

Beginning Hurdle Training

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Introduction

Suppose you are a young coach with little track & field experience. In your pre-season meeting with your other coaches--three or four, some "walk-ons" (maybe you are a "walk-on"). It is discovered that last year's hurdle coach won't be back and no one wants to coach the hurdles. The jump coach, shot put and discus coach, and the distance coach all give convincing arguments why they can't coach hurdles, and why you should coach hurdlers since you have the sprints and relays. Disarmed, you reluctantly agree to take on the responsibility.

With that as a premise, the following is an outline of how it is done. Keep in mind that some of your athletes may be multi-event performers and coordination with the other coaches is essential. You will learn on the job.

All my runners begin practice with Mach exercises "A", "B" and "C" and leg swings "A", "B", "C" as part of the overall warm-up, whether it be traditional or dynamic. When the hurdle group comes to me, I have the experienced girls model all activities first. The following is an outline of our hurdle routine:

Fence

1. Tubes 3 x 10 each leg (add during season)
2. Lead leg and trail leg 15 each leg (add during season)
3. "Walk-overs" with 5h x 3 (add during season)
4. "Grape stompers" or "mashed potatoes" 5-10h (must go left and right) x 30 each direction
5. Lift-overs 10 each leg (add during season)

Drills with soft hurdles or regular hurdles

1. Walk trail legs over 5h x 5 right and left leg
2. Jog trail legs over 5h x 5 right and left leg
3. Walk lead leg (B skip) over 5h x 5 right and left leg
4. Jog lead leg (B skip) over 5h x 5 right and left leg
5. Run trail leg with 5 steps between hurdles x 3
6. Run lead leg with 5 steps between hurdles x 3
7. Run over hurdles (8 step approach) 3 to 5 hurdles with 5 steps between hurdles x 3 (add on any given day)--this could be speed workout for the day, i.e., 4x4x40 with hurdles (3 each) or 3x3x60 with hurdles (5 each).
8. Out of blocks over 3-5 hurdles, 3 steps between
9. Out of blocks over 10h shortened x 3 with full recovery
10. Out of blocks over 10h regular x 3 with full recovery

We do the first 6 drills daily; the one-step drill and playing with hurdle spacing are interspersed during the next few weeks.

Drills 7-12 could be the whole workout for 100-meter hurdlers. The 300-meter hurdlers will do different conditioning and some different technique work.

The fence work is fundamental for the hurdler. We use surgical tubing tied to the bottom of a chain link fence and the girls simulate running action to activate the central nervous system for coordination and stereotyping.

The next activity, lead legs and trail legs, is the first and most important drill for the neophyte hurdler. Hopefully, I have an experienced hurdler to demonstrate. We set a hurdle against the fence at 30 inches and have the athlete use a high "A" action with foot which attacks the fence or wall with the toes "cocked" up. (For boys, the drills on the fence would be at 39" and the torso would lean over lead leg and a high arm action where the forearm is approximately at the height of the forehead. On other drills, there should be adjustments considering boy's races. They race at 110 meters. The momentum is like a falling forward action. As the lead foot makes contact with the fence or wall, the opposite foot on the ground should be on the toes. The lead leg knee should be bent slightly upon contact with fence; simply straighten the leg to return to the starting position. The torso upon foot contact with the fence should be bent slightly; do not let it lean very far-- keeping the back straight and shoulder squared.

