



# TRACK COACH

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TEAM USATF ATHLETES AND COACHES IN DOHA, QATAR FOR  
**2019 IAAF WORLD CHAMPIONSHIPS**



# TRACK COACH

Fall 2019 – 229



The official technical  
publication of  
USA Track & Field

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# TRACK COACH

FORMERLY TRACK TECHNIQUE

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publication of  
USA Track & Field

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ED FOX.....PUBLISHER  
RUSS EBBETS.....EDITOR  
TERESA TAM.....PRODUCTION & DESIGN  
FRED WILT.....FOUNDING EDITOR

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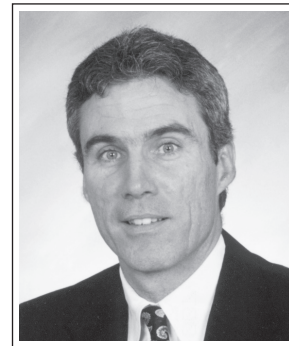
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FROM THE EDITOR

## **RUSS EBBETS**



### **INTERESTING TIMES**

One of the charges of moving into administrative work is that you attend meetings. I have rarely attended a meeting that could not have been run in half the time or should have accomplished twice as much. It's a chance to sit and talk with people usually minimally prepared to talk about things they don't understand. My most memorable experience was the time a colleague made two "pertinent" remarks before he realized he was in the wrong meeting! Let the minutes reflect that.

It had to be December of 2004, the Sport Sciences Committee meeting at the USATF Convention when the late David Martin got up to present the work he co-authored called, *Far from the Finish Line: Transsexualism and Athletic Competition*.

As David Martin forged ahead all I can remember thinking was, "Is this really a problem?" Maybe "problem" is the wrong word, then or now, but that's what I thought. There were more than a few titters as Martin gracefully worked through the topics of gender and sex, intersexed individuals, sex testing and some case studies. One needs to remember through the 80's and 90's this was such a fringe subject that any discussion seemed to court the unbelievable.

The classic example, seemingly the only example at the time was Dr. Rene Richards and her attempts to gain entry into women's tennis after sexual re-assignment surgery. There was lots of drama that included politics, discussion of "an unfair advantage" and basic human rights. And the resolution, if I can use that word, left many people wanting.

I grew up with an understanding that sex was a binary situation, meaning two options. You were a man or you were a woman, either or. But today (2019) the idea is being floated, even accepted by many, that sex is actually on a continuum, a spectrum, similar to autism. One source noted as many as 36 variations. That is certainly not the way it was presented in 9th grade.

Our sport has a checkered history with female impersonators who have triumphed at the Olympic level adding fuel to this fire. In fact, any time a female has a breakthrough performance the femininity question seems to arise. You would think this could be solved by basic science. You would think.

CONTINUED ON PAGE 7280

# **A LONGITUDINAL EXAMINATION OF THE THROWING CAREER OF REESE HOFFA**

Reese Hoffa's exceptional shot put career is detailed here. This article first appeared in *New Studies in Athletics*, 31:3/4, 29-37.

BY DON BABBITT, UNIVERSITY OF GEORGIA, AND  
REESE HOFFA, HOFFA THROWS ACADEMY.

## **ABSTRACT**

This article documents the entire career of the American shot putter, Reese Hoffa. A comprehensive explanation is presented of how Hoffa's training program was developed and adjusted over the years to allow him to become one of the most accomplished shot putters of all time. In addition, a detailed account of Hoffa's throwing improvement is presented through the course of his career along with reasons given as to why and how they happened. These descriptions and data are presented in an effort to help future

coaches and athletes learn from the choices made throughout Hoffa's career.

## **HOFFA'S ENTIRE CAREER**

Over the years, there has been abundant documentation and discussion of training programs and preparation methods for either a single season, or a major championship. However, it is rare to find an account that covers the training for the duration of an athlete's entire career. The intention of this article is to document the complete career of Reese Hoffa, who has been one

of the world's top shot put performers for more than a decade. This will be done in an effort to help coaches and athletes see how a top level performer has navigated his career, and to explain the rationale behind the adjustments and choices made over the years in responding to injuries, changes in fitness, and an ever-changing international schedule.

The course of Hoffa's career with the senior implement spanned from 1998 through 2016 season. During this time, Hoffa was able to achieve great success and

## BIOGRAPHIES

**Don Babbitt** is currently the Associate Head Track & Field Coach and throws coach at the University of Georgia, and has served in this role for the past 24 years. He has also been the CECS Editor for the throwing events for the IAAF since 2010. As a coach he had guided 53 athletes in major international competitions in all four throwing disciplines. These athletes have gone on to win 21 medals. The most notable of these athletes are 2004 Olympic Shot Put Champion Adam Nelson, American Javelin Record-holder Breaux Greer (91.29m), and 2007 World Outdoor Shot Put Champion, Reese Hoffa.

**Reese Hoffa** is currently director of the Hoffa Throws Academy in Watkinsville, Georgia. As an athlete he was 2007 IAAF World Outdoor Shot Put Champion, 2006 IAAF World Indoor Champion, and 2012 Olympic Games Bronze Medalist. In addition he earned two more silver medals at the 2004 and 2008 IAAF World Indoor Championships. He was ranked #1 in the world on four different occasions and was three-time Diamond League Champion in the shot put. His personal best is 22.43m (73'7¼")

amazingly stable results. He was ranked in the top three of Track & Field News' world rankings for 10 consecutive years (2005-2014), while also achieving the world's number one ranking in four of those seasons (2006, 2007, 2012, and 2014) (see table 1). Other career highlights included being crowned IAAF World Outdoor Champion in 2007, and IAAF World Indoor Champion in 2006, and winning a bronze medal at the 2012 Olympic Games. In terms of actual throwing performance, he recorded seven competitions over 22 meters, and an incredible 141 competitions over 21 meters during his career, with the latter accomplishment being the most of any shot putter in throwing history by a large margin.

### THE DEVELOPMENTAL YEARS (1997-2001)

Hoffa's first exposure to the 7.26kg shot came in his freshman year of university study at the age

of 20 years. In high school he had thrown for 1½ years with the 5.4kg shot and had a personal best of 19.58m (64'3") in competition using the rotational technique. It should be noted that he had warm-up and training throws in excess of 21.30m (69'10¾") with the 5.4kg shot while in high school, so it was apparent that he had the potential to throw much further than what his competition results indicated. The critical

issue that led to the instability of his high school results, and the inability to reproduce these large training and warm-up throws in competition, stemmed from the technical difficulties with his initial turn, or entry, out of the back of the ring.

The technical model, which Hoffa employed while in high school, was based of the technique of Randy Barnes and Brent Noon. This model used a "controlled fall", as described by Brent Noon, as part of the entry out of the back of the ring while the thrower is moving through the first single support phase. Hoffa had a tough time keeping balanced during this portion of the throw, which caused him to over-rotate and land to the left of the toe board when he reached the "power position". As Reese began his preparation for his first season with the senior implement in the fall of 1997, a technical change was made to keep the left foot continuously loaded while he performed his wind-up. This idea was borrowed from John Godina's technique in an effort to keep him more stable over the left leg during the first double and single support phases.

CHART 1

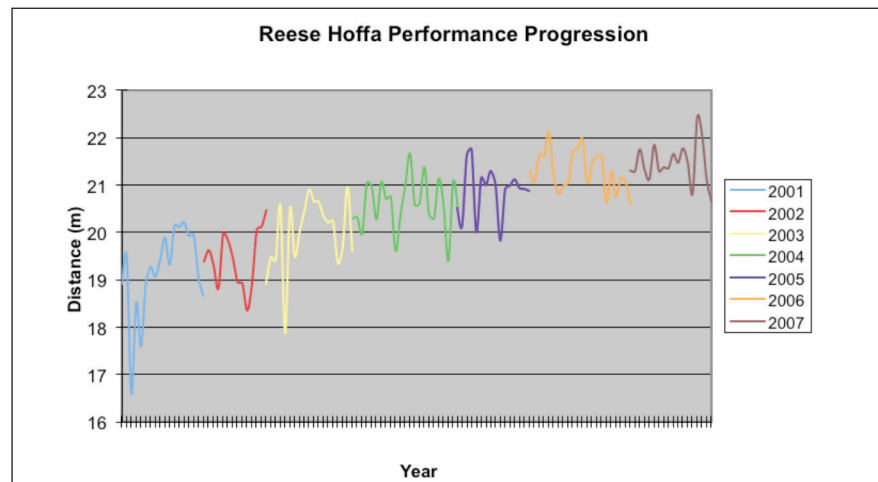


TABLE 1

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Age	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
Weight	122kg	126kg	128kg	129kg	130kg	133kg	133kg	136kg	137kg	140kg	143kg	146kg	145kg	145kg	145kg	145kg	145kg	150kg	141kg	
7.26kg	19.07m	19.36m	19.79m	20.22m	20.47m	20.95m	21.67m	21.74m	22.11m	22.43m	22.10m	21.89m	22.19m	22.09m	22.00m	21.71m	21.88m	21.30m	21.02m	
7kg	----	----	----	----	----	----	----	----	----	22.41m	22.25m	21.95m	22.35m	22.46m	22.56m	21.98m	21.86m	21.76m	21.26m	
6.8kg	----	----	----	----	----	----	----	----	22.26m	----	----	----	22.25m	----	----	----	22.04m	21.97m	21.76m	
6.6kg	----	----	----	----	----	22.62m	22.81m	23.08m	22.76m	22.81m	22.55m	22.12m	----	23.56m	23.64m	22.23m	22.15m	----	21.88m	
6.36kg	19.64m	----	20.56m	20.60m	21.29m	22.32m	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Stand	16.45m	16.80m	17.00m	17.35m	17.15m	16.70m	16.80m	16.40m	16.40m	17.00m	16.75m	17.05m	17.15m	18.70m	18.18m	18.05m	----	17.70m	16.32m	
Bench	189kg	200kg	210kg	213kg	215kg	3x195kg	2x200kg	220kg	3x205kg	3x212kg	227kg	2x227kg	3x205kg	2x220kg	2x220kg	230kg	221kg	2x230kg	1x230kg	
Squat	227kg	227kg	----	253kg	3x227kg	3x227kg	3x237kg	3x237kg	3x237kg	3x237kg	3x237kg	4x250kg	4x250kg	4x220kg	3x227kg	3x227kg	3x227kg	4x250kg	2x250kg	
Clean	143kg	150kg	160kg	168kg	160kg	3x150kg	2x160kg	4x160kg	3x160kg	----	----	----	3x140kg	----	----	3x140kg	----	----	----	
Snatch	110kg	115kg	130kg	130kg	3x125kg	3x120kg	5x100kg	----	----	----	----	----	----	----	----	137.5kg	----	----	----	
Push Press	150kg	2x150kg	2x150kg	180kg	180kg	2x180kg	2x180kg	----	4x160kg	----	----	----	----	----	----	----	----	----	----	
40y sprint	4.92	4.78	4.89	4.89	----	4.81	----	----	----	----	----	----	----	----	----	----	----	----	----	
OH Shot	15.55m	17.10m	16.58m	17.76m	18.19m	17.55m	----	----	18.31m	----	18.18m	----	----	----	----	----	----	----	----	
S.L.J.	2.60m	2.62m	2.75m	2.72m	2.80m	----	----	----	----	----	----	----	----	----	----	----	----	----	----	
Vertical	60cm	63cm	65cm	69cm	71cm	71cm	----	----	75cm	71cm	71cm	71cm	----	71cm	71cm	71cm	----	----	----	
World Rank	----	----	41	28	32	9	5	2	1	1	3	3	2	3	1	3	1	5	15	
US Rank	----	----	5	6	7	5	3	2	1	1	2	2	2	2	1	2	1	2	5	

