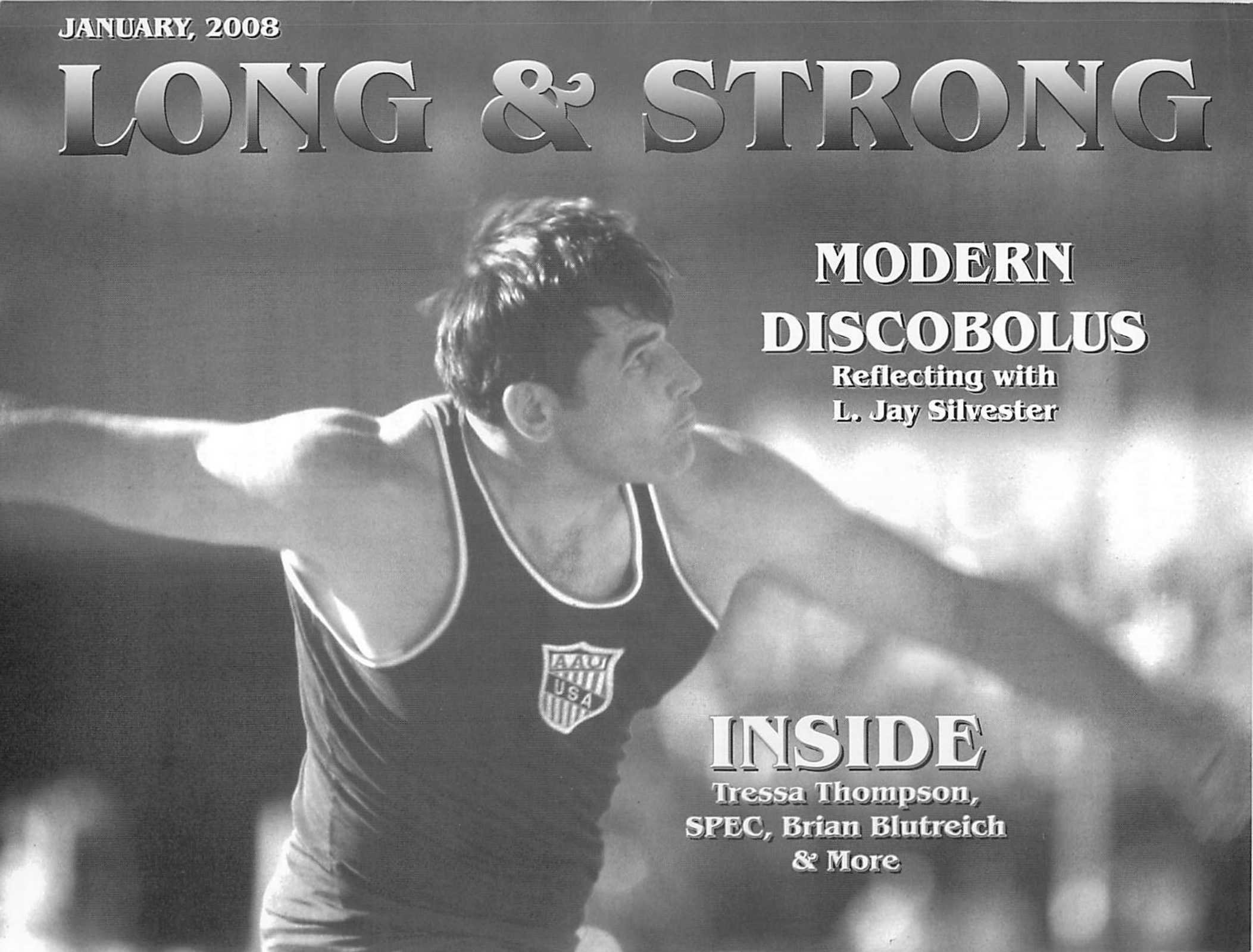
JANUARY, 2008

LONG & STRONG



MODERN DISCOBOLUS

Reflecting with
L. Jay Silvester

INSIDE

Tressa Thompson,
SPEC, Brian Blutreich
& More

Tressa Thompson's promising shot career, and life, were already in decline when she competed at the adidas Oregon Track Classic in June of 2000.

Correspondents:
- Jeff Gorski
- Brad Reid
- Don Babbitt
- Mark Valenti
- Dan McQuaid
- Lane Dowell
- Pat Corbett
- Don Amini

On the cover: Jay Silvester. (Sporting Heroes) This page: Tressa Thompson (Victor Sailer)

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Letter From The Editor

JUST A NUMBER

Glenn Thompson

One of the things I love most about throwing is the abject objectivity of it all. At the end of the day, people only want to know two things: (1) "Did you win?", and (2) "How far did you throw?"

It's really not much more complex than that.

Weather, and all too often, meet disorganization, can negatively impact performance. But you can't blame your performance on being double-teamed, pitched around, or the other girl's dad is president of the booster club. You either beat the tape measure, or it beats you.

Personally, I'm more about the distances. Each season, and to a lesser degree each meet, serves as an opportunity for personal athletic validation. I walk away from every opportunity to test myself wondering what I could have done different or better. Its a more of a mental than physical challenge, and I never grow tired of trying to solve the puzzle.

Less than ten years ago, I was tossing all-time bests with the shot. My PR came at age 36. A lot of that could be attributed to improved technique and training, however, I could still launch a standing throw as far as I ever had.

I lightly heeded the warnings of friends and colleagues about how the impending 40's would quickly erode my athletic skills. How my muscles and joints would ache and how my central nervous system would react at sundial speeds.

