

The Hurdles
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Hurdle races are among the most demanding events on the track. The athlete must have sprinter speed and great technical ability and strength. Flexibility is vital as is mental toughness.

Having an eye for proper technique is of primary importance for a hurdle coach. That is followed by knowing how to correct mistakes in a simple and understanding way to the athlete. Biomechanics are important to know, but if you cannot communicate and implement simply, the athlete will have a hard time getting it. Keep communication simple, clear and concise.

Four important phases in hurdling are:

1. Body at negative acceleration at touchdown going into the hurdle. What should the body look like at this point? Is there a drive into in to the hurdle or is the athlete blocking and going backwards or straight up?
2. Body at positive acceleration at take off going into the hurdle. What is positive acceleration? Where are the arms? Is the lead knee center?
3. Body at impact off the hurdle. Is the core following the trail leg off the hurdle?
4. Stride length coming off the hurdle. Is the athlete over striding? Is there a consistent stride pattern?

What else should you look for?

1. Is the athlete pushing off the ball of the foot rather than the heel? Is the foot directly under the center of mass at take off?
2. Is the athlete parallel and low over the hurdle? Look for the athlete getting too close to the hurdle.
3. Is there rapid touch down on the ball of the foot with a locked lead leg as the foot is contacting the ground?
4. Is the trail leg brought back to a correct sprint position off the hurdle? Is the trail leg staying tucked over the hurdle so it can be brought back to that sprint position?
5. Is there a consistent stride pattern between the hurdles?

In the short hurdles there are 9.14 meters between the men's hurdles and 8.5 meters between the women's. Both men and women commonly take 8 strides to the first hurdle and the lead leg is in the back block.

The trail leg is considered the "power" leg and is going to give the athlete the push off out of the blocks needed to get an explosive start. Many elite athletes take 7 strides which mean the lead leg will start in the front block. An efficient start and acceleration to the first hurdle is the key to consistency and correct hurdle rhythm. The start will be different than running an open 100 in that the athlete will be upright in a sprint position

after 4-5 strides. The “drive phase” is not emphasized in the hurdles.

Hurdle Factors

1. Stride Length
2. Stride Rate
3. Horizontal Velocity
4. Ground Contact Time
5. Air Time Over Hurdle
6. Air Time During Clearance
7. Hurdle Rhythm
8. Stride pattern
9. Hurdle Technique

The ability of a hurdler to rapidly push down the lead leg during hurdle clearance is critical to begin the breaking of the fall of the center of mass. This will make going into sprint mode and rhythm so much easier and consistently.

The trail leg recoups the forward velocity off the hurdle. It must be pulled through and brought back into sprint position, foot dorsal flexed and touched down under the center of mass. Heel is tucked to the butt, toe and knee aiming upward.

Lack of flexibility will greatly restrict the development of a hurdler. It will restrict efficient hurdle clearance technique.

Minimum Requirements of Specific Flexibility

1. Can hips reach maximum height?
2. Can athlete hurdle stretch on the ground?
3. Can the athlete lift the trail leg higher than hurdle height?
4. Is there a wide split between the thighs when hurdling?

FLEXIBILITY: Certain flaws of many top hurdlers many times are traced back to the lack of flexibility. There are ways to help increase flexibility as well as adjustments in form which has worked in Europe. The trail leg will be flatter and the shoulder will be turned more towards the trail leg rather than forward. Look up a former hurdler, Guy Drut on you tube. His video is great for more of European technique if your athlete struggles somewhat with certain flexibility movements. If an athlete is inflexible in the hips he will have a very difficult time hurdling, have him do something else.

Beginners, Drill, Drill, Drill!

1. Keep the hurdles lower and closer together.
2. Always practice form walking over the hurdles first. Practice arms.
3. Work on core strength. Abdomen work with medicine balls, planks, weights.
4. Practice rhythm over one foot barriers. This is a great speed workout which teaches stride consistency.

5. Don't hesitate to enter athlete in a race right away. The sooner they compete, the easier to work on mistakes.
6. Train as a sprint event. Work on their speed as much or more than their technique.
7. Watch pro videos and video tape your hurdlers, let them watch themselves progress.

Never teach an athlete to lean into the hurdle!!!

Year after year I have to deal with athletes who were told to "lean" as they were approaching the hurdle it confuses the hurdler and gives the wrong message. This will cause the athlete to hit the hurdle with the lead leg and will set the tone for the whole race, if they even make it through. The hurdler is to stay tall in the hips for a powerful drive into the hurdle. The body will naturally hinge as the athlete begins to clear the hurdle and at touchdown.

Struggling with three steps

More female athletes at the high school level have a harder time with three steps than the male ones. Speed and strength is a major reason for this. With your fast girls, start right away on developing their core strength and flexibility. I recommend working after practice every day on this because 10-12 weeks is not a lot of time to get this down. Three steps 100/110m over 10 barriers takes a lot of strength. Teaching this can become very frustrating. Start with the hurdles lower and closer together, as they get the feel for this and stronger start moving hurdles back out.