This technical adjustment paid off well and Hoffa was able to throw 19.07m (62'6<sup>3</sup>/<sub>4</sub>" ) with the 7.26kg shot in his very first season with the heavier implement. In the subsequent three years of throwing at the collegiate level, Hoffa was able to steadily improve his best from 19.07m his freshman year to 20.22m (66'4<sup>1</sup>/<sub>4</sub>" ) at the end of his senior year. Apart from technical refinement, the key philosophies for improvement were to steadily increase power gains through strength & power training in harmony with technical execution, and to increase body weight while simultaneously improving vertical jump performance (see Table 1). Both of these goals were reached successfully, which facilitated the steady improvement

that was seen during Hoffa's college years.

During Hoffa's four years of collegiate competition, the training schedule was heavily influenced by his course of academic study. As a result, throwing sessions were limited to only two times a week and were placed on Mondays and Wednesdays before lifting workouts in order to allow for maximum recovery between heavy lifting sessions. Table 2 offers a sample training cycle during the spring competition period to give an idea of the template that Hoffa would eventually use for the rest of his career. The following points were used to guide the setup of the weekly training cycles.

1. If there were no competition on the weekend, heavy squatting or leg exercises would be put on Friday to allow for a 72-hour recovery before the next training session on Monday.
2. Throwing workouts were scheduled directly before lifting workouts on Monday and Wednesdays to allow for a 48-hour recovery period after a lifting workout to recover for the next throwing workout.
3. If there was a competition on the weekend, then the squatting or heavy leg workout would be scheduled at the beginning of the week to allow for the longest possible recovery period before

competition (96 to 120 hours)

- Both competition weight shots and light shots (between 6kg-7kg) were used in training. Heavy shots were not used because they caused Hoffa to alter his technique and timing in a negative way. Heavy shots were only used for stand throws in the General Preparation Phase.

## THE BEGINNING OF THE POST COLLEGIATE YEARS (2002-2004)

The 2002 season was the first time Hoffa's throwing career would not be subsidized by a school/university, and Hoffa now had to rely on a \$5000 post-collegiate grant from USATF and a part-time job to finance his throwing. The post-collegiate grant would be good for two years (through the 2003 season), and Hoffa had told himself that he would give himself two years to establish himself a professional shot putter. If at that point, he were not able to support himself by shot putting, he would retire and transition into another line of work. A goal of being able to throw 20.50m in competition on a consistent basis was set. It was felt that this type of result would place him high in all IAAF Grand Prix events and may be good enough to get him on the US World Championship team for 2003.

Hoffa's training schedule was kept the same as what he had done while in school since it allowed him to progress steadily. Consequently, there seemed to be no reason why it needed to be changed. As he did in his collegiate years, this schedule only had him throwing two times a week, at about 20-25

TABLE 2

Outdoor Preparation Cycle: March 12 <sup>th</sup> -April 6 <sup>th</sup> , 2001		
Week	Power Lifts	Olympic Lifts
1	X6x6x5x5x5	5x5
2	5x5	X5x5x5x4x4
3	X5x5x5x4x4	5x4
4	X4x4x4x3x3	X4x4x3x3x2
Monday:	Clean or Snatch (see Olympic Lift reps) Combo Lift 3x3 Push Press (see Olympic lift reps) Running Drills	
Tuesday:	One legged Squats 4x6 each leg Bench Press (see Power Lift reps) Rhythmic Step-ups 3x8 each leg Gymnastics Room (1 hour) 5x100m build-ups	
Wednesday:	Clean or Snatch 5x5, fast and comfortable Narrow Grip Snatch 3x5 fast! 2x150m, 2x100m, 2x50m	
Thursday:	Incline Bench Press (see Power Lift reps) Neider Press 3x4 Gymnastics Room (1 hour) Stair Sprints x5	
Friday:	REST	
Saturday:	Competition	
Sunday:	REST	

throws a session. This gave him a weekly volume of 40-50 throws, and a monthly volume of around 220 throws. Compared with most world-class throwers, this throwing volume was very low. What was important for Hoffa, however, was that the quality was very high, so there was a sharp focus on execution of movement, and the sessions were completed before any significant fatigue could affect technical execution. It was felt that this training approach would reduce the long-term wear and tear on Hoffa's body and would pay off for him by allowing him to produce world-class results well into his 30's.

In his second year out of college, Hoffa was able to put together a solid season with 11 meets over 20 meters and six meets over the 20.50m (67'3¼") mark. He reached his goal of making the 2003 World Championship team in Paris and won the gold medal at the Pan-American

Games while throwing a meet record of 20.95 (68'8¾"). These results were critical, and enabled Hoffa to make enough money—and secure a shoe sponsorship—to continue his throwing career.

After the 2003 season was complete, the competition results were analyzed, and it was determined that even though Hoffa had reached his goal of throwing well enough to now be a full-time shot putter, the average meet results were still too inconsistent with large fluctuations in performance. On two occasions in 2003, Hoffa had important throws land just outside the left sector due to over-rotation caused by turning out of the back on his left heel. The first was a 21.34m (70'¼") sector foul at the Mt. SAC Relays, and the second was a 20.30m (66'7¼") sector foul in the World Championships qualifying round in Paris. Both of these results would have drastically



Reese Hoffa sequence



Figure 1



Figure 4



Figure 2



Figure 5



Figure 3



Figure 6



Figure 7



Figure 10



Figure 8



Figure 11



Figure 9



Figure 12

altered his ranking and status in 2003 if they had landed just 30cm to the right and in the sector.

To address this issue, it was determined that Hoffa should “stay in touch” with his timing and technique so he would not have to spend a lot of time trying to find or retool it during the course of the competition season. This would be accomplished by throwing year round. It was decided that during the off-season (from September to November), that Hoffa would take 10 full throws one time a week to maintain a good throwing pattern, so he would not have to find his timing as he began his General Preparation Period for the next season at the beginning of November.

During the fall throwing, Hoffa was able to throw consistently over 20 meters and at times could hit 20.50-20.60m. This was done without any formal conditioning program at the time. The only technical focus during this two-month period was to work on staying on the ball of the left foot as he turned out the back of the ring. Hoffa was starting to develop a tendency to roll back on his left heel as he turned out of the back of the ring, which caused him to do a “heel turn” instead of the traditional pivot on the ball of the foot. By cleaning up the turn out of the back of the ring, we felt that Hoffa would be more consistent in reaching the middle of the ring and reduce his tendency to over-rotate when he tried to go fast.

The tactic of not taking a break from throwing during the fall worked out very well, and Hoffa was able to throw a large indoor personal best of 20.29m (66’7”) in early December of 2003. He transitioned well into the indoor season breaking 21m for

**TABLE 3**

Summer Competition Cycle:	
Week	Power Lifts
1	5x5 up to 75-80%
2	5x4 up to 85%
3	5x3 up to 75%
Monday:	Shoulder Circuit followed by short sprints
Tuesday:	Bench Press (see Power Lift reps) Manhandlers 2x10 Standing Bar twists 2x10 each way
Wednesday:	Agility Circuit
Thursday:	Step-ups 2x8 Back Hypers 2x10 Walking twists 4x25m
Friday:	Back Squats (see Power Lift reps) Hip Raises on box 2x10 each leg 4x100m build-ups after lifting
Saturday:	REST
Sunday:	REST

the first time and finished the 2004 indoor campaign by winning a silver medal at the IAAF World Indoor Championships in Budapest, Hungary with a personal best of 21.07m (69’1½”). The overall focus during these first few post collegiate years was to (1) have steady improvement in performance and (2) to reduce the number of poor performances. By the 2004 season, it was very rare to see Hoffa throw below 20 meters in a competition. This type of consistency enabled him to achieve his first top-5 world ranking in 2004, as well as making the first of three US Olympic Teams.

One development that came out of Hoffa’s experience at the 2004 Olympic Games in Athens, Greece, was a new and more focused effort in the approach to qualifying rounds. Hoffa was not able to get out of the qualifying round in Athens, posting a mark of only 19.40m (63’7¾”), and was mistakenly only given one warm-up throw in the stadium. As a result, a change was made in throwing sessions leading up to

major competitions, where a throw of 20m must be reached after only three full throws in any session. This philosophy would be followed for the rest of Hoffa’s career, and he was able to successfully qualify in all subsequent major championships on his first throw in all but three competitions (where he utilized all three attempts).

## THE PRIME YEARS (2005-2012)

The years spanning from 2005 to 2012 were the most successful of Hoffa’s career. During these years he was ranked no worse than #3 in the world, and finished ranked #1 in the world for the 2006, 2007, and 2012 seasons. Going into the 2005 season Hoffa had developed his power levels in the weight room and in field tests to where we thought he was capable of 22 meters (72’2”), provided he could execute his throw with good technique. It was felt that a throw of 22 meters would be good enough to win any major championship at this point, which is why it was

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chosen as the performance target.

At the same time, a choice was made to take the snatch out of his training program in an effort to protect a tender back that Hoffa had developed in the 2004 season. By the end of the 2006 season, both the push press and clean were also taken out of the program as well for the same reason. There was an initial fear that 22 meters could not be reached without having such powerful exercises remain in the program, but these fears were quickly allayed as the training results continued to improve, even after their omission. Careful attention continued to be paid to the relationship between Hoffa's bodyweight and vertical jump as well. Each successive year of training saw him gradually gain weight along with either maintaining or improving his vertical jump at the same time. For example, in 2002, Hoffa had a bodyweight of 130kg (287lb.) and a 71cm vertical jump, which then improved to a 75cm vertical jump at 137kg (302lb.) bodyweight in 2006.

