

TRACK COACH

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Terry Crawford, 2024 Legend Coach

TRACK COACH

Summer 2024 — 248



The official technical
publication of
USA Track & Field

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TRACK COACH

FORMERLY TRACK TECHNIQUE

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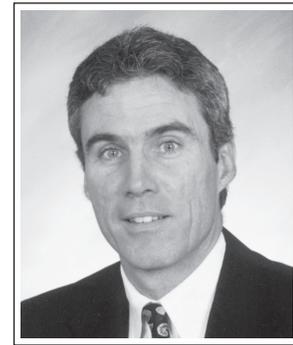
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FROM THE EDITOR

RUSS EBBETS



IN THE DOING...

Twenty-five years ago, I started a master's degree in Communication and Learning Design. It was a night school program; I took one course a semester for seven years. And just like Johnny Cash stole his Cadillac in the song One Piece at a Time, I completed the degree. One of the great things I got from the program was that it allowed me to study the intricacies of a motor learning course I was teaching. I was able to fine tune the students' experience all the while addressing the different learning styles each student possessed.

Back then there were three recognized learning styles – visual, auditory and kinesthetic. The explanation was that the different students favored a different learning style in order to perceive and digest information presented to them. Everyone, to a degree, has all three means to learn, but one style (visual, auditory or kinesthetic) dominates.

This all made total sense to me. What I was able to do with my term projects was design a multi-station teaching format that cycled through the three learning styles playing to a strength of a student, shifting gears and allowing that student the opportunity to strengthen a weak area that might be the strong suit for a fellow student. This offered each student a chance to "help" or demonstrate to a classmate and made for a dynamic learning experience within the class that benefited all. This set-up offered me many different teaching options (guided discovery, learn-by-doing, see one-do one-teach one, etc.) and proved to be highly effective with the students loving the whole process.

My original intent for this editorial was to discuss the Learning Pyramid (Figure 1) which, as you can see, incorporates the three different learning styles. The Learning Pyramid was crafted in the 1950s by psychologist Kurt Lewin at Maine's National Training Laboratory (NTL). Lewin's research into group dynamics was even referenced in Ken Doherty's *Omnibook*. The NTL is a thinktank that strives for broadening education through more effective presentation methods. This pyramid model has been used internationally with applications to the classroom, business settings and sports teams.

The learn-by-doing technique is a kinesthetic (touch and feel) learner focused on means to teach or coach. Various maxims have been employed over the years like "see one, do one, teach one" or "in the doing comes the knowing" that concisely get the points

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EDITORIAL COLUMN

Continued from page 7928

across. In fact, I have no doubt, anyone who has coached with any degree of success has successfully utilized these techniques.

But we live in a time where the fashion of the day is to question everything. The problem I have with this is that the “questioning” may not be really for clarification or further explanation but rather to nit-pick an endeavor or to discredit something while at the same time allowing the critic to achieve some secondary gain from all this.

The Learning Pyramid has been under fire over the last decade because the various steps of the Learning Pyramid cannot be substantiated. The NTL somehow lost or had all their research destroyed. The NTL claims that research would validate the efficacy of their methods. The fact that countless coaches and teachers have studied, implemented and succeeded with this method doesn't seem to count for anything. While the concept of learning styles has been expanded over the last two decades it turns out there has been little scientific scrutiny to validate these coaching and educational strategies either. With no reproducible research, the baby gets thrown out with the bathwater.

One essay that discredits these coaching and teaching strategies (“Excavating the Origins of the Learning Pyramid Myths” by Letrud, 2018) is well written and the author's conclusion categorically denies any need for further use of this teaching method. You would think that this eureka moment would be quickly followed by the recent discovery of a “new and improved” method that is a short cut to enlightenment or skill acquisition backed by enough statistical data to satisfy any bean counter. This would force a skeptical editor to admit that, yes, there is a better way. But

you don't get any of that.

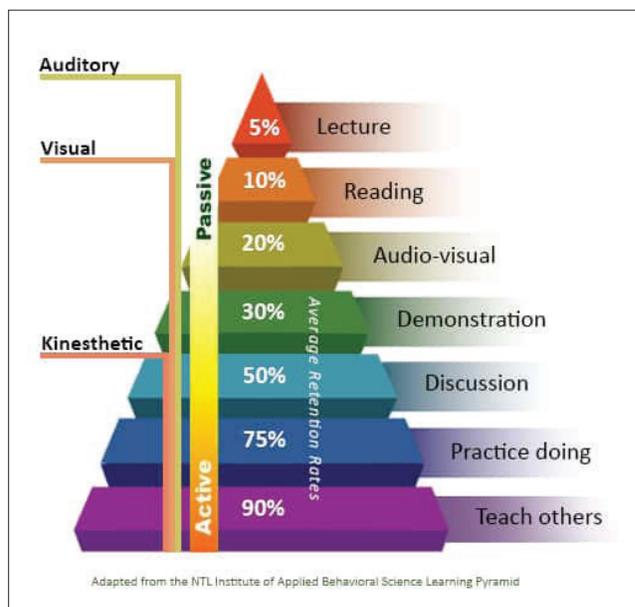
You scratch your head and wonder how this could be. Much of the Learning Pyramid is time tested, like from ancient time tested. In Track Coach #235, we reprinted an article by several of the heavyweights within the sport science world (Guy Hornsby, Andrew Fry, Mike Stone, Greg Haff)

defending the concept of periodization. I was dismayed that anyone would question the value of periodization or even bring into question the efficacy of the coaching organizational method. But Mike Stone and others put that dismay to rest.

One of the points the sport scientists made was that tenure track academics, endeavoring to solidify an academic career path, create “paper tigers” with a misinterpretation or misrepresentation of concepts, in this case periodization, and then proceed to poke holes in the theory of periodization to “prove” that it does not work.

But again, we are left with no workable alternatives. The well written article gets reviewed by fellow scholars and becomes part of the “canon of doubt.” The article checks all the necessary boxes of statistical significance, p-values and confidence levels that are inversely proportional to the author's ability to distinguish between a split time and a half-time.

And what have we done to improve this? On-line learning, death by PowerPoint and Zoom, Zoom, Zoom. Who could have ever thought high school detention would have prepared you



for something? It would be interesting to see if someone re-did the Learning Pyramid, new research with new surveys to see where these innovations (on-line learning, Zoom, etc.) would be placed on the Learning Pyramid. Of course, I'd also like to see who funded the research, was it AI generated with the understood threat if R2-D2 didn't say something nice somebody would pull his plug?

I still use learning styles, reference the Learning Pyramid and would still recommend their use. You can find simple 10-minute tests on the Internet to identify your own learning style, if you are interested. I refer to the Learning Pyramid to continually challenge myself to present learn-by-doing learning or a coaching experience that challenges the athlete which over time offers the opportunity at mastery.

Motor skill development and coaching are interactive activities. You can talk as much as you want, present articles, show videos or tear down a concept with a pen, a pickaxe or possibly an excavator. But at the end of the day the simple fact remains that, “in the doing comes the knowing.”

INTERVIEW WITH BOO SCHEXNAYDE

Driving “Boo” Schexnayder has long been regarded as a leading authority in track & field training, particularly the horizontal jumps. He spent 18 years on the LSU staff, producing 26 NCAA champions during his collegiate coaching career. He served on the U.S. team coaching staffs for the 2003 Pan Am Games, the 2006 World Championships in Beijing, and the 2008 Olympics in Beijing. One of the stalwarts of USATF Coaching Education, he has chaired a number of technical committees over the years. He was happy to answer *Track Coach* editor Russ Ebbets’ questions in a recent interview.

Boo, what have you been up to since you have “retired?”

I keep hearing about my retirement but I’m as busy as ever. I just don’t work for a school at the moment. I’m doing consulting work with schools, universities and pro sports teams, speaking at clinics and conferences, still involved in coaching education. Most of my work is outside track. I have a lot of off-the-track interests that I am trying to devote more time to as well.

How did you get into coaching and specifically, track & field?

I always wanted to coach from the time I finished high school. Coaching was problem solving, infinite numbers of variables, with a people/personal side to it as well. The level of challenge hooked me.

I was supposedly an engineering student, but was reading all of the coaching books in the library. I had an interest in track from doing it in high school, and when I started coaching football at the high school level I immediately wandered into track coaching in the off season. I was much more of a football coach than a track coach then and my motivation was to become as good at coaching track as I was at football. In my early career I turned down collegiate football opportunities for various reasons, but a door to collegiate track opened for me and I felt it was right at the time. I’m happy I did but wonder at times what my life ... and bank account ... might look like had I stayed in football.

Track & field has a long history of innovation from fashion to func-

tion, lycra to weight training to precision timing. How have you cut through all the hype to adopt procedures or products without buying into every new fad and winding up with a garage full of junk?

“If it seems too good to be true, it probably is” is a cornerstone philosophy for me. I’m a skeptic by nature. I deliberately hesitate to implement new things until I am truly confident and sure about how I’ll use them. If you are confident in your coaching abilities and philosophies, frivolous things are less tempting, so I remind young coaches to define goals before they design processes. Coaching is fun and effective when you as a coach are comfortable in your own skin and confident in your own ability. A favorite quote of mine is that “timeless truth doesn’t

sell". Truth is effective but it's boring and a poor commercial model. Fads and gimmicks will always be around. The greatest challenge in coaching is staying true to your principles and not getting distracted by shiny things.

The execution of fundamental movement patterns can become so routine that the lack of attention can lead to sloppy, inefficient execution. How do you impress upon your athletes the need to remain focused during this routine, mundane portion of practice and to strive for technical excellence?

It won't be important to the athletes until they know it's important to you (the coach). If you stay true and send a constant message they eventually come around. Subtle but consistent pressure on athletes to make changes is critical. Pressure in coaching may have bad connotations in today's societal context but pressure can be applied appropriately. Nothing changes without pressure ... I tell young coaches all the time, if the athletes haven't changed, you haven't coached. I'm happy to deal with an athlete who is struggling to master a skill, but not one who isn't committed to change. I hear athletes say sometimes, "it doesn't feel right" ... how do you know what it's supposed to feel like if you're trying to do something you've never done before? As a coach you can't let those statements rock your confidence. Athletes need to understand that there is a right way and a wrong way, I assume they chose me as their coach because they wanted to be coached, not because they wanted to do it their way.

Regarding football, how did coaching that sport differ from

coaching track & field? What did you learn from football that you feel made you more effective coaching track and field?

Football culture is military ... everyone has a job as part of the mission. It helped me to understand training group dynamics more. I required every athlete to contribute to the training group, and there were lots of ways to contribute besides scoring points. Mentor or tutor a teammate, set up hurdles... do something! I noticed how teams bonded in football, not through silly team building activities but by going through really tough training together. Football helped me understand how individualism could exist within a group culture. Football has a no-excuses mentality we could learn from, we're jealous of football but we won't do what football does. Track as a sport has suffered because coaches have too much say over sport governance. Nick Saban might be the most powerful guy in football but if they tell him he has to play Auburn at 11:00 am he does, and he's not looking to play the 4th quarter later that night because it's too hot in the afternoon, or send half his team to a different game because they have a better chance to qualify there.

Conversely, what do you feel football coaches could adopt from track & field that would help that sport?

In most cases, a much better understanding of training, and a better understanding of the actual physiological demands of their own sport. In my consulting work it's frustrating sometimes that team sport coaches want results like mine, but won't prioritize like me or implement a process similar to mine.

I TELL YOUNG COACHES ALL THE TIME, IF THE ATHLETES HAVEN'T CHANGED, YOU HAVEN'T COACHED.

The possibility of information overload today is real with "answers" to every question available via the cell phone or Internet offering instantaneous solutions that could be as right as they are wrong. What sources or starting points should a new coach be conversant in before they veer off into the uncharted waters of the world wide web? What is a book or video you'd recommend with good basic advice?