Three Step Drills

1. Five-Ten Mini 24" hurdles at the correct spacing. Sprint all the way down clearing the hurdles keeping basic hurdle form. Use flats first, then spike up.
2. Lower the hurdles one notch and move them in 2-3 feet. Use 5-6 hurdles.
3. Do the "Quick Drill" for strength and speed endurance. {Three to four hurdles side by side facing different directions, lower and closer together.} The hurdler runs down and back 2-3 times each interval. Do not do this drill with inexperienced hurdlers too soon.
4. Mark the track where the lead and trail should land for those athletes having trouble with consistency and rhythm issues.
5. Have athletes get comfortable three stepping five-six hurdles in their flats. Spiking up feels great on meet days and time trials and seems effortless once they get this down.
6. Three step trail leg drill. Set 6 hurdles up have athletes trail leg over side in flats then spike up. This helps athlete master the trail going at full speed.
7. When your athletes are in sprint mode and doing their repeat 100 and 60's, have the athletes do their work out alongside the hurdles so they can visualize.
8. Walkover and simple drill every day, intense hurdle workouts should only be twice a week until meets start. Meets are a hurdle/speed workout.

9. Keep reminding your hurdlers the sound of that three step rhythm. That sound in their head is a good thing.
10. Make sure you run a time trial race, all 10 hurdles before the first meet. This will give the athlete confidence and will help you work out flaws before the first meet.

300-400m HURDLES

This is a speed endurance race. Core strength and flexibility, as well as putting in longer intervals early on are very important for success in this event. Always include hurdles either at the beginning or the end on interval days. The athlete should know how many steps he takes between hurdles at 300 meter speed and should know how to alternate. Use the same form drills as you would with the 100/110's.

Men: 19-24 strides

Women: 23-28 strides

Men: 12-17 strides

Women: 14-19 strides

If your athlete takes even strides the lead leg goes to the back block.
Odd number strides lead leg goes to the front block.
Encourage athlete to count their steps.

The long hurdles can be broken up into four stages:

1. Start to First Hurdle.
2. Movement Across Hurdle on the Straight and on the Curve.
3. Running between hurdles
4. Last hurdle to the Finish

Favorite Workouts

1-2-3-4-5 working first hurdle to fifth out of blocks all out, full recovery

4x300 first 2 hurdles and last 2 hurdles set up.

5x150 working curve only.

3x200 all out all hurdles. End of season workout.

Warm up

You cannot maximize the performances of your athletes if the warm up phase is unstructured.

1. Warm up elevates muscle temperature.
2. Improves blood circulation.
3. Increases Oxygen transportation.
4. Good blood flow enhances distribution and removal of metabolic bi-products.
5. Muscles can contract properly.
6. Increases coordination.
7. Injury prevention

Don't take static stretching out of your warm up; just don't hold the stretch longer than 20 seconds.

Warm up example

Run 50 walk 50 2 laps
Forward skips 2x50m
B skips 2x50m
Side lunges
Forward lunges
Ankle jumps
Static stretch, hold for 20 sec only
Flexibility drills
5x60m accelerations working on running form
Hurdle drills.

Make sure warm ups are always done fully clothed.

Cool Down

800-1000m jog-Static stretch, hold each stretch 60 sec. Roller and ice bath.

The 12 Week Program

The pyramid system can still work even in 12 weeks. High volume low intensity the first 4 weeks. Short rest intervals.70%. Medium volume, medium intensity next 4-5 weeks. Longer rest, 80%-85%. Low volume, high intensity, full recovery time, last 3-4 weeks. Do not over hurdle your athletes. Walkovers and technique emphasis is good, shin splints are not.

Hurdle Progression in 12 Weeks

First 4 weeks emphasize basic fitness, rhythm workouts, core strength and conditioning mostly.

Walkovers, side of hurdle, work both legs. Hurdles are always lower

Walkover center of hurdle, work both legs. Work on proper arm placement during all walkovers so they will get this early. Emphasize leading with the knee not the foot.

Isolation drill, over center, both legs.

Lead and trail flexibility drill with hurdle on fence.

Watch videos of good hurdlers

Rhythm drills over mini hurdles/see who can 3 step.

End of 2nd week start going over the hurdles, 5 step drill in flats only.

Introduce the blocks to first hurdle.

3rd week, work 3 step with those who are ready/time trial at the end of that week to see where they are at. Video tape and overview.

4th week meet preparation work on strengths do not over emphasize their weaknesses!

Work on 3x3 blocks to first 3 hurdles.

5-8 weeks. Introduce the one step trail leg drill, keep hurdles low.

Interval, with hurdles at the end of race, no more than 3.
100/110 5 step drill all 10 hurdles, trail leg and over center.
Work on mastering technique with speed.
Keep the walkovers going as part of the warm-up
Increase intervals with hurdles.
Do the “quick drill” once a week.
10-12 weeks, fine tune. Watch video. Prepare for Regional’s and State.

FOCUS ON STRENGTHS FIRST, THEN THE WEAKNESES!

Quick overview:

Hurdling requires speed.

Find your hurdlers in your sprinter pool.

Have all your sprinters doing hurdle work, you will find the ones with flexibility.

Learning hurdles requires repetition for proper technique.

Low hurdles need speed and endurance work.

When training rhythm keep hurdles lower and closer, this will also take out the fear factor.

Hurdle right after warm up, not at the end of a training session. You want your hurdlers fresh not tired.

Mistakes to look for:

Fly away lead arm. Keeping trail leg tight to body will correct this.

Rotation of torso in the air. Keep shoulders square

Breaking on the landing off the hurdle. Keep body following trail leg, land on the ball of the foot.

Collapse on landing, this is a strength issue. Work on core and quad strength.

Inconsistent stride length, work on consistent acceleration and repetition.

Lead leg not driving straight. Too close to hurdle. Work on flexibility, move athlete back, work on lead knee, and again a consistent stride pattern.