By the time the 2006 season was complete it had become a very rare occurrence for Hoffa to throw below 21 meters in a competition. This was a testament to his ability to maintain a good throwing rhythm for the whole year. A key strategy was developed for maintaining the throwing rhythm by matching up the weight of the implement thrown in training to the fatigue level seen at the time. The choice of shots for training during the outdoor competition cycle was centered on the ability to maintain a good rhythm and throw between 21.00-21.50m in training. In order to do this, Hoffa would throw a 6.6kg shot when he was feeling very fatigued, such as when he returned to the US from

a series of competitions overseas. The 6.6kg shot allowed him the possibility to achieve his target distance and intensity. After a few sessions, once his nervous system recovered from the trip, he would switch up to a 7kg shot. Finally, in the last few workouts before the next trip, Hoffa would throw the 7.26kg shot. This progressive approach allowed him to always stay in his throwing rhythm for his target performance of 21+ meters.

During the months of May until September of each year, the overwhelming majority of Hoffa's competitions would be held outside the United States. This necessitated the need for a training approach during this time that allowed him to (1) maintain his throwing rhythm, (2) maintain his power levels, while still being able to recover from the international travel that most of his competitions required. Table 3 provides a description of a three-week training cycle that Hoffa would use in between in series of international competitions that allowed him to maintain his form. This type of cycle would be repeated over and over between his international trips.

With these training principles fully developed by the 2006 season, performance plan for the following years remained largely intact from year to year. The quality results were reproducible each of the following seasons with only minor changes being made to work around injuries that would pop up from time to time, as was the case in the 2009-2010 season.

## THE FINAL YEARS (2013-2016)

Following the 2012 London Olympics, Hoffa developed a nag-

ging injury to his left knee. This injury stayed around for most of the 2013 season and caused him to make some inadvertent changes to his technique as he entered out of the back of the ring. The instability in the start out of the back of the ring caused him to have the shortest seasonal best performance since the 2004 season; however, he was still able to compete well and earn a #3 world ranking at the end of the season. The 2014 season saw Hoffa return to full health and he was able to find steady form, win the Diamond League, and finish the year ranked #1 in the world.

Hoffa's plan at this stage was to finish his competitive career at the end of the 2016 season. Efforts were focused in these last two years to limit the number of competitions and avoid excessive travel in order to maximize recovery and conserve energy. These adjustments were relatively successful in 2015; however, it was becoming an ever-greater challenge to determine how much recovery Hoffa needed between competitions and travel. In 2015 and 2016 it took about twice as many days for Hoffa to recover from a trip than it did before 2014. It became apparent after many years of training that it was relatively simple to figure out how much to work to put in to reach a given level of throwing fitness, but it was a constant battle to figure out the amount of recovery that was needed between training and competition.

Upon reflection after the conclusion of the 2016 season, Hoffa felt that his move to start the Hoffa Throws Academy in 2014 actually affected his training, and thus, his performances from 2014-2016.

*(Continued on page 7300)*

# ***RUN SLOWER TO RUN FASTER***

Just what the title says: to be a better runner, to get the proper mileage in, you might have to slow down a bit.

*BY JASON R. KARP, PHD*

When I was a kid, I loved watching the TV sitcom, *I Love Lucy*. Lucille Ball was one in a million. There was a famous episode during which Lucy and her friend Ethel work at an assembly line, where they were assigned to wrap pieces of chocolate as they came down the conveyor belt. At first, the job was easy. The chocolate pieces were coming down the belt at a slow enough speed that Lucy and Ethel could easily grab each piece of chocolate and wrap it. Then the speed of the conveyor belt quickened, and Lucy and Ethel had their hands full. Literally. They couldn't wrap each piece of chocolate in time before the next piece was already passing them, so they grabbed handfuls of chocolate and shoved them in their pockets and in their mouths. It was hilarious, and that episode became a famous part of TV history.

Little did the director of that scene know that he revealed the secret to how to become a better distance runner.

Clearly, increasing the speed of the conveyor belt didn't work. Lucy and Ethel couldn't keep up with the pace of the belt. If the company that Lucy and Ethel worked for wanted to produce more wrapped chocolates in less time, they should have had more factories with more assembly lines and more workers like Lucy and Ethel wrapping chocolates coming down the multiple conveyor belts.

Deep inside your athletes' muscle fibers, those factories are the mitochondria, and those workers—the Lucys and Ethels—are the enzymes that catalyze the chemical reactions involved in aerobic metabolism. The more mitochondria a runner's muscles have, the greater his or her

muscles' capacity to use oxygen and the faster pace he or she will be able to sustain. The most efficient way to make more mitochondria—more factories, more assembly lines, and more workers—is to run more. And to run more, runners must slow down their runs, because there is an inverse relationship between training intensity and duration: The faster one runs, the lower the total amount he or she can run.

In addition to the slower pace of easy runs enabling runners to increase their weekly mileage, they also decrease the chance of injury and can get more out of their harder workouts because their legs will be less fatigued.

The number and size of mitochondria in the muscle fibers is sensitive to the volume of work performed. When the factories are stressed

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because of greater demand, more and larger factories will be built to increase their supply to match the demand. If those pieces of chocolate kept coming down the conveyor belt long after the 30-minute *I Love Lucy* episode was over, more conveyor belts, and more and larger factories to hold those conveyor belts, would have been built to keep up with the demand for chocolate.

One of the biggest mistakes runners make is thinking that to run faster in races, they need to run faster in workouts. So, they run their workouts faster than their current fitness level dictates. I once coached a

college runner who ran 19 minutes for cross country 5K, and she told me she wanted to be trained like a 17:30 5K runner. So, I told her to run a 17:30 5K and then I'll train her like a 17:30 5K runner. Races, which tell the runner and you his or her current level of fitness, dictate the training speeds, not the other

way around. Distance runners don't do workouts to practice running faster; they do workouts to improve the physiological characteristics—to make more assembly lines—that will enable them to run faster in the future. Even if it's not as funny or as glamorous as the *I Love Lucy* chocolate episode.

Jason Karp is a coach, exercise physiologist, author of 8 books and 400+ articles, speaker, and educator. His best-known book is *The Inner Runner*. He is the 2011 IDEA Personal Trainer of the Year and two-time recipient of the President's Council on Sports, Fitness & Nutrition Community Leadership award. His REVO<sub>2</sub>LUTION RUNNING™ certification has been obtained by fitness professionals and coaches in 21 countries.

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## EDITORIAL COLUMN

*Continued from page 7290*

Part of the problem is that the people who make the determinations here sometimes get it wrong. Politics, racial bias, nationalism, statistical manipulation and even ignorance influence decision making that is ostensibly made “in the name of science.” In the late 60's there was a Polish sprinter Ewa Klobukowska, whose career was ruined after her chromosomal make-up was deemed that of a male by the day's “scientific methods.” Stripped of her records and titles, humiliated at home and yet somehow, she managed to conceive and bear a healthy child less than two years later. Fake science?

One needs to accept that, in part, these decisions are being made by former athletes who could run, jump and throw well but whose “scientific method” is in a word, basic. The other half of this equation are political operatives along for the junket with all the resolve of a white flag and the political fortitude to vote with the majority.

In total this group is not chock full of Nobel Laureates but rather a group with feet of clay, like you and me, whose understanding of anatomy and physiology is stymied by the differences between the sigmoid and the semi-colon.

We live in interesting times. I truly believe the sentiment that one is born to meet the challenges one faces. But I have to wonder when I hear the toast that ends with “... may you live in interesting times” if it is being given “tongue-in-cheek.” And then I wonder to myself was it meant to be a blessing or a curse?

I draw your attention to Kevin McGill's piece on javelinist Steven Seymour. All but forgotten Seymour was an Olympic medalist and American record holder. McGill delves into Seymour's innovative training methods as Seymour struggled to master the aerodynamic changes of the javelin in the late 1940's and early 1950's. With six months, thousands

of miles of travel and countless hours of work, McGill has produced a fascinating piece on some forgotten track and field history.

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## A LONGITUDINAL EXAMINATION OF THE THROWING CAREER OF REESE HOFFA

*Continued from page 7298*

During those seasons it seemed a little harder him to feel completely prepared for the top competitions, but he was not quite sure why. This epiphany, made it clear that splitting off, just a little of his time, to begin the building of his academy, took away from some of the little details involving recovery, that allowed him to be at such a high level for so long. Such realization happened too late to have any effect on Hoffa's results, but it did serve as a valuable lesson for future use as an aspiring coach.

# TRAINING SPEED FOR THE WOMEN'S SPRINT HURDLES

Another practical guide from Coach Thorson, This one on the training of 100m women hurdlers.

BY MIKE THORSON, ASSISTANT COACH (HURDLES), UNIVERSITY OF MARY  
FORMER DIRECTOR OF TRACK & FIELD/CROSS COUNTRY AT THE UNIVERSITY OF  
MARY

## A LOOK AT THE PRACTICAL APPLICATION OF TRAINING SPEED, SPEED ENDURANCE AND HURDLE RHYTHM FOR THE WOMEN'S 100-METER HURDLES

It takes a very special blend of speed, speed endurance and strength and power to be a successful, elite women's sprint hurdler. Many of the world's best hurdle coaches have traditionally said that speed development is the most important ingredient in the women's 100m hurdle race.

Many coaches interpreted that to mean that there should be a primary focus on the pure speed compo-

nent. Although speed is critically important, that is far from the case. Many leading hurdle coaches would actually place **rhythm** ahead of pure speed as the goal of their training programs. That will be addressed later. The great Jamaican coach, Stephen Francis, said an athlete who is looking to run 12.90 in the short hurdles should be capable of running 38 seconds in a 300-meter time trial. That is assuming, he said, the athlete can sprint 11.70-12.00 in the 100 meters. Francis went on to say that a hurdler with a goal of 12.3-12.4 should be able to negotiate a 300 in 36.0.

With that being said, much more than pure speed is essential for a successful women's sprint hurdler. The 100-meter hurdles are very

complex and unique in that no other event requires an athlete to execute highly technical movements under extreme fatigue or an exhaustive state. Thus, it is fair to say that the biggest contributing factor to the slowing of the hurdler is fatigue.

The question is this: What can be done to alleviate the technique breaking down late in the race due to fatigue? *A training program designed to train speed, speed endurance and speed endurance 1 and 2 along with sprint hurdle rhythm is the answer.*

Unfortunately, many coaches underestimate and sometimes even ignore Speed Endurance 1 and 2. **This is a serious mistake.** Those elements must be trained along



with the other speed components and strength and power on a year-around basis to develop a successful women's 100-meter hurdler.

