Elite *"CUTTING-EDGE"* Hurdling

by
Steve Silvey
Assistant Track & Field Coach
Sprints/Hurdles/Relays
Texas Tech University

There have been numerous articles written on the subject of proper hurdle technique. Many of these articles have never shared the nuts and bolts of actual hurdle workouts and what elite coaches can do to fine tune their athletes as the prepare for record setting performances.

Remember that a great male or female hurdler must spend a lot of time on **flexibility**. *The hurdler should be one of the most flexible athletes on the entire track and field team.* Be prepared to stretch twice a day. A tool that can be especially helpful is the Stretch-Rite Belt. It enables the athlete to get the same stretching benefits alone as they do when a coach or second athlete helps them to stretch.

Another important component to hurdling is **Dorsi-Flexion** (heel up-toe toe). Dorsi-Flexion will allow the athlete to gain 2-3 inches in additional "lead leg" clearance and 2-3 inches in "trail leg" clearance. Let's explore several key factors of hurdle training – specifically 110 meter high hurdle training.

1. Crowding the hurdles together
2. Lowering the hurdle height
3. Removing hurdles in training
4. Increasing attack velocity

Crowding the Hurdles Together
"Crowding the hurdles" together means moving the hurdles closer together than the original regulation marks on the track. For the men's 100-meter hurdle it means moving them to a distance of 8.5 meters instead of the normal regulation mark of 9.14 meters. For the women's 100-meter hurdle it means moving them to a distance of 8.0 – 7.5 meters instead of the normal regulation mark of 8.5 meters.

The purpose of crowding the hurdles together is to help the male and female athlete to develop the habit of getting the "lead leg" up faster to "attack" the hurdle. Once the hurdles have been adjusted and are "crowded", the result you should see is an athlete who is getting back into a "hips tall" position sooner as well as bringing the lead leg up to attack the hurdle quicker.

Workout example for men:	5 x 5 hurdles (8.5 meters)
Workout example for women:	5 x 5 hurdlers (8.0 meters

While you are aware that a strong wind behind the sprinter running 100 and 200 meters will produce faster times, did you know that these same strong winds can cause the hurdler to crash and burn on the hurdles? Several years ago, prior to the Texas Relays, while I was coaching at the University of Arkansas, I spent 2-3 weeks crowding the hurdles in practice prepare my athletes for the strong "south breezes" that we always experience in Austin in March and April. As you probably know those "breezes" always

"push" the athletes. Harry Jones a freshman hurdler from the University of Arkansas worked very hard doing a lot of 8.5 meter hurdle training in practice. On the day of the competition, in the University division of the Texas Relays, Harry finished 2nd in a field of very talented athletes and the primary reason Harry accomplished this achievement in his freshman year was simply because he was able to put himself into better body position faster than other athletes. The strong winds caused many of the great college athletes who were also competing to crash and burn because of their inability to be in proper body position quickly. Harry later became the SEC Champion as a sophomore when he ran 13.69 FAT.

Lowering the Hurdle Height for 100/110 Event Practice

To help the athlete eliminate any fear of attacking hurdles during a race and achieve the proper "hips tall" position (like you see with elite athletes), drop the traditional 42" hurdle to 39" or even 36" in practice. By dropping the hurdle height in practice, the hurdler can get back to this proper "hips tall" position and will overcome the bad habits they may develop from the fear of a taller hurdle. Many young athletes have a tendency to "jump" the hurdle instead of "sprinting" through the hurdle. When an athlete is "over rotated" at the hip, they are giving up a large share of their maximum leg power which in turn hurts the development of maximum speed performance for the hurdler. When I train my college male hurdlers, I drop the traditional 42" hurdle to 39" or even 36" in practice. Again, I do this to help the athlete learn how to quickly go into the "hips tall" position just like the elite sprinter.

Workout example:	College	8 x 10 Hurdles	39 inches
	High School Boys	6 x 10 Hurdles	36 inches
	High School Girls	5 x 10 Hurdles	30 inches

As a result of lowering the hurdles, you may be afraid the hurdler's lead leg height might get too low, but when you watch the hurdler often you will see that while racing the lead leg is often 2-3 inches too high above the hurdle. Not only will you see the hurdler attack the hurdles more efficiently but also can confidence as they overcome their fear of attacking the hurdles during a race.

