Why do sprinters fall apart at the end of a race?

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Recently, I had the distinct pleasure of attending a 6 hour freshman/sophomore meet. The meet was very well run, it was just, you know, a 6 hour freshman/sophomore meet. I can't tell you how many times I watched sprinters fall apart at the end of races.

First of all, no. its not because of a lack of "conditioning". It is a coaching mistake to assume that, when sprinters get run down in races, the solution is more 'conditioning', whatever that means. And, yes, that applies to 400m training programs as well.

I didn't invent these ideas. I learned them when I was preparing to teach the sprints and relays sections of the USTFCCCA Track & Field Technical Certification.

I thought it was a great way of thinking about how you should view your program design, or, perhaps more appropriately, view the 'holes' in your program design. After all, coaching high school sprinters is a wildly different animal than coaching in the collegiate environment.

Coaching success means starting with the end in mind. Without a clear understanding of how to design and implement an effective annual plan for sprinters, you're doomed to making well intentioned, but false assumptions about why your sprinters fail to execute and perform.

So, again, there are only THREE reasons sprinters fall apart at the end of races.

As the coach, it is up to you to understand these reasons in order to consistently identify and fix the fatal technical flaws frustrating both you and your sprints squad. This

article will help you figure out where and why things are going wrong, as well as how to fix the problem/s.

1**. Energy System Failure**

When coaches fail to adequately develop the anaerobic energy system, athletes often decelerate rapidly at the end of their race. This is frequently the cause in the 400, occasionally the cause in the 200 and never the cause in the 100.

In a nutshell, when coaches do too much aerobic and interval work and not enough acceleration (high intensity runs of 2-4 seconds), top end speed/maximum velocity (high intensity runs of 4-8 seconds), speed endurance (high intensity runs of 8-15 seconds), special endurance (high intensity runs of 20 seconds to 2 minutes), strength and power, (multi jumps, and multi throws) development, sprinters fail to develop the qualities required to be successful in the sprint events.

We can debate the split with 400 types. And, no doubt, you've watched your 400 runners tie up over the last 150 meters on multiple occasions. Your mind will tell you, "They need more 'strength'". If you do the math, you may find they simply don't have the flat out speed to match top 400m specialists. Therefore, especially at the HS level, they don't need more high volume, low intensity interval days. They need more work near, at or faster than race pace.

2. Coordination Erosion

After operating at top speeds for more than a few seconds, the body's motor control systems tend to fail.

The ability to coordinate efficient movement patterns falls apart and then, if you know what you're looking at, your sprinters are just stumbling and bumbling down the track, trying not to fall down. We see this most often toward the end of shorter sprint events.

If I were to break down the goals of my entire training philosophy and system, all into one sentence (after injury prevention) it would be:

Everything we do revolves around developing general and specific coordination. Even our skipping is done in a very

specific way:
Upright posture (chin up, chest up, toe up, knee up, heel up) and *flat* footed landing with the shin perpendicular to the ground at foot strike. If we let kids get away with toe or heel first landings, even during the warm up, it contributes to the insufficient motor patterns we're working so hard to fix.
If coordination development isn't a foundational part of your program, your sprinters probably get run down at the end of races, particularly against skilled sprinters with slightly less or equal levels of ability.
3**. Momentum Deprivation**
That's a fancy term for having an ineffective 'drive phase'. Your sprinters simply don't push hard enough for long enough.
In truth, the problems start with their starting blocks settings. Most young sprinters are not properly situated in the blocks before the gun goes off.
Once the starting gun goes off, most inexperienced sprinters react like a sleeping cat when you slam two pans behind their head: Wild eyed, panicked and paying no particular attention to anything other than getting out of there as quickly as possible.
They might perform old school speed drills like Champions in practice. But when the gun goes off they immediately revert to whatever feels most natural.
Unfortunately, what feels natural is not fast. So they pick their head up, flick the drive arm up about 4 inches, step out of the blocks, stand straight up and start spinning their wheels like they're auditioning to be the Road Runner. And we all know what happens to the Road Runner.
It's sad really. Also, not fast.
So when they come out of blocks and shift gears too quickly or do some weird, seizure-like variation of the drive phase mechanics you were hoping for, it leads to not reaching their true top speed, getting to that fake top speed too early and beginning deceleration too soon.

In fact, you might consider holding your sprinters out of blocks until they show the ability to do quality down (3 point, 4 point) starts without blocks. Regardless of whether you adopt this approach, they still need to get set up properly in the down position if they’re going to develop any consistency, especially in the chaos of an actual race!

This is why we do some form of acceleration development every day. Yes, every day. Starting the first day of practice.

You just have to patient because unless you have naturally explosive and/or extremely strong athletes who can hack their way to fast 100m times day one, your kids will probably have to take a step back before taking two steps forward.

So, in summary, your athletes must possess the ability to express large amounts of strength and power for the duration of their race.

They need the general and specific coordination to execute a consistent, efficient and violent drive phase that transitions into consistent and efficient coordination of top end speed and speed maintenance mechanics.

And they need enough reps in practice at appropriate velocities and intensities to allow them to execute these skills in competitive situations.

The extent to which they develop these skills and qualities is directly proportional to how well you implement a training program addressing the workouts, volumes and intensities scientifically proven to generate faster times.