## MARAUDER SPEED PRINCIPLES

Coaches need to have an understanding of the basic speed principles prior to designing a training program for a female hurdler. The **University of Mary Speed Principles** follow:

1. Sprinting is the result of **neuromuscular coordination**; a motor learning process.

a. Force production as well as movement and velocity have to be *optimal, rather than maximal*.

b. With higher speeds, the time frame becomes smaller for muscle contraction and relaxation. Thus, it is more difficult for the CNS (central nervous system) to distinguish and coordinate the driving forces of extension with antagonistic actions of flexion in leg recovery. It is very important that the agonistic and the antagonistic muscle activities not hinder one another.

c. **Repetition** of this neuromuscular facilitation in the correct firing sequences seems to establish an automatic response in performance. **Only through repetition at high speeds can an athlete educate the**

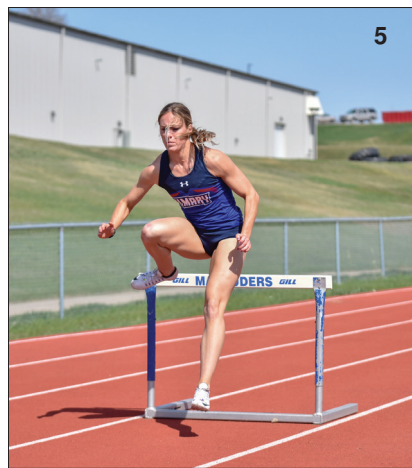
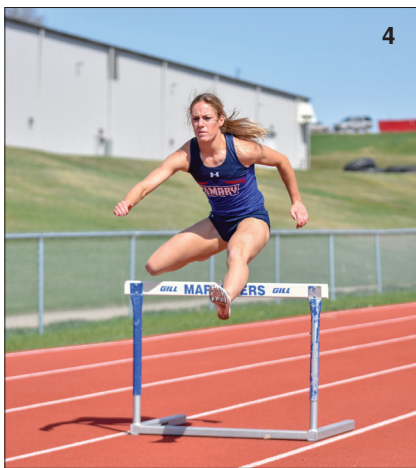
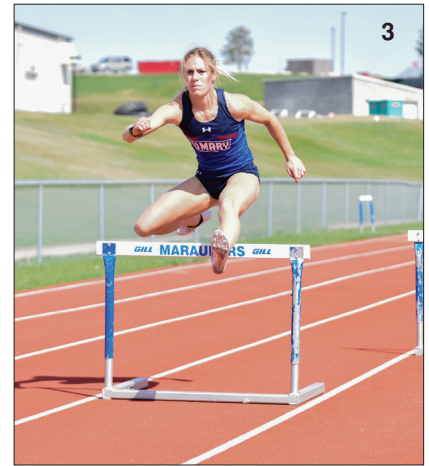
**proper muscle to be used and the order to be fired.**

d. The neuromuscular recruitment and activation of motor units (skill) is most effectively developed only **during fatigue-free seconds** of anaerobic alactic work. A sprinter does not only improve performance by activating bigger motor units in greater quantities, but by synchronizing their activation to produce a greater rate of force development. In other words, everything must coexist or co-occur in the correct order for optimal motor firing.

**ONLY THROUGH REPETITION AT HIGH SPEEDS CAN AN ATHLETE EDUCATE THE PROPER MUSCLE TO BE USED AND THE ORDER TO BE FIRED.**

2. The base training for speed is **SPEED**. Thus, it should be trained year-around. Neglecting speed training for several months of the year is a serious mistake. This was often done in the past to obtain so-





called “base work” prior to training speed. *“If you train slowly, you will be slow.” If you want to be fast, train FAST! Slow running confuses the nervous system and ruins the mechanics involved in vertical force.*

3. No fatigue can be present when speed training is being implemented. Athletes must have complete or near recovery if the athlete is to receive the maximum training effect. An elite level athlete needs 24-36 hours of rest or very low intensity work prior to a maximum speed training session.
4. Develop speed before speed endurance.
5. Increase and decrease inten-

sity to continually stimulate the CNS and avoid the movement stereotype. In other words, vary speeds and train at different intensities. Remember that practice does not make perfect, it makes **permanent**. Too much and incorrect sprint training can lead to “barriers” in speed development. Coaches should be very cautious training with too many all-out sprints attempting to sustain maximum levels for too long and repeating over and over, etching in a pattern.

6. Emphasize neuromuscular coordination over strength and conditioning.
7. Speed should always be trained before strength in any session.

8. Acceleration and stride frequency do not develop without strengthening associated muscles to be fast and powerful.

9. Choose exercises that are **specific** to sprinting and **train for performance** and not work capacity. **Always stress quality over quantity and remember that quite often “less is more.”**

10. It is important to stimulate the CNS as frequently as possible. Although daily would be ideal that is typically not possible due to the need for recovery time for the athlete.

11. In regards to strength training, medium loads with a fast series of repetitions are typically what are needed for the sprinter/hurdler. Heavy loads, however, will be needed to aid in the improvement of the acceleration phase where power is needed. Research shows strength training with heavy loads will produce gains in maximum force production. Remember, however, too much work with maximum loads and slow speeds will develop muscle memory that is non-productive for the sprinter.

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12. Choose multi-joint exercises over isolation and single joint exercises and optimally in the same firing sequence that a sprinter/hurdler would employ.
  13. Train for muscle balance and amplitude of movement. Programs must address all muscle groups and balance in strength development. Many injuries are the result of an imbalance in the antagonist muscles.
  14. Address postural needs first and foremost. A strong **CORE** is critical to great performance. Remember that the best exercise for the core is **sprinting!**
  15. Employ the same group of exercises long enough for a positive training effect (4 weeks), but not so long as to cause a dynamic stereotype or staleness. Athletes and muscles need variety and varied stimulus. Remember that speed takes time to develop. It is not an “overnight” process.
  16. Don’t think that strength work has to be done in the weight room. Sled pulls, Tire pulls, Hill running, Hurdle Hops, Multi-Throw/Jumps and Speed Circuits can produce some significant functional strength gains.
  17. Training can have a huge effect on fast/slow twitch muscle fibers. Although to a degree this is genetic, training can have a huge effect on the recruitment and utilization of the correct fibers. Too much slow endurance work will recruit the intermediate fibers to assume properties of slow muscle fibers. On the other hand, more high intensity train-

ing can train the intermediate fibers to take on the properties of fast twitch muscle fibers. Distance runners have a high percentage of red fibers (slow). Sprinters have a high percentage of white fibers (fast twitch) and studies have shown up to 40% of these fibers are transitional and can be influenced toward red or white based on training! Remember, **“You are what you do.”**

## SPRINT MECHANICS

Another component that many coaches don’t spend enough time training is sprint mechanics. Athletes need to understand and be taught how to sprint before they can develop and improve speed.

### MARAUDER SPRINT MECHANICS

***A sprinter/hurdler is only as fast as their mechanics will allow!***

The principal mechanic keys/points:

1. The head is held high and level with the eyes looking straight ahead. No rotation of the head with a loose jaw and chin down ( Head Steady).
2. The torso is erect and in a position of “good” posture. Instruct athletes to run tall with chest up. The body will be nearly vertical at high speeds (slight forward lean in some cases).
3. The hand of the driving arm comes up shoulder level (front-side mechanics). Arms should be bent at 90-100 degrees. Hands should drive back 6-8” behind the hips on the backside.

Remember that all sprinting is controlled by the arms and that the arms precede the legs. **Arms drive the legs!**

4. The shoulders are relaxed, with the thumbs up and the elbows turned in toward the body. The arms should not cross the mid-section. The shoulders are relaxed and down—not *hunched*—causing tightness in the upper body.
5. The hips are high enough above the ground to allow the driving leg to extend fully to the ground.
6. The ankle fully extends at the end of the leg drive. Good knee lift is essential—thigh should be parallel or horizontal with the ground.
7. Concentrate on running smooth—no bouncing.
8. Ground contact should be with the ball of the foot, behind or slightly underneath the body’s center of gravity with an active foot strike. The goal of the athlete should be to impact the ground with a foot that is moving backward—think of a child riding a scooter or skateboard. The foot should be pushing backward before it impacts the surface. **Sprinting is a pushing action and not a pulling action.** Ground contact for 100-200m athlete and short sprinter should be ball of the foot, 400-800m runner the arch. By contrast, the 1500 meter runner will have ground contact with the entire foot.
9. Feet should be straight ahead during foot contact and in the dorsi-flexion position (toes as

close to shin as possible—cocked)

10. Avoid excessive rear-side mechanics (actions). Stress high hips. Problems associated with excessive backside actions:

- a. Increased recovery time which results in slower step-rate (stride frequency)
- b. Increased load on the hamstrings which have to assist in the recovery process. Greatly increases the risk of injury!
- c. Decreased knee lift (front-side mechanics) because knee lift is inhibited when the hips are low and there isn't enough time for them to be lifted higher with the late recovery. This results in less powerful foot contractions.

11. Relaxation: All athletes should be striving for relaxation. Focus on using muscles that are required for running and stabilization. Even the face should be relaxed. More importantly, learn to switch off all muscles that are not required as much as possible.

## SPEED/SPEED ENDURANCE

A coach must understand speed and speed endurance before designing a 100-meter hurdle women's hurdle training program. A brief explanation with examples of workouts follows:

**##Speed** Runs of 95-100% intensity over 30-60m or up to six seconds of running. Examples: (1) 2 x 20m-30m-40m with spikes from

blocks @100% intensity with 5 minutes recovery per rep and 8 minutes for set. Total Distance: 180m. (2) 2 x 3 x 40m with spikes from blocks @ 100% intensity with 5 minutes recovery per rep and 10 minutes for set. Total Distance: 240m.

## A COACH MUST UNDERSTAND SPEED AND SPEED ENDURANCE BEFORE DESIGNING A 100-METER HURDLE WOMEN'S HURDLE TRAINING PROGRAM

**##Speed Endurance** Runs of 95-100% of maximum over 60-150m or 7-20 seconds of running. Examples: (1) 3 x 80m @ 95-100% intensity from a four-point stance with 4-5 minutes rest per rep, 10 minutes recovery, followed by 1 x 150m with spikes @ 95-98% intensity. Total Distance: 390m. (2) 2 x 2 x 150m with spikes at 95-98% intensity with 6 minutes recovery per rep and 8 minutes recovery for set. Total Distance: 600m.