There are other benefits to lowering hurdles as well. As you are aware a good hurdler will take 8 strides to the first hurdle and all hurdlers take 3 strides between hurdles. The *only* difference between the 13.5 hurdles and the 5.0 hurdle is the stride frequency of the athletes. Both athletes are taking the same number of strides while racing but the 13.5 hurdler is traveling at a much higher rate of speed. For this reason, I will have my college hurdlers who run the 42" hurdles for a meet go as low as 36" hurdles in practice so they can work on the *pure speed* that is required to be a great hurdler. In order to avoid confusion, it's important to emphasize to the hurdler that we are lowering the hurdles for *speed development* and that they should not adjust to get down so low they make contact with the lower hurdles during the lower hurdle training. The objectives of this drill are:

1. To overcome the fear of attacking the hurdle.
2. To be clean over the hurdle regardless of the hurdle height.
3. To develop maximum speed by running through the hurdles.

In 1997 while at the University of Arkansas, there was a young hurdler, Kevin White. The Sunday before the SEC Championships, he did the following high quality workout.

Workout	**Hurdle Height**	**White's Time**	
1 x 10 hurdles	(39 inches)	13.1 – Hand	10 minute Recovery
1 x 10 hurdles	(39 inches)	13.0 – Hand	10 minute Recovery
1 x 10 hurdles	(39 inches)	12.9 – Hand	

The following Saturday, Kevin White established a new SEC Meet Record with a "wind legal" 13.41 with FAT timing at the SEC Championship at Auburn University.

When lowering the hurdles for women who typically hurdle 30 – 33 inch hurdles in practice, go down to 28-30 inches to get the same effect and achieve the objectives mentioned above. The same objectives are true for men and women but remember when explaining the reason for lowering hurdles to the athlete the emphasis is on "speed" development.

At the University of Oregon, Micah Harris set the school record in 2002 with a 13.67. Much of his practice time was spent running over 39" hurdles. When I arrived I saw immediately Micah needed to learn how to sprint better. This drill was responsible for forcing him to sprint harder and faster between the hurdles in practice. Eric Mitchum was only 18 when he arrived at the University of Oregon with what I would call an average high school sprint speed. He committed to doing a lot of the 36 and 39 inch "speed/hurdle" drills and finished second in the PAC-10 Championships with a 13.73 clocking and was only beaten by the eventual NCAA Champion, Ryan Wilson of USC. Eric's clocking was the fastest that I had ever coached as a true freshman. Before Eric, my fastest freshman was Eddie Jackson (University of Arkansas) who just missed the NCAA Final in 2000 when he ran 13.75.

Removing Hurdles

Occasionally, I will remove a hurdle from the set of hurdles in practice. Doing so will help the athlete to *increase their speed velocity* to the next hurdle. Please note that the intent is **not** to change the number of steps a hurdler uses between the hurdles. Instead it is to help the hurdler to handle *positive changes in speed* as they get ready to hurdle the next barrier.

Sample workout: 5 x 10 hurdles (remove hurdle #2)

Removing hurdle #2 causes the athlete to carry more speed into hurdles 3, 4, and 5. This allows the hurdler to actually *feel* what could happen in racing when there is a positive adrenalin release or during the natural speeding up of the race by the leaders when they attempt to win a race.

Attack Velocity

You can also help a hurdler's "attack velocity" by putting another starting line back behind the traditional starting mark of 13.72 meters. From the new mark the hurdler is now taking 10 steps to the first hurdle instead of 8. At 10 steps, the hurdler is now carrying more speed into the first hurdle thus enabling him/her to have more speed going into hurdles 3, 4 and 5.

Workout example: 200 meters (70%)
5 x 5 hurdles (39 inches) "Using Attack Velocity 10 steps"

As mentioned above, the regular distance from the starting line to the first hurdle for a male athlete is 13.72 meters. However, when using this "attack velocity" concept the new starting line is 16.50 meters from the first hurdle. Women hurdlers will use the same distance as the men from the start to the first hurdle to increase their "attack velocity."

Coaching the 300 Intermediate Hurdler

Did you know that the top 25 300 meter hurdlers in the world *can use both their right and left legs* when running the 300 meter hurdles? The ability to use either leg as needed in hurdling is not a skill they use regularly but instead have developed it to use as needed in emergency situations such as, fatigue, headwinds, or hitting a previous hurdle. They are so adept with this skill that immediately and instinctively without even a conscious effort they can use the opposite leg and make their race a success. For this reason, I strongly believe in the benefit of learning to use alternate legs and which is why my 300 and hurdlers work on this skill. All of my male hurdlers start learning this skill beginning in the fall. We continue working on it during the winter and early spring by doing many "4" stepping over the women's 100 meter hurdles. This simply means that the athlete is going to "right lead" on one hurdle and then "left lead" on the next hurdle. This will feel uncomfortable and awkward at first but if an athlete is doing 10 x 10 hurdles 3-4 days a week at a low rate of speed in their training shoes during a warm-up or cool-down, they will learn this new skill and become comfortable with using alternate legs for hurdling.