So often the answers you find appear great on the surface but when you examine the genuine underlying science, you see why they are ineffective. I'm not sure innovation and technology aren't crippling more coaches than they are helping. So much of it is biased or commercially driven. For example, I deal a lot with hamstring rehab and am highly successful with it, but what I do is the exact opposite of what most trainers and doctors do because they are stuck in tradition, know science but don't apply it, are subject to fads, and commercial and insurance factors dictate choices. I don't have a book or video to suggest, they often have their own commercial bias. A solid understanding of sports science and development of a strong personal philosophy are a must. An understanding of what you are trying to accomplish is a good start ... establish the goal before the process.

Over the last 4-5 years mental health has landed on the radar

screen of the general public. Do you feel that the psychological strength of an athlete comes from the mindset that is expected and exhibited throughout a season at the daily practices? What practice routines or thought processes did you promote that created a competitive mindset that allowed your athletes to compete and train with positive expectations, if not fearlessly versus individuals riddled with groundless fears, self-doubts and an inexhaustible pool of excuses.

I believed in subjecting them to reality. Rationalization and self-pity are the two most worthless human behaviors and I am totally intolerant of them. I'm far from a mental health expert, but it's obvious to me that young people today aren't capable of handling negativity as young people could years ago. It's an unfortunate side effect of societal progress. Being a coach, I think of the overload principle, which when applied that tells me the only way to help them is to allow them to be exposed periodically to small doses of negativity, so they can work through problems and gain confidence. A safety net philosophy, where we protect them from very damaging situations seems sound, but trying to prevent them from ever encountering negativity is crippling them. Let's not forget that sometimes success is just as scary as failure, because it takes us out of a comfort zone and creates expectations. Eliminating fear of failure and understanding failure as part of the process of improvement is freeing and enlightening.

Did you ever use any pre-testing to find out learning styles of your athletes? What I'm asking here is finding out if the athletes are

predominantly visual, auditory or kinesthetic learners and then using that information to tailor training communication.

Not formally, but I am highly respectful of this aspect of coaching. It was drilled into my head as an education major in college, and I quickly learned that being non-compromising in what needs to be done is fine, but it is not an excuse for a lack of creativity in the delivery process.

We convey ideas through language. How much emphasis do you place on how you say things? Did you give much thought/planning towards creating meaningful snippets that underscore the old training maxim that "words cue action?"

It's the most important thing we do. All the great coaches are great communicators. Word choices determine context, clarity, nuance, and much more. More verbiage is no substitute for skilled verbiage, and sadly, this is the only aspect of coaching that doesn't have a steady stream of commercial and technological methods available for those wishing to improve. Every coach should tape themselves at a meet, and then listen to it later outside of the meet context. It's shocking how inane we sound at times.

I have worked with many "teachers" who felt repetition was beneath them. What role does repetition play in your practices? From the design of a practice session, to the drills, to the language used to the methods of presentation.

That egotistical approach to the teaching profession kind of sick-



Bob Schexnayder

ens me, how can you call yourself a teacher if the students haven't learned? I remember an instructor in coaching education who repeatedly got bad student evaluations and wore them like a badge of honor, he saw them as a validation of himself as tough and non compromising. How can a room full of bad grades validate you as a "great" teacher? High bars for students are fine, but don't lower bars come first? Expecting students to deliver good work and show commitment should not be confused with a realization that students learn differently and at different rates. An athlete who doesn't pay attention and as a result needs more repetition than another is unfortunate, but we have to meet them where they are. I always say that the mark of a great coach is the ability to reach different types of people. The athletes that always have their act together don't really need you as a coach, they'll be fine without you. The troubled ones need you.

In a collegiate system I always have thought one of the challenges facing the college coach was to get new recruits "all on the same page" in that most recruits

arrive with different training histories, competitive backgrounds, even different levels of physical condition. What fundamentals (mental or physical) did you strive to establish first before you could start more serious training? What were the steps to this process?

Training is serious from day one, but serious and dangerous are two different things. Activities done at the onset of a training year in a good system are productive but low risk, and corrective in many ways. Some would have you believe that a lot of corrective work must be done before beginning training, what they miss is that good training systems have that type of work embedded in the program from day one. I try to select an entry point that will accommodate reasonable levels of readiness, and I am ready to individualize if needed. Choosing an entry point that is too low wastes very little time, but an entry point that's too high can wreck somebody. All that being said though, they must feel challenged from day one and every day afterwards. Athletes feel good about themselves when they accomplish something difficult, and when we are too easy on them we unfairly steal that feeling of accomplishment from them.

How did all this get managed? Did you use some form of testing? (30m sprint, STJ, VJ, etc.) or did you send out fitness plans prior to an athlete's arrival with fitness expectations for Day 1?

Testing is a big part of what I do, but I don't pretest. Testing doesn't tell you everything, and there are many simple tests athletes can perform well on even when unfit. I did send simple workouts to be done prior to the "official" start of practice. I

usually had upperclassmen doing those in town and new athletes could jump in and train with them; that was an effective ice breaker.

IN MOST CASES THOSE ATHLETES WHO THINK THEY KNOW A LOT REALLY DON'T, AND RETEACHING IS OFTEN NEEDED WITH THOSE WHO THINK THEY ARE COMPETENT.

In a related issue did you ever have a training manual or a copy of written expectations, book list, that would be given to the new recruits before they arrived on campus that detailed the expected levels of fitness and of personal behaviors?

I did not, but expectations were thoroughly communicated early in the recruiting process. I also stressed that there were enough hours in a day to do well in school and sports. I believed in realism in recruiting. Being fake in recruiting means you get athletes whose priorities don't match yours. Some recruits failed to sign with me because their priorities disagreed with mine, but that's ok; better that I learned then. There were recruits who watched a really, really tough practice on a visit, then suddenly decided that our business school wasn't good enough for them. My reaction... "well, you go find a good business school".

How was resistance training introduced? No doubt some recruits came from highly organized Olympic lifting programs while others had little more exposure to

weight training than a Universal Gym. What level of proficiency did an athlete need to exhibit before you felt comfortable introducing more complex training?

I assume everyone knows nothing and teach everything from scratch, and I am extremely patient. In most cases those athletes who think they know a lot really don't, and reteaching is often needed with those who think they are competent. I think a fault of a lot of coaches is that they feel uncomfortable doing remedial stuff with a very talented athlete, but it doesn't bother me. With a good coaching job, they get out of the remedial stages very quickly. If you're spending months doing remedial stuff that's a coach failure, not an athlete problem.

How do you incorporate video analysis? With the advent of cell phones is the visual feedback you give immediate, on the practice field or do you schedule a formal sit-down debriefing where you dissect a performance?

I think video is wonderful, but often overused and misused. We rely on it too much and don't develop our verbal communication skills or coaching eye. We show an athlete a position that they should be in for only 1/100th of a second and they assume paralysis there. I like to film practice and look at it myself afterwards for confirmation. I often watched video with athletes in the office away from practice, and much of the video was of other athletes. When immature athletes watch video without guidance, they often fail to realize what's important, and they often see what they want to see.

Do you do an “all team” session, where one can learn from another’s application of a principle or poor technique? Or were these reviews more individual in nature?

As a football coach, I quickly learned that putting a bunch of people in a room to watch a coach guided video session together was a sure way to put most of them to sleep. My video sessions were all individual, and a significant portion of the session was watching other elite athletes in the event (not necessarily teammates).

Your programs have been blessed with countless athletes who could be characterized as legitimate superstars. What role do these athletes play in your program with regards to mentoring young talent? Granted, this is not a job everyone aspires to or feels comfortable with but I’m sure you’d agree that your success stories all have a chapter or two of successful mentoring.

Mentoring younger athletes is something many of them did very well, and that was an important part of team chemistry. But I don’t think you can, and I never tried to, force someone into a mentorship role. During my time under coach [Pat] Henry at LSU the culture was incredible, accountability was incredibly high, and levels of positive peer pressure were off the charts. It was easy to coach winners in that environment.

Were your team captains or designated mentors taken aside and given specific expectations that you had for them with regards to mentoring? What were some of these expectations?

There were times when I called in

older athletes and discussed with them the antics of a talented but troubled younger one. I wanted them on board and understanding of why I might be seeming to handle that troubled athlete differently. They typically responded positively because they were good people themselves and also knew they needed the troubled athlete’s contributions to succeed as a team.

How do you change your presentation style when you are addressing coaches at a clinic versus athletes on a practice field? Obviously, there are usually age differences here but how do you focus on maintaining attention but also selecting content?

The biggest difference is that I kept athletes mostly on a need-to-know basis in most cases. I didn’t feel it was necessary that they be able to write a thesis on the long jump (a coach should be capable of such) but they did need to understand their unique strengths and weaknesses and their individual strategies for using their strengths and avoiding their habitual problems.

Over the last 30 years what generational shifts have you noticed? I have always felt that at the end of the day the same job needs to be done, be that run, jump or throw. Have you noticed any attitudinal changes and if so how have you changed your approach to teaching or coaching?

I keep hearing young people have changed but I’m not so sure. Back in the old days you were expected to coach “hard”, but even then, there were athletes who didn’t respond to that. In the teacher’s lounge you would hear a saying, “the trouble with education is never the kids,

it’s the grown-ups”. Years ago, you were the coach and athletes bought in immediately because they respected that title. Now athletes, in those first few weeks, are figuring you out and deciding on their degree of buy-in. However, once you get the buy-in and the athlete has decided that you as a coach can get them where they want to be, things are the same as they have always been. They don’t expect you to be perfect, just right most of the time. In my later years of coaching there was nothing I couldn’t get an athlete to do if I framed it correctly.

What is the structure of your daily training plan? How similar is it as you cycle through the semi-annual or annual training plan?

I issue training on Mondays for the entire week, I don’t want them to experience surprises and I want them to get mentally ready for technical and tough sessions. There are always exceptions but I try to keep the same themes on the same days throughout the year. Monday, Wednesday and Friday are speed/power themed, Tuesday and Thursday fitness and restoration-based training, Saturday the big tough running day. It was funny to see their eyes go immediately to the bottom of the page (to Saturday) as soon as they received the piece of paper. With some events Wednesday was another running day. With older athletes, I worked in longer training cycles.

In spite of all the successes you have had there have no doubt been setbacks, disappointments and frustrations. What procedures have you personally adopted to keep yourself on track and to stay motivated, to recover or to keep moving forward?

I think a strength of mine is the ability to fearlessly self-evaluate and criticize, sometimes maybe to a fault (I've been told). When I think of all of the great coaches I've asked for help, they were all humble. I'm sure it was because to get to that level you have to fail a lot. I think I have a healthy philosophy, I look at problems as opportunities for growth, problems are like vitamins for coaches, like spinach for Popeye, they are your greatest blessing, the biggest problems present the biggest opportunity for improvement.

Specifically with your athletes. How have you counseled athletes who have suffered through disappointments due to their own making, dealing with a fluke injury (e.g. rolling an ankle getting out of a pit) or having an exceptional career but the "poor timing" to have a competitive career against one of the sports all-time greats and always being second fiddle?

My faith helps here, I think God has a way of teaching you the lessons He wants you to learn. Chasing fairness in life is admirable but expecting fairness in life is unreasonable. I don't preach to the athletes but I do help them understand that negatives often spur us to great things, possibly in other fields. One of the greatest disappointments of my young athletic life was my impetus to get into coaching ... that worked out ok long-term for me. It's important to realize the story is never completely written until they close the coffin.

I have always marveled when a team has two superlative athletes who excel in the same event at regional or national competitions.

At the NCAA Indoor Meet in 2004, your guys (LeJuan Simon, John Moffitt and Willie Bradley), placed 1-2-3 in the triple jump, your event. What do you recall about that competition?

Those guys were tremendously different. Simon was a highly recruited star, Moffitt wasn't highly recruited at all, and Bradley just showed up and asked to come out for track. Watching them train together and bond, you could foresee something special happening. I remember that day, coaching hard to get them through early anxiety, and then just settling in and watching once they were zoned in, how John's big jump spurred LeJuan, Willie moving into third on the last jump because of the importance of the team title race. The feeling of being proud of them (especially in light of the previous day's long jump), outweighed the happiness of winning.

