SPRINT HURDLES

AN INTRODUCTION TO SPEED, STRENGTH, TECHNICAL, AND RHYTHM TRAINING

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Introduction

In track and field there are only two true “sprint” events, the 100 meter dash and the sprint hurdles. Both events are run along the straight away and are an all-out sprint from beginning to end. The sprint hurdles race consists of the men’s 110-meter-high hurdles, and the women’s 100 meter hurdles. Like all running events, the objective is to reach the finish line as fast as possible. While speed is very important in the sprint hurdles, the skill of clearing the hurdle is most important as it determines how efficiently and quickly you return to sprinting after clearing the hurdles.

Both the men and the women’s sprint hurdles race is run in a rhythm consisting of 3 steps in between the hurdles. These 3 steps are the same for high school, college, and professionals alike with the only difference being the rate at which the steps are taken. Training to improve this rhythm is pretty straightforward and only requires a proper plan and guidance for maximum results. From high school to Olympic Final training to improve rhythm is the key to success in the Sprint Hurdles, and an understanding of how speed, strength, and technical training improve this rhythm is the what you will learn in this book today.

In this book, I am going to share with you everything you need to know about training for the Sprint Hurdles. First you will learn the basics of the event such as the difference between the 100 and 110 hurdles race, the various hurdle styles that exist, hurdle terminology, and finally some tips for coaching newcomers in the event. We will then look at the race and how to train for it. You will learn the concept of periodization and the training phases of a season as well as get a general overview of Technical, Speed, Strength, and Rhythm training. By the end of this book you will have a thorough understanding of the Sprint Hurdles event, and be ready to begin preparing workouts that get results for your athletes.

While this book is designed for beginners, novice and advanced coaches and athletes will also find lots of great information that will prove beneficial. What I share with you in this book will not be a scientific, measure every angle, use a million gadgets approach to training. What I share with you in this book will be the fundamentals of training, and are the exact methods I and many other professionals use to run faster in the sprint hurdles. Everything I know is a combination of what I’ve learned working with world class coaches like Larry Wade, Steve McGill, Carl Valle, and Alfredo Schery. Though training as a professional is best done with one coach for an entire career, having worked with so many has allowed me to absorb a great deal more than the average hurdler and is the reason why I have become one of the leading experts on the sprint hurdles event in track and field.

At the writing of this book, I am training to qualify and compete in my 3rd Olympic Games. If you are interested in getting a deeper understanding of the sprint hurdles and what it takes to compete on the Olympic Stage, feel free to sign up and follow my personal journey to the 2016 Olympic Games. You can follow my journey at sprinthurdles.com/complete-training
The 3 Golden Rules

Training for the sprint hurdles requires a balance between speed, strength, technique, and rhythm training. The art of hurdling is a lot more than simply getting up and racing to the finish line. In order to master the hurdles and continually improve, a strategic approach must be taken. While your efforts in training will be focused on improving the various components of the race, there are 3 Golden Rules that are at the foundation of the sprint hurdles, they are:

1. **Run your fastest,**
2. **Stay Forward,** and
3. **Stay Tall.**

Through the days, weeks, months and years you will undoubtedly get caught up in the specifics of training, but above all else the 3 rules must be followed for ultimate success.

**Run your fastest** is and always will be the most important factor in success as a sprint hurdler. It will be very easy to get caught up in technique and many times coaches and athletes will focus more so on the movements of the event than the speed of the running. Though this is natural and happens to everyone, you must always remember that the point of the race is to reach the finish line first. On race day, thinking should be to a minimum, and instinct to run your fastest must lead the way.

**Stay Forward** is a cue that you have undoubtedly heard (lean), and it is with good reason as it is a pre-requisite for success in the event. Learning to maintain a forward lean ensures you stay in attack mode and allows gravity to help pull you down the track and towards the finish line.

**Stay Tall** is the final Golden Rule and is extremely important to running faster in the hurdles. In order to clear the 42” barriers in the race (39” for boys and 33” for women/girls), you must always strive to maintain your hips as close to the hurdle height as possible. This will ensure you spend as little energy as possible to clear the hurdles, and ensure your body stays as close to sprinting as possible through the entirety of the race.