**##Speed Endurance 1** Runs of 95-100% of maximum over 150-300m or 20-40 seconds of running. Examples: (1) 2 x 200m with spikes @ 95% intensity with 8 minutes recovery per rep, 10 minutes recovery between set, 1 x 200m with spikes @ 95-100% intensity. Total Distance: 600m. (2) 2 x 300m with spikes @ 98% intensity with 12 minutes recovery per rep (second 300 faster than first). Total Distance: 600m.

**##Speed Endurance 2** Runs of 95-100% of maximum over 300-600m or 40 seconds of running or more. Examples: (1) 1 x 400 with spikes @ 95% intensity (12 minutes Recovery)

1 x 350m with spikes @ 95-98%. Total Distance: 750m. (2) 1 x 350m with spikes @ 95% intensity (12 minutes Recovery) 1 x 350m with spikes @ 98% intensity (second 350 faster). Total Distance: 700m.

**Note: Although frowned upon by some authorities, coaches will often want to "mix and match" different energy sessions in one training session to obtain maximum training benefit.** Example: 1 x 350m with spikes @95% intensity (10 minutes Recovery) 3 x 150m with spikes @ 98% intensity with 6 minutes recovery per rep (Mixing Speed Endurance with Speed Endurance 2). Total Distance: 800m.

## HURDLE RHYTHM

Rhythm is the speed which allows hurdlers to use their techniques to the maximum (Brent McFarlane in *The Science of Hurdling and Speed*). The problems in the 100-meter hurdles typically occur later in the race when the athlete must maintain the sprint rhythm. The biggest factor that contributes to a hurdler slowing down late in the race is fatigue and the resulting inability of the hurdler to maintain the rhythm pattern.

Far too often there are women's hurdlers who are very successful indoors over five barriers, but can't produce corresponding results outdoors over the 10 barriers. While speed is critically important in the women's 100-meter hurdles, rhythm endurance or rhythm maintenance is normally more important and is the goal of leading hurdle coaches.

**Hurdle rhythm is trained by using different combinations of hurdles placed at lower heights or closer distances (or both) and**

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**varying recovery periods. It also is gained by training the athlete in all forms of speed endurance.** Many coaches fail to understand this. They fail to train the skill and energy systems in the same setting. Consequently, many hurdlers are great in training and at certain drills, but can't reproduce that in a race situation where fatigue and sprint hurdle rhythm become factors.

In a race where nearly all of the competitors take the same number of strides (51), it is critical that the hurdler maintain an optimal rhythm pattern throughout all stages of the race. That is typically the deciding factor in the 100-meter hurdle race.

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**A GREAT PERCENTAGE OF TRAINING TIME SHOULD BE DEVOTED TO SPEED AND HURDLE RHYTHM.**

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One can see very quickly that it is a very difficult task to combine technique, speed and speed endurance and hurdle rhythm into a complete training package for the 100-meter hurdler. But it must be done if the coach wants to develop a successful, elite female hurdler.

A great percentage of training time should be devoted to speed and hurdle rhythm. Hurdle rhythm that mimics competition can be rehearsed in a training session over any number of hurdles from blocks in a race setting using discounted hurdle heights and spacing. One of the drills we use is what we term **tempo hurdles**. A description of the drill: Set (s) of any number of hurdles done in spikes with all-out intensity from a three or four point start with very adequate recovery. The

first hurdle is on the mark and the spacing is 7.7 meters. The hurdles are reduced in height (**typically 30 inches**). These modifications allow for the correct hurdle rhythm pattern to be trained. Example: 2 x 2 x 4 Hurdles @ 30" with 3 minutes recovery between reps (5 minutes recovery between sets). Spacing 7.7m.

**Coaches should use touchdown times and the touchdown charts as much as possible to ensure that the correct hurdle rhythms are being trained.**

### BREATHING MODEL/ PATTERN

A breathing model/control pattern can certainly contribute to the enhancement of sprint rhythm maintenance and endurance for the hurdler. The hurdler will establish a specific pattern of breathing in the race, with the hurdler "blowing out" on hurdles 1, 3, 5, 7, 9 and holding the breath the remaining time. The breath should be held into the set position. Many elite hurdlers use a pattern of "blowing out" on hurdles 1-4-7-10. Holding your breath creates what is known as the Valsalva maneuver, which research shows increases blood pressure in the carotid artery, facilitating motor unit availability/recruitment. It is important to "recharge the system" because studies have shown that sustained maximum motor firing can last for only approximately 2½ seconds in very elite athletes.

### STRENGTH TRAINING

Increased power and strength will certainly enhance and increase hurdle maintenance and assist in sprint hurdle rhythm. The best way for hurdlers to gain strength

is **SPRINTING and HURDLING**. Remember too, hurdling is a form of plyometrics. But there are many ways to gain sport specific, functional strength and power. They include: (1) Weight room strength training (2) Plyometrics and Bounding (3) Body Weight exercises (4) Hill running (5) Multi-Jump/Throw Med Ball exercises/routines (6) Therabands/Cords (7) Resistance Training (Sled, cords)

**The top lifts for a sprinter/hurdler include:**

1. Squats (Front Squat, Back squat, Split Squat, Jump squat)
2. Cleans
3. Jerks
4. Inverted Rowing
5. Lunges
6. Hamstring Exercises (1) Negative Glute Ham Raise (2) Partner Glute Ham Raise

### TRAINING WEEKS

**The following are actual weeks of training by U Mary women's hurdlers at different times of the year that illustrate how to train pure speed, speed endurance and speed endurance 1 and 2 along with sprint hurdle rhythm.**

#### *Week 7-October 23-29*

Monday, October 23—12—Hurdle Technique followed by Flying 30's w/spikes, 1 x 350m w/spikes @ 98% (10-12) 1 x 200m w/spikes @ 98% Strength Training.

Tuesday, October 24—3:30 pm—Warmup, Accels w/spikes, 20 minutes. Moderate Stationary Bike (Recovery) Med Ball Circuit—Blue Circuit 2 x 20.

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Wednesday, October 25—Flying 30's w/spikes, 1 x 300m w/spikes @ 98% (10), 2 x 150m w/spikes @ 98% (6) Strength Training.

Thursday, October 26—12—Hurdle Technique followed by Flying 30's w/spikes.

Friday, October 27—Warmup, 10 x Priory Hill (200m Hill) Med Ball Circuit—Orange Circuit 2 x 20 Reps.

Saturday, October 28—REST.

Sunday, October 29—Recovery—Stationary Bike 20 minutes. Steady Pace.

**Note:** For training purposes, **98%** is basically all out intensity. Recovery is noted in parentheses ( ).

### **Week 12-November 27-December 3**

Monday, November 27—12—Hurdle Technique followed by 1 x 300m-150m w/spikes @ 98% (12) Strength Training.

Tuesday, November 28—3:30 pm—Accels w/spikes, Flying 30's w/spikes, Med Ball Circuit—Go Big Orange 2 x 15.

Wednesday, November 29—3:30 pm—1 x 200m-150m-150m @ 98% w/spikes (12, 10).

Thursday, November 30—3 pm—Hurdle Technique, Strength Training

Friday, December 1—4 x 150m w/spikes @98% (6).

Saturday, December 2—REST.

Sunday, December 3—Recovery—Warmup, Accels/flats 4.

### **Week 20-January 22-28**

Monday, January 22—2 pm—1 x 300m w/spikes @ 98% (12). 2 x 150m w/spikes @98% (6). Strength Training.

Tuesday, January 23—12—Hurdle Technique, Med Ball Circuit-- Little Marauder 2 x 15.

Wednesday, January 24—2 pm—3 x 40m Blasts from blocks w/spikes followed by 1 x 250m @98% w/spikes. Strength Training.

Thursday, January 25—12—Hurdle Technique (Light).

Friday, January 26—Pre-Meet Warm-up.

Saturday, January 27—UND Invitational, Grand Forks, ND.

Sunday, January 28—Recovery—Stationary Bike—15 minutes Easy.

### **Week 27-March 12-18**

Monday, March 12—2 pm—15 minutes Stationary Bike Easy, Warmup, Accels/spikes.

Tuesday, March 13—2 pm—Hurdle Technique. Med Ball Circuit—Orange Circuit 20 Throws.

Wednesday, March 14—2 pm—4 x 200m w/flats @ 85% (4 ½). Strength Training.

Thursday, March 15—2 pm—Hurdle Technique followed by 1 x 200m w/spikes @ 98%.

Friday, March 16—1 x 350m w/spikes @ 98% (10-12). 2 x 200m w/spikes @ 98% (8). Strength Training.

Saturday, March 17—REST.

Sunday, March 18—20 minutes Elliptical (Recovery).

## **HURDLE TECHNIQUE TRAINING SESSIONS**

**The following hurdle technique training sessions demonstrate what the University of Mary employs to train the following: (1) speed (2) hurdle rhythm endurance/maintenance (3) Sprint hurdle rhythm pattern (4) Acceleration (Starts) (5) Hurdle Technique**

### **Thursday, March 28**

1. Sprint-Hurdle Warmup
2. Lateral Walking Lunge
3. Hurdle Hops 3H x 3
4. Accels 4 w/spikes

1. 1 Step Hurdles 5 Hurdles x 3 30
2. Flying 30m x 2 4 point (Time)
3. Tempo Hurdles 2 Hurdles x 3 30  
First 2 reps with hand weights

1. Resistance Starts w/hand weights x 2
2. 8 Hurdles FS x 1 33-30
3. 5 Hurdles FS x 3 30

Note: For all technique sessions: H=Hurdle FS=from start with blocks, HW=Hand weights, All spacing at 8.0m, Hurdle Heights are listed, either 30 or 33.

Note: Touchdown times are used for every rep over 4 or more hurdles.