I had, and have, designs on defering, if not stopping, the hands of time.

Every year I have benchmarks I measure myself against. I spend my winters playing pick-up hoops twice a week. Every winter, on or about my birthday, I pledge that I will be able to dunk a basketball. Ten years ago, I used to do so in games with ease. The last few years its been become more challenging, and I've been satisfied to drop one in between games. With my 45th birthday fast approaching, I still have to get that dunk this winter.

Each spring I measure my throwing fitness by those shot standing throws. On average, they are down about five feet from when I had my PR. This is another frustrating development.

These developments (or should we say erosions?) often send weekend warriors to their recliners.

"If I can't get it done anymore there's no sake in doing it at all."

Give 'em a gold Timex and move on to something less strenuous that requires minimal effort. Shuffleboard anyone?

Aging is a slippery slope that starts directly underneath a graying scalp. Yes, the metabolism slows, and the joints might stay stiff a little longer after a good workout. And damnit, maybe you can't jump like you used to.

But that doesn't mean you can't try.

There's no restriction on trying new training methods. Experimenting with your technique. On taking supplements and pushing yourself away from the dinner table before that third helping. Maybe an occasional athletic massage or yoga or Pilates to fight that ever lessening range of motion. Taking preventive measures to avoid career-altering or ending injuries.

And more importantly, challenging yourself to what you did last year...or more. It's an attitude that plays well in the gym, at the office and at home. I had a discus PR at age 43 in 2006 not because I was a more powerful athlete. I was just a smarter thrower, more comfortable with my technique and training.

This winter, in full Ponce de Leon mode, I tweaked my training program yet again. With less time available for training and throwing, but with as much desire as ever, the challenge is to train smarter.

Will it work? Who the hell knows. If it doesn't click, or even if it does, I'll be tweaking again next winter.

I sill embrace my 16-pound and 4-kilogram implements, even if they don't always return the sentiment. The lighter implements in my not-so-distant future have all the appeal of the 4pm dinner special at Dennys.

As of this writing I'm still looking for that birthday slam...and I'm going to get it. Not doing so is NOT an option.

Have a great 2008...in all aspects of your life.

I will. **L&S**

L. Jay Silvester

THE ANIMATION OF DISCOBOLUS

By Brad Reid

Once, a man's ideal was captured in stone by a sculptor, and then admired through the millennia; now, a modern Discobulus can be seen, not only as the embodiment of an idyllic form, but in the animation of its very motions.

I am hardly a savant of any sort or kind, though I must say I am amused by their odd and varied synesthesia afflictions, that is, odd pairings and overlappings of sensory perceptions. You know, someone who sees numbers as colors, or shapes as sounds, that sort of thing. In the context of sport, the closest I believe I ever come to a synesthetic experience is watching film of L. Jay Silvester throwing a discus: I think of vowels. A, E, I, O, U... sounds made where there is no closure of the throat cutting off the flow of air, this as opposed to a consonant where the air is restrained at one or more points over an utterance. Silvester throws a discus like a vowel... smooth, rounded, continuous. In contrast, most mortals throw like consonants... hard edges, stops and starts, and odd points of acceleration and deceleration.

Lest you cruelly nickname me "Rain Man," I should quickly mention that I am not alone, though I doubt anyone else would admit to the "vowel" thing, but using another language metaphor, they'd certainly agree that seeing Silvester throw is watching "poetry in motion." 1976 Olympic discus gold medalist Mac Wilkins became an early disciple of Silvester's technique and is on record as one who diligently studied the finer points of his clever mechanics watching Silvester tapes over and over. Wilkins' resulting style similarities are obvious. Both men successfully employed

1. similar wind-up postures;
2. a wide and relatively high right leg sweep out of the back of the ring;
3. a hip sink and a controlled lean without sacrificing critical balance points;
4. then an abrupt landing of pulled-in right pivot foot as the sole friction contact for angular momentum now acting on mass drawn in tight for the all-important center ring pivot;
5. a right foot landing, not over-rotated, but pivoting fast;
6. a kipped left leg reaching for the front of the ring;
7. incredibly long pulls on the discus;
8. chests and heads high as if slamming into an invisible wall;
9. strong terminal vertical vector lift elements and high releases;
10. and, noteworthy skills "flying" the discus.

Oh! 70 plus meters throws; L. Jay Silvester and Mac Wilkins have these in common, too.

Dr. Silvester, commenting for me on how well he thought Mac Wilkins had mastered the technique, said no one has ever done it better than Mac did leading up to and at the 1976 Olympic Games. Wilkins' "wild leg" was hugely successful for him securing multiple world record tosses and an Olympic discus gold medal over stiff international competition. Vintage clips of Wilkins and Silvester moving into and through their right foot pivots look remarkably similar to a kayak being literally sucked into and spat out of a bouldered narrowing in a rushing whitewater river where the restricted water greatly accelerates objects caught up in it. To throw over 70 meters, one has to carry significant speed, force, and critical positioning out of the back of the ring and deliver it, intact, and pass it through a rotating right foot pivot. To be sure, one can turn out of the back and use the left leg to "push" into the middle of the ring, but Silvester had perfected a technique where a simple law of physics commanded his right leg to "pull" him into the middle.