Throughout that indoor season the possibility of multiple All-Americans had to have been discussed, but was a 1-2-3 ever addressed? If it was how did you manage to keep practices challenging but not cutthroat?

1-2-3 was never spoken, even though it was accomplished a couple of times in earlier invitational meets. I did (in the fall) allow practice to be cutthroat at times, after all you can't learn to win if you can't handle losing and know how to react to it. When someone gets their butt kicked in a practice and comes back strong next time, that produces confidence and understanding that, ultimately, success or failure is your decision. Inseason practices I kept low key, saving emotional energy for the meets.

And for the athletes – what was their mindset? Was this season a "team effort" (my success is our success) or was it necessary to keep the athletes separated preventing training and competitive efforts from overriding a greater goal?

They were all experiencing success and bought in, so I could get them to do anything I needed them to do in training. John winning the long jump in the same meet tempered his disappointment at getting 2nd in the triple jump, but I'm sure John and Willie wanted to win too. Ultimately, they were supportive of each other, they understood their roles on the team. The idea of winning a team title was sold as early as the recruiting process, I never dreamed that my jump group (including my pole vaulter) would literally win it by themselves. But I think they did dream it though.

Finally, how did you dodge the favoritism bullet? (You care more about XX than you do about me!). I am sure you wanted all three guys to do well but attitudes or negative self-talk can shift in a moment with a breakout performance, an inopportune injury or bad competition.

There was no bullet to dodge, I failed twice that day because I coached each the three to win that competition. I think they would all say I sincerely invested in each, and I think they all had a healthy view of competition. In recruiting, when I had a great athlete on the team or signed to come, I would always remind recruits ... you're going to have to compete against that person regardless of who you sign

with, so why not come to compete against him in practice and benefit from the same training?

What rules did you have for practice? How were they enforced? What were the penalties?

I'm a standard person, not a rule person. I think rules are kind of dumb because there will always be some unusual situation that validates breaking a rule, but never a situation where standards shouldn't be upheld. Spending a lot of time preaching rules to kids sends messages to the athletes that the coaches expect trouble. I think we sweat the small stuff way too much (nagging athletes) and the big, important things get lost. I was a coach who was "cool" most of the time and I didn't make a big deal about minor infractions with athletes who were generally in line. When something was serious or habitual however, I came down hard without any confusion or compromise. It was brief and over immediately after... holding grudges is another unproductive coaching behavior. Penalties were always being pulled out of training... taking away what they loved.

How did you like to see an athlete approach competition? Did you generate a to-do list that essentially scripted a competitor's timeline, or did you allow the athlete to formulate their own plan and then suggest tweaks as a season or career progressed?

Every athlete in each competition had a technical plan that we had discussed before... what must be done, what was likely to go wrong, and how we would react to that. As far as the mental and emotional preparation, I left it up to

them unless there were problems. Interestingly each great one developed a preparation ritual of sorts. When certain athletes struggled in preparation, I pointed out those examples to them. The night before major competitions, there were no festivities and team building foolishness, they were in the hotel, quiet getting mentally ready. There were rare occasions where I refused to coach an athlete at a meet because of some (very, very serious) preparation issue. It sent a message to the entire group as well.

Artificial Intelligence is slowly and insidiously creeping into our everyday lives. What fears or hopes do you foresee within coaching for this ever-expanding technology?

I'm sure there will be some eventual AI program that takes a video, digests it, and spits out feedback, and it will be wildly popular (although maybe not ... track coaches might not be able to afford it). But the brain is so much superior to AI ... I hope I get to coach against that AI program.

THE IDEA THAT THE COACHING PROCESS COULD BE GOVERNED BY SCIENCE RATHER THAN INSTINCT WAS FOREIGN AT THE TIME.

To say that coaching ed initially had a "cool reception" is a laughable understatement. For the vast majority of established coaches who succeeded on recruiting prowess and a strong opinion, coaching education was maligned or dismissively marginal-

ized. You were one of the first "big time" program coaches that shifted that attitude recognizing the import of sport science and how it could be applied. What in your background led you to believe this was a prudent career path?

Oh yes.... What we take for granted today was very controversial then. The idea that the coaching process could be governed by science rather than instinct was foreign at the time. I can't say I ever made a conscious decision to push that philosophy on others, but I guess people try to copy successful people. I'm a problem solver by nature and an engineer at heart so it was instinctive and natural to me. My mentors were the same way. Meeting like-minded people in the curriculum development process reinforced this.

At one time you had written much of the Level 1 curriculum with an exceptional degree of conciseness and clarity. What "rules" do you set for yourself when writing and how do you adhere to these rules? Do you have any set writing goals, times of day, word counts, etc.?

Thanks for the compliment. When writing momentum is everything to me, I sometimes have writer's block but when I break through, I can pound out hours consecutively because I have a vision for the organizational structure of the document and the finished product. When the draft is done, I read every line looking for ways to simplify it and to be sure the reader isn't relying on any assumptions that aren't addressed earlier in the document. Nuance is cool in speech but you can't rely on it in technical writing. I believe

strongly in “logic trees”, based on the scientific model, where your answer to a question brings you to a specific action (or another question)... a flowchart-based approach to training, teaching, and problem solving. It’s how I operate as a coach and it underlies my writing.

Are there any educational theorists that you have modeled your communication or presentation style from? Are there any models that set the standards of your style?

I was an education major and I studied them all, but I’m just being me. Football taught me the importance of the clarity of the message. Teaching algebra taught me that thought processes and logic should drive the teaching process. I’ve had people who have asked me how I can teach a 36-hour course and never glance at the notes, it’s because it’s all organized into neat folders in my head. Good decision making comes not from passionate reaction but from logic, the scientific method, deductive reasoning, and the times I’ve failed are times I’ve wandered from those things.

Howard Cosell sarcastically called sports “the toy department of life.” What about sport has offered you a lifelong challenge? I am sure the opportunity to “do something else” has been ever present but not acted upon. What has been the attraction, the appeal that has generated a lifelong enthusiasm and a level of achievement and contribution that is world renowned?

Humans seem to have an innate drive to compete and appreciate competition. How else can you explain the popularity of sport in

society? It’s the chase to master the unmasterable. chasing perfection and victory with no promise of gain if you win. If you live for challenges, how can you not love this? The peripheral challenges and work have kept it fresh for me too. The coaching education work, meet management, venturing outside of track for performance coaching and consulting, all kept work life exciting and stimulating.

What are your coming goals for the next few years? Is there anything in particular you feel you’d like to get done? One last thing?

I really don’t have any, I’m just taking it as it comes. I like consulting work because you’re constantly problem solving and it changes from client to client. A lot of people have asked me to write books but

I can’t write a book because I feel my story and personal development isn’t complete yet, maybe one day I will. I think if a sports-related challenge came about that was totally different from anything I’ve done it would be very tempting. Keeping up with my off-the-track interests is becoming more of a priority.

Thank you for doing this and for all you have done over the last few decades.

Thank you, Russ. At one time this magazine was all we had. It was a cornerstone of professional development for my generation of coaches. The past editors of this magazine are legendary figures in the sport, and you have upheld that standard admirably. Thanks for keeping this going and for maintaining that quality and tradition.



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STRENGTH TRAINING FOR THE HAMMER THROW

BY TODD “IRONMAN” TAYLOR

This classic article first appeared in the October 2003 issue of *Long & Strong Throwers Journal*. It is still relevant to today's throwers and coaches.

INTRODUCTION

The goal of this article is to share some concepts and ideas about acquiring and maintaining strength for the hammer throw event. My present day cyberspace name of “Ironmari” is actually an old college fraternity house nickname from back when athletes rarely saw the inside of a weight room. At best, one might be using some old Universal gym machines and doing free weight squats “back in the day”. Strength sport athletes did little lifting and only then in the off-season. I got the name because I loved to climb to the little weight room on the 3rd floor of a big old brick field house built in the 1800's and throw the iron around. I owe a great deal of my success in athlet-

ics over the years to weightlifting in a classic old gym starting as a 5-foot, 102 lbs. 13 year-old who wanted to play high school football. By my senior year, having gained 20 lbs. a year, I was introduced to the Olympic lifts.

I have always loved the lifting part of training or conditioning. However, I can also readily admit that strength training, and especially the free weight lifting part of it, is only one piece of learning to become a proficient hammer thrower, i.e., one who can throw far using good technique. While there are some good resistance training exercises that benefit all of the throws, I will focus specifically on what exercises and lifts are most beneficial for the hammer event.

The multi-event thrower will then have to look at things that might be incorporated into or emphasized in his/her current program. A limiting factor will be access to and quality of facilities and equipment, your training workload capacity, and time constraints. I will also address incorporation of strength training into periodized training programs and what the priorities should be during the major phases of training.

STRENGTH ATTRIBUTES OF THE HAMMER THROW

Certainly, general overall strength is beneficial when you are trying to put a heavy object and your body in synchronous rotation. Lower body (legs) and core stability (lower back, abs, obliques, hip flexors),

often referred to in strength sports as the body's "power zone", is more important than upper body strength in the modern throwing technique. Strength in the hammer is needed for counterbalancing the outward pulling force generated by the hammer and to get into and hold the key positions during the throw. So, one would also want to be strong in the shoulder girdle and back as well as having strong stabilizer muscles for all the continuous tension (against the ball) and balancing involved in a hammer throw. A great finish in a hammer throw releases the energy built up in the turns through an explosive upward lifting of the legs, hips, back, and arms in a smooth, controlled, forceful movement. Finally, good flexibility and range of motion throughout the throw is very important—one of those paradoxes of hammer throwing..flexibly strong.

Thus, we have just said that in throwing the hammer, the thrower must have "strength" that addresses base or overall strength, core stability, explosive power, flexibility and range of motion used in the event. For purposes of this article, I will not address core stability, flexibility, and agility exercises since the available literature and Internet resources are pretty good for these areas.

OLYMPIC-STYLE LIFTING FOR POWER DEVELOPMENT

The foundational lifts/exercises for the hammer throw involve the Olympic lifts and their variants (power and hang cleans and snatches and pulls) for one reason— these are explosive

multi-joint movements engaging muscles, tendons, and connective tissue that generate high power output. Olympic lifting movements help train and condition the body for developing maximum torso kinetic energy through a full-range of coordinated and continuous movements in the hammer throw. Throwing is about "slow to fast" movements and powerful acceleration that pushes the limits of the "force-velocity curve", i.e., huge acceleration in a very short time frame. "Power" is expressed as Force x Distance x Time; thus, explosive power is often referred to as "speed-strength" because your choices to become more powerful are to be quicker or have more "limit" strength. Velocity (speed) is the y- axis and Force (strength) is the x-axis for the force-velocity curve. The training effects of Olympic lifts and their variants increase both speed/quickness and strength, thereby "pushing" the force-velocity curve and the ability to generate maximum power on demand.

Yeah, I know I am preaching to the choir here, but those who would take the straight bodybuilding or powerlifting path to building strength in the hammer need to know that the greatest transfer to the athletic movements in the hammer (and all of the throwing events) comes from the Olympic lifts and their variants. Here is a practical illustration of the force-velocity curve (power output) at work. Patrick O'Shea in Quantum Strength & Power Training compared the actual power in wattage (distance moved and amount of time to lift the weight divided by body weight) for two former world record holders in the deadlift (Doyle Kenady

and clean movement of a clean & jerk (Alex Pisarenko). Kenady took 2 seconds to pull 405 kg., 40m, generating 5.67 watts for his 140 kg. bodyweight. Weighing about 40 lb. less, Pisarenko pulled his 265 kg clean to a height of ,90m generating 21.64 watts—4 times the amount of power!

THE GREATEST TRANSFER TO THE ATHLETIC MOVEMENTS IN THE HAMMER (AND ALL OF THE THROWING EVENTS) COMES FROM THE OLYMPIC LIFTS AND THEIR VARIANTS.