Through the remainder of the book I will focus on the various aspects to training, but it must always be remembered that, on race day, sticking to the 3 Golden Rules is more important than the entirety of the material we will cover combined.
The 100 Vs 110 Hurdles

100h=Speed

The women compete to 100 meters over 10 hurdles spaced 8.5 meters apart. Their hurdles are 33” tall and do not rise after high school. Since the women hardly have to elevate their hips in order to clear the 33” hurdles, they can maintain a more natural sprint stride in between them. This allows them to take more advantage of their natural foot speed, and for this reason speed will influence times more than technique in the women’s event. While the Men do not need world class speed in order to succeed in the 110 hurdles, the women will need to poses great speed to compete on the international level as a 100 meter hurdler.
The men run to 110 meters over 10 hurdles spaced 9.14 meters apart. The hurdles are 42 inches tall (39 in high school) and cause the athlete to elevate their hips in order to clear them. This causes them to take off further in front of the hurdle and also land further behind it. For this reason the men are forced to run with a much shorter stride between hurdles which greatly diminish the impact of their natural foot speed.

Improving the rate of the 3 steps in the 110s ultimately comes down to returning to proper *sprint* form the fastest and therefor requires a greater emphasis on technical efficiency over the 10 hurdles. Immediately returning to proper sprint form ensures you maximize the rhythm with the shortened stride length.
**Terminology**

**Lead Leg** – The lead leg is the first leg to clear the hurdles when racing.

**Trail Leg** – The trail leg is the second leg to clear the hurdle when racing.

**Rhythm** – The Sprint Hurdles race is run with 3 strides between each hurdle, these 3 strides create the Rhythm of the race.

**Splits** – A split is the time from point A to point B. Point A and point B are usually two consecutive hurdles. The time that it takes to get from one hurdle to the second is the split. A split is usually timed from the touchdown (landing) off one hurdle to the touchdown off the following hurdle.

**Technique** – Technique consists of position, and the movements of the lead leg, trail leg and arms into over and off of the hurdles.

**Periodization** – Periodization is a strategic approach to training. It is effectively a training calendar divided into phases that work together to allow an athlete to reach best performances at the biggest and most important meets of the season.
Hurdle Styles

No two hurdlers are alike and no two hurdlers will respond to the same type of training. It is important to know what kind of hurdler you are working with so you can use appropriate cues, workouts and most quickly achieve results.

**Speed Hurdlers**

This type of hurdler relies on his/her pure sprint speed to achieve results. Gail Devers, and Terrance Trammell were speed hurdlers. They often have incredible starts and are especially successful during the shorter indoor season. This type of hurdler will not be too concerned with mastering technique, and will only want just enough to continue moving forward.

Although this type of hurdler will achieve lots of success on the high school level when the hurdles are only 39” he might run into problems at the Men’s 42” hurdles, if he has not become fairly technically efficient.

The women’s 33” hurdles do not rise again after high school and for this reason female Speed Hurdlers will always be the preferred hurdler to coach.

**Power Hurdlers**

This type of hurdler runs fearlessly and does not mind hitting the hurdles. This hurdler will not hesitate to run straight through the hurdle and can often times break them in the process. While this is a very great quality to have in a hurdler (fearlessness), it can lead to problems later in development if they do not master technique. This type of hurdler will typically be bigger and stronger and while speed might not be their strong point, their sheer aggressiveness will see them achieve lots of success throughout their careers. David Oliver is a prototypical Power Hurdler.

**Technical Hurdlers**

This is the most common type of hurdler and they can be both a joy and a headache to work with. This type of hurdler will be most interested with “how” to clear the hurdle, and will almost always focus on technique before speed. They will often forget to run as fast as possible and have to be reminded of the 3 Golden Rules, but will achieve the greatest level of success at the elite levels.

While on the High School level this type of hurdler will achieve less success than a pure speed hurdler, the roles will continually reverse as they progress through the ranks. On the Olympic Stage, the most technically efficient hurdler will almost always win the race. Liu Xiang, Allen Johnson, Sally Pearson and Dawn Harper are prototypical Technical Hurdlers.
Coaching New Hurdlers

Even newcomers will do something right. An error often made is in giving your first time hurdler instruction on how to hurdle. While the job of the coach is to provide constant feedback in training, it should be kept to a minimum during your initial training session with a new hurdler.