Whereas more than a decade earlier, Parry O'Brien's glide shot put style had been paradigmatic and a sharp visual contrast to its predecessors, L. Jay Silvester's technical contributions were nuanced and subtle additions to then extant discus techniques. The O'Brien glide would be quickly adopted by all serious shot putters. In contrast, the Silvester technique could only be adopted by those with the discernment to see it, first of all, then to learn and apply its magic. For aspiring discus throwers and coaches with an eye for such things, the Silvester wide leg sweep was as revelatory to them as O'Brien's glide had been to legions of shot putters. For this author and many students of the discus throw, even though Mac Wilkins and others would develop successful wide leg sweeps and related mechanics, and throw even farther distances employing it all, for whatever reason, it is never more visually apparent than seeing it performed by L. Jay Silvester.

The Wide Right Leg: Its Origin

As regards the origin of the wide right leg, I should record that L. Jay first noticed it when his brother, Shirrel, had a 170' throw during a practice session prior to the State meet as seniors in high school. L. Jay had thrown well at the Regionals before the State meet, then experimenting himself with a wider right leg, improved to 170' to win State. It would be many years later that, in addition to a wide leg sweep, Silvester would perfect his style with a hip sink and a controlled lean. A second set of world records would soon follow these further refinements in his discus technique. A fine internet article by Dan John titled, "My Commentaries on Ralph Maughan's Classic 1963 Discus Article" includes this observation by L. Jay Silvester taken from *Trials and Tri-*

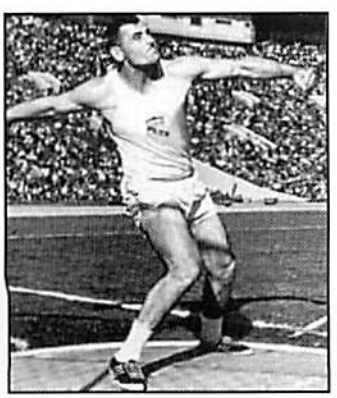
umphs: Mormons in the Olympic Games by Lee Benson and Doug Robinson: "At 30 years old, to discover a significant technical key was very unlikely… But, my entire body tingled when I let go of the discus. Every cell in my body was cheering. That's how you do it." The film clips of L. Jay Silvester, soon thereafter available for consumption by aspiring discus throwers, well, the technique they were trying so hard to emulate and quickly learn had taken the master himself over a dozen years to perfect.

Early Silvester

I was curious whether L. Jay Silvester had left high school as a highly-celebrated athlete along the lines of a Dallas Long or a Randy Matson. Dr. Silvester replied that he started grade school the same year as his older brother, Shirrel, who had suffered an early childhood illness that delayed his schooling. Perhaps because of Shirrel's early illness, L. Jay was actually the larger of the two, but both played various sports and played them successfully. L. Jay thinks Shirrel may have been the more agile of the two, being more mature by a year and a bit lighter, and a better football player at least early on. But, by their senior year, at 6' 2.5" and 205 lbs., L. Jay was an All-State football player, State wrestling champion, and had won both the discus and shot put titles at the State meet with the previously mentioned throw of 170' (14 feet farther than second place) and a new record 58' 3" shot put result. College recruiters definitely took notice of these two athletic brothers.

Off to College…

Though college recruiting was a bit more confined and regional in the 1950s, L. Jay and Shirrel received scholarship offers to a variety of big name schools and ultimately settled on football at the University of Utah. The summer after graduating high school, the two brothers headed to its campus for assigned summer jobs. It lasted just a few weeks. L. Jay noted that they were two innocent farm boys suddenly turned loose in a big city; it felt all wrong, so they left. The brothers didn't dangle long and were quickly picked up by Utah State on football scholarships. Shirrel's athletic career would end soon after his freshman football year concluded while L. Jay's would be at the beginning of one that would endure at elite levels for another twenty years.



L. Jay had one of those experiences that many of us have endured at one time or another as athletes: an overzealous coach. Silvester described the Utah State football training regimen as "torture" and after his freshman experience, he transferred to the track and field team the following spring and fell under the tutelage of Coach Ralph Maughan. Coach Maughan was no mean athlete himself, having lettered eleven times in various sports at Utah State and qualifying for the 1948 Olympics as a hammer thrower. If such a thing as a "throws" coach even existed in the mid-1950s, Silvester would have as good a coach to tutor him as any in the nation. Now a legend in our sport, Coach Maughan would be an excellent choice for a young Silvester and, in turn, it would be through such early notable athletes such as L. Jay and Glenn Passey that his exceptional reputation would be built. Coach Maughan didn't require absolute adherence to any set of throwing rules allowing his throwers the opportunity to explore some for themselves. An independent-minded Silvester would flourish as a thrower in the Utah State program.

Collegiate Statistics

As a freshman, Silvester recalls throwing the discus a best of 156' and putting the shot around 52'. By his sophomore year, L. Jay had improved to the point where he placed third in the discus at the 1957 NCAA Outdoor Championships with a throw of 170-9, and fourth in the shot put with a throw of 55-6. He scored all of Utah State's ten NCAA meet points. As a junior in 1958, L. Jay improved even more and threw 181-8 for third place in the discus and placed second in the shot put with a throw of 57'3/4" yet again scoring all of Utah State's fourteen NCAA meet points.

1959 NCAA Championships?

One year younger than Al Oerter and Rink Babka, who by 1959 had exhausted their NCAA eligibility, and assumed to be a top contender for the 1959 NCAA discus and shot titles, records of the meet show no results and no entries for Silvester his senior year. Dick Cochran (see *LSTJ* Vol.7, Issue 3, Jan. 2005) would win the discus title that year with a throw of 178 feet, almost 14 feet beyond the second place finisher. It was simply no contest. Where was Silvester, I asked during our interview? Dr. Silvester recalled riding back on a bus from a track meet when a fellow passenger mentioned to him how great L. Jay had been throwing of late and "what a shame it was, he couldn't throw at the 1959 NCAAs." This was news to Silvester, bad news, for he had never been told that a now-defunct NCAA competition rule stated that any freshman athlete playing on a varsity team would count as one year of eligibility against them. Silvester had played varsity football his freshman year, then freshman, sophomore and junior years for track & field, this all conspiring to make him ineligible his senior year for the 1959 NCAA Outdoor Track & Field Meet.