"Why is that?", you ask. Good question, and some important concepts to grasp so you can see the correlation between what some call the "quick" lifts and throwing in general—and definitely the hammer. First, in the clean and the snatch, if done correctly, you initiate the movement of the bar by generating a downward force or push into the ground with your feet. Second, the really powerful Olympic-style lifters are able to pull for a longer distance and time before they get under the bar. The best throwers can generate force for the longest path before release. Third, the great amount of force generated with a heavy weight is what creates the greatest stimulation and development of the fast-twitch fibers—the type of muscle you need for explosive throwing movements. Finally, that explosive throwing movement occurs because of not only the power generated but through a "summation of forces"; in both the Olympic lift and the throw,

the bar/ implement is increasingly accelerated with each successive movement.

DEVELOPING STRENGTH ALONG THE PATHWAYS OF MOTION

Now having set the stage for throwing all this iron around in the gym, we need to be as balanced in our strength training approach as we are in the ring with the hammer. The foundational pulling movements, however, are essentially along one plane of motion (vertical) while the actual throwing motions in track and field are multi-directional and rotational as well in the hammer. So, it is equally, if not more important, for the thrower to do twisting and turning movements with resistance (tubing, bars, med ball, plates, dumbbells, pud, etc.) along the pathways of motion actually used in the hammer. For the multi-event athlete, then, these exercises will be the greatest addition to their core lifting program if he/she wants to add something event-specific for the hammer. This is not unlike the core training of javelin throwers who do more med ball, knockenball, tubing, and assistance lifts than other throwers. For the record, the 2003 NCAA D-II men's hammer champion and 3rd, 5th, and 9th place women's finishers were from Western Oregon University where the women do only this type of resistance training and it is the mainstay of the men's.

A WARNING TO MUSCLE HEADS

I also want to emphasize a point I made in my earlier article. One can certainly achieve a measure of success “muscling” the hammer

and weight (its indoor version), however, this can create bad habits that interfere with proper technique to throw far and maximize your potential. Generally, strength gains should parallel improvements in technique and training plans should favor drills, agility, explosiveness and throwing during the competitive season. Create a goal to develop more base strength or power or address specific weaknesses in muscles or the kinetic chain in the off-season. But all things being equal, technique rules in the hammer. Short-term gains in distance from strength gains may eventually be compromised by poor technique, usually expressed as being a “strength thrower”.

Melissa Price's 2003 USATF National Championship in the hammer (70.34m) was labeled by her coach, Mark Colligan, “That's a 275 lb. clean!” That's real world validation of the correlation between Olympic-style lifting and power output. But one also needs to note that this is an elite thrower with very good technique who specifically set out to integrate increased strength and power levels into her overall periodized training plan.

Unfortunately, some throwers also have to be reminded that throwing hammers for a training session is a form of strength training in itself that is the most applicable strength training that can be done. Variable weight training with heavier hammers in the preseason can help develop specific strength for the hammer throw. When planning weight room workouts, please remember not to over-train yourself by forgetting that throwing sessions are strength training as well.

The training session imposes increased resistance or progressive stress overload on the body and the body responds to the stress with the SAID principle—Specific Adaptation to Imposed Demands. Huge workload volumes and a bazillion sets do not build strength, rather they fry your central nervous system and get you over-trained. The growth in muscles and your strength gains come while the body is recovering from the workout. If you are wiped out from a ton of lifting, drills, and throwing, then you are pedaling backward not making gains.

Something to think about right up front, then, is what components of your training should be put on the back burner for awhile if you are not feeling fresh and strong for either ongoing training or competition? If you are a thrower, you should always throw—less volume or less intensity and/or more drills and fewer throws. The exercises that develop functional strength along the pathways of motion (tubing, bars, med ball, plates, dumbbells, pud, etc.) have the closest correlation to the actual throwing motion. So, the things to drop are those that the Ironman and many others just hate to do—back off the heavy lifting in the weight room. Backing off can mean training sessions/days, volume (sets), intensity (weight), or speed (quick lifts with less weight).

So, regardless of your “training age”, listen to your body to keep from getting over-trained or signs you might need to back off—the “haze” or “fog” that comes over you, zapped energy level, waning enthusiasm, etc. Be dedicated; not dumb! Be committed; not comatose!!

CORE LIFTS—STRENGTH & POWER DEVELOPMENT

Keeping in mind that most throwers are multi-event throwers, I will prioritize the lifts for those that want to emphasize the hammer in their overall training. Keep in mind, I have never been or coached a 65m or above thrower, but I will give you my rationale for prioritization.

1. Power Snatch
2. Front Squats
3. Rack Romanian DeadLifts
4. High Pulls/Power Cleans
5. Bent Barbell Rows

Power Snatch The power snatch is the one lift that most closely mimics the power generated in the hammer throw at time of release. As the hammer comes down between your legs you are lifting straight up with the hips, legs, back, chest and arms—pretty much a snatch!! The one difference is that your hands are closer together holding the handle. Thus, I like to use a grip width on the Olympic bar that is just outside my knees. Really push into the floor at the start of the snatch and have your weight back on your heels. In the power snatch you get under the bar but with a much longer pull upward than into the squat “catch” position. I like to think in terms of throwing the bar up and getting under it to keep myself from throwing behind my head and off balance. One more thing....I like the athleticism of the split-leg snatch. Think about it...in the hammer you step to the ball with the right leg/foot to “catch” the hammer as the ball is approaching its high point in the orbit and most powerful outward pull on you. So, I split-leg snatch with the right foot out front.

Relax the Traps! Speed kills in the hammer, but radius rules!!! At the same speed, 2-3 inches of additional radius can add significant distance to the throw, if you understand the physics of centrifugal force at work in the hammer throw. Tight trapezius muscles and shoulder girdle during the throw will greatly shorten the radius. Thus, in the pulling motion of the snatch (and clean too), I let the traps relax and concentrate on the pulling motion being a continuation (or summation) of the force generated getting the weight off the floor. I also do the whole movement under control. So, when you are doing your Olympic and other lifts you should mimic various aspects of the hammer throw.

SPEED KILLS IN THE HAMMER, BUT RADIUS RULES!!!

Front Squats If you are doing Olympic lifts, you are working the hips, thighs, and hamstrings. Squats just give you more emphasis in those areas. Some throwers just mix in front with back squats for variety or think that they work different muscle groups. However, the hammer thrower should be keeping his/ her hips behind the heels and not piking (bending at the waist). The front squat keeps you in a more upright position like throwing a hammer than does the back squat. If you stop and think about it, hammer throw release is about a three-quarter squat movement. But during the hammer throw you are reacting to the increasingly outward pulling force of the ball as you counter the hammer. Thus, I think it's a good idea to do some heavier squats in the one-half to

three-quarter position, but also do some full range of motion front squats to strengthen the hips and stabilizer muscles for the varying angles you get into countering the ball through three or four turns. Again, thinking about mimicking the hammer throw, with the weight racked in front, you have to think about resisting falling forward just like resisting the outward pull of the hammer by countering with the hips behind the heels.

Rack Romanian DeadLifts Okay... what the heck are these? Throwers need to make sure they don't have a muscle imbalance between the quadriceps and hamstrings. Romanian deadlifts, done correctly provide great hamstring and lower back development. Generally these are performed by moving from a “hang” position with an Olympic bar to just below the knees by sitting your butt/hips behind your heels with your head and chin up, i.e., an erect posture; then, you stand up with the weight. My variation on this is to use a heavier weight in the power rack with the weight starting point just above the knees. Take a comfortable clean grip just outside your knees. Keeping the weight way back on the heels, stand up with the bar without shrugging the shoulders and let the bar essentially “roll-up” your thighs to your waist. There is a pulling motion up on the thighs but it is primarily a hip/leg action. A barbell plate under the heels or Olympic lifting shoes will enable you sit back better.

High Pulls/Power Cleans The two exercises are coupled together because you can decide what works best for you. The main benefit is the heavy pulling movement, so I prefer the Tibor Gecesk method

of not “racking” the pull onto the shoulders (the clean) until the last rep of the set or not even racking it. I am an old guy without great wrist flexibility, so I still find that I get the benefit of handling heavier weight than a snatch. The power clean “catch” of the weight is more of a three-quarter squat and erect like throwing the hammer than the true “rock bottom” deep squat catch of an Olympic lifter. Nothing wrong with the Olympic clean; it’s just not necessary.

Bent Barbell Rows This is one of my favorite exercises along with “close grip lat pulldowns” on a machine. Technically, these rows would be called an “assistance lift” like the pulldowns on a machine, but I count “core” lifts as the ones where I am focusing on strength and power with only a few reps (five or less). The true bent barbell row position is almost like a “good morning” bent with your back parallel to the floor with bent knees, except you row/pull a bar toward you.

I like to take the lower back out of this and work on the pulling motion while putting my butt/hips behind the heels. The only difference between this bent barbell row I am describing and the Rack Romanian DeadLift above is that the bar is pulled into the waist from that bent position (you don’t stand up). Or, another way to describe it is a barbell row from the Romanian deadlift position.

CORE LIFT PROGRESSIONS— POSITIONS AND SETS/REPS

I will not take the time to discuss periodized training and lifting pro-

grams but generally you will move through general conditioning, general preparation, specific preparation and competition (in-season) programs. As one progresses toward the season, a starting point with the core lifts for “strength” cycles (off-season) would be 5 sets of 5 reps with the Olympic variant lifts being performed from the floor. A “strength and power” cycle(s) moves the reps down to the 3-rep range for 2-3 sets. Generating peak power production occurs in the 1-2 rep sets with 3 to 5 minutes rest in between sets so your energy stores are fully replenished. Olympic lifters will tend to work a lot at this latter level, but throwers only “work up” to heavy volume and intensity for a cycle or two at most and during the season can maintain strength levels at 85% of one rep max (1RM) for 3-5 reps in 2-3 sets.

For variety and to work explosiveness, I like to see a progression over the entire pre-season and competitive season in the snatch, pull/clean done from the floor, boxes (below & just above knees), and hang positions. During the season, a good option for keeping up strength levels and being explosive is alternating what some would call “strength” and “speed” weeks. In the strength week, do your core lifts in that strength maintenance range of 2-3 progressive overload sets of 3-5 reps (85% 1 RM). During the speed week, take a 50-60% 1 RM weight and do those core lifts in “Bulgarian sets”. Angel Spassov got these from the Bulgarian Olympic lifters who would do as many reps as they could within 20-second sets. For the snatches, cleans, pulls—do them from the hang position. I really like the explosiveness in the Bulgarians with a “hip” snatch—starting with

the bar at hips. In the early part of the season, most throwers lift and throw “through the meets” and then peak for one or two special meets (conference, region, etc.). The Bulgarian sets in a speed week are great for the “bigger meet” competitions during the season, i.e., you will keep some strength up but still be fresh for the meet.

MORE ON SPEED AND EXPLOSIVENESS

Because of the influence of football coaches and strength training in high schools and health clubs, American throwers associate “strength” with a big bench press and huge back squat. But many roads lead to Rome as the saying goes. Squat and deadlift movements may be fine for foundational or base strength, but if you think about the throwing events—especially the hammer—your feet are neither staying in one place and exerting force vertically in a single plane nor do they have your bodyweight equally distributed throughout the throw. As you move from double to single support, catch the hammer at the top of the orbit, and move again through double support, you are doing a lot of single leg and hip movements. Getting into the season, then, more explosive movements that use each leg would include: jump squats, step-ups, and one-leg presses.

Jump Squats Perhaps one of the most enduring impressions of hammer throw WR holder Yuri Sedykh in his training is the film footage of him doing jump squats with dumbbells. Done correctly this is more of a plyometric-type exercise where minimal time is spent gathering yourself upon contact

with the ground; the emphasis is on the upward explosiveness. Using lifting straps, you can use some serious weight with just the dumbbells. Another way is with an Olympic barbell from a one-half or three-quarter back squat position. Regardless of free weight choice, correct posture with the chest and head up are important to mimic the position of the hammer throw.

Step-Ups The Russians are also famous among powerlifting and weightlifting devotees for the “Russian Squat Routine” which is designed to be inserted three times a week into a six-week cycle of periodized training to improve squat strength (+5% 1 RM). Yet, Angel Spassov noted that former Russian great hammer thrower and coach, Anatoly Bondarchuk concluded through research that high step-ups were much more beneficial than the heavy back squat.

