

Primer for Hurdles Training

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Introduction:

These are my thoughts about how best to train amateur hurdlers. They're based on 14 years of competitive hurdling (high school, college, and post-collegiate). The emphasis in the training is on *practical* training plans and workouts. In my opinion, the most difficult decision for a coach/athlete to make about hurdles training is how/what to fit in given limitations on time.

Sources:

The single best book I have found for hurdling is Brent McFarlane's *Science of Hurdling*. I draw on some of McFarlane's terminology in this primer. I also recommend Wibur Ross' *The Hurdler's Bible 2*, and for some interesting articles see the collection in Jess Jarver's *The Hurdles*.

Hurdling = Sprinting +Plus

One way I think about hurdle training is that hurdles are "sprinting +plus". This means two things. First, it means that hurdlers have to be sprinters. They need to get in shape just as other 100m or 400m runners do. At the same time, however, hurdling is something more. The "+Plus" includes all of the technical hurdle skills, as well as the special strength needed to succeed in running over the barriers. In terms of training, this leads to the first question a coach should answer: **[1] *When will your hurdlers train with the other sprinters, and when will they train specifically for the hurdles?***

[1] When to Hurdle:

Here are several options for how to orchestrate "spring time" with "hurdle time", listed in the order that I think is most beneficial:

- A) Best: 2 days of hurdles, 2 days of sprints: The primary benefit of doing 2 days of hurdling is that one day can be devoted primarily to technical work (and later in the season, to starts and race simulation). The other day can be devoted to heavier hurdle workloads and repetition.
- B) Good: 1 day of hurdles, 3 days of sprints: As a post-collegiate athlete, this ends up being the training schedule I generally use. The reason is that I simply don't have time for a second hurdle training day. In this

approach, we squeeze strength and technical hurdle work into the same day.

- C) *Better-than-nothing: Split-days:* On split-days, hurdlers do both hurdling and sprinting. The primary drawback of this approach is that workouts become too long and too strenuous. At worst, this can lead to injury, but even without injury, it's a problem because hurdlers may not be rested enough to properly execute the technical aspects of hurdling.

[2a] What to do

In the attached Table I lay out my approach to coaching and training for the hurdles. The training schedule, which can be modified to fit different schedules and different athlete abilities, is guided by three principles:

- (1) **One practice, one skill.** With so many things to think about when hurdling, it's easy to get overwhelmed. An approach that I now take is to focus on one skill per practice. Athletes can concentrate on mastering one element of their hurdling. Coaches can choose a set of drills and a workout that are best tailored to the "skill of the day".
- (2) **Train like you hurdle: Lead leg first, trail leg last.** In thinking about how to sequence a training program over a series of weeks and months, one way to go about it is to pattern the workouts after the hurdling motion itself: start with the lead leg, move to the snap over the hurdles, and end with the trail leg. Sessions can subsequently cover special topics such as: arms, keeping the trail toe up, leaning over the hurdle, etc.
- (3) **Real race hurdling whenever possible.** It seems obvious, but hurdlers get better by hurdling. Rhythm is developed in races. This means integrating race-like conditions into training (e.g. starts out of blocks), and racing the hurdles as much as possible. Something you'll hear hurdlers (especially new hurdlers) say is that, "I'm not ready to hurdle yet." But the best way for them to get ready is to hurdle in a real race. I like to say, "Race ugly early, so you can race pretty later."

A Sample Ten Week Program

100/110 HH vs. 400 IH training: Although most professional hurdlers focus exclusively on a hurdle event (either the 100/110 HH or the 400 IH), high school, college, and open athletes usually compete in both races. In thinking about training, all new hurdlers should be introduced to the technical skills of sprint hurdling. They can then adapt to the 400m IH, where technique will vary somewhat. On the strength side, it is more important for 400m hurdlers than 110m hurdlers to load up early in the season on strength building workouts. It is also important that 400m hurdlers practice their approach under race-like conditions. They need to be able to “hurdle tired” – executing good hurdle form and not stutter stepping even when their bodies are fatigued.

WOMEN vs. MEN training: The basics of hurdle training, especially for athletes who are just starting out, are the same for women and men. But there are some important differences to be aware of. On the technical side, because the hurdles are lower, female hurdlers may choose to take slightly different approaches than male hurdlers, e.g. lead knee not as high up. In addition, especially for new female hurdlers, there may be some need to encourage your athletes not to be scared of the hurdles. From a practical standpoint, remember that the female hurdles are spaced differently for the 100 hurdles, and that the hurdle heights are lower than men’s. In workouts, men and women can do drills together. When hurdles are used, two flights can be set up (one for women and one for men). As with sprint workouts, women should have different goal times than men.