So, one of the top discus throwers and shot putters in the nation would be denied his best opportunity to secure a NCAA title, as if two prior years of heads up competition at the NCAAs against the likes of Al Oerter and Rink Babka hadn't been enough. Two gold medals may have slipped out of his grasp owing to an unintentional technicality. Dick Cochran would win the 1959 NCAA discus title going away; Carl Shine would win the shot put with a throw of 57' 11.75".

It should be noted that Dr. Silvester made certain to point out to me that he didn't take a win over Dick Cochran as any sort of certainty and that he doesn't assume he'd have won the 1959 NCAA discus or shot put titles. Cochran outdistanced him at the U.S. Nationals one week later on June 20, 1959 taking third place with 180-8 to Silvester's fourth place throw of 178-9. It would be the missed opportunity to compete and represent his university that would sting. Silvester would certainly have placed first or a second in the discus, and likely either first or second in the shot put, too, for sixteen to twenty valuable team points. This would have been a third consecutive positive NCAA meet outcome to further establish Utah State as a top national program for track and field.

With another sixteen or more NCAA Championship points, Silvester's total NCAA Outdoor championship point production would have totaled forty (assuming two second place finishes in 1959) to as much as forty-four points (with two firsts) making him one of the most productive collegiate throwers in history. This total would have greatly exceeded Oerter's twenty-four NCAA meet points, which Silvester actually equaled in his two years of NCAA Championship competition, or Rink Babka's sixteen. As it is, one of history's most revered and talented throwers was denied the opportunity to compete.

Records Begin to Fall

Within two years of his final season of collegiate eligibility, L. Jay Silvester would win his first of five national discus championship titles on June 23, 1961 defeating Al Oerter with a throw of 195-8 establishing a new meet record and just shy of the world record. Then on August 11, 1961, Silvester established a new world record of 60.56 meters, the first ever 60+ meters throw. Just days later on August 20, 1961, Silvester set his second world record with a distance of 60.72 meters. With a crop of elite discus throwers rarely matched in history, a number of throwers would then trade world records over the ensuing years of the mid 1960s. Fully seven years beyond his first two world records, on May 25, 1968, Silvester took the lead, yet again establishing a new world record mark of 66.54 meters. Then again as in his first cluster of two world records in 1961, on September 18, 1968, he set yet another world record at 68.40 meters.

As the first to exceed 60 meters in 1961, Dr. Silvester is also on record for being the first to exceed 70 meters with a throw of 70.38 meters on May 16, 1971. As it would happen, the meet director had no experience submitting world records for ratification, so his great throw was never ratified as such. However, within the throwing community, no one debates who first exceeded seventy meters in an official meet: L. Jay Silvester was first beyond 60 meters and first beyond 70 meters too, the latter almost ten years after the first milestone, a point of great pride for him as it reflects so positively on his longevity in the sport. It wouldn't be Silvester's only toss beyond 70 meters as he exceeded this threshold in a meet competing against Ricky Bruch, and he had at least one exceptionally long practice throw in the 240 feet range that he discussed at the 2006 NTCA annual meeting.

The 70 and 20 Club

In addition to Silvester's 70+ meter discus throws, I should point out that he was also a 20 plus meter shot putter establishing his best put of 20.01 meters in 1971, his peak year as a multi-event thrower. I queried my various databases looking for a list of all throwers in the 70/20 Club, as one might choose to name it, and found only five men having exceeded both levels: Jay Silvester, Mac Wilkins, Ben Plucknett, Ricky Bruch and Wolfgang Schmidt. This is rarefied company to say the least, and Dr. Silvester, as the club's founding member, gained entry over thirty-six years ago! Of more contemporary American throwers, John Godina and Andy Bloom come quickly to mind as two elite athletes coming very close in recent years to exceeding both of these remarkable levels, these names proffered to younger readers to establish the great difficulty of mastering both throws at such high levels, even to this day.

The Sine Qua Non of Throwing...

Knowing that so many great throwers perform well in more than one throw, I asked Dr. Silvester if this was almost a prerequisite to elite throwing status. Today, one sees more event specialization and few elite throwers even attempt to excel at more than one event. Dr. Silvester agreed that it is probably so, recounting that he had thrown the javelin 203 feet on an early effort, that Mac Wilkins had been an excellent javelin thrower before excelling at the discus and shot put, and that many other throwers had similar histories of being good at throwing things. For any collegiate coach reading this article, as good as a high school prospect is in one specialty event, it may be his or her ability to demonstrate superiority in another throw that establishes the upper ranges he or she will ultimately achieve as a specialist in one. In throws history, one need look no further than Parry O'Brien, a national champion himself as a discus thrower, and then too, at the discus/shot putters in the 70/20 club, to realize that the sine qua non for weight men is first and foremost and forever will be... a great talent for throwing. Other matters such as size and strength certainly factor in but can often be engineered in the weight room and in the cafeteria; a talent for throwing, where none exists naturally, can rarely be coached. To throw a shot put twenty meters or a discus seventy, the critical element is a God-given talent for throwing things.

