

## Sprinting and Hurdling the JAC Way

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### **Introduction**

Whenever you say the phrase, “track and field” to someone, what do you think comes to their mind first? More than likely it will be something along the lines of, “100 meters”, “Usain Bolt”, or maybe just simply, “speed”. Can you blame them though? Watching an elite sprinter run makes it almost seem surreal. Everything looks effortless, yet the athlete is producing thousands of pounds of force and moving at truly incredible speeds. While people may argue about the simplicity of some events (ex. long jump where you run as fast as you can and then just jump as far as you can) most people would agree that sprints are the “holy grail” of simplicity. Get to the finish line as fast as you can, preferably in first place. All of the different hurdle races, from 60mH to 400mH, fall into the category of sprints, and they must be coached as sprinting events. The hurdles are simply another high speed race to the finish line; NOT a hurdling technique competition. In this article I will go over the demands of the sprints and hurdles, how we at the Jacksonville Athletic Club teach the events, as well as share with the reader our training philosophy on these events. Finally, I have included some sample training plans that we use during the different phases of the season.

### **Notes**

We at the Jacksonville Athletic Club believe that the sprints and hurdles are events where not much in-depth coaching, outside of a couple rudimentary cues, is needed. For example, telling your athlete to “push as hard as you can to the cone” will do wonders in terms of helping them improve their overall time and technique. The human body is an extremely sophisticated organism and it does an exceptional job of arranging itself into the positions it needs to be in during certain points of movement. Through this “hack in the system” we can avoid overcoaching all together. As you read deeper into this article you may conclude that sprinters and hurdlers have very similar training as jumpers as set forth by other JAC written articles, and if that is the case you would be exactly right! The sprints, hurdles and jumps have almost identical physical and neurological demands by nature, and where they do differ I will go into greater detail later in this article. Finally, as a rule when training our hurdlers, the hurdles will almost always be discounted, whether by height of hurdle or by distance between hurdles, and usually both will be discounted.

### **How We Teach the Events**

First, we will start with the sprints. We at the Jacksonville Athletic Club teach sprinting as a pushing action. Some may talk about sprinting as “pawing” or “pulling” at the ground, however we believe by emphasizing pushing we give the athletes a simpler technical model. Have you ever had to push a car or any vehicle after it has broken down? To get it moving you start by taking big, powerful, aggressive steps pushing down and back (horizontally) to build speed slowly. Once the vehicle is in motion you do not think about shortening your stride, but you notice that your feet begin to move quicker and your cadence speeds up. You are now standing much taller than when you started, and your feet are pushing almost straight down, in a vertical manner. This is the same way we teach someone how to sprint. From a resting start, you must use extremely long, powerful movements pushing horizontally backwards to

put your body into motion. Then, as you gain speed, you will get taller with each preceding step, transferring from horizontal to vertical pushing, and cadence of your strides will increase.

We will start any athlete with acceleration runs anywhere from 10 to 30 meters. From a standing start, we encourage the athlete to start with whatever foot feels the most comfortable in front. From there we have the athlete take a large step back (leaving the front foot on the ground), raising the opposite arm upwards and then we ask the athlete to begin to “roll” forward, allowing the shoulders to move forward and down. Without any pauses or hitches we ask the athlete to push off both feet and run as fast and aggressively as possible to the marked distance of the run. From there we will seldomly make technical adjustments as athletes will over time become more comfortable moving their limbs at rapid speeds needed for the sprints. We at the Jacksonville Athletic Club do not give many cues at all during these exercises, as we do not want the athlete to overthink such a natural motion.

Teaching hurdles is very similar to flat sprinting. Hurdles will be placed at varying distances depending on gender, age, experience level, speed, etc. For the purpose of this section I will assume we are working with a high school level athlete. Normally for girls, the first hurdle will be placed at 42ft (12.80m) from the start line, with boys being placed 44ft (13.40) from the start line. Between the hurdles is where the variables will come into play. For high school girls the hurdles can be anywhere from 23ft-26ft (7m-8m) apart. For boys they can anywhere from 26ft-29ft (8m-9m). For the beginner we always err on the side of closer and space them out later if needed. These discounted distances will allow the athlete to take 3 strides between the hurdles setting the athlete up on the same lead leg into each hurdle.

For athletes that are learning at a younger age, we believe that it is advantageous to teach them to 4 step, as this will cause them to alternate lead legs on consecutive hurdles. This will force them to put their feet down quicker and sprint between the hurdles rather than slowly reaching each step to make it to the next hurdle on the correct foot. This is also a great way to help build overall coordination and athleticism for the younger athlete.