Many times you will find that they will execute an exceptional lead leg or trail leg, or maybe they naturally stay forward or keep their arms moving on top of the hurdle. Whatever the case, you want to allow your first time hurdlers the opportunity to show what they are capable of, before you begin giving instruction. After a few attempts at clearing the hurdles with a running approach, take note on what they do right as well as what they do wrong, this information will help you determine what to focus on first as you begin ingraining good habits in your athlete.

As we stated earlier, the sprint hurdles race is run with a 3-step rhythm. It will be fairly difficult to win races if your athletes can not 3-step and for this reason ingraining the proper 3-step rhythm must be the first objective with all beginner hurdlers.

Pre-requisites for Hurdling

Hip-Strength

Having the proper hip-strength to clear the hurdles in stride is a pre-requisite to success in the hurdles. Often time’s beginners do not have the necessary strength in the hips and run into troubles clearing the hurdles. Even more advanced hurdlers who can properly 3-step between hurdles run into the trouble of staying tall in between hurdles due to lack of hip-strength. Here are 2 quick tests you can perform with your athletes to check if their hips need strengthening.

Testing Hip Alignment

In order to get an understanding of proper hip-posture perform the following test. Standing in the middle of a doorway, lower to one knee with your butt and head firmly planted against the wall.
There might be a noticeable gap between your lower back and the flat surface of the door. The greater this gap is, the more unaligned the hips are. Rotate the hips to ensure the lower back flattens against the well, this is a neutral alignment and is the correct posture of the hip when standing upright.

**Testing Hip Strength**

There are two test you want to perform to determine hip strength, the first will test glute strength and the second will test hip flexor strength.

**Test 1**

Standing tall in a comfortable position with feet approximately shoulder width apart, curl one heel to your butt and hold.

While viewing the athlete from the back, watch to see if the hips tilt either left or right. If so, strengthening of the glutes (especially the glute medius) should be performed.

**Test 2**

Standing tall in a comfortable position with feet approximately shoulder width apart, lift one knee as high as you can, with the foot dorsi-flexed (toes pointing toward knee) and hold.
While viewing the athlete from the side you are looking to see if they 1. Buckle at the knee when raising the it or 2. Raise their knee above the 90-degree angle (thigh parallel with floor).

If the knee buckles when raising the knee, the glutes need strengthening, and if they fail to raise their knee past parallel the hip-flexors and or lower abs need strengthening.

I have made available a beginners hip strengthening circuit on Udemy.com. The routine is a body weight only strength and conditioning workout that should take 15-25 minutes to complete. You can register for the course at a discount by visiting Udemy.
Flexibility

Flexibility is a very important factor in hurdle success. It is no coincidence that nearly every world record holder can perform the splits, in particular the Russian split (feet spread to either side). Flexibility is important in that it allows the athlete's body to strain less while clearing the hurdle. Though all athletes will be able to jump and clear the hurdles, the goal is to clear them as low as possible so as to maintain the hips level all the way to the finish line. Stretching for 30 minutes at the end of every training session is strongly suggested in order to maintain and improve flexibility throughout the year.

Here is an exercise you can do to quickly loosen the hips.

1. Lay flat on the ground with your back and your feet flat on the ground.
2. Breathing calmly and relaxed, focus on ensuring your back is completely flat and you are completely comfortable.
3. Rotate your hips further under you, by squeeze your glutes and then relax once more to ensure a flat back and feet on the ground.
4. Extend your legs so that your legs are completely flat on the ground creating a straight line from head to ankle.
5. Pull your toes up towards your knees and hold until you feel they are completely flat, as they would be if you were standing (dorsiflexed).
6. Relax further, focusing on maintaining the back firmly flattened against the ground.

You may feel tightness in your ankles when holding this position, and one ankle may feel like it can easily pull towards your knees, while the other feels weaker and less able to hold the proper position. In this case, pull harder on the toes that feel weaker, while allowing the other ankle to rest fully in the proper position.

Step 2

1. Completely relaxed, separate the legs as far as you can until you feel a slight cramp in your glutes.
2. Squeeze the cheeks to better rotate the hips under and flatten the back to the ground.
3. Ensuring to maintain a flat back, relax the hips and legs fully
4. Once more separate the legs a bit further (chasing a slight cramp in the glutes) and relax fully.