L. Jay Silvester Statistics:

Shot Put National Championships Results – 1957 5th, 1960 4th.

Discus National Championships Results – 1958 5th, 1959 4th, 1960 6th, 1961 1st, 1962 4th, 1963 1st, 1964 2nd, 1965 2nd, 1967 2nd, 1968 1st, 1969 2nd, 1970 1st, 1972 1st, 1973 4th, 1975 4th, 1976 3rd. Silvester won five national discus titles.

Olympic Teams (4) – 1964 4th, 1968 5th, 1972 2nd and 1976 8th. Silvester won the Olympic Silver Medal at the 1972 Olympic Games.

L. Jay Silvester, in his prime athletic years, stood 6' 2.5" and weighed 250 lbs. He describes himself as strong, but not the strongest of all throwers, with lifts of Snatch 265 lbs., Clean from the floor 365 lbs., Bench Press 465 lbs., and Squat 620 lbs.

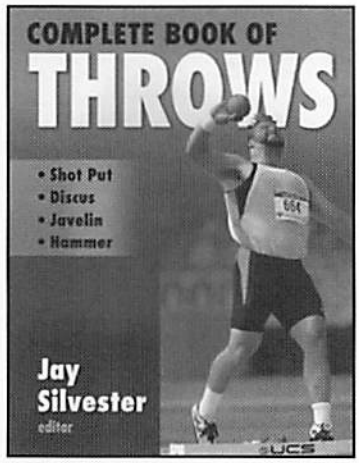
Books by Dr. L Jay Silvester:
Modern Drills for Track & Field – The Throwing Events

Weight Training for Fitness and Strength

Complete Book of Throws (Co-author)

Concluding L. Jay Silvester?
On April 24, 1976, Mac Wilkins, suffering from lingering effects of a weightlifting-induced back injury, would establish his first of many discus world records with a throw of 69.18 meters, 226-11, at the Mt. SAC Relays. He had mastered a throwing technique that would lead to an Olympic discus gold medal just a few months later. Days earlier, Wilkins had visited the T&FN offices to pick up a copy of the 1971 *Track & Field News* issue with L. Jay Silvester adorning its cover. Every little bit of motivation helps.

Competing against Wilkins on his world record day would be a then 38 year-old L. Jay Silvester. Wilkins, though suffering with the injury, was motivated yet again by the elder statesman of discus throwers pounding out big throws early in the warm-up session. *Track & Field News* recorded Wilkins as saying, "I saw Jay Silvester get in there and he looked so good – he just blasted that sucker. I usually kind of ease that first one out there, especially in my condition, but I got in there right after him. Watching him made something happen; everything kicked in. I just blasted three warm up throws. It was just like a competition, they were 'all out there.'" After the competition, Wilkins went on to say "having Jay here really helped... He is the thrower whose technique I try to emulate. Being able to watch him throw helped me get up for the competition." Yes, every little bit of motivation helps.



L. Jay Silvester would yet again make an Olympics Team, his fourth, and he traveled to Montreal along with Mac Wilkins and John Powell. No doubt, Silvester's presence at the 1976 Olympic Games helped and encouraged Mac Wilkins, if only for its psychological underpinnings: Having your role model competing alongside of you as a teammate is a rare privilege in sport. That essentially two generations of throwers can compete side-by-side is an oddity of our sport, but what a great one.

Others, too, would greatly benefit over subsequent years from Dr. Silvester as he coached five NCAA discus champions, at last tally, and countless All-Americans. In 2000, Dr. Silvester served as the Olympics Throws Coach. More recently, he was honored as the torch-bearer at the 2002 Winter Olympics. Concluding Dr. L. Jay Silvester's story? Well, it is simply impossible. As I interviewed him, he was but days away from attending the 2007 NTCA annual conference as a presenter ready to offer up his personal anecdotes and to share his ideas on the throws. Too, just a matter of weeks before our telephone conversation, Dr. Silvester had set yet another discus record, this time in the 70 to 74 masters age class. This leaves the author with the only conclusion I can make of a man in almost constant motion, with many things still being accomplished to this day, a conclusion I have held for a long time: For discus throwers wanting to learn the wide right leg sweep and other valuable discus mechanics, the best model to study is the legendary L. Jay Silvester, our modern day Discobulus.

*** The sequential photographs found in this article (pg. 8) were captured from a 1971 training film of L. Jay Silvester and contributed by Gerry McEvoy, publisher of Mac Throw Video (www.macthrowvideo.com)**

*** *My Commentaries on Ralph Maughan's Classic 1963 Discus Article,* by Dan John, can be found in its entirety at http://danjohn.org/page36.html**

