
Strength Training for Hurdlers (and other Track and Field Athletes too!)

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“What is it that technically distinguishes the hurdle from the sprint? ... The hurdle requires a higher skill level. Also, you have to run a bit out of control because you are running at 10 fences and you are throwing your private parts at them, while running full speed.”

- Dexter McCloud ¹

I. Training After College

When I am asked (not that I am asked that frequently) about training for the hurdles (or sprints more generally), my first response is that infinitely more important than the specific training program is **consistent training over time**. In thinking about why I haven't been able to quite hit the times I used to clock regularly in the 400 hurdles, I have come to the (reluctant) realization that I have not been able to put enough time into the training. When I looked at the college training I did, I was there every day, without exception. Post-collegiate life is less forgiving. Jobs and school simply leave less time for track.

My experiences the last few years have led me to believe that the most important consideration to make in developing a post-collegiate training plan is finding the best **realistic and balanced** plan. This can be difficult for those of us who were used to spending a large portion of our time at the gym or on the track as college students. It's also hard because most of the training programs from coaches are designed with either a college or elite athlete in mind. Brent McFarlane's hurdle program is one of the best examples – to complete his plan, you would have to spend 12 hours a day thinking or working on your training.

The training question then is: what to cut out and what to leave in? Before answering that in terms of workouts and weights, you have to answer it in terms of track and non-track interests. How much time do you want to devote to track? Six days a week? Two days a week? How much of a commitment can you make? Will business have you on the road for weeks at a time? Do you want to spend more time with your significant other? And so on ...

This is the point at which some club coaches with unrealistic expectations lose a lot of his athletes because they expect the answer to all of the life-choice questions to be: Track, Track, Track. That's unrealistic, even for very dedicated athletes. But if it's not going to be track all the

¹ Masters Hurdler Dexter McCloud, USA Indoor National Champion and World Champion in the 60-meter high-hurdles, <http://www.bodybuilding.com/fun/drobson132.htm>

time, it still has to be track *a lot of the time*. And that leads back to the question of what to cut out and what to leave in? To answer this question, we can think of post-collegiate training options as falling in one of four categories. (Table 1).

Table 1. General Options for Post-Collegiate Training in Track and Field		
Description	% of Peak Performance to Expect	Training Requirements
Intense training	100% expecting PRs	Full 6-day workout program (including circuits, plyos, abs, etc.); 3-4 days coordinated lifting
Focused training	85-95%, maybe a PR	2-3 workouts a week, plus 1-2 other runs; 2 days lifting
“Stay in shape” training	75-80%	1-2 workouts a week; occasional lifting
“Being active” training	N/A	Workouts and lifting when the mood strikes

My post-collegiate experience suggests to me that you can skate by and perform at 85-95% of peak performance with 2-3 workouts a week, 1-2 days of lifting, and a few scattered additional runs in there for good measure. This level of training is equal parts exciting and frustrating. On one hand, you can be respectable on the track, e.g. for me: running 50.high and 54.mid. But unless you get lucky on a particular day (my 4x400 at 2003 Club Nationals for instance), you’re going to be reminded race-after-race that you’re not going to PR. This is frustrating, particularly because physically you could potentially be in shape to run faster than ever before. Given life’s circumstances, and your choices to spend time on other (probably more important areas) of your life like work and school, 85-95% may be where you end up.

My sense is that this is where most of GBTC’s core members are, with some exceptions for those folks who have really turned it up a notch. My sense is also that a lot of us try to turn it up to that higher level, and can maintain it for a few weeks or a month, but then get hammered by work and school again. So we train somewhat inconsistently, and that can be frustrating too since we slide back down the hill faster than it took to climb up.

Below this 85-95% standard, there is a level of 1-2 workouts per week, not too much additional running, and some lifting when possible. This seems to produce results in the 75-80% realm. It’s a nice way to “stay in shape,” and it might be less frustrating for the athletes because from the beginning their goals are not as high as those training at the level above them. What’s most difficult here is the extreme start-and-stop. Rather than just missing a workout here and there, these athletes may go 3 weeks without a workout, then show up and try to get right back into things.