For athletes just learning the hurdles, we at the Jacksonville Athletic Club will set out 3-4 hurdles, set at a low height, (24-27 inches for girls, 30-33 inches for boys) and have the athlete run through the hurdles many times over. To start, the athlete will begin from the standing rollover start that I have described earlier in this section. The athlete will then go on to run through all hurdles as fast as they can. We always tell the athletes that the only thing they can do wrong is stop before going through all of the hurdles that are set out. The technique will get better over time, so we just want them running through the hurdles!

When determining the lead leg for the hurdle, the athlete should try using both legs to lead into the hurdle and after multiple efforts decide which leg feels most comfortable. If they run the long hurdles, (200mH for junior high, 300mH for high school and 400mH for college) both lead legs should be practiced on a regular basis.

After the athlete has gone through the hurdles a few times, we ask the athlete how the hurdle spacing felt. If they feel like the hurdles are too close, we will then space them out. On the same note, if they feel as though they must reach to get to each hurdle, we will move them closer together and encourage the athlete to run faster between the hurdles. This will more times than not fix their reaching problem. Beginner athletes will normally run at sub-maximal speeds between the hurdles as they have never tried to sprint over a barrier and it is a new skill for them. If that is your athlete, fret not! Over time they will become more comfortable sprinting between and through the barriers.

We try not to stress perfect hurdle technique too often. There will NEVER be a perfect hurdle rep, so we spend time convincing a hurdler of how good they are rather than nitpicking each rep. We make sure each rep consists of the athlete running as fast as possible, staying forward through the hurdle, and driving into the hurdle with a bent knee rather than a kicking foot with a straight leg. These three key points along with confidence (most important) will lead to fast times.

One note to consider on teaching a beginner's trail leg technique. We usually see the trail leg of the beginner athlete come under their body, as opposed to up the side of the body, which would allow for a lower, more efficient clearance of the hurdle. This is completely fine for a beginner, and we do not stress this minor detail at all. We encourage the athlete to think about bringing that leg around the side and while it may not click at first, that is completely okay. Over time the hurdles will progress to higher heights and this will force the trail leg to come up higher and around to the side in order to not clip the hurdle.

From the athlete's very first-time running hurdles we focus on speed to the hurdle, and speed between the hurdles, as hurdling is a sprinting event. This way we will continue to progress their comfortability running over the hurdles, very fast, without spending time doing walk over drills with "good" form. These drills may work for some athletes, but often an athlete will practice a certain technique at slower speeds with a high level of precision but once they try to transfer that skill into full speed, everything they know goes out the window. To perform a skill at maximum speed it must be practiced at similar speeds.



*Pictured is Todd Gurley, current NFL player. While most would agree this is not the best-looking hurdle form, he was able to run 13.8 in the 110mH because of his incredible speed. It's a race, not a beauty pageant.*

## **Training Philosophy**

When writing training for an athlete, the coach must always take into consideration what the athlete did the day before training and what they will do the day after. What you do one day should not hinder what will be done the day after, as balance is everything. We at the Jacksonville Athletic Club work off a schedule of high/low training days. Monday, Wednesday and Friday consist of very high neural demanding training days. The days following the high days (Tuesday, Thursday and sometimes Saturday for more experienced older athletes) are of very low demand/general days. This system was made popular by late Canadian Sprint Coach, Charlie Francis, coach of previous 100m world record holder, Ben Johnson. The two opposites of high and low days send very clear signals to the body as to what is to be accomplished. We live by the "SAID" principle (Specific Adaptations to Imposed Demands) which in layman's terms means "you are what you do". To run fast you must practice running fast. Tony Holler, in reference to training at slower speeds and expecting returns on speed increases says, "You don't plant beans and grow corn."

## **Weekly Format:**

This setup will be held relatively constant through the whole training year.

Track athletes need to be extremely fast and powerful, place focus on explosive movements, and allow enough rest to ensure quality work. Quality over quantity!!!

Our training year starts with 100% effort acceleration development from day one and we always limit volume, not intensity. Progression should follow from acceleration development to speed development to speed endurance. We take our time progressing between the three, as speed endurance without speed is just endurance. Speed endurance shown on Wednesday will not be introduced until later in the training year when adequate time has been spent developing prerequisite qualities of acceleration and speed.

Short to long, fast to faster!

For hurdlers, hurdle runs up to 3-4 hurdles can be placed in for acceleration development. Hurdle runs up to 7 hurdles for speed development. Hurdles can also be placed at long hurdle marks (300mH/400mH) for tempo running. Be careful about how many practices a week you have an athlete hurdle, try not to exceed two, to ensure enough flat running at high speeds.