The lead arm (arm opposite of lead leg) can be taught two different ways (the athlete will feel more comfortable with one or the other) and I teach both. The first action of the arm we teach is a natural bent arm; upon contact of the foot with the wall, the opposite hand would be extended forward so that the hand would be aligned to the center of the body, reaching as far as the upper shin, the elbow bent about 120 degrees. This arm action seems to be the most natural action. The other method taught is called "reading your watch." (Many world elite hurdlers, including this year's World Championship hurdlers, have used this method very effectively.) The arm is raised to shoulder height, the elbow bent about 90 degrees so that it appears that the athlete can read a watch if it were on their wrist. The wrist would align with the nose, the lead arm action must not allow the shoulders to be other than square to the hurdle. The trail arm (on the same side as the lead leg) should be "cocked" at 90 degrees with the hand at the hip. This arm can fly all over the place if the coach doesn't emphasize its proper location. Since this drill is so critical, I work individually with the new girls for the first couple of weeks. Sometimes I will take a girl out of a hurdle drill and put her back to the fence drill to further stereotype the proper action. Both right and left lead legs and trail legs are instructed for two basic reasons: first, most of the 13-15-year-old girls (boys) do not have the speed or strength to three-step when they begin hurdling and will have to alternate or four-step when they begin racing; secondly, being able to hurdle with either leg is a distinct advantage for the 300-meter hurdle event.

The girls do the trail leg drill with a 33-inch height (boys 39") and the hurdle placed approximately two feet from the fence, adjusting for the height of the athlete. Both hands

are placed on the fence and the hurdler stands with her lead leg beside and slightly forward of the front edge of the hurdle. The trail leg is pulled over the hurdle with the knee on an upward angle and the head as close to the buttock and hip as possible. The trail leg is then advanced forward as the toe becomes averted (the foot in a dorsiflexed position with the small toe up) and the thigh moves to a position parallel to the hurdle rail. This action (a hip circle) is at right angles to the body. Keeping the heel close to the buttock-hip until the trail leg crosses the hurdle, the knee continues to be pulled through high under the upper arm position, and then the foot (still in a dorsiflexed position) comes down sweeping past the hurdle, pawing the ground as it begins another repetition over the side of the hurdle. It is important to keep the shoulders and torso squared to the fence. It is often necessary to physically handle the athlete's knee and foot to help direct the proper path and technique for the knee, leg and foot.

The next activity is used with regular hurdles set at 33 inches (39"). The athletes do a hamstring stretch by placing their heel (not the Achilles) on the hurdle top and slowly lower their chests to their knees--one leg, then the other. Also alternating one leg then the other, the athletes do a groin stretch, standing perpendicular to the hurdle, placing one leg on the top of the hurdle knee, calf, and foot on the rail and bending the torso toward the ground, touching both hands to the ground. The athlete finishes this stretch, then lifts the torso up and "walks around" with one leg on top of the hurdle while slowly moving the body so that the hip-buttocks is next to the heel on the hurdle. Next, the athlete moves to a station where 5-10 hurdles are lined up, with bottom side rails touching the front rail of the next hurdle. The athlete then walks over the hurdle. The coach should remind the athlete the knee leads and if lifted high, don't turn the body, keep the shoulder square, and pull the trail through, just like the fence drill.

To increase strength in the hip flexor, our athletes do two drills. The first drill has a variety of names--grape-stompers, mashed potatoes, etc. Simply put, it is an "A" skip over the sides of the hurdles that are lined up, lower rails touching. The athlete moves sideways, lifting each leg over as she goes over each of the 5-10 hurdles. One circuit going left is followed by another circuit going right. The next strength developer for the hip flexor is the lift over. When the exercise is begun, two hurdles are used--one to hold onto and the other to lift the leg over. The athlete will not be able to do many of these lifts at first (5-10 reps each leg), but as the season goes along, the athlete will get stronger so that 20-25 reps each leg is manageable. Bracing herself for balance with one hurdle, standing up very straight and tall, she will lift her almost straight leg (knee must be slightly bent) over the edge of the hurdle top. The new girls will generally try to lean back on the drill, but one must insist on bent knee and straight, tall body posture.

