*There are many ways to introduce children to track and field events. The following text represents a simple approach to the high jump by Dr. Lohmann of the German Democratic Republic. It is based on a translated summary of the high jump chapter in the author's book Running, Jumping, Throwing, published by Sportverlag Berlin. Re-printed with permission from Modern Athlete and Coach.*

Keep in mind right from the start that the first two phases, the run-up and the take-off, have the largest influence on the height reached in the high jump. Even the most sophisticated flight movements are of no value when the athlete can't take off efficiently. For this reason it is important to concentrate always on the take-off.

## THE FLOP

### *The run-up*

The run-up in the flop technique of the high jump begins from the side of the lead leg, follows a curved path and is fast. The bend in the curve is most noticeable in the last three run-up strides. The radius for the curve is 6.00m for a three-stride run-up, 7.00m for a five-stride and 8.00m for a seven-stride run-up.

### *The take-off*

The take-off takes place from the outside leg.

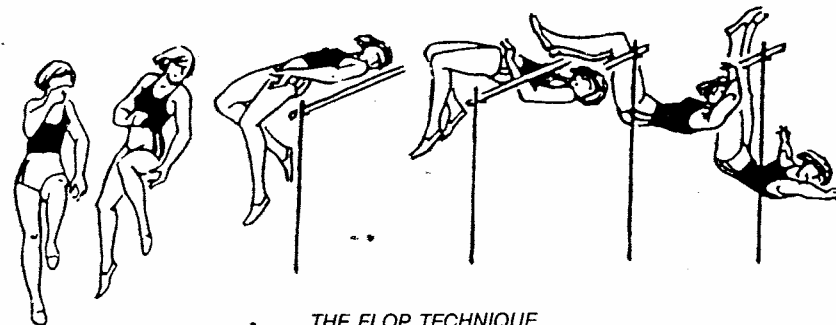
- The extension of the take-off leg is fast and as vertical as possible. No rotation of the back towards the bar should occur in the early part of the take-off.
- The lead leg swings energetically inward-upward with a bent knee. The direction of the swing deviates 15 to 20° from the run-up direction to initiate the turn of the back towards the bar.
- The eyes are directed towards the bar, making the head turn over the lead shoulder in the opposite direction to the rotation.

### *Bar clearance*

- The take-off leg drops next to the lead leg after the take-off.
- The body is stretched and turns into the required back to the bar position.
- The hips are pushed forward as soon as the shoulders have cleared the bar and the body moves into a “bridge” position over the bar.
- A fast bending of the hip joint takes place as soon as the seat has cleared the bar and is followed by the straightening of the knees to form a “L” position.

### *Landing*

- The landing occurs initially on spread arms, shoulders and the back. As this takes place, the jumper should hold to the “L” position to keep the muscles tense.



THE FLOP TECHNIQUE

### PREPARATIONS

### *Where can we jump?*

It is not an easy question to answer, as landing in modern high jump techniques occurs often on the back. This, of course, requires a very soft landing surface. However, we have found in our choice of jumping exercises that only a small number of jumps need a soft landing area.

What is really a must is a flat and firm takeoff surface to avoid slipping and an obstacle to jump over. A firm take-off area can be found on paths or natural surfaces, although grass can be slippery even when dry. Finding an obstacle is even easier. Get a 3 to 4m long rope or rubber band that can be attached to stakes, bushes, fence posts etc. Two stakes that can be used near any firm take-off area are most useful.

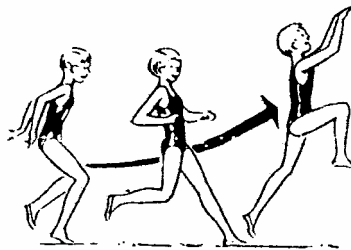
Flop and straddle techniques can't be performed without a proper landing area, both of these techniques succeed only when there is no fear of landing. You should find a sports ground in your neighborhood with soft landing mats to practice these techniques.

*How should we train?*

Whatever you do, don't begin practicing a high jump technique right from the start. You have to be prepared for this by first developing the necessary jumping power and agility.

The exercise description that follow are chosen for this task.

**JUMPING EXERCISES**  
*Reaching for high targets*



Attempt in all jumping exercises to jump as high as possible. Most jumps should be performed from a short run-up. Adjust your action accordingly and execute the jumps with the technique described in this text. Always check that the landing does not occur too far from the take-off spot. Keep in mind that all jumps with rotations serve as a direction preparation for the flop technique. Use these jumps frequently in your training sessions.

Never combine high jump and long jump exercises in the same workout. The change from one to another is difficult and the results are poor for both events. Also, don't forget to include stretching exercises in your training sessions. Athletes with poor mobility will not become champions.