Once you're completely relaxed, have avoided the cramp in the glutes, and can maintain a flat back, sit up straight and begin stretching from this position. The relief you will get from this stretch should be immediately noticeable and it should become a part of your daily routine.
Training for the Sprint Hurdles

While the first part of this book covered what the sprint hurdles are and some basic prerequisites, the art of mastering the event comes through training. There are many components to training for the sprint hurdles, and we will go over the 4 basic components of a successful sprint hurdles training season.

Rhythm Training

Technical Training

Speed Training

Strength Training

Since rhythm is the most important aspect of the race, and since all beginner hurdlers must learn to 3-step if they wish to be successful, we will begin by learning how to properly ingrain the 3-step rhythm.
Rhythm Training

Rhythm training is the most important aspect to improving in the sprint hurdles and it begins with learning how to 3-step. Ingraining the proper race rhythm is a straightforward process and only requires discipline and patience to master.

Rhythm training for beginner hurdlers should start with drills over cones then progress to the cycle drill, on to quick steps, and finally on to hurdles spaced at near the regular race distance. Once your hurdlers can successfully sprint over the hurdles spaced 2ft closer than their normal race distance, they will be ready to also 3-step at full speed in races.
**Cone Drill** (introduce rhythm)

Cone drills are the first workout you should perform with new hurdlers. To conduct the workout simply place cones (or banana hurdles, sticks, shoes etc.) on the track in increasing distances.

4ft-6ft-10ft-14ft-16ft-16ft-18ft-18ft

The athletes should begin by standing upright at the first cone, and moving forward through all cones with a 3 step rhythm in between cones. As they move down the track, the emphasis should be on maintaining normal arm and leg movements as they clear the cones. The arms should pump up and down, and the legs should cycle underneath the hips.

Your athletes should work to move through all cones in rhythm and should not move on to the next workout until they can move through 5+ cones spaced 18ft apart.

**Cycle Drill** (introduce the hurdle)

The cycle drill is the preferred drill for ingraining proper arm swing over the hurdles, but is also the perfect starting point for learning to run in rhythm over the hurdles.

With the hurdles at the lowest height, space them 15ft apart. The athletes should move through the hurdles in the same fashion they moved through the cones in the cone drills. The emphasis should be maintaining a good rhythm and moving smoothly through all hurdles.

Once they can move through the hurdles in rhythm you should work to gradually increase the space between the hurdles.

15ft-15ft-15ft-15ft

To

15ft-16ft-17ft-18ft

Take note of which hurdle they struggle with as that will be the distance for the next progression of the cycle drill. If they struggle when the hurdles are spaced at 17ft then the set up should go as follows

17ft-17ft-17ft-17ft.

This continual progression should continue until the hurdlers can perform the drill with the hurdles 25ft apart. Though it may take a few sessions, all hurdlers should eventually be able to perform the cycle drill with the hurdles at 25ft apart at which point they should move on to the Quick Steps drill.
**Quick Steps (introduce speed)**

With the rhythm fairly ingrained it is now time to begin moving through the hurdles with more speed. From the starting line the athletes should approach the first hurdle in their normal 8-step approach (not at full speed) and continue through the hurdles with proper form and rhythm.

To begin place the 1st hurdle at the regular mark, the second at 18ft and every hurdle thereafter at an increasing distance of your choosing until the hurdles are at 26/27ft apart. The set up I use most is:

18ft-21ft-24ft-25ft-26ft-27ft

The goal is to move the feet quickly between the hurdles spaced 18/21/24ft and continue to move them quickly as the distance increases.

Your hurdlers will want to open their strides in between hurdles as they attempt to clear more ground between the hurdles, but they should instead try to move their legs just as quickly throughout all hurdles, and instead take-off from further in front of the hurdle as they move down the track. This is something that will require lots of cueing and patience by the coach, but something that should be ingrained as habit before moving on to run full speed over the hurdles.

These are the only 3 workouts you will need to ingrain proper rhythm with your beginner hurdlers. They should not perform normal full-speed workouts that your more advanced hurdlers will perform until they can perform the quick step drill in rhythm, doing so will only work to ingrain bad habits, and ultimately slow progress in learning the proper race rhythm.

All of these drills can be viewed for free by visiting sprinthurdles.com

**Advanced Training**

After the basic 3-step rhythm is ingrained, it is time to get on to increasing the rhythm. This will be accomplished through further rhythm training, but will also greatly improve with the help of speed, technical, and strength training. Before we move on to the other aspects of training, lets briefly discuss how to increase the rhythm between hurdles.