### **Tuesday, April 2**

1. Sprint-Hurdle Warmup
2. Cone Hops/Squares
3. Standing Long Jumps x 4
4. Accels w/spikes 4

1. 1 Step Hurdles 4 Hurdles x 3 30

2. 30m x 2 4-point start
3. Tempo Hurdles 3H x 3 30

1. 2 Hurdles FS x 1 33-30
2. 10 Hurdles FS x 1 33-30
3. 8 Hurdles FS x 2 30
4. 3 Hurdles FS x 2 30

**Monday, April 16**

1. Sprint-Hurdle Warmup
2. Hurdle Hops 4H x 2
3. Cone Hops ( Big and Small 2)
4. Accels spikes 4

1. 1 Step Hurdles 4 Hurdles x 2 30
2. 1 x 30m Fly on turn (Time)

3. 1 x 20m Block Start (Time)
4. Tempo Hurdles 3 H x 2 w/hw 33-30-30

1. Fly 20m (Time)
2. Block Start x 1
3. 2 Hurdles FS x 1 33-30
4. 10 Hurdles FS x 1 30
5. 8 Hurdles FS x 1 33-30
6. 8 Hurdles FS x 1 30

**Monday, April 23**

1. Sprint –Hurdle Warmup
2. Squares
3. Hurdle Hops 4H x 2
4. Accels 4 spikes

1. 1 Step Hurdles 5H x 2 30
2. Arms 2 H 2 x Chest
3. 2 x 40m 4-point start (Time)
4. Tempo Hurdles 3 H x 2 33-30

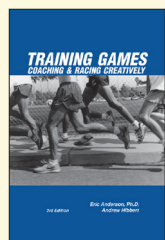
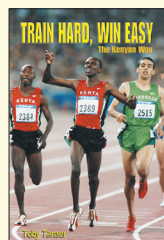
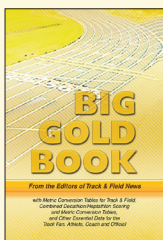
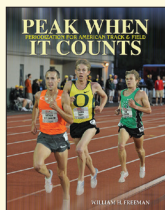
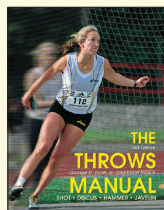
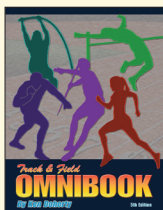
1. 2 Hurdles FS x 2 w/hw 33-30
2. 12 Hurdles FS x 1 30
3. 10 Hurdles FS x 1 33-30
4. 8 Hurdles FS x 1 30

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# STEVE SEYMOUR

*Kevin McGill, who wrote the Javelin and Hammer chapters in The Throws Manual, a 1991 publication from Tafnews Press, and updated the subsequent editions of the book, is a lifelong aficionado of javelin throwing. Here he assembles a fascinating remembrance of one of the true pioneers of American javelin throwing, 1948 Olympic silver medalist Steve Seymour.*

BY KEVIN MCGILL

In *Sports Illustrated*, July, 1969, Jerry Kirshenbaum interviewed several javelin throwers for a piece entitled “They’re All Out to Launch.” He had a quote, which I ran across in a piece by Klaus Bartonietz in February 2019. It has also been in Bob Sing’s book, *The Dynamics of the Javelin Throw*, and somehow, in concentrating on the other sections, I missed it in the 1980’s, a second time. Here it is.

“One mustn’t think of the javelin as a minor sport like curling or anything. The javelin represents the glory of Greece and it symbolizes man’s search for his primitive ancestral identity. I can blink my eyes and look out at a javelin thrower and see tens of thousands of warriors marching across the field and I can

hear the voices of antiquity. No, the javelin isn’t some minor sport. It is classic. It is beauty. It is excellence. It is immortality.”

It was winter here when I read this slowly for the first time. If you were within a half mile, you might have heard my jaw drop. Suddenly...I said to myself, who is this guy—Steve Seymour—who wrote this??? I needed to find out.

I knew his name from an old *Strength and Health* article published in the 1960’s. Also, Ken Doherty quoted him in *Modern Track and Field*. However, this paragraph hit me like a snowball smacking into my forehead. So...I began a search to find out more.

Thanks to Ed Daniels from New Hampshire, I had the location on the Internet of Seymour’s daughter, Stephanie. At the same time, I subscribed to the *LA Times*, and downloaded maybe thirty mentions of him over the years.

There is very little on the Internet about Seymour. The librarian at LA84 helped me find the “Clinic Notes” which Doherty had quoted from. They sent me a five-page presentation done by Seymour; one by Bud Held, and two by Frank Wetzler, Al Cantello’s coach. The search for the National Track Hall of Fame Library ended up as a dead-end at USATF. I flew to Los Angeles to meet Stephanie and her husband, and we went through every page of two huge scrapbooks Seymour

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left behind when he died in 1973. Let's dig in, shall we?

Steve Seymour was actually born in NYC, October 4, 1920, as Seymour Cohen. Well into his 20's, he changed his name to Steve Seymour according to a Franklin & Marshall College mention, to avoid "the strong anti-Semitism of post-war America". His full family name was then Stephan Andrew Seymour. He occasionally spelled his first name as Stephen. Up until his mid-20's, the results show for Seymour Cohen. One of the coaches he was connected with was Dean Cromwell, the Olympic coach in 1936 who sat out two Jewish athletes from the 400-meter relay, to avoid offending Hitler. There is no record of Seymour knowing about this. Even if he did, it did not interfere with his admiration for Cromwell. He referred to Cromwell as "keenest of them all. Incomparable stylist and psychologist."

His family moved to Middletown, PA, and he began throwing at the high school there, achieving a modest 113' in 1935, as a junior, using the American Hop style. As a senior, he used the back cross, and got out to 149'. He went to Franklin & Marshall, and threw 174' as a frosh, then 183', 196', and finished with a school record of 208'. Seymour competed in the pole vault, long jump and ran cross country. Now, at this point, he had a side arm delivery, so he developed a rather chronic sore elbow. He thought cross country was good for "toughening the body." He did learn the front cross from Boyd Brown, a 232' thrower from Oregon.

As he was ineligible for the Penn Relays the following year, he loaned his javelin to Garland Adair

from the Brooklyn Navy Yard, and Adair won with 189 feet. That year, Seymour managed to get to 221', and he worked with Bob Peoples at Franklin Field, attempting the Finnish approach. For you javelin nuts, in 1939 Peoples was featured in a flip book done by Dean Cromwell called "The Javelin Throw and Relay Races." Peoples had thrown 219' in high school, the national record. It would be Peoples US record of 234'3", set in 1941, that Seymour would break in 1945, with 235'3". These were all set with wooden javelins.

Seymour kept himself busy during this time. He coached at West Catholic HS, while attending the Philadelphia College of Osteopathy. In his scrapbook, he had collected sequence shots of throwers, including Nick Vukmanic from Penn State, who won the NCAA in 1938 and 1939. Seymour won the AAU Junior in 1941, under the name Seymour Cohen.

Around this time, he started collecting tidbits of athletic philosophy, starting with Ty Cobb: "Quitters never win." Years later, he asked H. Archie Richardson about Harold Connolly, and got a postcard back with five tips. Archie had written "Archie's Little Black Book", a fascinating collection of pieces on track & field athletes. Worth finding on Amazon, or wherever you search!!!

In 1944, Seymour transferred to the Los Angeles College of Osteopathy, got married in June to Charlotte Singer. They had three children: Stephanie, Diana and Misha. When his father died in 1945, he returned to Middletown for the funeral, and shortly afterward shipped overseas as a medic. He finished school in 1947, got a job as an intern.

Also in 1945, while being called to the Army, he found time to win the Penn Relays with 208'. Later than year, he set the AR of 235'3" while in Istanbul. At one point, he was stationed at Fort McArthur in Texas. No javelins there...so he improvised: "practiced by throwing hand grenades all on the plains of West Texas."

In 1946, he threw 215' for an Egyptian all-comers record, and shortly thereafter had his right elbow fractured by a mob over there, thinking he and the others were British!! He was treated at Walter Reed, and then at the LA College of Osteopathy, where two doctors treated him, so he could regain training in December of the same year.

In 1947, the Times reported that Seymour was at the Helms Athletic Foundation studying Finnish technique....then he went out and broke the AR by more than ten feet, hitting 248'10". The reporter mentioned the officials took some time to examine Seymour's javelin and "when they found it wasn't jet propelled and had no flying saucer for a motor they approved his record." He won the Helms "Athlete of the Month" for that toss.

In February 1948, *Track & Field News* ranked him #1 in the world for 1947, based on his AR. Tapic Rautavaara, who later beat him in the Olympics, was ranked 4th with 237'2". Seymour liked *T&FN*, and had issues #1 and 2 pasted in his scrapbook.

*Track & Field News* reported that "he had visited coaches and throwers all over the country trying to pick up fine points of the event. He even talked to baseball greats Bob Feller,





On the podium in 1948



Ready for a throw in 1948

Johnny Lindell and Ewell Blackwell seeking the secrets of their powerful arms." He said there was a lot he didn't know about the javelin. "I have invented a new style which is not the Finnish or American method, but until I pass 258' it remains

individual basis and there are no color or religious lines drawn...a clean cut sport." This was years prior to the drug era.

Prior to the Olympics, he made a list of his competitors. Next to Y.



U. S. Javelin Record-holder Training Here for Olympic Games at London

In January 1948, the *Long Beach Press Telegram* featured Seymour, showing several of his innovations. In the lower left, is the varied spaced horizontal ladder he built. This enabled him to exercise more specifically in javelin positions. Over on the lower right is the javelin pulley he devised.

theory." There was a terrific picture of Blackwell in his scrapbook. It is noted...Blackwell was a wicked side-arm thrower. Perhaps Bob Feller and his fastball would be a better model. Seymour preferred track to other sports because "it is on an

Nikkanen, Finland, he wrote: "WR holder; leg injury in war; Jarvinen's protegee." I looked down to this entry: "(X) Mikkola, Finland; died in the war; was #1 prospect for Nikkanen's world mark." That made me stop and think for a few minutes. He also wrote Martin Biles's name down. Biles had beaten him eight times in a row in 1947-48.

In January, 1948, there was an article in the *Long Beach Press Telegram* that showed Seymour with homemade equipment in his backyard, doing specific exercises for the javelin. He built a horizontal ladder, with varied spacing. He had a javelin attached to a cord, on a pulley, and did javelin motion drills.

Now in the Olympics in 1948, he was behind Biles in the qualifying round. When they entered the final, Biles did not throw well at all. Biles has 67.68 in the qualifying, and only 65.17 in the final, with two throws under 60 meters. Seymour with 63.83 in the qualifying for 5th place, entered the final with a sore elbow, and perhaps a bit of a let down. He fouled his first effort, then only reached 62.56 on his second. Then...along came his friend, Wilbur "Moose" Thompson, the gold medalist in the shot. According to the *LA Times*, Aug 5, 1948...Moose gave Seymour a good talking to, told him to forget that sore arm. Next throw...67.56, or 221' 7 1/2" for the US's first silver medal in the Olympic javelin. (Cy Young and Bill Miller went 1-2 in 1952. Bill Schmidt's bronze in 1972 has been the only men's javelin Olympic medal since then.) Thompson's and Seymour's families were lifelong friends.