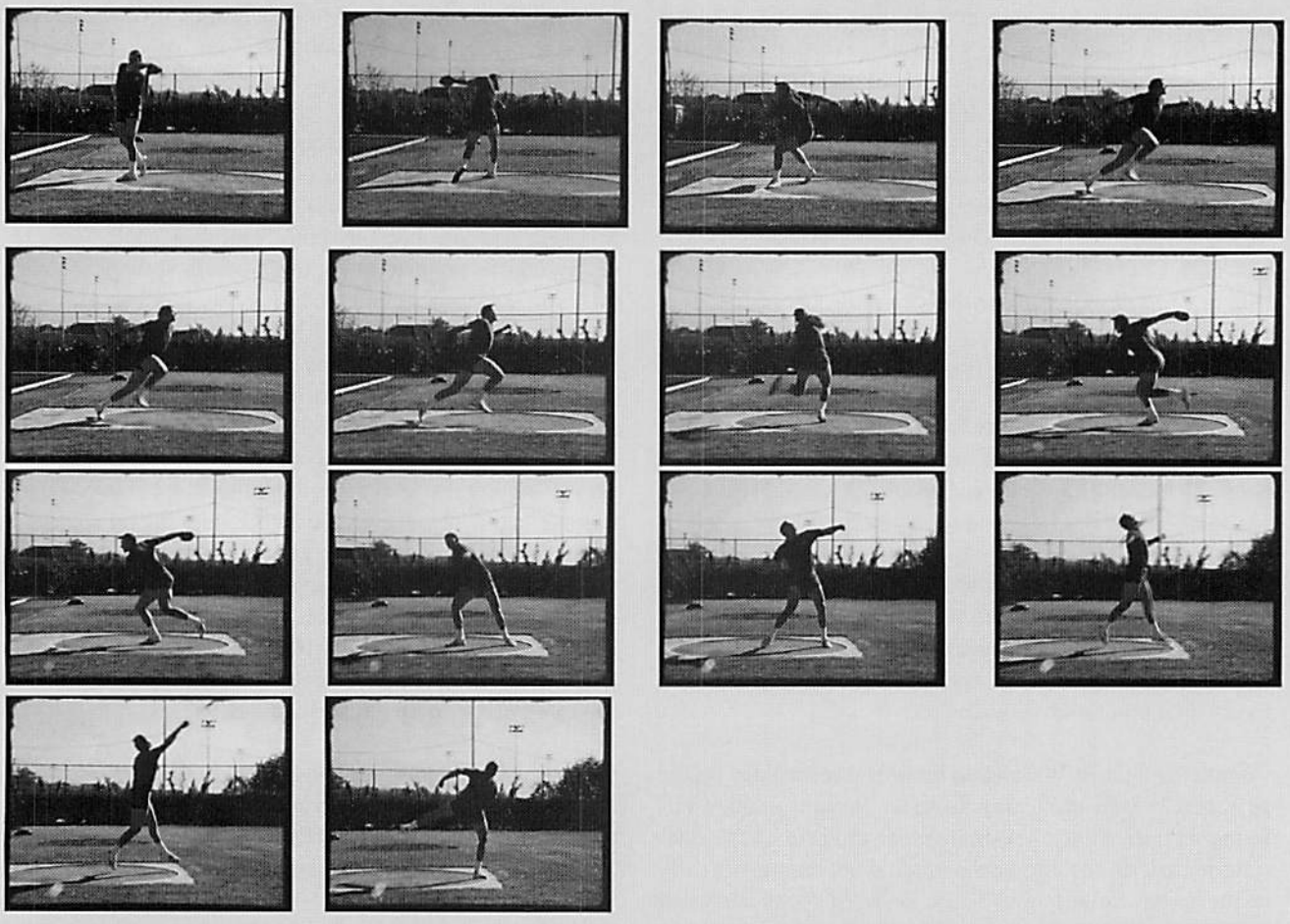
*** The National Throws Coaches Association (NTCA) can be found at www.nationalthrowscoachesassociation.com and is a valuable source of materials for throwers and coaches**

*** *Dick Cochran, The Discus World's Shooting Star* by Brad Reid, *LSTJ* Vol.7, Issue 3, January 2005**

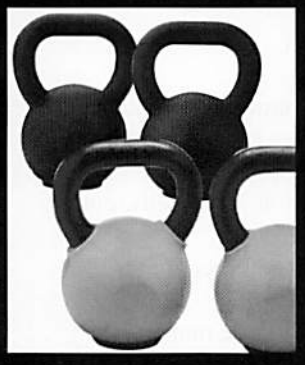
L&S

POETRY IN MOTION

Side and front views show the classic Silvester form (1971).



Sequences courtesy of Gerry MacEvoy



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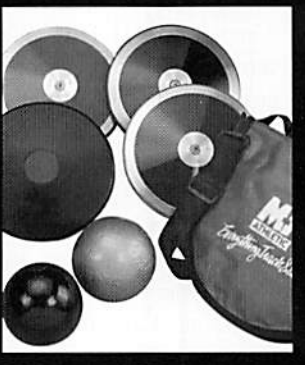

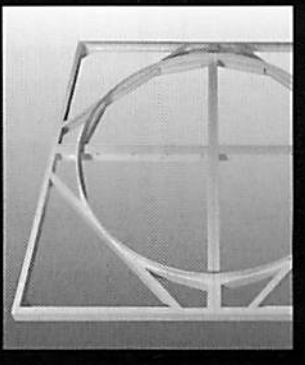

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E.T.S.U./S.P.E.C.

THE SCIENCE OF SPORT

By Glenn Thompson

SPEC (The Sports Performance Enhancement Consortium) is a cooperative program between the East Tennessee State University (ETSU) Department of Athletics and the university. SPEC is a collaborative program between several departments at ETSU- these departments include Intercollegiate Athletics, Kinesiology Leisure and Sport Sciences, Qullien School of Medicine, Physical Therapy and the School of Public Health. It involves service, education and research. The basic mission of SPEC is the development of sport through coaches clinics, sport camps, community involvement, athlete monitoring programs, education programs and research.

Directors Mike Stone and Meg-Ritchie Stone, along with graduate assistant Anna Swisher, took some time recently to inform LSTJ readers about the amazing work they are doing at ETSU.