There are literally dozens of hurdle workouts you can perform to help your athletes increase the rhythm between hurdles. They all revolve around the concept of discounting the hurdles (moving them in closer).

There are 3 distances in which you will want to train your hurdles.

1 foot closer (from the regular mark)

2 feet closer

3 feet closer
Placing the hurdles 1 foot closer will be the typical set up for a majority of the season. Placing the hurdles 2 feet closer will work to increase the rhythm between hurdles, and is suggested for hurdlers who need a greater challenge in order to continue dropping times in races. Finally moving the hurdles in 3 feet will serve to put your hurdlers on over-drive and is intended for your most elite hurdlers, looking to really take their hurdling to a new level. All workouts should be performed from the starting line at full speed though blocks are not always necessary.

**Splits**

Splits are what let you know the rhythm and ultimately the times your athlete is capable of running. A split is measured from the touchdown (landing) off 1 hurdle to the touchdown off the next hurdle. There are a few splits that you will always aim to run as your hurdlers progress in training.

**Men (Boys)**

1.00 = 13.00  
1.05 = 13.50  
1.10 = 14.00  
1.15 = 14.50  
1.20 = 15.00  
1.25 = 15.50  
1.30 = 16.00

While the athletes starting capabilities and finishing capabilities will influence the times they will run, this general splits guide will prove fairly accurate in predicting race times.
**Speed Training**

Speed training for the sprint hurdles is of utmost importance for the females (100 hurdles) and their 33-inch hurdles, but is also of extreme importance for the Men in the High Hurdles. This is the only aspect to training for the sprint hurdles that will differ between men and women. The women should focus heavily on speed development, as the hurdles are so low that technical mastery is not as important, but Men must have a more balanced approach to training, as the 42” hurdles require a change in stride pattern and an exaggerated elevation of the hips to clear. Regardless, speed training will be the foundation for Rhythm training and will ultimately be necessary as you look to run faster times.

Speed training involves a lot more than simply lining up to run 30, 40 and 50 meter sprints. In track and Field there must be a more complete strategy to allow for athletes to reach their best performances at the biggest meets of the year. Through the use of periodization your job is to design a plan that adapts the body to greater speeds as the season progresses.

There are a million and one philosophies for what is the “best” training strategy. Nearly every approach works and nearly every approach fails. Track and Field, especially the sprint hurdles, is a sport in which athletes must be trained as individuals for ultimate success. That being said, there is no “one size fits all approach” to training, and it is the responsibility of the coach to know how to train each individual athlete. I have personally had the most success with a Long to Short approach to training, and that is the strategy that I personally use and will share with you in this book.

A long to short approach to training, is simply a strategy that gradually progresses an athlete toward max speed training. Beginning with long runs, over distance runs, special endurance, power, and finally speed training, the long to short approach is followed by a majority of the American Based coaches and athletes competing today.

A short to long approach would be just the opposite with an emphasis on fast speed running, gradually increasing the distances throughout the training year. While this approach to training does work for many, I find it is more risk to injury especially in younger athletes who cannot handle the stresses of high speed running on a continual basis.

Speed Training when executed at its best, works hand in hand with strength training. Through proper planning speed, rhythm, strength, and technical will work in unison through the year to achieve optimum results.

The general phases of seed training are as follows:

General Conditioning

Special Endurance
Speed Endurance

Power

Speed

**General Conditioning**

The General Conditioning phase of training includes all the work done to prepare the athlete for real track and field workouts. This phase of training is done in sneakers, and does not have to be performed at typical distances. Long road runs, tempo runs, and odd-distance runs on the track are the staple of this phase of training.

During this phase of training the volume will be high as you work to build a strong endurance base. While the intensities will never be at 100% the perceived intensities of the athlete will be at or near 100% as the workouts progress.

**Special Endurance**

This phase of speed training is the part of the season that athletes will dislike the most. Though they will not run at max speed, they will work to run strong and hold form through over-distance runs. During this phase of training spikes will be introduced, volume will drop slightly but still be high in comparison to true speed or speed endurance training.

During this phase of training sprint hurdlers should work to improve times in distances of 250-400m+. Though hurdlers don’t need to train at distances over 400 meters very often, it will help build the strength that will carry them through the winter training season and also allow them to help in an array of events outside the hurdles.

