

Hurdles

The image features a green chalkboard background. In the lower-left quadrant, two pieces of pink chalk are positioned diagonally. The chalkboard is covered with faint, white, hand-drawn markings, including a large 'C' on the left, a large 'S' in the center, and a large 'A' at the bottom. The lighting is soft, creating a slight shadow for the chalk pieces.

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Hurdles

- Theory Session Objectives
 - Discuss & define stride pattern and rhythm
 - Discuss stride length & cadence and identify importance
 - Analyse and identify key actions at various stages of a hurdle race
 - Analyse required actions for lead & trail leg and arms
 - Identify common hurdling faults

Hurdles

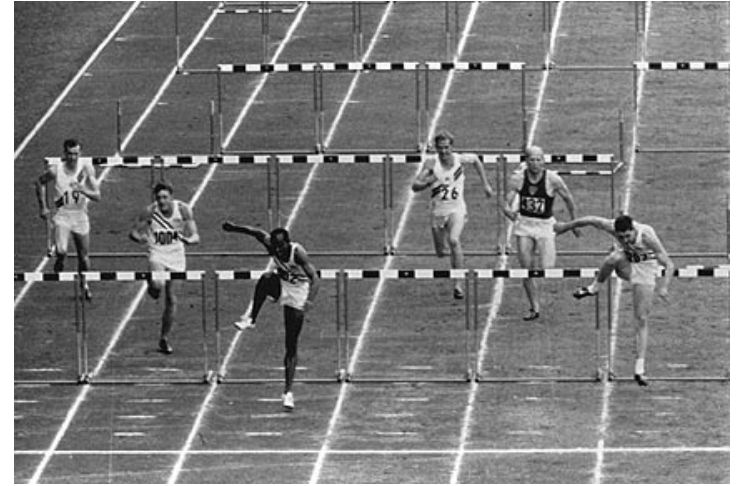
Introduction

- Hurdling is, because of its technical and energy demands, an exciting and challenging event. The technical component of hurdling is clearly much greater than in sprinting, yet the concept of the hurdles race must be one of a sprint, with adjustment for each hurdle. The stride pattern for sprint hurdling is a 8 stride pattern to the first hurdle followed by a 3 stride pattern between the hurdles

The Novice



Hurdles



- The essence of hurdling events is to generate as much speed as possible over the race distance, while clearing a prescribed number of equally spaced barriers of a specific height. As a result the number of strides taken during a race is largely predetermined, as is their length.
- The athletes COG is kept as close as possible to its normal sprinting path while crossing the hurdles in order to minimize the length of time in the air
- The concept of **rhythm** (a regular pattern of movement rehearsed to be as efficient as possible throughout the race) becomes of **utmost importance** in a hurdlers preparation

Hurdles

- Nearly all athletes in a hurdle race will take the same number of strides.
- e.g. 80mh = 12m run in, 7m spacings, 12m run out, 9 flights
 - 8 strides to the first hurdle
 - 3 strides between flights (3 x 8) = 24
 - 7 strides to finish
- 39 strides
- If we can improve the athlete by just 0.1sec per hurdle the athlete will save nearly a second off their time



Hurdles



- Since stride length is predetermined, the development of **stride frequency (cadence) is the most important factor** in a hurdlers preparation

Hurdles

Hurdle Technique

- Stages
 - Start & Approach
 - Hurdle clearance
 - Between hurdles



Hurdles

The Start and Approach

- In sprint hurdling the first hurdle is only some eight strides away so the athlete must come upright at the 3rd or 4th stride, much earlier than the sprinter.
- To enable this to happen the block spacings may have to be slightly altered. When using an eight stride approach the take-off foot is placed in the front block.
- **8 strides means the lead leg is in the back block**



Hurdles



Hurdle Clearance

- The athlete must attack the hurdle and aim to clear it, by approx. 17-18 cm, **as quickly and efficiently as possible**, raising their centre of gravity only a little more than in a normal sprint action.
- 2/3's of the stride over the hurdle takes place before the hurdle, 1/3 after the hurdle.