I looked for video of Steve throwing, and did locate two on YouTube. The first one, "Tapio Rautavarra (Finland) Olympic Javelin Champ 1948" was posted by Gerolf Holkema, true javelin fanatic. There is a clip of Seymour throwing in the Olympics a few minutes in. I sent this link, which is in Finnish, to Stephanie Seymour. She had never seen this before. She had a friend in Finland translate what the very gracious Tapio Rautavarra said about her dad in the video: "There was a guy from California, he was in much better shape than me. He had bad luck. In the London Olympics, the wrong man won the title!" That...is the true Olympic spirit. If you Google Rautavarra, you will learn his amazing story after the Olympics.

The second link was posted by Huntley Film Archives "Javelin Film



Seymour was featured on the cover of the *LA Times* magazine section.

317.MPG". This is a video, mostly of Steve throwing the javelin. There is no origin, but this might have been made by the military. Who else would say: "There are four departments in the javelin?" There are so many shots of Steve throwing bare chested, I was surprised he had a t-shirt on here.

In 1949, he did a talk on the javelin for the National Track Coaches, and it was reprinted in "Clinic Notes". Thanks to LA84, I was able to get all five pages and it is quite a historic document for the javelin. Seymour had been quoted by Ken Doherty in

*Modern Track and Field*, which led to finding this gem. Other articles available from LA84, were from Bud Held, and two from Frank Metzler, Al Cantello's coach. The National Track Hall of Fame Library, which Ken Doherty helped established, has vanished, so LA84 still has microfilm of these original pieces.

In 1952, famed sports writer Paul Zimmerman wrote about Bill Miller, silver medalist in the javelin: "He says Steve Seymour taught him what he knows about throwing the spear." Miller had a PR of 266' 8 1/2" in 1954. At 5'10", 170, he was

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rather small for a thrower. Late in his career, Miller worked with Native Americans and helped bring Jojoba and Guayule to the public eye. He published an article in the *National Geographic* on his work. Cy Young, at 6'5", who won the gold in 1952, had a PR of 259' 8 1/2" in 1956. Young, a walnut/almond farmer, believed he knew more about the javelin than anyone.

Phil Conley, one of the top throwers in the 1950's and a member of the 1956 Olympic team, thanked Steve with a postcard. In one interview, Conley said: I'm getting more back into the throw now. I'm sure Seymour helped me." Seymour had a chat with him after a meet, and talked him into revamping his style somewhat.

In the early 1950's, Seymour swam 21 miles in 13:40, after delivering a baby! This was to match the distance of the English Channel swim, in the Pacific Coast Club pool. As he neared the end, he lifted his goggles and said " Well, where's France?" Stephanie laughed when we found this in the scrapbook.

In 1952, then Dr. Seymour was in charge of a case involving Dick Doyle, a top U.S. discus thrower, who dove into shallow surf at Seal Beach, and broke his neck. Seymour described the injury as causing almost complete paralysis. Later, the only thing affected was Doyle's right arm. Doyle's Montana school record, set in 1951, lasted until 2013. He had thrown 175'6" in the AAU Meet that year.

In 1953, the Held javelin, a hollowed wooden version, was defended by the Karhu manufacturer Rolf Hohentahl. At the time the rules allowed for arbitrary thickness. Cy

Young was quoted that Held "used a javelin which floats and travels for at least 20 feet further than the ordinary javelin." At the time, Bud

had thrown 263' 10". Matti Jarvinen also agreed with Karhu.

Dink Templeton once wrote a piece



**His release at the 1948 Olympics. Taken from the YouTube video mentioned in the text.**



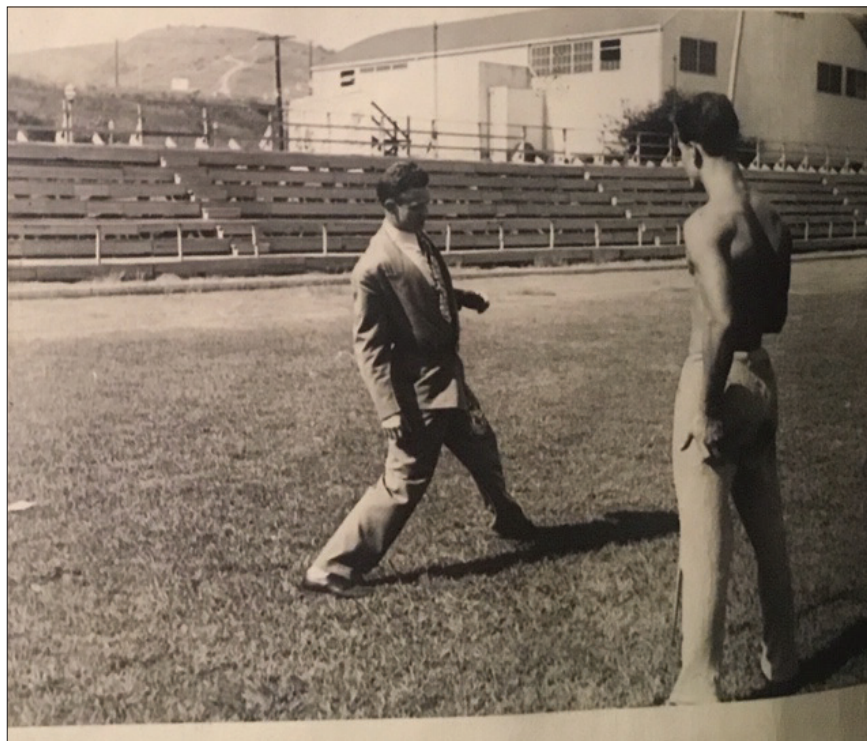
**Nice position in this approach.**

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for the LA Times entitled "Held's New Javelin Looks Like Mongoose." He said the javelin was so fat, it could be mistaken for the carrier Held had which could hold four javelins. He wrote: "When Los Angeles is startled by a horrendous scream of anguish sometime in the near future, don't be alarmed. It'll just be Steve Seymour the first time he gets a look at it." Seymour did try to get the Held javelin banned, along with Cy Young. This surely did not endear him to the Held brothers! It was a time of transition in the javelin, from the hollowed wooden javelins to the upcoming Held aluminum. While researching this, I learned that Bud Held developed the first aluminum tennis and racquetball racquets.

In 1958, Steve Seymour set a PR of 251'1". It was reported he "employed a unique system of weight exercises, and has steadily improved with age." Also In the 1950's, Bert Nelson referred to Seymour: "one of the most amazing and admirable men in our world of track & field. He is a "leader in the treatment of alcoholism, does much to propagandize the sport through writings, speeches, personal appearances, brings an inventive mind to promoting not just the javelin throw but the entire sport." Nelson reported that Seymour had dead-lifted 545 pounds in an event in Long Beach, matching Dave Davis, the shot-putter. Seymour told Nelson the flat beach at low tide "may be the fastest running surface known to man." Seymour had a race with 140 competitors on the beach, and 9,000 spectators watched!

In 1957, he found himself 30 lbs overweight. So he went on a diet, lost 30 lbs and 7" off his waist, trained and wound up throwing



**Many times, Dr Seymour would spot athletes training on the athletic field, and he would help coach the local throwers...while still in his suit, and tie.**

248'10" which equalled his AR from 10 years earlier. The diet: Breakfast - juice, bran flakes, coffee; Lunch - Salad, fruit, all you want; Dinner - meat and vegetables. The article was entitled: " I came back from 'early old age'". He was working many hours as an osteopath, and also with his clinic for alcoholism.

He was featured in the "Mirror News" in March 1959: "Never too old: After a day in clinic, Dr Steve Seymour lifts weights in his Long Beach apartment, then goes for a romp in the surf, followed by javelin practice on the sand." He made a comment that he was experimenting with lifting weights while in the "different positions you would assume while throwing. Then you lift weights in these various positions. I'm very excited about it, and think with this program, a man will be able to throw 300 feet." He was 38 and had his sights on the 1960 Olympics. A

*Strength & Health* editor must have seen this, and asked Hal Higdon to write an article on the "innovations". Unfortunately, I have not found this article as of this date.

Seymour said, "I think I've read everything that's ever been written on the javelin. I had all the foreign books translated and even communicated by ham radio with the European experts." He knew the javelin! "The right elbow, then the right arm, then the right hand... the right wrist...and a powerful flip" he typed in a note on throwing. Seymour put the caps in: "Dean (Cromwell) says the back should be bowed...the Finns throw with half a chest as the outfielder...I thrust the spear with the whole chest...the body moves ahead of the spear... the arm hangs behind below... [Matti] Jarvinen is bouncy...I have translated all his stuff besides working out with him...and Valste,



**This is obviously a posed shot. He was in the *LA Times*, and other papers, dozens of times. That silver medal made him quite popular in Southern California.**

who has learned from Jarvinen... THEIR ELBOW IS WIDE...AND AS VALSTE SAYS ALL JAVELIN THROWERS HAVE ARM TROUBLE. THIS SHOULD NOT BE..." Seymour knew what muscles were used...and wrote notes on that for a presentation.

Another note discussed his displeasure with the Finnish method:

"I worked with Jarvinen, Nikkannen, the WR holder...and Valste, the head Finnish coach who is dogmatic in training methods. I threw 225' using this style and after a few weeks of personalized coaching was up to 210' using his methods. After my return to the US...using this low draw-back...I was down to 200'. One day, Dean Cromwell was watching me louse up my distance

and he asked me if I had enough of the Finnish style. My answer was... more than enough. My coach back East who is assisting [Ken] Doherty at Penn, Bob Detweiler, was also happy I was discarding this style. It is a side-arm style." Again, he mentioned Cromwell, Detweiler, Comstock and Templeton, praising all for their contributions to his understanding of the javelin.

Maxwell Stiles, writing on the Compton Relays, told a story of how Held's javelins could be blown off course. Cy Young had a throw blown "60-70' off line." It missed his wife Bonnie by two feet, in the stands!! Seymour gave four points on what a "spearman" must consider, and the fourth was "Did I run it through someone?" In 1960, in an exhibition at an All Comers at Wilson HS, he threw 237'2". At the time he was 40 years of age.

In 1961 Seymour was the coordinating Project Director for a report to President Kennedy, called "The Soft American: Problems and Solutions." There were 105 people interviewed, among them famous actors, coaches, police, etc. The longest report was written by Bert Nelson, co-founder of *Track & Field News*. Pat Boone, Jerry West, Elgin Baylor, and Otis Chandler were among those interviewed. It is a fascinating report, just as accurate today in its assessments, as it was then. Parry O'Brien: "Automation is responsible. In European countries, people walk 2-3 miles to work. This contributes to physical and moral hardness." Arnold Palmer: "Exercises are not enough. We need youth programs to expose kids to activity and they will begin to like it."