First, at the bottom of the squat, a load twice what is being lifted is placed on the lower back (as in greater injury potential); two, you never assume the back squat position in throwing or sports; and, third, the step-up generates more “power” in the thigh and hip.

Similar to the jump squat, you can do these with a barbell on the back or holding dumbbells. Ideally, the hammer thrower would want to keep a 90-degree angle of the leg (thigh parallel to floor) at step-up to the platform or box. You simply step up to the platform with one leg while pushing off with the toe of the other foot; as you step up, feel the thigh and hip engaging. For example, step up with the right, then the left and step back down with the left, followed by the right.

Keep your good hammer posture with the head and shoulders over the hips and get a nice rhythm going. I visualize myself stepping to the ball with the upward moving leg. One can do all the reps on one leg and switch or simply alternate legs during the set. The Bulgarian weightlifting team replaced the squat as a core lift with heavy step-ups progressing from 5-6 reps to 3-rep progressive overload sets. Not only did they recognize greater muscle fiber recruitment and muscularity, the resulting world records led them to replace the squat in their training with the heavy step-up.

**BONDARCHUK
CONCLUDED THROUGH
RESEARCH THAT HIGH
STEP-UPS WERE MUCH
MORE BENEFICIAL
THAN THE HEAVY BACK
SQUAT.**

One-Leg Press Think about the catch of the hammer: the left leg is collapsing with the hips behind the heel like a piston absorbing the outward pull of the ball, as the right leg touches down and applies centripetal force into the ground to begin acceleration of the ball from the top of the orbit down to through the back of the circle into the next turn. Boy what a mouthful....but the legs are working both together and independently in that transition from double to single and back to double support. The single or one-leg press can help develop that strength as well as the small stabilizer muscles involved in balancing. While holding onto a power rack, you can do one-leg squats at bodyweight or with a sandbag

on the shoulders. Machine one-leg presses are easier to perform. Concentrate on the pushing motion in an explosive fashion; if you can't do it explosively then reduce the weight. Stay in the 6-8 rep range. I like the one-leg press with the machine because you should be pushing into the ground with the right forefoot (and setting your hips behind the heels) when you catch the hammer coming out of single support.

The Rationale Strength training guru, Ken Sprague (owner of the original Venice Beach, CA Gold's Gym), weighed in on this subject in a recent post on The Ring throwers discussion forum. He supported all three of these exercises as superior for “powerbuilding for a ground-based movement.” He stated that the real issue for strength training in the throws is finding “how to best train the body to increase acceleration.” He then gave a twofold answer: “1) maximally train each joint angle involved in the technical movement, so that maximal force can be applied at each joint angle, and, 2) train to meet the enormous bilateral forces the body encounters in the technical movement.” So, in addition to summation of forces involved in the throws, especially in the hammer throw, you want to think in terms of the direction and angle of those forces for the generator of those forces—your legs from the ground up.

Sprinting and Jumping Now, if you have the time, go ahead and work in plyometrics (hops, bounds, jumps, etc.) and sprint or hill work for explosive legs. But, the above exercises could be all that most throwers need during a competitive

season when you should be doing a lot of throwing. Learn to do a few things well and don't get yourself burned out and overtrained. I tend to see those exercises as more preseason and conditioning work for the time-constrained thrower. The Bulgarians found that the step-ups produced leg muscularity similar to those athletes who did a lot of sprinting and jumping in their training.

HAMMER-SPECIFIC EXERCISES

Didn't think we'd ever get here, did you? This is the section that most throwers already doing lots of weight training will have jumped to while skimming through the preceding material. [Hey....go back and read it...can't hurt you!] When I say hammer-specific exercises, I am referring to exercises that have the greatest carry-over in terms of utilizing the functional muscular pathways and range of motion used in the hammer throw. As I stated at the beginning of the article, these would be the exercises to "add" for training specificity and the last exercises to drop next to throwing if you are getting over-trained. Conversely, do these exercises in your peaking weeks for competitions or for the day before and day of competition for stimulation.

PLATE TWISTS AND SWINGS

Twist-to-180 The absolute number one best exercise will be the plate twist around to 180 degrees behind you in a dynamic, fluid motion (do not treat this as a rigid core-trunk building exercise although it is great for the obliques). You grasp an Olympic barbell plate with both

hands and turn to your right side (looking directly at the plate) with the trunk while pivoting only on the left foot; let the plate swing down in front of you (counterbalancing with the hips as it passes in front); then turn to the left side while pivoting only the right foot and let the plate "run long" like the hammer to 180° behind you (see 180°). Do this for 6-8 reps (3 reps to each side) and feel the rhythm to each side; several sets.

THE ABSOLUTE NUMBER ONE BEST EXERCISE WILL BE THE PLATE TWIST AROUND TO 180 DEGREES BEHIND YOU IN A DYNAMIC, FLUID MOTION

Stop and think about what is going on here: 1) You are developing range of motion and flexibility, 2) your shoulders and head are aligned with the plate/hammer, 3) your hips are countering the outward pull of the weight, 4) your pivoting right foot/leg creates a groundup force, 5) you feel the plate/hammer pull you into the turning motion, and, 6) you mentally ingrain the feeling of letting the hammer run to its high point in the orbit. For variety, I step outside to the patio and throw the plate in a release at the end of the last rep to the left side. Anticipating the release and correctly lifting everything up as it comes by the front of your legs and throwing out into the sector, you should see the plate spin flat—up and out like a flying saucer.

Pendulum Swing Finish In the plate twist-to-180, we did every-

thing in the throw except step to the ball in single support and get into double support for accelerating the hammer (if we do split-leg snatches and step-ups we mimic stepping to the ball). Done correctly, the finish or release of the hammer is not a violent, jerking, radius-shortening movement at the end of the throw. In the words of Lance Deal, "it's just another throw of the ball out to 180°." In the pendulum finish with a barbell plate, grasp it with both hands and place directly over your head as you pivot to the right side. Your arms should be straight upward, the plate overhead and parallel to the ground. Then from this starting position, using ground-up forces, pivot with both feet/legs to the left as you swing the plate down through 0° in front of you and get into the same position on the left side. To mimic the release, you need to anticipate the plate coming through the bottom of the pendulum and lifting with the legs and arms upwards as you pivot to the left and the arms swing overhead. Then continue back and forth. Same as the plate twist-to-180°, do multiple sets of 6-8 reps. Don't muscle this exercise and just use the upper body; you want to feel the ground-up force being generated and the rhythm.

Plate Wind The winds in the hammer throw should ideally involve a full-range of motion with the shoulders and not just the arms moving around the head. Take a barbell plate with both hands and begin doing winds with a full shoulder motion—be able to turn to 180° behind you with the leading elbow. Do 6-8 reps on each side for multiple sets. The emphasis here is feeling a full range of motion and rhythm. Feel the gravity drop of the plate/hammer from the top

on down through 0° between your legs in front of you. This rhythm is key to setting up the turns and the throw— you should feel this rhythm during your hammer winds.

During the off-season when starting all over with general conditioning circuit training before I get back into any kind of hypertrophy or strength and power weight training, I do these plate exercises along with at least weekend throwing to keep the neuromuscular pathways well-grooved. For a young athlete, the plate exercises and med ball throws are a good starting point for developing functional strength as their technique improves through drills and throws.

PUD THROWS

The “pud” is a hunk of iron with a handle that is used for partial throwing movements of the hammer throw. You can find Lance Deal’s nicely manufactured pud’s through the major track and field suppliers. The pud can be thrown overhead or frontward for general core strength development; concentrate on the hip pop or snap just like in a snatch to generate the momentum. Grasp with two hands, good three-quarter squat position, swing the weight behind your knees and waist or chest high, then swing it back down and throw it. I will generally do these with a 35-lb. pud for 10 throws each (forward and overhead); this basically just duplicates a snatch movement. Sometimes I’ll even throw a 45-lb. Olympic plate from this position; or even heavy boulders during my general physical preparation (GPP) training period in the pre-season. However, the most hammer-specific of the pud

throws is the “sling”—gripping the pud handle in the left hand, cradle it in the right hand over your right shoulder, and let the pud sling down through 0° between your legs, lift with the legs and hips as you pivot and release out over the left shoulder. This is a great mimic of the left-side action at the finish of the throw. Make sure it is a rhythmic “backhand” with the pud and not a leaning with the left side or pulling motion with the left arm (bad habits). For the slings, I would go for 10 throws to each side; always work both sides to maintain balance in your throwing muscles. Don’t forget to let the feet pivot, and again, generate force from the ground up as you pivot.

***YOU CAN FIND
LANCE DEAL’S NICELY
MANUFACTURED PUD’S
THROUGH THE MAJOR
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BARTWISTS

This is probably the single most recognized exercise for increasing rotational strength. An Olympic bar (and weights as necessary) is placed on the shoulders with the arms resting on the bar. Slowly pivot to each side and try to see 180° behind you. This is one of the best exercises to understand “ground-up” generation of forces for throwing the hammer. Forget that conditioning or beginning weightlifting class where you may have first learned this exercise by simply turning your obliques or shoulders. Press your right foot into the ground and feel the force work upward through the knee,

thigh, hips, obliques and shoulder girdle as the bar makes a nice long turning path around to your left; then repeat to the other side. Don’t keep your bodyweight centered; instead, try to feel the generation of force with the ground-up shifting of weight from side-to-side; keep head up and move with your shoulders. Do 10 reps each side for multiple sets.

MED BALL THROWS

Well, it certainly doesn’t take any strength to throw a med ball, but you won’t find a better implement for grooving those neuromuscular pathways for throwing events. For the hammer throw, the traditional med ball can be thrown two-handed from the opposite hip or shoulder like the pud sling throw. The med balls with handles (“power ball” and other names) can also be used. You can also do a one-turn throw from the sling and finish into a wall. Obviously, these things don’t weigh a lot, so you focus on the correct movements and positions. Try lying with your hips on a Swiss Ball, rotating to the side with outstretched arms, catching a med ball thrown by a partner, rotating 180° on the med ball to the other side, and then rotate back throwing the ball to your partner. Here’s a hint....you do that with just your arms and you will throw yourself off the Swiss Ball...use the trunk/obliques to both balance yourself and do the rotating with your arms along for the ride.

THE CORE BLASTER

I just had to make a plug for one of my favorite exercises, although this one is pretty close to the

snatch. I “stole” this one from a Tibor Gecek clinic and hand-outs—his favorite exercise. I had a blacksmith friend of mine make me (and a few special friends) a device to swing a stack of barbell plates—with a plate on the bottom welded to an 18” upright pipe (Olympic bar diameter) which has a hole drilled near the top for a removable rod. The rod serves as a handle for swinging the weights and is removed to slide plates on & off. The movement is like doing a repetitive forward pud throw as you grip the perpendicular rod at the top, get into that good three-quarter squat position, and start swinging the “core blaster” chest high and then down behind the knees. Keep the weight back on the heels and really use the hips to pop forward and generate the

force from the ground up. You can also simulate this exercise with a dumbbell or Olympic plate.

SUMMARY

I hope you are not tired of hearing the expression “ground-up” generation of force, because once you grasp it and train it, you will learn to throw the hammer much more efficiently and effortlessly. You will develop the right kind of “strength” and “power” and not just be an upper body dominant “strength thrower”.

The really successful elite throwers have a relaxed or “loose upper body” that is moving around this tremendous amount of force generated by the lower body while letting the ball be the “engine”

around them (another Lance Dealism). Your lifting choices should be predicated upon movements that will improve your throwing. Use controlled, directed movements in your lifting and throwing. Be aware of balance, rhythm and timing in your lifting and throwing. Incorporate plate swings and twists for additional work or specialization. Be a thrower first and then a lifter. Don’t let your strength development quantum leap your technique improvement.