L&S: *What are the primary goals of SPEC?*

The primary goals of SPEC are
- Education of Sports Scientists and Coaches
- Monitoring Athletes
- Sports Science Research

L&S: *Is SPEC funded entirely by ETSU?*

SPEC: At present SPEC is funded primarily, but not completely, by ETSU. We a have grant from the USOC for some specific projects and support from the national governing bodies of the respective sports

L&S: Two of SPEC's stated goals are (1) producing "cutting edge" sports science research and (2) gaining national and international recognition as the leader in coaching development and sports science, including the development of research, service and educational programs. Can you address the progress you've made in these areas?

SPEC: We are changing our undergraduate and graduate curriculum to a more sports-science/coaching type of curriculum and are working toward a doctoral program in sports science.

Our coaching and scientific meetings include speakers from abroad; we present consistently at national and international meetings, and we publish consistently in both scientific and coaching journals that are read world-wide.

We are attracting students from all over the USA as well as abroad.

L&S: *Can you talk about some of the equipment you have at your facility and how you use it?*

SPEC: Our lab facilites are about 1500Sq ft. and instrumentation/equipment includes:

Body composition -
- skinfolds, underwater weighting, BodPod

Strength and related variables:
- Force Plates
- Force rack - - force plate + potentiometer
- Cycle ergometer (wingates)
- timing gates

Aerobic:
- treadmills, cycles
- ParvoMedics metabolic system

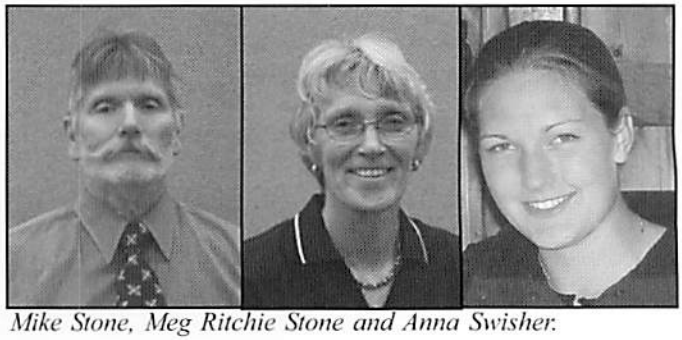
Miscellaneous
- Urine Analysis (refractomemter) - Hydration
- some biochemical analyses instrumentation (lactate, blood glucose, blood lipids etc.)
- Weight Training Equipment

The use of this equipment depends upon the sport.

However, there is a battery of tests that are common to most sports which are:

1. Urinary Specific gravity (hydration)
2. body comp (usually with bodPod)
3. Explosive strength - weighted and unweighted counter-movement and static jumps from a force plate - examine height, peak force, rate of force development, etc.
4. maximum whole body strength (mid-thigh isometric pull)

Depending upon the sport, we would add specific tests such as
- ◆ maximum aerobic power for long-distance runners
- ◆ beep-tests and agility endurance tests for soccer



Mike Stone, Meg Ritchie Stone and Anna Swisher.

L&S: *What role does each of you play in SPEC? What about your staff members?*

SPEC: Meg is the Head and Director of SPEC. She is the driving force behind Coaches Education Development and supervises the overall function of the SPEC program.

Mike is the Lab Director, oversees the lab and makes sure that the scientific aspects of the SPEC program are of high quality and deal with pertinent aspects of sports science.

L&S: *What range of sports do you support? Is track and field a primary sport for you?*

SPEC: We support a wide range of sports from basketball and soccer to track and field. We do work closer with some sports than others – track and field is one of these sports.

L&S: *Is SPEC geared more toward training than actual sport specific technique?*

SPEC: We deal with both of these areas in reaching our goals. Within our testing program (on request of the coach) we use Dartfish to help with qualitative assessment of technique. We work with teams in helping them learn proper lifting technique and supervising some of their workouts.

L&S: With Meg's background in throwing, is there any extra interest in this area of research?

SPEC: We do a great deal of monitoring, testing and training with the throwers. We have much more control in overseeing them - Meg coaches them - as compared to other sports here. We both have a great deal of interest in the throws.

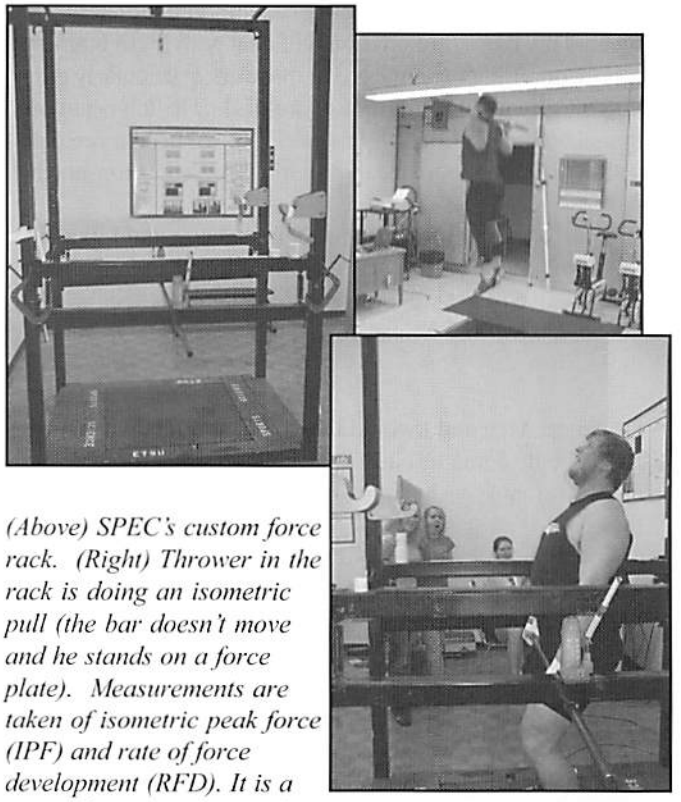
L&S: *Can you tell us more about your throwing-related research and projects?*

SPEC (Anna Swisher): The testing we do with our throwers at ETSU gives us (and them) some really valuable information about their throwing abilities and their ability to adapt in the training process. The testing battery includes hydration, Bodpod, jumps (weighted and unweighted), static and countermovement, and isometric pulls in a force rack, overhead med ball throw, etc.