**Power Training**

Power training should begin after a strong foundation in over distance runs on the track has been built. Power training is the attempt to convert the strength gained (both on the track and in the gym) to max acceleration. In the sprint hurdles athletes accelerate through 60 meters (about 5 hurdles) just as they would in the 100 meter dash. Through power training hurdlers will begin to recruit the muscles in a manner that mimics the race, and begin to activate the nervous system to the intensities of racing.

Power training on the track will include workouts such as hills, 10s 20s and 30s and will be accompanied by plyometric training designed to develop greater and greater explosiveness. It is only after completion of the power phase that athletes should be introduce to high speed training.
Speed

Finally after months of preparation the body will be ready to perform runs at full speed. The human body is only capable of maintaining max speed for a few seconds, for this reason runs over 60 meters in distance will not be considered speed work but rather speed-endurance.

True speed work will be performed at max intensity at distances between 40 and 60 meters and must always be accompanied by full rest. Speed training is defined by max intensity and full rest, and will be your best opportunity to increase foot speed for greater rhythm in the hurdles.

Speed Endurance

Speed Endurance differs from special endurance in that special endurance works to build strength, and speed endurance works to maintain max speed for longer distances. This is the work that will comprise a majority of your work during the competition season. Since Speed Work taxes the nervous system too much, speed-endurance workouts are used to both maintain speed, and improve the endurance necessary to finish the race strong as well as compete in multiple rounds during the championship season. Speed endurance workouts include any and all distances from 65 meters up to 200 meters. It is important to begin all runs with a full speed burst through 50-60 meters in order to truly call these workouts speed-endurance workouts. If the athlete does not achieve full speed then the workout effectively becomes a special-endurance workout.
Strength Training

Strength work is a very important aspect of training for the sprint hurdles. Though this is a part of training can be skipped during the developmental stages, it becomes increasingly important as the athlete advances. Not only will strength work be necessary to handle the increasing demands of the sprint work on the track, it will also be important in ensuring proper technique can be executed and maintained throughout the entirety of the race.

Strength work should also follow a strategic plan (periodization) for maximum results. The key to remember with strength training is that it should always lead the way for the work to be done on the track. EX: Before you do power work on the track, you should have touched it in the gym.

The general phases of strength training are as follows:

General Strength (Functional)

Max Strength

Max Power

General Strength (Functional)

Regardless of the level of the hurdler, general strength and conditioning should always begin with functional strength. A grand majority of coaches skip this vital step and then run into problems with their athlete down the road. In order to properly execute technique, hurdlers should be able to raise their knees above the height of the hurdle, without leaving the ground. They should also be able to successfully balance themselves on either leg and execute single leg hops (such as jumping rope).

Functional strength is very easy to develop but requires patience and consistency in training. The goal of functional strength is to learn to master your own body weight before progressing to using weights for further strength gains.

Functional strength should follow a basic 3 step progression

Proper Posture->Isometric Contraction->Functional Movements

Earlier you learned how to align and loosen the hips. It is with this proper hip position that all strength work (especially functional strength) should occur. Putting together a functional strength program is fairly easy and if you’d like to follow the one I personally do, I invite you to visit my udemy course on hip-strength. It is designed for beginners and will lay the necessary foundation before stepping in the weight room.
**Max Strength**

During this phase of training, the goal will be to get as strong as possible. This is required to both handle the stresses of power training, and to begin teaching the Central Nervous System to contract with maximum intensities.

If functional strength was properly taught, max strength should be a straight forward process. It is during this phase of strength training that periodization will be most important. You will need to continually push your hurdlers to their max, without over training them, so they can bounce back and reach new heights.

This is the only time of the season in which you should continually strive to move heavier and heavier weight in the gym.

**Power**

Power training is the last phase of strength training and is the most important for sprinters and sprint hurdlers. Though it is important to be strong, what’s most important is power. While strength is the ability to move a heavy load (lift a heavy weight) Power is the ability to move a load at max speed.

Power training concerns itself with not just lifting heavy weights, but moving the weight in an explosive manner. The stimulus of power training is closer to the stimulus of sprinting and hurdling, and it is for this reason that you should aim to make your athletes as powerful as possible.