All of you have performed these jumps for fun without thinking of the high jump. However, you will benefit more from these exercises when you concentrate on the following aspects of the take-off technique:

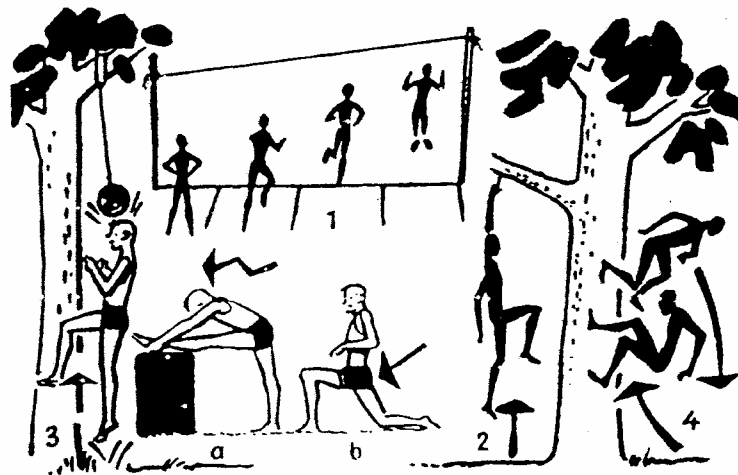
- Don't run too fast and use only 3 to 7 run-up strides.
- A curved approach is useful for the flop technique.
- Lower yourself a little prior to a fast, powerful take-off.

- Place the take-off leg fast and nearly straight on the ground.
- Shift the hips forward-upward to reach a position for a vertical jump.
- Take off close to the target, so that your flight is vertical and high.

Make use of the following exercises:

1. Zone jumps, reaching for a sloping rubber band (10 to 12 reps). The rubber band is placed so that it can be reached with the head relatively easy on one end. The athlete attempts to progress through the zones to the high end.
2. Reaching for branches (10 to 12 reps). Begin with low tree branches and look continually for higher ones.
3. Reaching for a ball (10 to 12 reps). Hang a soft ball from a string at a height you can just reach with your head.
4. Jumping up a tree trunk (6 to 8 reps). The athlete, from a short run-up, jumps up a tree trunk, landing on the lead leg and takes another step upward with the take-off leg before turning fast and jumping down.

Gymnastics exercises: a) Standing with one leg supported — trunk bends forward b) Flexible up and down movements in a split legs position.



REACHING FOR HIGH TARGETS

### *Jumping over high obstacles*

These exercises represent already frontal high jumps. They develop, besides jumping power, also jumping agility and, above all, a fluent transfer from a short run-up to the takeoff. Concentrate on the following:

- The lead leg must swing as high as possible.
- Over the obstacle let the lead leg hang and pull the take-off leg under the body.
- Land with a slight backward lean on the take-off leg and run immediately forward.

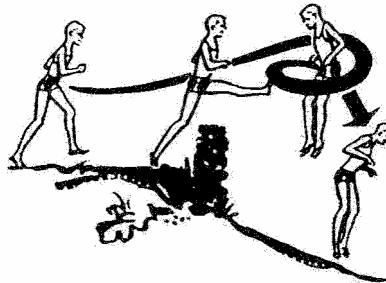
Make use of the following exercises:

1. Jumps employing take-off and landing zones (10 to 12 reps). The zones are 80 to 90cm in front and behind the obstacle.
2. "Window" jumps (12 to 15 reps). Two suspended ropes are needed. The athlete jumps over the first rope and must land in front of the other without touching it. The horizontal "window" is made gradually narrower.
3. Continuous jumps (4 to 6 reps). Use at least three obstacles, set at a height the athlete can just clear. One or two strides are taken between the obstacles.
4. Series jumps (4 to 6 reps). The jumps are performed as in exercise 3 over obstacles that become higher. The last can be above the athlete's reach.

Gymnastics exercises: a) Standing with one leg stretched back and supported — trunk bends backward b) Large trunk circles with extended but relaxed arms.



JUMPING OVER HIGH OBSTACLES



JUMPS WITH EXTENDED FLIGHTS  
INCORPORATING ROTATIONS



JUMPS WITH EXTENDED FLIGHT

### *Jumps with extended flight*

The flight phase is extended by taking off from a springboard or an area that is higher than the landing spot. The jumps with an extended flight can be performed without obstacles, however, it's better to have something that forces to jump higher.

The task to execute some movements in the flight improves control over the body and will be valuable later in the development of a bar clearance action. The exercises listed here are only examples. You can find many other interesting variations.

1. Jumps from a springboard (10 to 12 reps) over an obstacle with straight legs held forward and the hands touching the feet.
2. Jumps from a springboard (10 to 12 reps) over an obstacle into a small target area for landing. These jumps should be performed with and without rotations.
3. Jumps from a raised take-off area (12 to 15 reps) over an obstacle. The aim should be to jump as high as possible.

4. Target jumps in a group (8 to 10 reps) with each athlete in the group jumping into a series of targets arranged in a semi-circle.

Gymnastics exercises: a) Hip rotations in the front lean position with the toes of the foot touching the ground on the other side of the opposite leg. b) Sideways trunk bends with hands on the hip.