In 1965 Seymour arranged to put on a 24-hour race at the indoor Los

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Angeles Athletic Club. It was called the “24-Hour Last Day Run”. It was believed at the time the first modern-day American 24-hour race. Steve ran in it also, and did 50 miles in 17.5 hours! It was called “Last Day” as it was run on October 31, to help the running club pile up mileage. At one point, he set a record for a man weighing 215 lbs or more, with 57 miles on the LAAC track. Someone calculated it as 627 laps, if it was eleven laps per mile.

He wrote a piece for *Amateur Athlete* entitled, “Let’s Bring the Javelin Back.” In it he described the javelin he threw in 1959, as a “double weight”, 3.5 pounds. He felt that the 800 gram javelin was too light. Coach Chuck Coker told him once: “The heavy javelin separates the men from the boys.”

He hobnobbed with some famous people, like Jayne Mansfield and Mickey Hargitay. If you watch “Law and Order”, then you know the star is their daughter. He won the 1971 U.S. Masters All Around Athlete and Outstanding Athlete Award. In an article on him, he was quoted: “Personally, it is a genuine thrill to have a major athletic challenge after you’ve reached your 50th year.”

He wrote a book, “How to Improve Your Thinking to Solve Your Problems.” It is a rather interesting collection of 300 rules and ideas on how to think and communicate. In the Preface, he wrote “This is the first textbook ever written by a practicing physician on the art of logical thinking and its crucial relationship to mental health.”

Remember how I started this piece with the *Sports Illustrated* quote? There was more to it, as I found when I downloaded the article.

“The javelin is as old as gladiators and also as modern as Cape Kennedy. The human body is the launching pad and booster and all that, and only the rocket has changed over the years. The inspiration to send the rocket skyward—even that’s still the same. And the javelin remains the last line of defense. Think of Janis Lusia and Mark Murro. Now [in 1969] they throw in the same direction. After destruction of an atomic war, just picture the two of them facing each other, two men along on the field of battle, the ultimate confrontation.”

As I come to the end of this article, I achieved what I wanted to do—learn about Steve Seymour.

Let’s celebrate America’s first silver medalist in the Olympic javelin. I’ve been pleased to assemble this story, and it is inspiring to know that while Steve Seymour was an Olympian, he was much more. He was a terrific dad to his three kids. Can you imagine throwing a javelin with your dad at the beach?? When he struggled the last few years, he never let his kids know, even though they were adults.

Here was a guy who not only treated many thousands of patients as an Osteopathic Physician, he helped a large number of alcoholics in his clinic. Journalist Walter Winchell singled this out for praise in September, 1962. Seymour helped coach several top U.S. stars. I just learned earlier this week, that he coached Earlene Brown, the woman shot putter who competed in three Olympics. Earlene was a real pioneer in the women’s shot in the USA.

He was President of the American Academy of Achievement and

directed communication seminars among Nobel Prize winners. As the director of the Los Angeles Fitness Council, he prepared the “Soft American” report for President Kennedy. He worked with unemployed youth in Long Beach. Seymour also founded the Seymour Hospital and Medical Clinic. He also worked with the then governor Goodwin Knight on conferences discussing serious health problems facing California. He lectured and taught at the Loma Linda Medical School, and did studies at San Quentin, Chino, Terminal Island while conducting courses for correction officers. His whole life was devoted to fighting against alcoholism and narcotics addiction.

As someone who translated Egil Danielsen’s book at age 16, (and I will note, Egil, the 1956 Olympic champion, passed away recently), I can definitely relate to America’s first true javelin aficionado... Steve Seymour. He passed on his knowledge to many others. Imagine recovering from a fractured elbow, and then get the silver medal two years later.

Tomorrow, I plan on having a bowl of Kellogg’s All-Bran, and will lift my coffee cup to honor the memory of this unique American athlete, Steve Seymour.

Kevin McGill has coached at various levels in track & field—high school, college and national teams. He is a USATF Level I and II instructor, and in addition to his contributions to the books *The Throws Manual* and to *Track & Field Omnibook* has published in various journals in the sport. He is a former editor of *Track Coach*.



## **USATF CALENDAR OF SCHOOLS**

<http://www.usatf.org/Resources-for---/Coaches/Coaching-Education/Calendar-of-Schools.aspx>

### **Level 1**

Nov 1-3	Marian University - Indianapolis, IN
Nov 9-10	Lipscomb University - Nashville, TN
Nov 9-10	Nazareth College - Rochester, NY
Nov 15-17	Life University - Marietta, GA
Nov 23-24	Allen High School - Allen, TX
Nov 30-Dec 1	University of Richmond - Richmond, VA
Dec 6-8	Grand Sierra Resort and Casino (USATF Annual Meeting) - Reno, NV
Dec 7-8	UCSD - San Diego, CA
Dec 13-15	St. John's School - Houston, TX
Dec 13-15	University of South Carolina - Columbia, SC
Dec 14-15	St. John's University - Queens, NY
Dec 20-22	Westerville South High School - Westerville, OH
Dec 21-22	Florida Atlantic University (FAU) - Boca Raton, FL
Dec 21-22	Cerritos College - Norwalk, CA
Dec 21-22	Owasso High School - Owasso, OK

### **Level 2**

Dec 27-31	IMG Academy Bradenton, FL Sprints/Hurdles/Relays and Endurance
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### **Level 3**

Dec 27-Jan 1	USATF/IAAF Academy IMG Academy Bradenton, FL Sprints/Hurdles/Relays and Endurance
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*\*2020 USATF Coaching Education opportunities will begin posting to the calendar by late October.*



## **USATF/IAAF ACADEMY RETURNS TO IMG ACADEMY - APPLY NOW**

The USATF/IAAF Academy returns for the seventh collaboration December 27, 2019 – January 1, 2020 at IMG Academy, Bradenton, FL. The elite level course is the highest recognized achievement in the IAAF and USATF Coaches Education Certification System (CECS) pathway and combines over thirty hours of presentation and practicum on the track. This is your opportunity to learn from some of the most acclaimed coaches and sports scientists in the world in a high performance and personal setting. After completion of the course, an individual will have the skills and knowledge to coach at the national, international and podium levels.

Preliminary Instructor Lineup (complete lineup to be announced soon):

- Frank Dick: President of the European Athletics Coaches Association, member of the IAAF Coaches Commission, as well as chair of the IAAF Academy and formerly the British Athletics Federation's Director of Coaching. Dick's coaching prowess includes success in Athletics leading UK decathlete Daley Thompson to Olympic gold, and also spans a variety of other sports including consulting with England Rugby, and the likes of Katarina Witt (figure-skating) and Boris Becker (tennis).
- Dr. Ralph Mann: One of the world's premier biomechanists and a USATF National Track & Field Hall of Famer, Dr. Mann has been a longtime contributor to the USATF sports science and high performance programs, focusing on using biomechanical analysis on elite sprinters and hurdlers to evaluate and improve their performances. Dr. Mann earned an undergraduate degree in Mechanical Engineering and a Masters in Physical Education from Brigham Young University prior to completing a Ph.D. in Biomechanics at Washington State University. He is an inductee of the USATF National Track & Field Hall of Fame.
- Dr. Robert Chapman: USATF Associate Director of Sports Science and Medicine; Assistant Professor of Kinesiology, Indiana University. Dr. Chapman was a highly-touted endurance coach prior to moving into the teaching and administrative role. He currently leads USATF's high performance sports science programs.
- Scott Christensen: Christensen is one of the country's top high school cross country and track & field coaches, leading Stillwater High School in Minnesota. His accolades include over 13 state titles, multiple National Top 10 High School rankings and he guided 2016 Rio Olympian (1500m) Ben Blankenship during his prep career.
- Jackie Barcal: Head of Nutrition at IMG Academy, Barcal oversees all aspects of fueling professional and student-athletes at IMG Academy. Her vast experience includes stops at the University of Wyoming and at the University of Alabama, where she was a member of the inaugural Gatorade Sports Nutrition Immersion Program (SNIP). Barcal is a registered and licensed dietitian and certified specialist in sports dietetics.

Apply by midnight, October 31, 2019 to secure the pre-registration rate (\$100 savings).





## **SELECT COACHING ENHANCEMENT GRANT OPPORTUNITIES REMAINING – DEADLINES APPROACHING**

### **USATF/IAAF Academy Grant**

Qualified applicants are encouraged to apply for a tuition and shared housing package grant; valued at \$1519. Three grants are available, and application must be submitted by October 13, 2019 to [Matt.Rohlf@usatf.org](mailto:Matt.Rohlf@usatf.org) for consideration.

Requirements:

- Current member of the Coaches Registry
- Coaching resume
- Minimum of 10 years of coaching experience in an interscholastic, collegiate or elite athlete club
- USATF Level 2 certification in selected event
- Coached an athlete who has competed in USATF U20 or Senior Championships

Download a grant application at: [usatf.org/CoachesGrants](http://usatf.org/CoachesGrants)

### **National Youth Track Coaches Association Level 1 Grant**

The NYTCA is pleased to offer five Level 1 tuition grants (\$205) to qualified applicants. Applications must be submitted by November 1, 2019 to [rwilliams@nytca@gmail.com](mailto:rwilliams@nytca@gmail.com) for consideration.

Requirements:

- Current member of National Youth Track Coaches Association
- Member of the USATF Coaches Registry
- Current youth club coach, and actively coaching athletes who are 18 years or younger
- Must include a two-paragraph statement of your goals for attending the selected Level 1 School

Download a grant application at: [usatf.org/CoachesGrants](http://usatf.org/CoachesGrants)

### **New Online Interscholastic “Coaching Cross Country” Course Available**

The NFHS and USA Track & Field (USATF) have partnered to release Coaching Cross Country. The new online course marks the third collaboration between the organizations, with Coaching Track & Field and Coaching Pole Vault course titles previously developed and available on the NFHS Learning Center.

In this three-hour course, coaches will learn how to develop a training plan, delve into the psychology and mental toughness of long-distance runners, discover how to identify, treat and prevent common injuries and much more. Tailored to the interscholastic coach’s needs, the training methodology was adapted from the popular in person USATF Cross Country Specialist Course—originally developed by USATF Legend and Olympic Medalist Coach, Dr. Joe Vigil.

Along with an NFHS certificate of completion, the course also qualifies for the USATF Coaches Registry Education Standard requirement and NFHS certification requirements.

Coaching Cross Country is available online on [NFHSLearn.com](http://NFHSLearn.com) and retails for \$35.



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Phone (650) 948-8188 • Fax (650) 948-9445

<http://www.trackandfieldnews.com> • email: [subs@trackandfieldnews.com](mailto:subs@trackandfieldnews.com)