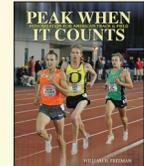
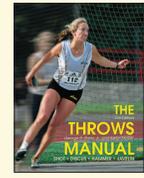
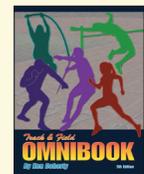
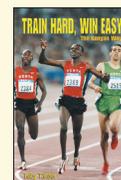
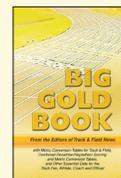
Remember, this has come direct to your living room from the “Ironmarf” who L-O-V-E-S to lift! Lift intelligently and purposely to improve your hammer throwing and develop body awareness of movements in lifting and exercises that mimic positions and aspects of the throw.

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MASTERY OF JAVELIN THROWING TECHNIQUE

BY V. L. KUZNETSOV (RUSSIA)

We haven't had a piece on the javelin in a while, so we dipped into the archives and thought this comprehensive, if ancient, article from an acclaimed Russian coach would be well worth reprinting (with some editing). Some of these exercises may still be useful. This first appeared in *Track Technique* #2 December 1960.

In the last few years, performances have sharply improved in the javelin throw. Already 12 athletes in the world have exceeded the 80-meter (262'5") mark which everyone considered a few years ago to be unattainable. Near at hand is the day when a 90-meter (295'3") javelin throw will not be sensational.

Such an improvement in achievements in this phase of track & field is due primarily to the adoption of newly constructed javelins which possess a shorter, lighter spear head and more thickening in the front part (in accordance with javelin specifications).

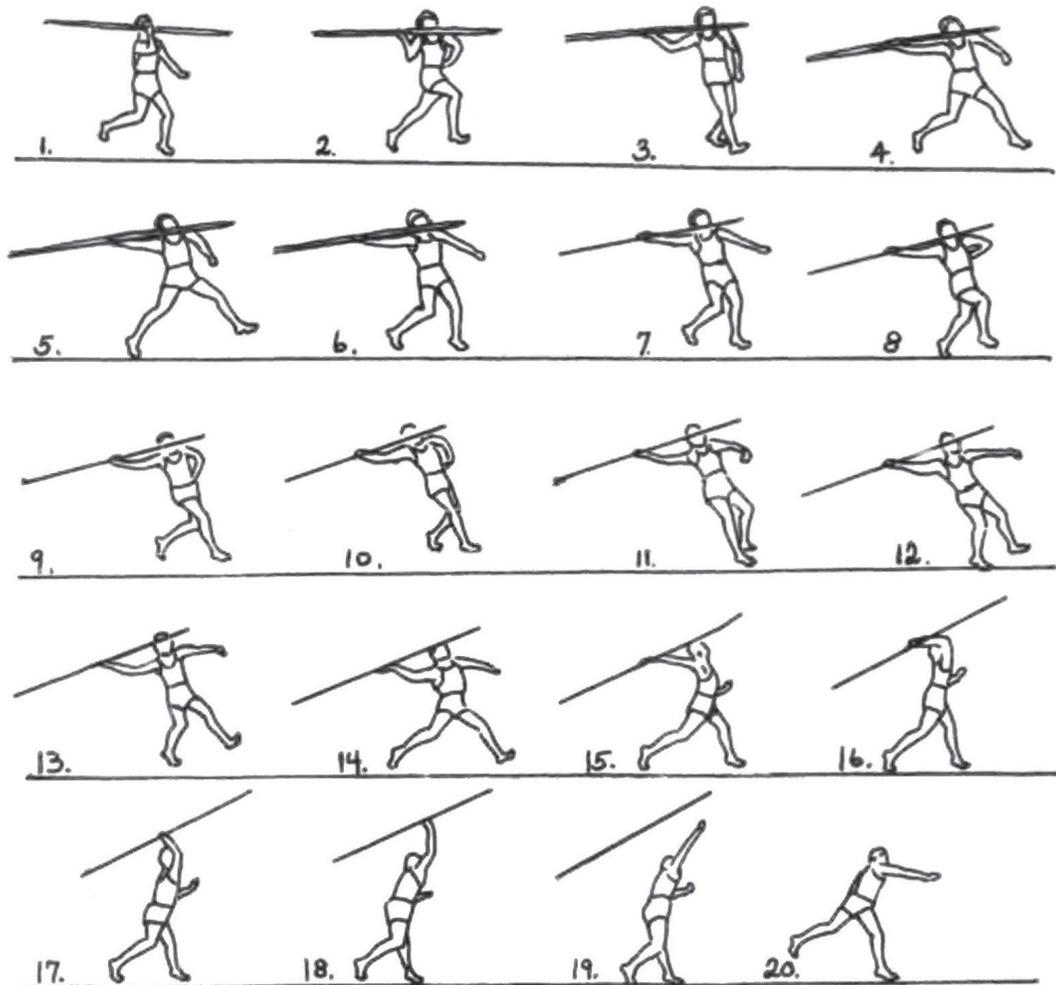
Experiments show that an added distance of 3-6 meters (10-20 feet) may be attained by the thrower who switches from the now obsolete javelin to a new standard one. The explanation for the difference is that standard javelins are an improvement aerodynamically, having a quality of more glide, especially at the end of the flight. At the same time, practice and research shows that, in order to utilize the virtues of these javelins to the fullest, the javelin thrower must keep in mind the following conditions.

1. The execution of the final effort should occupy the greatest amplitude and finish with an accent, a

quick movement of the upper arm and hand of the throwing arm following a vertical line drawn through the heel of the left foot, transferring the weight of the body over the straight left leg.

2. To attain an exact alignment, the line (in respect to the horizontal) of the effort of the thrower coincides with the line of the longitudinal axis of the javelin.

3. To release the javelin at an angle of 28.30 degrees from the horizontal. In this case, the javelin flies almost straight ahead. After flying in such a direction to a significant distance, the javelin's



spear head begins to rise (by air currents), glides (with the spear-head still at an angle greater than the horizontal), after which it falls almost flat on the ground. If you throw the standard javelin like you threw the old javelin (at an angle of 35-45 degrees), the flight becomes, then, an abrupt rise and a sharp fall.

Sporting practice has also prompted a more advantageous variant in techniques of throwing the standard javelin, to point to the sequence drawings as an example. In this instance, the javelin is brought simply straight back (frames 1-14) and the cross-over step becomes

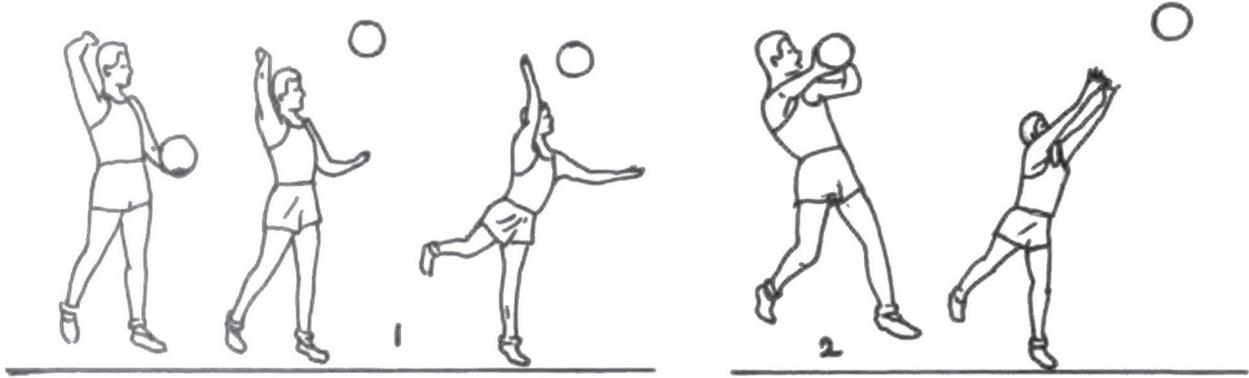
a little shorter (frame 10) while the thrust is completed following a vertical line through the heel of the left foot (frame 18).

Bringing the javelin straight back produces conditions for a more accurate application of the effort along the shaft of the javelin and directs the implement straight ahead. The shorter cross-over step promotes a faster transition of the run to the throw and release in a vertical line through the straight left leg, but in that time, as a rule the foot precedes the implement a little while the movement is fluid. Therefore the cross-over step must be of maximum swiftness.

The release of the javelin in a vertical line promotes an increase in amplitude for the final effort and the release of the javelin over the shoulder at approximately 28-30 degrees. (In the preceding sequence photos, where an impressive throw of 76.46 meters (250'10") was recorded, the release of the javelin over the shoulder was found to be at an angle of 29 degrees.

Almost all of the throwers who exceed the 80-meter (262'5") mark make use of one of the variations of the given technique.

The discovery of the following



ways and means of mastering the technique of throwing the standard javelin are gauged to the ability of a good thrower. In the given plan is generalized an individual longlived experience and the experience of the best Soviet throwers (and the throwers of other countries who have broken the 80-meter mark). The mastery of the technique of throwing the standard javelin is necessary even for the natural athlete and begins with the division of the technique into its elements and the perfection of these elements.

It is good if the teacher is able to demonstrate a standard throw placing special emphasis on the thrust, on the position before the thrust, the direction of the thrust, and the fine points of the final effort. Consequently, the problems posed by these aspects of the javelin throw may be rectified and

solved by the following exercises.

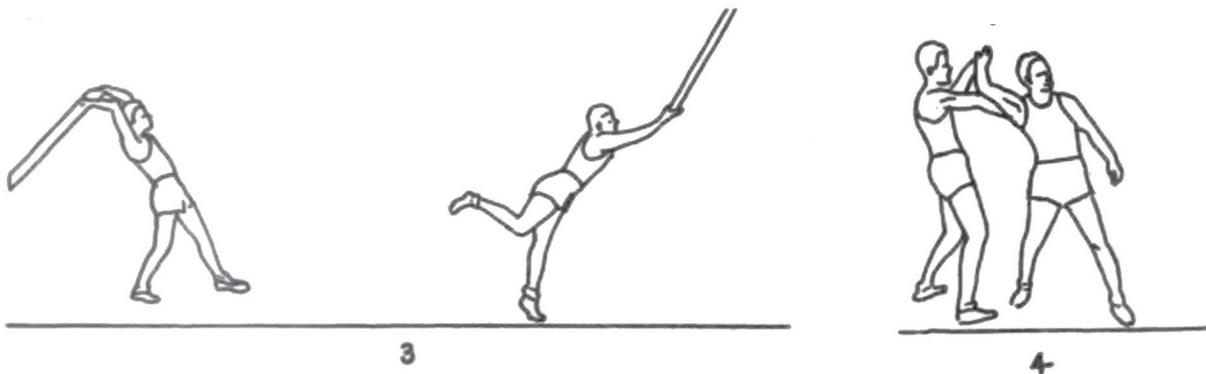
1. To perfect the release of the javelin by the thrower in direction of a vertical line from a spot and from a position facing the direction of the throw.

- a. Sitting with your back to a wall ladder, raise your arms upward and seize one of the rungs. Then, stretch out your left foot with your toe pointed and turned to the inside (bending the left foot inward is an aid to landing flat once you arch) while the right leg is drawn to the body. Then you arch with your chest forward.
- b. From the final position of "a", let go with your arms and "snap" forward to your foot (snapping over your left leg while swinging your arms forward).

- c. This exercise is done in the same manner as "a" except that you start slightly sitting on the right foot and hold the rung of the ladder with only one hand.
- d. This exercise coincides with "a" except that you hold a lower rung of the ladder.

Exercises with apparatus (pulley blocks, springs, etc.)

- a. Standing with your back to a wall ladder, your left foot forward and the weight of the body on your right foot, you bend your right arm backwards past your head and grip the wall ladder. Then, you step forward with the left foot.
- b. Using the same movements of "a" except, at the moment of



the step forward, you let go of the wall ladder and, while continuing the movement of the arm forward, you jump forward over your left leg to your right foot.

Exercises with a volleyball.

- a. You throw it up in front of you, jump forward to your left foot, and catch it with a "bang" (slapping it down from the top).
- b. Doing the same as in "a" except that you jump over your straight left leg to your right foot.
- c. Carrying out the same movements as in "a" and "b" except that, in this instance, you hit the ball with the hand straight ahead (drawing 1).
- d. Carry out the same leg movements as in "a", "b", and "c". In this case, your partner throws the ball to you at the beginning and you release the ball from the chest with both hands as you go through your foot action.