Calvin Davis, a 400 meter runner had never touched a hurdle in his life before 1996 and wasn't sure he wanted to. We made the decision it was in his best interest to convert to hurdling. He ran many of these 10 x 10 hurdles in practice (with the R-L) 4-step drill. Calvin ran his first race as a hurdler in April of 1996 with a time of 49.29. Later in August in just the 15th race of his life, he won the Olympic Bronze with a personal best of 47.91. Not a bad accomplishment for the man who just a short year before had said "no" to trying the hurdles.

Lowering the Intermediate Hurdle Height – 300 Hurdles
Dropping the intermediate hurdles 3-6 inches will allow the hurdler to be aggressive in practice because he/she will gain confidence that will carry the hurdler through the meet. If you are trying to convert a 400 or 800 meter runner to the 300/400 meter hurdles, you can help them to overcome any fear and "feel" success by dropping the hurdle in practice. I personally like to do this on the hurdles on one or both curves in the 400 meters and on the hurdle on the only curve the 300 hurdler runs. Many times I don't even tell the young hurdler that I have dropped the hurdle height 3-6 inches. Why? Because it is very important for an athlete to *feel success* in practice….when an athlete feels success that feeling will carry over in to track meets.

Removing Intermediate Hurdles
I often remove a few hurdles in training sessions for two main reasons:

1. Force athletes to use alternate lead legs
2. Improve training performance times to remove psychological barriers

In a workout, I recommend removing the first 2 or 3 hurdles to force the athletes to, first, run the distance and second, use whichever legal leg comes up as the approach that particular hurdle. This forces the hurdler to practice using the opposite leg and become

comfortable with doing so. In addition, I emphasize that they must run the distance. Chopping their steps is not an option and should be something they are instructed to *not* consider doing. The rule is simple: Whatever leg comes up is the leg to use!

Workout Sample: 150 Meters (70%)
1 x 8 hurdlers (Remove hurdles #1 & #2)

I have also been known to remove the final one, two or three hurdles for the intermediate hurdler. When I do this, my instructions to the hurdler are very simple: your goal is to finish the hurdle interval faster than ever before and you can because you have no hurdles in your way to the finish line! My experience is that this is a great for confidence building exercise particularly for the young hurdler. It gets them into the mindset of covering their race distance in a lifetime best in practice and then they carry that great confident mindset straight into the track meet.

A confident mindset plus the extra adrenalin that naturally occurs prior to a meet means that the athlete's time is now ready to drop a second or two when they are in that big race and ready to compete hard. If an athlete can run fast in practice, I believe it will be easy for them to run fast in those important late season track meets.

During the 2002 season at the University of Oregon, I had the opportunity to coach a young athlete named Brandon Holiday who was a walk-on at Oregon. Brandon was an average practice runner with a personal best of 52.97. In practice Brandon's times improved steadily from 52 to 51 to 50.0. Late in May, Brandon ran a big personal best and became the PAC-10 400 hurdle champion with an electronic time of 50.73. His speed that had remained unchanged increased steadily when I started in mid-season removing one or two hurdles over the final 100 meters of his race and/or lowering the height of the last hurdles. By removing or changing the height of the hurdles, Brandon was able to see and feel success even when he was in his greatest stages of fatigue.

Workout Sample #1: 200 Meters (70%)
1 x 8 hurdles (remove hurdle #6 & #7)
3 x 3 hurdles (at relaxed goal pace)

Workout Sample #2: 1 x 8 hurdles (remove last 2 hurdles & sprint home)=goal pace
2 x 5 hurdles (at relaxed goal pace)

Workout Sample #3: 1 x 9 hurdles "sprint home" remove final hurdle=goal pace
15 minute break
2 x 3 hurdles (at relaxed goal pace)

Hopefully you have found some of this information helpful and will be able to incorporate it into your hurdle program. In addition, these items will help you as a coach:

- **World Class Hurdle Training program (Book and DVD) "package"**
- World Class "All Sports" Speed Training Program (Book & DVD) "package"
- Coach Silvey's "Texas Tech" Training Program (Cook Book) Workouts for entire year
- Coach Silvey's "Arkansas" Training program (Cook Book) Workouts for entire year