

# The 100 Meter & 110 Meter High Hurdles

**Steve Silvey**  
**Assistant Track & Field Coach**  
**Sprints/Hurdles/Relays**  
**Mississippi State University**

Hurdling is one of the most beautiful and challenging events in the sport of track and field. Hurdling requires that the athlete develop or have a unique skill-set - rhythm, coordination, grace and extreme flexibility in addition to speed, power, strength, and athleticism.

## **HURDLING STATE OF MIND**

For a hurdler to enter the world of the “elite” athlete, he/she will need to have the right state of mind. A highly aggressive nature and the “mind set” of a western “Gunslinger” are characteristics that can benefit the hurdler. He/she will need the toughness and tenacity of a NFL of a linebacker and like the “**Ninja Warrior**” attack hurdles with “**No Fear**”.

## **FLEXIBILITY & THE HURDLER**

A great hurdler must spend a lot of time on flexibility. The hurdler is one of the most flexible athletes on a track and field team. Flexibility is so important that I consider it a waste of time to work with hurdlers who are not willing to work on improving their flexibility. Good flexibility decreases the following:

1. Technical errors in hurdling
2. Unwanted contact with the hurdle
3. Balance problems
4. Get to the ground quicker
5. Physical injuries

Working on flexibility means that the athlete must devote another 15-20 minutes a day in his/her workout to flexibility. When they do it is not important except that it follows an activity that warms up their muscles such as, in the morning after a jog, after practice or at home in and after a warm shower. The athlete must be very flexible in their hip rotations, hurdle splits, lower back and hamstrings to be great.

How flexible does the athlete need to be? He/she should be so flexible that he/she can almost do a split! Sitting on the couch watching TV, or sitting on the computer or playing video games won't get them to this level of flexibility. To get where they need to be they will have to be disciplined to stretch twice a day. If the athlete isn't able to discipline himself/herself to do this – then suggest a yoga class.

In 35 years of coaching I have found a direct correlation between hamstring problems and poor lower back flexibility. If you are running into this, address it with stretching and weight room exercises such as “good mornings” and “dead-lifts.”

I watch young hurdlers and see many young hurdlers make many common mistakes that can lead to bad habits causing them to never achieve their potential. Some of these errors can very easily be corrected:

#### **Hitting the Hurdle with the Lead Leg**

Cause: Most often the hurdler's toe is pointed down (Plantar-Flexion) when attempting to clear the hurdle.

Fix: Keeping the toe pointed up (Dorsi-Flexion) at all times, will produce 2-3 inches in additional hurdle clearance.

#### **Hitting the Hurdle with the Trail Leg**

Cause: Most often the toe of the hurdler's “trail leg” is pointed down (Plantar-Flexion) when attempting to clear the hurdle. This downward pointing of the trail leg which is “plantar-flexion,” decreases the ability of the hurdler to clear the hurdle by 2-3 inches.

Fix: Use “dorsi-flexion” and keep the toe up at all times.

#### **Importance of Dorsi-flexion**

A very important component to successful hurdling is “Dorsi-Flexion” (Heel up-Toe up) “Dorsi-Flexion” will allow the athlete to gain 2-3 inches in additional “lead leg” clearance and 2-3 inches in the “trail leg” clearance. It does not matter how tall an athlete is, if he or she is not using “Dorsi-Flexion” they will make themselves appear to be 4-6 inches shorter when they attack the hurdle. The end result is hitting the hurdle with either their lead and trail leg or both when attempting to go over the barrier.

### **Hitting the First Hurdle in the 110 Meter High's**

The key to becoming a great 110 meter high hurdler is having a great transition from the starting blocks into the first hurdle. As you are aware, it is only 8 steps to the first hurdle. I see too many hurdlers hitting the first hurdle because they are not in good body position as they attack the hurdle. Unlike the sprint events the hurdler must be in a "Hips Tall" position by either the 4<sup>th</sup> or 5<sup>th</sup> stride.

Failure to do so results in the athlete being 3-6 inches shorter than their normal body height and for that reason hits first hurdle. To be successful a hurdler must get into proper body alignment quickly. I would rather have the hurdler who is a tenth of a second slower going into the hurdle #1 but is in good body position, than to be faster and "over-rotated" at the hips. Most hurdlers who are "over-rotated" at the hips and not in the "Hips-Tall" position cannot change their body posture once the race continues past the first hurdle.

### **Twisting or Slicing with the Lead Leg Action**

Another bad habit that can cause hurdler problems is crossing the mid-point of the body with a lead arm. This causes the body to "compensate". At no time should the arms or legs cross the mid-point of the body. For example when the athlete takes his/her lead arm across past the mid-point of his body it causes the lead leg to hook or slice from below the waist.

The action that occurs below the waist is counter-balancing what happened above the waist resulting in wasted motion. Wasted motion hurts the athlete's speed performance.