At the bottom are athletes who are just dropping in when it suits them or when they can, with no formal training program in mind. I doubt these athletes are thinking much about “percentage of peak performance,” and are more interested in simply getting out and “being active.” Though they may end up with the track team because they did track once a long time ago, they really belong to some distinct group that is more concerned about fitness. These are the folks who on singles profiles say stuff like, “I like to stay active.”

II. Track Workouts for Intense or Focused Programs

As I have yet to slip all the way down to “stay in shape” or “be active,” I only have comments about the first two categories. The first category – intense training – is actually easier to describe than the second because you want to do everything you can: training every day (some mix of hard-easy, weekly periodization), complement it with at least 2 days of core lifting, and add in all sorts of supplementary work in between. This is the type of program that I have often embarked on post-college, and have had to cut back when school and work kicks in. I end up on something more in the “focused” program category, which is some combination of “good weeks” and “bad weeks” (hopefully more good than bad).

In a “good week,” I’ll get in two GBTC workouts (or the equivalent), plus one additional good hurdles workout (probably on Monday). If it’s a great week, I’ll get in another hurdle technical day on Wednesday or Friday (or Saturday if no meet). On the non-workout days, I’ll get in tempo running (20-45 minutes depending). I’ll usually take one day out of the week to rest. On the weight room side of things, I’ll get in two days of each body part – usually split up into 3 or 4 different sessions.

In a “bad week,” I’ll usually have to cut out the non-GBTC workout(s), replace them with tempo runs, and probably cut back on those also. In the weight room, I’ll drop down to 1 lift for each body part, over 1-2 sessions.

INSERT: DISCUSSION OF TRAINING

III. Strength Training for Intense or Focused Programs

“I learned real quickly that even though a big chest looks good, it would NOT help you sprint to your fullest potential. I ended up shedding the chest and grew some legs.”
- Tom Green ²

The most important question to answer before settling on a strength program is: what do you want to get out of this? Is your primary goal to run faster? Do you want to look more ‘ripped’? Are trying to rehabilitate injuries or prevent future injuries? There are spillover effects from any strength training program, which means that you’ll be able to accomplish multiple goals. But it’s important to prioritize because the program you choose will be better for some goals, and worse for others. In addition to your goals, think about your constraints. How much time will you have for strength training? What type of access do you have to a gym or other equipment?

Once you have the basic parameters mapped out, think next about what types of things you want to do. “Strength” training can mean a lot more than going to the weight room.

² Tom Green. University of South Dakota (97'-02'). Personal Best: 10.10/20.77. 8-time All-American, 7th in the 100m dash at the 2002 USA Outdoor Track and Field Championships, member of 02' World Cup 4x100, 02' NACAC U-25 gold and silver medalist.

Plyometrics, stair running, circuits, and many additional drills can be used to accomplish strength training goals either as a complement to or substitute for traditional weight lifting.

What to do in the weightroom

For sprinters and hurdlers, there is no debate that a weightroom routine is essential to achieving your full potential on the track. The focus should be power and explosion. For some examples of routines, I've included web links in Table 2. The core of most programs are squats (either full or ½ squats) and cleans (either full or hang cleans). In addition, machine leg press machines, jerks, and calf raises can be integrated. I find that (embarrassing as it is) the abductor/adductor machines in some weight rooms are useful for hurdlers because it strengthens the “pillar of strength” used so much over the hurdles.

I generally try to get in 2 days a week of legs work. If I had more time, I'd push that to 3 days a week, but 2 should be fine for most folks. One of the challenges is when to get in leg lifting, since so often the running/racing leaves your legs dead. If we're doing workouts on Monday, Tuesday, and Thursday, I try to lift legs on Wednesday and then again over the weekend. Something to keep in mind is that when you're lifting after workouts, you have to allow the weight to be reduced on your lifts. Also be aware of modifications that may be necessary due to injuries. For instance, I do hang cleans for me due to a bad back and ½ squats due to bad knees.

Looking broadly over the course of a season, I periodize my workouts, roughly going somewhere between 3-5 sets of 8-12 reps in the Fall, moving into the core 2-4 sets of 4-8 reps in the middle of the season, and cutting down to low weight, fast and precise lifts toward the end of the season.