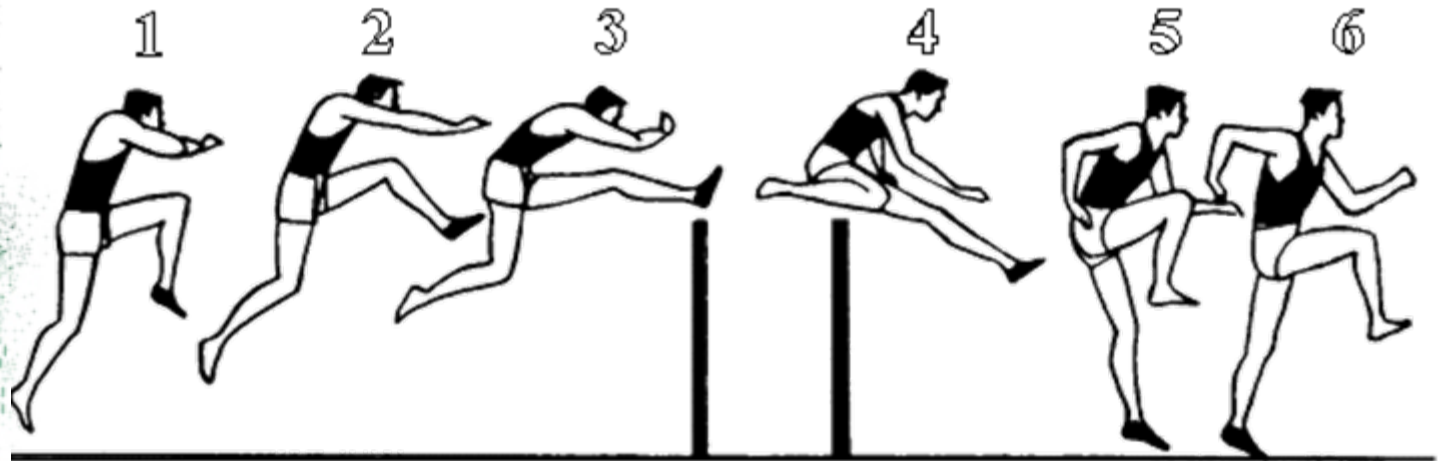
Hurdles



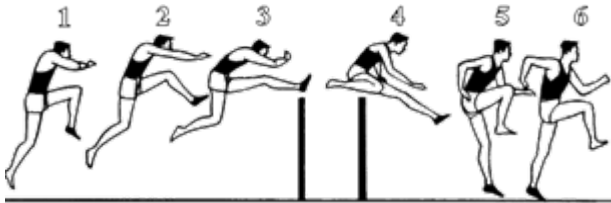
Running Between Hurdles

- **Three strides are used to cover the ground between the hurdles.** To achieve this the athlete has to modify his sprinting technique to make it fit the gap. A fast leg cadence and a shorter stride length is needed. The athlete may have to use a lower knee lift than in normal sprinting with an emphasis on leg speed.
- Of the 3 strides between the hurdles, the second is the longest, The first is the second longest and the third the shortest.

Hurdles



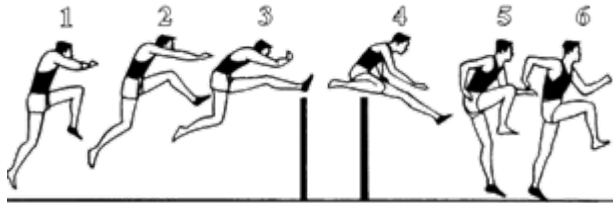
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Action of the leading leg:

- The knee must be picked up fast [1]
- **The knee is driven at the hurdle [1] & [2]**
- The lower part of the leg is left low and extends once the knee reaches the height of the barrier [1] & [2]
- The knee must be picked up in line with the vertical centre line of the body.
- There should be no tendency for the knee to be pulled across the body or for the lower leg to go out and round.
- **As the heel of the lead leg passes the barrier it must be pulled down and back to land under the body [3] & [4].**
- There is no necessity for the lead leg to be straight over the top of the hurdle [3].
- The leg straightens as it descends towards the ground [4].

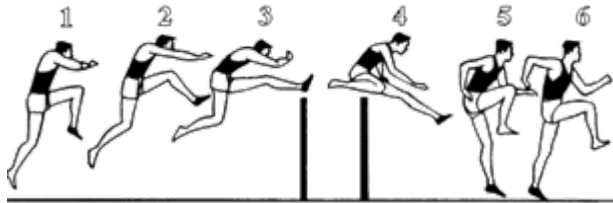
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Action of the trailing leg:

- The trailing leg drives the body at the hurdle as the lead leg rises [1].
- The recovery of the trail leg must begin from well behind the body if the drive is to be completed.
- The athlete should feel the trailing knee sweeping wide and flat over the hurdle [4].
- As the leg crosses the hurdle the foot must be cocked at the ankle so that the foot does not hit the barrier [4].
- **After crossing the barrier the knee continues to rise and comes round in front of the body [5].**
- Many young athletes have a tendency to drop the trail leg off to the side after it has crossed the barrier. This has the effect of making the first stride very short and pulling the athlete off balance. The trail leg must be pulled through high and fast so that the first stride is fast [5] & [6].

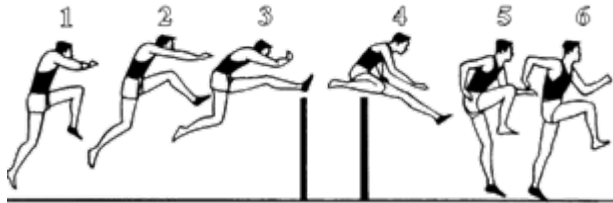
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Leg Action

- **The last stride of the approach to the hurdle is shortened** (sometimes called a 'cut step') in order to allow the take-off leg to move rapidly under the hips. This ensures that a fast effective drive can be made across the hurdle. [1].

Hurdles



Arm Action

- As in sprinting, **the arms act to balance the body and counter the rotations produced by the legs.** The arm opposite to the lead leg actually leads the action into the hurdle and pushes/dives forwards as the lead leg rises [1]. The other arm should be taken back in a normal sprinting action. As the trail leg comes round the leading arm swings back and wide to counter the rotation of the trail leg [4].

Hurdles



Safety

- Hurdling is dangerous on wet grass or any other slippery surface.
- It is also **dangerous for children to run over hurdles in the opposite way** to the correct running direction (i.e. with the feet of the hurdles on the far side).

Hurdles

Coaching beginners

- Try to establish a **regular rhythm** with the ultimate aim of 8,3,3,3 (Smaller/younger athletes may start 9,4,4,4.. Or even 10,5,5,5..)
- To move an athlete progressively from 10,5,5,5 to 8,3,3,3 - start with low hurdles set in from normal spacing. Extend hurdle distance and height until competition settings are achieved
- Emphasise the need to get back on the ground as quickly as possible. 'Active' take off and landing.
- Focus on stable COG. Use athletes head as a que



Hurdles

Common faults

- 'Jump' hurdles
- Lead with foot
- Lead Leg out to side
- Trail foot overtakes knee
- Irregular stride pattern
- Arms uncoordinated