Sample 10 Week Training Program

Week #	Focus	Notes
1	Attack the hurdle: Lead Leg	The single biggest error I see with young hurdlers is a failure to attack the hurdle properly: knee up, ankle up, toe up. Many young hurdlers either jump over the hurdle, or throw their leg up and “straight leg” the hurdle. Because proper take-off and attack of the hurdle with the lead leg is the first motion a hurdler makes, it has to be performed correctly. If there are more than 10 weeks to work with, I recommend using the first two for working on this aspect of hurdling. <u>Drills:</u> Choose drills that emphasize take off, and aggressive, quick lead leg action into the hurdle. Examples are A’s, B’s, wall drills, walk overs, skip overs. <u>Workouts:</u> Early in the season, you want to build strength in hurdlers. If you’re still inside, you’re generally forced to do either some version of up-and-back (“Choo Choo”) over hurdles, or 200m w/hurdles on the straightaways.
2	Get over the hurdle: Quick snap	Maybe the most noticeable difference between good and poor hurdlers (or between good and great hurdlers) is the time spent over the hurdle. The great ones are up, over, and down seemingly instantaneously, the rest of us feel like we’re floating. Building on the previous week’s work, after

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		<p>a proper takeoff and attack of the hurdle, you want your athletes to feel the quick snap of the hips and trail leg knee coming over the hurdle. To keep it simple, you can save the trail leg for the following week, focusing here on the snap through and emphasizing that it must come <i>as soon as the lead leg begins to come down</i>.</p> <p><u>Drills:</u> Shadow hurdling where lead leg is held up, and as soon as foot begins to drop, trail leg snaps through. Similar drill, but with lead foot held over a hurdle (low height), then let lead foot drop, which forces trail leg to snap through. Skipping up to hurdle, jumping up to hurdle, holding position momentarily, then snapping through with trail leg.</p> <p><u>Workouts:</u> Jamming hurdles to force high knee lift and emphasize snap through. Missing hurdle drill. Again, up-and-back and flights of hurdles. For building strength, 400m hurdlers can do repeats with hurdles at odd spacing (to force adjustments).</p>
3	Return to sprinting: Trail leg	<p>With the takeoff and snap through introduced, it's time to have the trail leg come all the way through (knee should rotate all the way around) and be back in sprinting position. Trail foot must come down as well, with "active foot" clawing at ground as it takes its step.</p> <p><u>Drills:</u> Trail leg drills over hurdle, walk-overs emphasizing trail leg;</p> <p><u>Workouts:</u> Go over side of hurdles; Same as previous weeks for building strength.</p>
4	Get out, get out: Starting blocks	<p>So much of hurdling, especially the short hurdles, but the intermediates as well, depends on solid start. Though it may seem early in the season, it's worth getting your athletes acclimated to the blocks and their step pattern to the first hurdle. If it's the first time out of blocks for an athlete, make sure to spend some time on the blocks before talking about how to adjust your start for the hurdles (where you need to be cognizant of how your body is getting ready to hurdle).</p> <p><u>Drills:</u> Reaction drills for quick starts; short sprints; regular starts drills</p> <p><u>Workout:</u> Starts over 1, 3, 5, or more hurdles (make sure to give athletes enough time to recover so they can come full speed out of the blocks); Starts can be either for spring or intermediate hurdles</p>
5	Maintain balance: Arms	<p>At this point in the season, your athletes may have started racing and should know the basic hurdling technique. It's time to start refining things and worrying about the rest of the body. Arms are an important place to start: make sure the arms are kept in (not extended out as many hurdlers do). Longer levers mean more time over the hurdle, which means a slower time.</p> <p><u>Drills:</u> Arm swings, walk over with emphasis on arm placement</p> <p><u>Workouts:</u> Whatever workouts are chosen, emphasize correct use of arms</p>
6	Get quicker	Here I would go back to the same drills you've been doing all year (whether walk overs, A's, etc.)