For the rest of the body, I mix in all sorts of exercises – my primary goal is to take care of problem areas (e.g. I have dislocated both shoulders, so I do a lot of shoulder rehab work when I can), and then to have fun with the rest of it. I like to mix up chest, back, and arms work with all sorts of programs, and I don't worry as much here about my point in the track season. I do try to avoid bulking up too much in the Spring. It's important not to let your routines get stale, so I mix in new lifts with the old standards. In Table 2 I include a number of resources for generating ideas about new lifts and routines. I like to get in 2 days a week for each body part, and I will combine one of them with my legs day.

Putting this together, it means I'll often do 4 sessions: legs/arms, chest/back, legs/arms, chest/back. If I have less time, the first thing I take out is the second day of chest/back. If I'm pressed for even more time, I'll drop the second day of legs/arms. If there is only time for one workout, I'll combine everything into one session and just try to get in a little bit of each.

Much depends on gym access. When I had 24 hour gym access, I turned to a 3-day on, 1 day-off program. I lift two body parts each day (splitting these six: legs, chest, back, shoulder, triceps, biceps). When I'm traveling, I often have to settle for non-weightroom strength work, as hotels are not likely to have squat racks.

What to do outside the weightroom

INSERT: ADDITIONAL STRENGTH TRAINING NOTES

Special considerations for middle and long-distance runners

There is a debate in the running community about whether or not middle and long-distance runners should do much strength training. Often the prescribed workouts are for high-rep, low-weight routines, or for ‘circuit’ training. If you just want some basic information on strength training for runners in general see the notes from Dr. Stephen Pribut.³ I’ve also included a number of links in Table 2.

Perhaps even more than with sprinting/hurdling, for middle and long distance runners it’s important to keep in mind the distinction between general “strength” training and more specifically *weightroom* training. Strength training, for instance hills, seems important and is more a component of a regular training program.

Weightroom training, on the other hand, seems to me to be less universal. Based on a review of the literature, and my own experience in talking to and training with middle and long distance runners, my sense is that weight training isn’t necessary, but can be helpful if done properly. Getting “too big” is a legitimate concern, but there are simple ways to avoid the problem: (a) don’t lift as many days/week, (b) don’t live as much weight/rep, and (c) turn to more non-weightroom strength options.

Notes on the sample programs enclosed:

The enclosed training programs are a few representative samples of my training over the past 3 years, at different points of the season. Some of the basics remain the same – ½ squats and hang cleans are at the core of most of the programs – but there are noticeable differences in terms of sets and reps (and frequency of going to the weights) based on the time of the season. The principles, which are drawn in large part from Brent McFarlane’s *Science of Hurdling*, are fairly straightforward – lift a lot early, increase your weight (decrease reps) into the middle of the season, and then gradually decrease weight and increase speed (of lifts) as you get closer to peak time.

It was interesting to go back through some of the older routines because I noticed differences based on my injuries at the time. In Fall 2000, for instance, I was just coming back from a lower back (S-I joint) injury, so I cut out the hang cleans and instead did things like step ups and one-leg presses more. Then in Fall 2001 I was coming back from a nasty hamstring injury, so on the advice of my trainers, I cut out the leg extensions (for quads) and kept leg curls (for hamstrings) in the hopes that I might avoid some imbalances between the relative strength of the two muscle groups.

³ <http://www.drpribut.com/sports/strength.html>

There is also variation in a lot of the non-core lifts (arms, abs, etc.) and that was based on mood, training partners, and just a need to mix things up some.

When I had more time for training, I also took note of a number of other issues – sleep, food, hydration – and had very detailed (and long) workouts to go along with the weight training.