Drills with soft hurdles utilize walking, jogging, and running over the sides of hurdles spaced at different intervals and eventually different heights. With the novice on the first day, I take off top of the hurdle, take a piece of pipe insulation (foam rubber) and put it over the wood and lay the top of the hurdle, standing up, and lean it against the outside front of the hurdle. Five hurdles will be set up so that three walking steps can be taken in between each hurdle. The girls line up and I walk with each girl as she does a trail leg at each hurdle. Emphasis is on the lead foot actually being past the hurdle so there can be a

"trail" leg action; also, the arms need to be in control. The next drill with the same hurdle set up would be walk through lead leg. The athlete would use a "B" march step over the hurdle. Once the walking drills are completed, jogging trail legs and lead legs is utilized. The jogging mode is a high knee prancing stride with three strides in between hurdles. Generally, the first day with the new hurdlers ends at this point, and the girls are then given a conditioning workout.

Normally, progression to the jogging trail and lead legs is faster each day in the first week as the athlete becomes more familiar with the routine. The coach must reinforce the correct technique steadfastly, i.e., arms in the correct position, knee leading over the hurdle, "B" skip motion with the lead leg. From the jogging stage, the progression is to three-quarter speed.

Three-quarter speed necessitates opening up the hurdle spacing with the goal of getting comfortable with the rhythm of the 100-meter event. In addition, at this time the athlete is introduced to the eight-step approach to the first hurdle. (Spacing of hurdles for 3/4 speed and full speed may be different on different surfaces, i.e., I would tend to use more regulation spacing--8.5 meters on all-weather surfaces and 8.0 meters spacing on dirt). At first, let the athlete stand at the first hurdle, one foot forward of the other (as in a blocksetting) and run eight steps toward the starting line. Then have the athlete mark where the eighth step came down, then move an additional five feet further from the first hurdle. Do not attempt the hurdle until you (the coach) is confident that the athlete will be taking off the ground approximately five to six and a half feet from the first hurdle. Five feet is usually too close for proper hurdle clearance, but beginners will not be approaching the first hurdles with a velocity to clear taking off at 6 to 6-1/2 feet, which is what they will do later on in the season. Once the athletes have their own starting line to negotiate eight steps to the first hurdle, they are ready to go over five training hurdles. The soft training hurdles (about \$90 each) are very forgiving of a lead leg or trail leg hitting the hurdle. Spacing on the next four hurdles is critical. Twenty-four feet or 7.3 meters has been a successful spacing to begin with, especially considering that these girls are not in spikes and not in condition. Moving the spacing to 25' 7" or 7.8 meters should happen on the fourth or fifth day, and by the ninth or tenth day or thereabouts (it really depends on the learning curve) the spacing should go to 26' 3" or 8 meters, which is not too far from the regular spacing of 27' 10-1/2" or 8.5 meters, using five steps in between. (By this time, buying spikes should be encouraged. The hurdlers should use spikes with drills before using them in the first meet and it should be on the surface that the athlete will be racing on).

The coach needs to watch these drills from four positions--directly behind the hurdles; directly in front of the hurdler; approximately ten yards from the final hurdle; in the middle of the flight of hurdles on the lead leg side, and on the trail leg side. If you possess a video camera, use it. If you can't replay it on the field, have the hurdlers go to a room at lunch and see themselves on the monitor. This will help the learning curve dramatically.

Speaking of learning curves, it is incumbent upon the coach of hurdlers to do a lot of reading and viewing of video. Also, if possible, attend clinics and listen to and see hurdle presentations.

For reading, my suggestions include the book *The Science of Hurdling* by Brent McFarlane.

Important periodicals include Track Coach (formerly Track Technique), published quarterly by Track & Field News; Track and Field Coaches Review, published quarterly by U.S. Track Coaches Association; and Track and Field Quarterly Review, published by N.C.A.A. Division 1 Track Coaches' Association;

The Hurdles, edited by Jess Jarver, published by Track & Field News.

Finally, I suggest the purchase of all of Speed Dynamics videos: Sprint Training Vol. I, Vol. II, High Hurdles Vol. I, Vol. II, Drills for Speed, and 13 Seconds.

A serious coach must get informed and continue to grow by keeping up with the literature of his sport.