Training for power will include performing the Olympic Lifts (power clean and snatch) as well as incorporating medball and plyometric work both in the gym and on the track.

This should be the last phase of training performed in the gym, just prior to true speed work on the track.
Technical Training

Technical training is of utmost importance for the 110 hurdles (Men/Boys) but should be taken very seriously for the 100 hurdles (women/girls) as well. At the elite levels of the sport, the most technically efficient hurdler will often win the race. This is because as at the world class level, all athletes will have the basic speed to run fast in the hurdles, and simply maintaining more of that speed (through efficient/proper technique) will lead to more consistent victories.

Technical training begins with a strengthening of the muscles required to lift and extend the legs (hip-flexors/abs/glutes/hamstrings) and advances to learning the proper mechanics of the race.

The strength demands of proper technique will be touched upon through strength training, but can be further improved through specific drills and exercises on the track. Hurdle walk overs should be performed early and often to ensure your athletes can focus on executing technique at a faster rate later in the season.

The Lead Leg

The lead leg is the first leg that crosses the hurdle. In order to execute most efficiently there are 2 basic rules to follow.

1. **Lead with the knee** – the knee must lead the way (just as in sprinting) and must reach the height of the hurdle before take off
2. **Heel to Hip**- In order to ensure the hurdle motion is cyclic (as in sprinting) you must make sure to cycle the foot under the hip. In order to do this, bring the heel to the butt as you raise the knee above the hurdle height.

The lead leg should never ever open up towards the hurdle. This is a style that was taught in the olden days, and it is fast going extinct. Kicking the foot out toward the hurdle, breaks up the action over the hurdles and causes athletes to go long over the barriers. The goal is to keep
everything as tight as possible and as close to proper sprint mechanics as possible. For this reason the foot should come straight up and return straight back down to the track.

**The Trail Leg**

The trail leg is the key to creating speed off the hurdle. While the lead leg ensures proper balance off the back side, bringing the trail leg through with a big aggressive step back down to the track will literally throw you forward and towards the next hurdle.

**You do not want to open the hips in order to bring the trail leg through.** You should work to maintain the hips as square as possible at all times when hurdling, especially when executing the proper trail leg technique.

Just as with the lead leg, there are 2 important aspects to executing the proper trail leg

1. **Finish through full extension** – many coaches like saying “leave the foot behind”, but I find a better cue is simply to push through full extension into the hurdle.
2. **Pull the trail leg high into the chest** - the trail leg should literally look like the lead leg on the backside of the hurdle. The knee should be well into the chest with the foot dorsiflexed and parallel to the track.

**The Arms**

The arms should always move in the same manner as they do when you sprint on the ground. The arms are very important in maintaining rhythm, timing and balance in the hurdle race and should be kept as tight as possible when clearing the hurdles.

The lead arm should move up and down as in a normal sprint stride, and the trail arm should do the same. A mental note to tighten the trail arm should be made, as many hurdlers will have the tendency to allow it to open up which causes balance and timing issues.

The arms are best ingrained during the **Cycle drill** and the 1-step drill. It is best to allow your athletes to develop the timing on their own when performing these two drills. Given enough time
the body will naturally adapt to the proper rhythm, and they will execute perfectly without much need for cues in races.
Elite Training

Eventually your athletes will be looking to break 14.00 seconds at which point they should begin with more advanced forms of training. Such workouts would include

**Speed Cone Drills** – These are drills designed to ingrain the stride length necessary between hurdles.

**Zone Drills** – These are drills designed to adapt the athlete to higher speeds in between hurdles. In a zone drill you will remove 1 or more hurdles, and force your athletes to run full speed over the hurdles with 5, 7 or more steps in between each hurdle.

**Half Hurdles** – With these drills your athletes will run full speed over 1 side of the hurdles. This will work to speed lead leg and trail leg mechanics, and serve to ingrain the sense of fear necessary to run truly fast times.

**Closing Comments**

I would like to take a quick moment to say thank you for reading my book. I am grateful for your commitment to improving and would like to be here to help as much as I can. If you feel there is something I did not cover that you think would have been beneficial to this Introduction to training for the Sprint Hurdles please feel free to write me at sprinthurdles@gmail.com and let me know. I will use your feedback to include more on the topics you wish to know most about in future updates and revisions.

Thank you again!

Hector Cotto