For 400m Runners:

Mark Richardson's training programme ⁴

This is the regime he follows for his mid-winter build-up

Monday: Weights: cleans 6 x 5 x 90K (PB 97 122.5K); squats 5 x 5 x 130K; bench 8 x 90, 6 x 95, 4 x 100, 2 x 105, 1 x 110 (PB 97 125K)

Tuesday: Track: 5 x 300m, 5 mins rec, in 39 secs

Wednesday: Weights: heavier, with fewer reps than on Monday

Thursday a.m.: Hills: 5 x 60 sec runs on a woodland course

Thursday p.m.: Circuits, including press ups, squat jumps, sit ups, tricep dips, burpees, crunches, 5 sets on partner basis, 50 reps per exercise

Friday: rest day

Saturday: Technical session sprint drill, including 9 x 40m tyre pulls

Sunday: Aerobic session: 6 x 600m on grass

⁴ <http://www.pponline.co.uk/encyc/0202.htm>

Table 1. Internet Resources Related to Strength Training and Track and Field

HURDLER / SPRINTER STRENGTH TRAINING

Site	Notes
http://www.bodybuilding.com/fun/drsquat16.htm	A great starting point for sprinters and power athletes.
http://www.bodybuilding.com/fun/tomgreen.htm	Tom Green provides his strength training workout. Note the variety of strength exercises he employs.
http://www.bodybuilding.com/fun/tomgreen1.htm	Tom Green provides video of 9 great exercises (non weight-room) you can do to build sprinter strength.
http://www.elitetrack.com/articles/maximumspeed.pdf	Article from Frank Dick, Director of Great Britain Track and Field, on developing strength for maximum speed.
http://www.drtrack.com/CoachingEducation/CoachingNews.php	New Strength Training Program Design for Sprinters (PDF) by John M. Cissik, Head Coach, Running Inc. (Texas Woman's University)
http://www.elitetrack.com/articles/inseasonsprintcissik.pdf	Brief notes (similar to some of the notes in this article) about weight training during the season for sprinters.
http://www.pponline.co.uk/encyc/sprinting.htm	An interesting collection of track related training articles, some covering issues of weight training.
http://www.bodybuilding.com/fun/rome1.htm	Workouts of a the thrower Jarred Rome.

MIDDLE DISTANCE / LONG DISTANCE STRENGTH TRAINING

Site	Notes
http://www.serpentine.org.uk/advice/coach/fh51.php	Frank Horwill's "Thoughts on strength training for middle distance runners"
http://www.bodybuilding.com/fun/maki7.htm	Discussion of basic principles related to weight training and long distance running.
http://faculty.washington.edu/crowther/Misc/RBC/strength.shtml	Summary of recent research on long distance running and strength training.
http://owlsac.org.uk/Training/weight_training.htm	Answers some basic questions runners have about weight training.
www.people.virginia.edu/~ejk4e/runlift1.txt	
http://www.centralparktc.org/training/coach03.htm	Coach Devon Martin (Central Park Track Club) offers some thoughts on weight training for middle distance runners.
http://www.ohiorunner.com/articleview.asp?id=25&page=1	Discussion and some example weight routines for middle distance runners.
http://jap.physiology.org/cgi/content/full/86/5/1527	1999 academic article on strength training and distance running (also includes list of research cites). Article title: "Explosive-strength training improves 5-km running time by improving running economy and muscle power"
http://members.iinet.net.au/~peterg1/run/aths.html	Example workouts of championship middle distance runners

Table 1. Internet Resources Related to Strength Training and Track and Field

BODY BUILDING ROUTINES

Site	Notes
http://www.bodybuildinguniverse.com/routines.htm	A clean site with well some well researched routines.
http://www.discussbodybuilding.com/	A useful message board that can be searched.
http://www.muscleblitz.com/	Filled with annoying ads and pop-ups, but if you can ignore these, you can find some useful information and good routines
http://www.leeheyward.com/workouts.htm	Provides a number of workouts geared toward body builders
http://www.bodybuildingforyou.com/Bodybuilding-Routines.htm	On the sidebar, they provide a menu of many bodybuilding routines, organized by muscle group.
http://www.bodybuilding.com/fun/bbinfo.php?page=WorkoutPrograms	A large number of diverse bodybuilding programs.

ABDOMINAL ROUTINES

Site	Notes
http://www.wikihow.com/Get-Six-Pack-Abs	A nice, clean site (with some photos) presenting ab routines.
http://www.bodybuilding.com/fun/bbinfo.php?page=Abdominals	A good list of articles on working the abs.
http://www.shapefit.com/ab-workouts.html	Simple ab routines for all levels.
http://www.buildingbodies.ca/Weights/abdominal-workouts.shtml	A few additional ab routines.