Exercises with an axe or a wooden rail.

- a. Standing with your left foot forward and the weight of

the body on your right foot, you hold the axe all the way back with both hands. With this axe, you execute swings at an imaginary object which is at a height of 2-2J meters (6'6" to 8') while, at the same time, stepping over the left foot (drawing 3). You must stand far enough from the object so that only the end of the axe touches it when a full swing is executed. Such a position enables you to end your swing in front of you while still going over the left foot. The previous instructions are indispensable for the following exercises.

- b. In this case, the axe should be lighter and held in the right hand only.

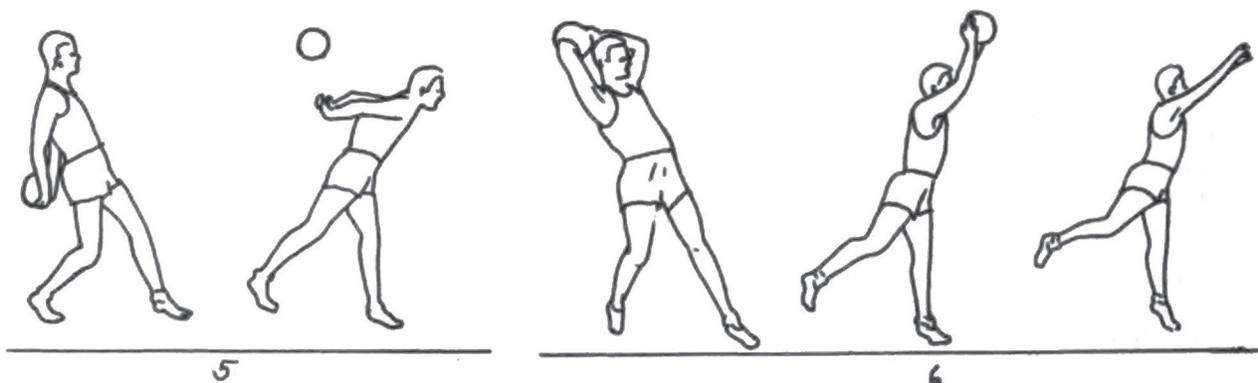
Exercises with a partner.

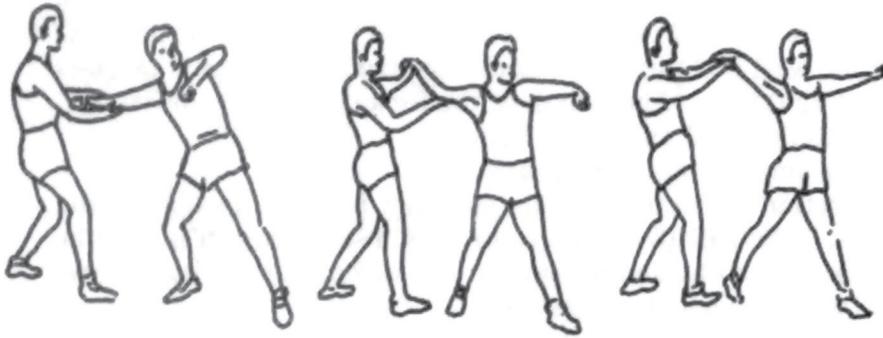
- a. Standing with your left foot forward and the weight of the body on your right foot, you lock your hands and pull them behind your head. Your partner stands behind you and with his right hand pulls you slightly back. You, then, imitate a thrust. As you are initiating a thrust (onto the straight left leg), your partner releases your hands and pushes you over to your right foot.

- b. The movements are the same as in "a" except that you use only one hand.
- c. With the same movements as in "a" except that you hold a ball (or stone, etc.) in your right hand while your partner stands to your right and with his left arm holds your throwing arm and with his right arm assists the exercise (holding under the shoulder). The throw of the object is straight ahead following a vertical line (drawing 4).

Exercises with smooth boards or aluminum pipes (which are thicker at one end).

You stand at a distance of 1.5 meters (5'-6'6") from a wall, facing it with your left foot forward and the weight of the body on your right foot. (The length of the board or pipe should be equal to the length of the javelin). The throwing arm is drawn back past the head and initiates a thrust. As the thrust is completed, the pipe hits the wall and the hand slides forward on the pipe. (A piece of rope is used to protect the hand from friction). The length of the forward part of the stick should be such as to offer a resistance to the hand as it hits the wall.





sides, your left arm seizes an upper bar while your right arm reaches below and beyond the parallel bar. You then pull yourself and move to the position of a "taut bow".

b. With the same movements as in "a" but you stand with your face to the wall.

Exercises with a partner.

a. Standing with your left side in the direction of the throw, the weight of the body more on the right leg, your right arm stretched behind and the left somewhat bent at the elbow; your partner stands behind you and with his left hand drags back the palm of your throwing arm while his right hand brings the forearm of your throwing arm back. You move to the position of a "taut bow" while your partner assists you in moving the elbow of your throwing arm upward (drawing 7).

with an active movement of the right foot and the release of the ball must occur while crossing over the left foot.

c. With the same movements as in "a" except that you hold the ball (1.5 kilograms or 3.3 pounds) with one hand. These exercises may be carried out in front of a mirror.

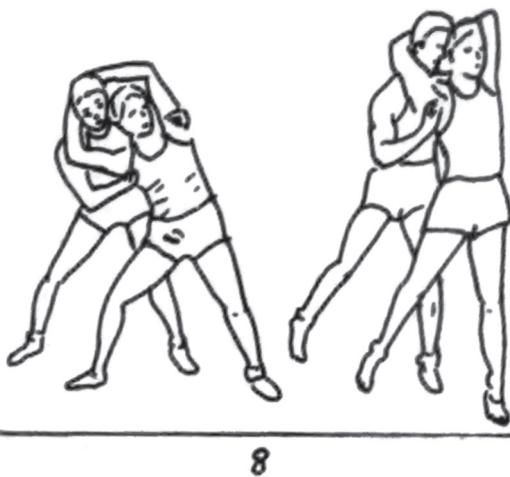
d. With the same movements as in "c" except that you throw at a target which is set at a height of 3-5 meters (10'-16') and a distance of 20-25 meters (65'-82').

e. With the same movements as in "c" and "d" except you hold a spear and make note of the landing and the axis of the spear.

b. With the same movements as in "a" except that the partner with his left arm assists the shoulder movement of your throwing arm.

c. With the same movements as in "a" except that the partner stands next to the exerciser facing his chest.

d. With the same movements as in "a" except that the partner holds the exerciser under the armpits. The exerciser grabs his partner's neck with both hands (drawing 8). You then move to the position of a "taut bow". The partner's right hand assists the movement in front



Exercises with hard balls, light implements, or spears.

a. Your chest faces the direction of the throw while your left foot is forward and the weight of the body is on your right foot. The ball (2-4 Kilograms or 4.4-8.8 pounds) is held in both hands behind the back. You throw the ball up and forward at the expense of the legs (drawing 5). You must watch out that the body does not lean forward.

b. With the same movements as in "a" except the ball (2-7 kilograms or 4.4-15.4 pounds) is held with two hands behind the head. The ball is thrown forward and up (drawing 6). The thrower begins the exercise

2. Mastering the javelin.

Exercises with parallel bars.

a. Standing with your back to parallel bars, the weight of the body more on the right leg and the arms stretched to your

of the shoulder of the throwing arm while his left hinders the exerciser's bend to one side.

Exercises with a parallel bar with grenades, shot puts, implements, and javelins.

- a. Standing with your left side in the direction of the throw, the weight of the body more on the right leg, your right arm stretched straight back, holding a parallel bar adjusted almost to the level of the right shoulder; you move to the position of a "taut bow" and return to the original position.
- b. With the same movements as in "a" except that grenades, shot puts, implements, or javelins are utilized in place of the parallel bars.
- c. With the same movements as in "a" except that the right arm is stretched back with a javelin while the left holds the javelin spear-head at head-level; you, then, move to the position of a "taut bow", overcoming the resistance of the left arm.
- d. With the same movements as in "a" except that the coach, standing behind, lightly seizes the javelin at the back end and at the movement to a "taut bow" position guides a correct execution of the exercise.

Exercises "a", "b", and "c" and "d" may also be executed in front of a mirror.

3. Mastery of the release of the javelin—through a vertical line from a position standing with the left side in the direction of the throw.

- a. Standing with your left side in the direction which you are hitting with your axe (cudgel), the weight of the body more on the right leg while the arm with the axe is stretched to the right; you strike at an object (i. e., a beam), suspended at a height of 2-2.5 meters (6'6"~8'), going over the straight left leg as you strike.
- b. With the same movements as in "a" except that the axe is lighter and held by one hand only.
- c. With the same movements as in "a" except that you hold a ball or a shot (2-5 kilograms or 4.4-11 pounds). You throw the ball or shot straight ahead going over the straight left leg. At first this exercise may be done in separate movements (i. e., you move to the position of a "taut bow" in one movement and then throw in another movement). Later, you may coordinate the two movements.
- d. With the same movements as in "a" except that a grenade, stone, or javelin is held in one hand. When you do this exercise with a javelin you have to watch that your thrust coincides with the shaft of the javelin and the release of it through a vertical line.

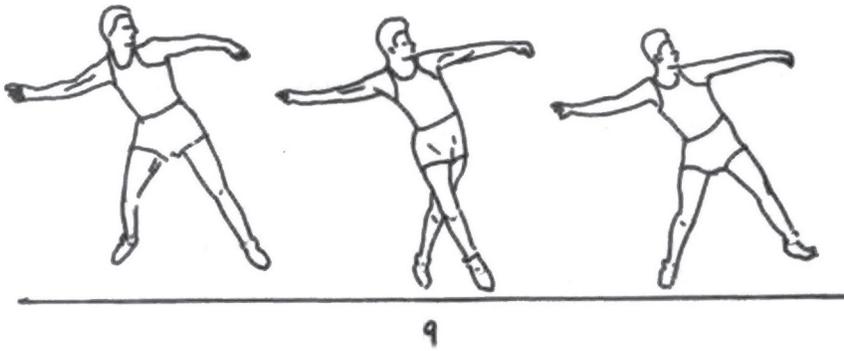
4. Mastery of the release of the javelin through a vertical line, with two or three steps (without the cross-over step).

- a. Standing with your chest facing the direction of the throw, your left leg behind: your arms stretch behind your head and

grip a parallel bar adjusted at shoulder level. You then move to the end of the position of a "taut bow" in the first step.

- b. With the same movements as in "a" except that at the moment of the movement to the position of a "taut bow", you release the parallel bar and, continuing the movement of the arm forward, jump over the straight left leg.
- c. With the same movements as in "a" except that a partner stands behind and assists lightly stretching your arms back and aiding in a correct execution of the exercise.
- d. With the same movements as in "a" except that you hold onto a horizontal ladder with bent arms. You then move your left leg behind (arching or kicking).
- e. With the same movements as in "a" except that you use an axe or cudgel (taking into account all the previous exercises which have bearing on this).
- f. With the same movements as in "a" except that gripping a shot put (2-4 kilograms or 4.4-8.6 pounds) with both hands, you throw it straight ahead.
- g. With the same movements as in "a" except that you throw balls, implements, grenades, stones, or javelins (with one hand).

With all these exercises, you must watch that the throw begins with an active movement of the right leg and finishes in such a position that a vertical line can be drawn



through the extended left leg and the right arm. The exercises may be executed in two and later with three steps. (In the last case, exclude the exercise with the horizontal ladder).

5. Mastery of the cross-over step (drawing 9).

Draw three parallel lines. The distance between the front and middle lines is equal to the length of the cross-over step.

- a. Stand with your left foot on the middle line and point the toes so that there is an angle of 40-45 degrees between the feet. The weight is on the right foot. Place the right foot on the third line. As your throwing arm goes straight back, you move your weight over the left leg but still keep the shoulders back. You do the cross-over step putting the right foot on the front line and turn the instep so that it is almost parallel to the front line. Finishing the step with the left foot, you wind up in your original position.
- b. With the same movements as in "a" except that after finishing "a", you reverse your movements so that you return to the original position.