**Monday:** Acceleration Development (standing, crouch, blocks), Multi Jump circuits (bounds), Multi Throw circuits (Medicine ball or Shot put)

**Tuesday:** Tempo running, General strength circuits, Hurdle mobility

**Wednesday:** Acceleration Development, Speed Endurance

**Thursday:** Same as Tuesday

**Friday:** Acceleration Development/Speed Development, Multi Jump circuits, Multi Throw circuits

## **Sample Microcycles**

General prep for both sprints and hurdles will be almost identical, closer to competition more they will differ.

### **General Prep: Sprints/Hurdles**

**Monday:** Acceleration Development- 4x10m, 4x20m, 3x30m (2-3' rest btwn reps, 4-5' btwn sets) Multi Jump Circuit x 5 (SLJ, STJ, RR-LL, RLRL), Multi Throw Circuit x 4 (OHB, UHF, Hammer hip throw both sides)

**Tuesday:** Hurdle Mobility, Tempo running- start with 8 and progress to 12x100m barefoot on grass/football field at 70%, walk back rest, General strength circuits (bodyweight/MB) 10-12' of work, 15-30" bouts with 1:1 work: rest ratio.

**Wednesday:** Acceleration Development, Bleacher Bounds x 4 (1 foot every other step, opposite foot, both feet as many steps as possible repeated)

Easy 3 step hurdles with hurdles low and close, 6x5H

Slowly add speed and distance between hurdles each week

**Thursday:** Same as Tuesday, extended cool down in place for circuits

**Friday:** Acceleration Development: Hill Sprints- 4x30m, 4x40m, 4x30m, Hurdle Hops 5x5H

### **Specific Prep: Sprints**

**Monday:** 4x20m, 4x30m, 2x40m, Multi Jump Circuit x 3

**Tuesday:** Hurdle Mobility, Tempo running, 6x200m at 70% w/ 2' rest, Bodyweight circuits

**Wednesday:** 4x20m, 4x30m, 4x20m, 3x120m at 95% with 10-12' rest, OHB/UHF x 6 w/SP

**Thursday:** Same as Tuesday

**Friday:** Same sprints as Monday, Hurdle Hops 5x5H

### **Specific Prep: 110m/300m Hurdler**

**Monday:** 4x20m, 2x30m, 2x1H, 2x3H, 2x5H(110H), Multi Jump Circuit x 3

**Tuesday:** Hurdle Mobility, Tempo running, 6x200m at 70% w/ 2' rest, Bodyweight circuits

**Wednesday:** 4x20m, 4x30m, 1x4H, 1x3H, 2x2H, 2x1H(300H) with 12'/10'/8'/8' rest, OHB/UHF x 6 w/SP

**Thursday:** Same as Tuesday

**Friday:** 4x20m, 3x30m, 3x150m Sprint-Float-Sprint(50m-50m-50m) w/10' rest, Hurdle Hops 5x5H

### **Competition Week: Sprints**

**Monday:** 4x20m, 3x30m, 4x20m from blocks, SLJ x 8

**Tuesday:** 5x200m at 70%, extended cool down

**Wednesday:** 4x20m, 2x30m from blocks, 2x150m(Fast!) w/ 12' rest

**Thursday:** 8x100m strides on grass, extended cool down

**Friday:** Long warmup, 4x20m block starts, OHB/UHF x 4

**Saturday:** 100, 4x400 relay

### **Competition Week: 110m Hurdler**

**Monday:** 4x20m, 2x30m, 1x3H, 1x4H, 1x5H, 1x6H from blocks, SLJ x 8

**Tuesday:** 5x200m at 70%, extended cool down

**Wednesday:** 4x20m, 2x30m from blocks, 2x150m(Fast!) w/ 12' rest

**Thursday:** Easy 3 step hurdles in flats, very low and close hurdles, easy rhythm, 10 x 4H

**Friday:** Long warmup, 1x1H, 2x2H from blocks, OHB/UHF x 4

**Saturday:** 110H, 100 or 200

### **Final Thoughts**

These weekly plans are merely a guiding tool for anyone interested in the training of sprinters or hurdlers. Always remember that nothing is ever set in stone, always have a back up plan in case of inclement weather, absences, etc. Never be afraid to cut a practice short or send an athlete home if you see fit when quality deteriorates. Undertrained and healthy is much more important than someone being in good shape and hurt. Brandon Hon, sprints and hurdles coach at Florida State University says, "you can't take a steak back to pink". The training of jumpers, sprinters, hurdlers and combined event athletes should all be very similar. Speed is the biggest factor in an athlete's success, and all of these event groups should practice running fast on a normal basis. You cannot go wrong with slowly building a large base of speed and power through extremely fast runs progressing from acceleration to speed to speed endurance.

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