Sample 10 Week Training Program		
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		but now emphasize how they can be done with quicker muscle actions. Then move from the drills to hurdling, and emphasize quickness in all components: quickness in the attack phase, quick snap through, quick trail leg. Workouts can emphasize being quick even when the body is fatigued.
7	Get faster	Again this week you can go back to stuff you've already covered, but emphasize doing it as a faster pace. Easy examples are starts over 2, 3, 4+ hurdles. Look for fast 3-step pacing, or if it's the intermediates for fast times in between hurdles. Add to the hurdle workouts some pure speed workouts (e.g. 40m sprints). To hurdle fast, the athlete has to run fast, and these workouts should complement the other spring workouts being done.
8	Technical refinements	Heading into the last few weeks of the season, you want to personalize hurdle workouts so that each athlete can work out the technical flaw(s) that are most detrimental to her/his racing. Developing an eye for hurdler errors takes time, but you can often help your athletes a lot by identifying small problems. As with the other days, don't give your athlete too much to bite off. If you see problems in both the lead and the trail leg, pick one to start with.
9	Technical refinements	Same as the previous week. Workouts at this point should involve a lot of fast race simulation. For the 400m hurdles, you can do 200m over hurdles ~90%, choosing a different 200m of the race to work on each time. For the 100/100m hurdles, go out of blocks over a set number of hurdles.
10	Race simulation	At this point in the season, presumably the last week before peak performance, you want to get your athletes ready to run their best race of the season. Running race simulations (e.g. 3 or 5 hurdles out of blocks at race pace) is the way to go. Coaches can look for minor technical issues, but should focus most on allowing their athletes to "feel the rhythm" and be ready to peak.

Here are some hurdle links of interest:

Selected sections from: Identifying And Training Elite Hurdlers In The United States, by Kathleen Raske Sparrey. She draws in part on the work of the fellow whose programs I have been following for years, Brent McFarlane (from Canada). <http://www.coachr.org/shrthrd.htm>

The M-F Athletic hurdling notes:

<http://www.everythingtrackandfield.com...>

"Basic Hurdle Technique" by Coach R. Lewis

http://www.advantageathletics.com/sprints/hurdle_technique.html

and more from him:

<http://www.anycities.com/user/rical2/ath/athletics.htm>

If you want to read about more hurdle workouts, a very clear description of some possible ones (and we'll pick some of these up soon) can be found at:

http://www.coacheseducation.com/hurdles/tonie_campbell_mar_01_2.htm

And there are a few other articles from that site at:

<http://www.coacheseducation.com/hurdles.htm>

Jim Bush (on coaching the hurdles): "Getting into a rhythmic pattern as soon as possible is the key to fast hurdles times. It makes no difference whether it is the highs or intermediates, the runner has to develop a rhythm that is as fast as he can control."

If you're interested in learning more hurdles, read his full set of comments at:

http://www.ustrackcoaches.org/Web/Coaches%20Review/Featuredarticles/on-line_clinic.htm

There are more great articles on hurdling technique and training from UK coaches at:

http://www.ukhurdlesclub.net/13site/coaching_articles.asp

Some cool hurdling quotes that your kids may enjoy:

"Coach, I like the 400, I LOVE the 400 hurdles"

- Kerron Clement, a 19-year-old University of Florida sophomore, set a new world indoor 400-meter record of 44.57 seconds at the 2005 Indoor NCAA Championships, breaking the former world best of 44.63 by Michael Johnson.

Full interview at:

http://www.runnersworld.com/cda/daily_news/0,5039,0-0-0-0----03-23-2005,00.html

"I train while you sleep."

- TaNisha Mills - 400m Hurdler, check out her web site (with bio and some training notes) at:

<http://www.tanishamills.com/>

Allen Johnson (on falling in Athens): "I was shocked when I hit the ground. Now, I have accepted it and moved on. ... I will train harder this winter and my motivation in training will for sure be more thorough so I will be ready to take on those guys at next year's World Championships." [See: <http://uscports.collegesports.com/sports/w-track/spec-rel/091704aac.html>]

On training groups by Colin Jackson, Great Britain, World Record Holder:

"My training group is a No.1 priority because the people you train with are going to be the people you spend most of your time with. Each one has got to bring a quality to the group. In all the groups I have worked with, no one athlete has been totally dominant in all aspects of training. Each one had individual strengths ... When you are a bit tired, there are always people around to pick you up. It is important for the group to bond particularly well. From 16-21 I was working with some of the top people in the country, and we were all good at something without any ego problems. There was a day when I was the champion, and a day when I was a loser."

"I didn't choose the hurdles; hurdles chose me"

-- Melissa Morrison-Howard (the "smallest hurdler in the world")

-- 2nd in the 60m HH at the 2005 Boston Indoor Games

(See: <http://www.salisburypost.com/2000nov/112100a.htm>)