- c. With the same movements as in "a" except that in the original position you slightly raise the left leg and begin the exercise with an active step of the left foot to the ground (that is, the exercise is executed with a set rhythm characterized by the movements of the last exercises).
- d. With the same movements as in "a" except that you finish the movement to the position of a "taut bow".
- e. With the same movements as in "a" except that the exercise is done with a light shot, grenade, stone, or javelin--with and without the actual throw. (In the last case, watch out so that what you're throwing leaves in a straight line).

6. Mastery of the technique of bringing the javelin straight back in conjunction with the individual abilities of the thrower.

In solving this problem it is necessary to take into account the various methods of bringing the javelin back: 1. Bringing the javelin straight back first and then turning your shoulder to the

right and then bringing the javelin straight back.

7. Doing the two motions at the same time. The thrower must try all three variations and choose the one best suited to his ability. And, he must make use of the following methodical applications.

- a. Holding the javelin in both hands, you bring it back in 1-4 steps with the help of a trainer who stands behind you holding the javelin at the end. The trainer aids in a correct execution of the exercise. This exercise may also be done in front of a mirror.
- b. You bring the javelin back in 4 steps (preserving the rhythm of the acceleration of the last several throwing steps) and then return to your original position.
- c. With the same movements as in "a" except that you throw the javelin straight ahead.

In the long run, athletes must master the technique of throwing the standard javelin, applying their experience from throwing various implements, throwing various implements with a run, and gradually increasing the distance of the throw and the run to individual advantage.

Translated from Russian by Robert Buckeye and Wally Swerchowsky from the February, 1959 issue of Light Athletics, published in Moscow, Russia.



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USATF

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- The USATF Level 1 Program launched in a new blended learning format May 2024. The new experience features updated self-paced lessons on sport science, athlete development models, instructional strategies, nutrition, and insights from USATF National Team Coaches before members complete the event specific units on Zoom or in person (select markets). The new format also introduces a new optional starting point for members to begin their learning via the USATF Developmental Coach Program.
- The USATF Developmental Coach Program is a new optional learning pathway carved out of the first unit of the USATF Level 1 Program. The 3-hr online training is geared toward entry level coaches, parents, volunteers, and administrators, and emphasizes developing positive coaching practices, ethics, risk management strategies, understanding growth and development, how to teach sports skills, and structure practice. Members can upgrade their Developmental Coach certificate to a USATF Level 1 Track & Field Coach during the valid term (two calendar years) by later enrolling in the USATF Bridge to Level 1 Program where they will complete the remaining USATF Level 1 Program units (includes Level 1 Sport Science, event specific training access, and exam).
- USATF joins Million Coach Challenge offering access to the free Connection Based Coaching courses on the USOPC Mobile Coach Platform.

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- USATF Campus platform relaunches with a new experience integrated with USATF Connect. Login to your membership account and select “Coaching Schools” to purchase a new training or return to previous trainings by selecting USATF Campus from the left-hand navigation menu when signed into your USATF Connect account.
 - Watch for 2024 USATF Level 3 Program information to be added to the Calendar of Schools later this summer.

Learn more about all available coaching education programs at:

<https://www.usatf.org/programs/coaches/coaching-education>



TERRY CRAWFORD NAMED 2024 USATF LEGEND COACH AWARD

The U.S. Olympic Team Trials - Track & Field gained a whole new meaning for long time coach Terry Crawford. On June 27, former head coach of Texas, Tennessee and Cal Poly’s collegiate programs was honored with the USATF Legend Coach Award for 2024. She is the first woman to win the award in its 10-year history.

Before she became a coach, Crawford was a three-time all-American and national champion in the 220-yard dash, 440-yard dash, and 880-yard dash as an athlete at the University of Tennessee. Crawford also competed at the international level and was a finalist in the 400 at the 1968 U.S. Olympic Trials and competed in the 800 at the 1972 Trials.

Two years after Title IX was enacted in 1972, Crawford made history at the University of Tennessee as the first head coach of the Lady Vols track and field team, displaying her commitment to advancing women’s influence in athletics. In 1981, the Lady Vols brought home the Association for Intercollegiate Athletics for Women (AIAW) National Championship in track and field - the school’s first women’s championship in any sport.

Throughout Crawford’s 35-year coaching career she has coached 12 Olympians, over 125 all-Americans, and won the NCAA women’s triple crown title in 1986 (cross country, indoor track and field, and outdoor track and field), a feat never to have been done before.

Crawford has also had her fair share of experience coaching international teams for the U.S. She was named the Head Women’s Track and Field Coach for Team USA for the 1988 Olympic Games in Seoul, where the women’s team brought home nine total medals. She also served as the Head Coach for the World University Games, Assistant Coach at the Pan American Games, Head Coach for USA vs. USSR Track and Field Dual Meet Series, and more.

Her career accomplishments have been immortalized by the University of Tennessee and the University of Texas, as she has been inducted into both the Tennessee Athletics and Longhorn Women’s Hall of Fame.

Additionally, she has been inducted into the USTFCCCA Hall of Fame, and has been honored with multiple namesake awards, including USTFCCCA Terry Crawford NCAA Division I Women’s Program of the Year. She was also honored with the namesake for the USATF Distinguished Female in Coaching Education Award.

Her leadership stretches well beyond the oval, as she has held several leadership positions in the world of track and field. Some of these include President of U.S Track Coaches Association and Women's College Cross Country Association, USATF Board of Directors, USATF Coaches Advisory Committee Chair, and appointed to first Director of Coaching position at the USATF National Office. "A Champion of Breaking the Glass Ceiling", she became the first female coach to win a National Championship at Tennessee and the Triple Crown at Texas. Additionally, she was the first female president of the USTFCCCA and is one of the first women in NCAA Div. I to be named director of a dual-gender Track and Field/Cross Country team in 1996 at Cal Poly State University-SLO.

The USATF Legend Coach Award is now in its tenth year and is selected by the USATF Coaches Advisory Committee. The inaugural award was presented to Hall of Fame Tigerbelle Coach Ed Temple in 2014, followed by Dr. Joe Vigil (2015), Tom Tellez (2016), Clyde Hart (2017), Brooks Johnson (2018), Bob Larsen (2019), Bill Dellinger (2021), George Williams (2022), and Bobby Kersee (2023).



SPOTLIGHTING THE NEWEST CLASS OF USATF LEVEL 1 INSTRUCTORS

USATF Coaching Education is excited to announce the newest cohort for the USATF Instructor Training Course. The hybrid course presents a bridge between adult learning best practices and the Level 1 curriculum. The 15 members selected will converge in Indianapolis, IN on July 8 and then be a mentee instructor at a 2024-25 Level 1 School to complete their certificate requirements.

Dr. Ola Adeniji (USATF Oregon) is an assistant coach at the University of Oregon for sprints/hurdles and holds over 18 years of coaching experience. Dr. Adeniji earned a PhD in Sports Biomechanics and has been published three times. Dr. Adeniji holds USATF Level 2 certificates in Sprints/Hurdles/Relays, Jumps, and a USATF Level 3 certificate in Jumps.

Julie Anderson (USATF Snake River) has 30 years of coaching experience at the high school level. Anderson holds USATF Level 2 certificates in jumps, endurance, and sprints/hurdles/relays. Anderson earned her Master of Science in Exercise Physiology from Arizona State University.

Henry Brun (USATF Missouri Valley) is the Director of Cross Country/Track & Field at Friends University (NAIA) in Wichita, KS. Brun has been coaching at the collegiate level for 12 years. He holds USATF Level 2 certificates in Sprints/Hurdles/Relays and Jumps. Coach Brun has been named Conference Coach of the Year seven times and is a three-time NAIA Regional Coach of the Year. **Marcus Carroll (USATF Southern California)** is the Director of Track & Field and Cross Country at Long Beach City College. Carroll is a 2023 USATF Level 3 candidate in Jumps and holds USATF Level 2 certificates in Jumps, Combined Events, Sprints/Hurdles/Relays, Endurance, and a USA Weightlifting Level 2 certification.

Jason Cooper (USATF Illinois) is head girls track & field coach at South Shore International College Prep. Cooper has produced four state champions, two USATF Junior Olympic National Champions, and a state runner up team performance in 17 years of coaching. He holds USATF Level 2 certificates in Sprints/Hurdles/Relays, Jumps, and is a 2023 USATF Level 3 candidate in Sprints/Hurdles/Relays.

Patrick Grosserode (USATF Nebraska) is the horizontal jumps coach for Doane University. and is the president and head coach for USATF club, Lincoln Community Track Club. He holds USATF Level 2 certificates in Jumps and Sprints/Hurdles/Relays and is a 2023 USATF Level 3 candidate in Jumps.

Carol Lawrence, MBA (USATF North Carolina) is the Head Track and Field Coach at Johnson C. Smith University following a successful run at Providence Day School. At Provide Day School, Lawrence was named Charlotte Observer Coach of the Year (5x), South Charlotte Coach of the Year (5x), NCISAA Division 1 Coach of the Year (4x), and produced nine straight girls state championship wins, and eight boys state championship wins. Lawrence holds over 18 years of coaching experience and a USATF Level 3 and World Athletics Level V certificate in Sprints/Hurdles/Relays James Luginsland (USATF New Jersey) is an Adjunct Professor and Teacher at Middlesex College (NJ) & Middlesex County Magnet Schools, with 13 years of coaching experience. Luginsland holds USATF Level 2 certificates in throws and jumps, and is a 2023 USATF Level 3 candidate in Throws. Luginsland has coached the #1 javelin thrower in NCAA DIII Lia Negra, three NJCAA All Americans, and NJIT's first ever Atlantic Sun Conference Champion, Erick McNamara in 2017. Kevin Padin, PhD (USATF Florida) is the head cross Country/track & field coach for Barry University with 11 years of coaching experience. Coach Padin is holds USATF Level 2 certificates in Endurance and Sprints/ Hurdles/ Relays. Padin earned his Doctorate in Physical Therapy from the University of Miami.

Mike Petro (USATF Potamic Valley) is the head cross country/track & field coach at Hood College. Petro holds USATF Level 2 certificates in Throws, Jumps, and Endurance, along with CSCS and NSCA-CPT certifications from the National Strength & Conditioning Association. Petro earned a Masters in Exercise Science and Health Promotion degree from the California University of Pennsylvania.

Andrea Riley (USATF Georgia) is an assistant coach at Lane 4 Track Club and brings nearly 20 years of coaching experience across the NAIA, high school, and club ranks. Riley also teaches middle school and high school grade science. She holds a USATF Level 3 and World Athletics Level V certificate in Sprints/Hurdles/Relays.

Steven Sanchez (USATF South Carolina) is an assistant coach for throws at USC Upstate. Sanchez has over 9 years coaching experience in the NCAA ranks. Sanchez holds USATF Level 2 certificates in Combined Events and Throws and is a 2023 USATF Level 3 candidate in Throws. Jared Steele (USATF Pacific) is the head coach of the BYU Running Club. Steele holds USATF Level 2 certificates in Endurance and Sprints/Hurdles/Relays, and USATF Level 3 certified in the Youth Specialization. He has been for coaching for 10 years. In 2022, Steele earned the Mel Ramey Sports Science award for his work at the 2022 USATF Outdoor Championships. Darcy Wilson (USATF New England) has been coaching for 20 years and joined Brown University as the Associate Head Coach (Throws). Wilson holds USATF Level 2 certificates in Throws and is a 2023 USATF Level 3 candidate in Throws. In 2023, she was the first to ever coach both the male and female NCAA Division I hammer throw title holders in the same year.

Phillip Wright, Jr. (USATF Ohio) is an assistant track & field coach for Upper Arlington High School. In over 11 years of coaching, Wright has guided athletes to multiple school records, state, and national podium finishes. He holds USATF Level 2 certificates in Sprints/Hurdles/Relays and Jumps, and USTFCCCA: Strength and Conditioning.



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