### **Loss of Balance When Using the Trail Leg**

Attempting to bring a trail leg over and through the hurdle can cause the athlete to lose balance for the same reason as above. When the athlete uses his lead arm and crosses the mid-point of his body either in front or behind, the athlete has to compensate for this negative movement by bringing the trail leg over the mid-point of his body. Again this is wasted motion. Inefficient movement causes the athlete to lose valuable time on each hurdle.

### **Dropping the Head When Attacking the Hurdle**

I see many hurdlers dropping their head down as they attempt to clear the hurdle. Dropping the head from a normal "Neutral" head position can result in the hurdler banging or hitting the hurdle. The elite hurdler's head position moves no more than 1-2 inches regardless of whether he/she is on top of the hurdle or running between them. Constant up and down head movement simply kills speed performance. When a hurdler drops his/her head suddenly, their center of mass drops 4-6 inches. This results in more hurdles being hit by the athlete's lead and trail leg. Dropping the head can cause a hurdler that is 6' feet tall to

perform like he/she is 5'-6" to 5'-8" inches tall. *The simple rule is stay "tall like a pencil" at all times. A pencil never changes its shape and always remains straight.*

### **Hitting Hurdles as the "Lead Leg" Leaves the Ground**

Because the high hurdles in high school are only 39 inches tall, I find that most high school hurdlers are using a locked or straight lead leg. In college hurdles are 42 inches. Athletes that have not been taught proper "lead leg" technique will hit the higher hurdles until the lead leg action is re-learned. For the athlete to clear the hurdle with ease they must learn to leave the ground with the knee. This short lever helps the athlete to raise his/her "center of mass" 4-5 inches which aids in lead leg clearance of the hurdle. Also leading with the knee as the athlete leaves the ground also makes the lead leg action of the hurdler quicker. In summary, short levers are stronger and faster, while long levers are slower and less powerful.

### **Long & Slow Lead Arm Action (Arms away from the Body)**

Long and slow lead arm action is a problem many hurdlers have when they are on top of the hurdle. The hurdler's arms are wildly sweeping around the outside of the body and often pass into another hurdler's lane as the arm goes around behind their back. Often the athlete resembles an "airplane" with both arms extended away from the body. *Long levers are slow levers* and cause the athlete to not get the arms into proper sprinting motion as they approach the ground. To correct such a flaw in technique, the hurdler needs to learn to keep simply keep his thumb pointed up as he/she attacks the hurdle. The "thumbs-up" motion will allow the hurdler to have a shorter and quicker lead arm action resulting in the hand stopping at the hip. Once the hand stops at the hip and the athlete hits the ground with both feet, he can continue "sprinting" with quick arm strokes between the hurdles.

### **Hitting the Last Hurdle Prior to the Finish**

A very common problem is dropping the head and eyes as they go over the last hurdle to approach the finish line. Again, even at the end of the race it is important that the head always remain in a "neutral" head position. Athletes must first clear the hurdle then start the final sprint to the finish line.

### **The Race isn't Over Until It's OVER!**

Remember just because the last hurdle has been cleared, the race isn't over! The most important 1.3 - 1.6 seconds are remaining so sprint through the finish!

### **Getting Run Down at the Finish Line**

For some reason many athletes focus on “leaning” at the finish line. Contrary to popular belief, leaning is a “braking force” which causes the athlete to slow down before they hit the finish line. Athletes many times start leaning 5 to 8 meters prior to the finish line. Leaning too soon too long causes athletes to lose anywhere from .10 to .30 seconds. In conclusion the athlete should always run through the finish line and only think about decelerating 5 meters past the finish line. The timing clock stops when the athlete’s torso “breaks the plane” at the finish. When the head, neck or arms cross the finish line it does not stop the clock.

### **Chopping of Steps While Running the Intermediate Hurdles**

The top 25 hurdlers in the world know how to use both legs while hurdling. To be successful college and high school athletes must be willing to learn and use both legs while running the long hurdles. Chopping steps prior to clearing a hurdle kills both momentum and speed. If the hurdler is close to the hurdle and feels that his or her steps are going to be off, the correct thing to do is to accelerate 4-5 steps at an even higher rate of speed before they attempt to attach the hurdle. This sudden change in speed makes the athlete’s hurdle steps come back into the proper pattern desired. Again chopping steps always kills a great hurdle time!

### **Methods of Changing Hurdle Technique**

In conclusion the athlete must reformat his/her technique with many daily drills and lots of reps. The athlete cannot change the bad habits I have described with slow warm-up drills prior to practice. I recommend that the athlete use a mirror at home or in the weight room and practice 40-60 reps each day with the proper technique. The more reps that are done correctly enable the athlete to perfect his/her hurdle form for race day.

Remember bad habits that have been around for years cannot be changed overnight. Rome was not built in a day! If the athlete is patient and willing to work hard, anything can be changed. If you would like to more information on hurdling please refer to these books:

Secrets to Becoming A Successful Hurdler (Book & DVD)

Championship Training for the 300 & 400 Meter Hurdlers (Book & DVD)

Stretch-Rite Belts (A Must for the Hurdler)

*SSEproducts.com*