We would like to invite coaches and athletes to come to our lab at ETSU and get tested. We do outside testing for a modest fee to cover the time it takes to have us run the tests, pull off the data, analyze and return it to the athlete and/or coach. The information that a thrower can gain from the testing we do is enormous. We can measure power outputs (peak power) from jumps on a force plate in addition to impulse and velocity (and acceleration). We measure the static jumps vs. countermovement jumps in the various weighted conditions vs. the unweighted condition. It is the same force rack that Dr. Stone used at the Olympic Training Center in Colorado Springs. We can ascertain rate of force development (RFD) and isometric peak force (IPF) from the isometric pulls. Rate of force development is critical for the throws for obvious reasons and improvements in RFD and IPF correlate well with jump heights and distances thrown. The higher the IPF and RFD, the farther you throw, in almost every case.

One of the main goals of all of the testing and monitoring that we do with the throwers (and with all the teams for that matter) is to determine what qualities/abilities an athletes must possess to be successful in their sport. What is it that correlates best with actual throwing performance? The closer we can get to determining what has the greatest impact on throwing performance, the better we can get at identifying talented throwers (perhaps even at younger ages as many other countries do). Through SPEC, we measure physiological, psychological, anthropomorphic, biomechanical, and technical qualities of the athlete.

Additionally, if we monitor the training process of a particular athlete, such as an elite shot putter, over the



(Above) SPEC's custom force rack. (Right) Thrower in the rack is doing an isometric pull (the bar doesn't move and he stands on a force plate). Measurements are taken of isometric peak force (IPF) and rate of force development (RFD). It is a test to determine maximal leg strength and explosiveness. The thrower in the picture holds the record for the highest IPF and RFD of all athletes tested at ETSU. (Top/Right) Thrower with an 11kg bar on his back is doing a static vertical jump off a force plate.

course of several years, we will be able to help her or him tremendously with altering both related physiology and technical aspects of performance.

Not only are the tests a good way to measure current training state, but if done several times a year, it is a great way to monitor the training process (e.g., if the emphasis in the training process actually caused a change in the athlete, one should be able to predict certain testing results and then check them against actual testing numbers relative to baseline tests).

What we are working towards and hope to accomplish over the next several years is to build on the data we have on throwers at all levels so that we can better predict throwing success.

If we get a good number of throwers to test in the lab, the throwers will benefit individually, but the throwing community also stands to benefit as a whole. I am working towards my Masters now and in a few years will be pursuing a Ph.D. here as well. My research interests are throwing, power sports and weightlifting and I'd like to continue to build off what Dr. Stone and Meg have already done in those fields. I will be spending the next five years with the Stones and we would all like to investigate throwers further to better equip coaches and athletes. Ideally, my thesis/dissertation will deal with these interests. Compiling testing data on throwers, particularly elite throwers, would be enormously helpful. The lab is not out to make money or open a business, but we need more data and the information we can provide throwers is top-notch.

Also, if you or anyone else has things they would like to see tested/researched, please feel free to get in touch with me. I'd like to get some good hard data to advance what is known about what it takes to throw far and how to get there.

Dr. Stone, Meg and I would like to lay out the invite to have people come test at ETSU. Interested parties can email me (annaswisher@gmail.com) and we can go from there.

L&S: Can you name five things every thrower should know, but probably doesn't?

SPEC:
1. Being somewhat under-trained is always better than being any degree of over-trained.
2. In the developmental stages, good technique must be established simultaneously with strength, power, etc.
3. At the advanced level, continuous work on technique is largely non-productive. Once technique is established, it is exceedingly difficult to alter.
4. Typical aerobic training is largely non-productive (and in fact can have negative effects) for throwers.
5. You are never strong enough.

L&S: *Why is it so difficult to alter technique at advanced levels? Are there methods you recommend that are more effective in making technical adjustments at elite levels?*

SPEC: With advanced throwers that have been throwing for many years, technique stabilizes and making technical alterations becomes exceedingly difficult. In a study done with elite weightlifters in the United States, it was shown that even if lifters could make changes in practice, they reverted back to their old technique in competition (under stress).

Part of it deals with critical ages in development and altering motor control during those periods. Certain aspects of motor control become much more difficult to alter after about 16-18 years of age. The motor unit and muscle activation patterns stored in the motor cortex of the brain, once developed, are stored as engrams and are extremely difficult to change (i.e., there is a great deal of both intra- and inter-muscular task specificity). If an athlete begins to learn how to throw after those critical periods, it is harder to learn complex tasks, such as throwing technique, but not impossible.

Think about this—who do you know that has perfect technique every time? So, even if you do not have perfect technique, if you possess greater maximum strength and explosiveness, you are more likely to have a good throw every time. This is assuming that the technical flaws are minor. Based on the scientific literature and our own observations, if you spend a lot of time on technique at these advanced levels, you may be wasting your time. You would be better served working on making gains in strength, explosiveness and power. Technique still demands attention, but should not be the primary focus.

L&S: *What training exercises (weight room and other) do you feel are most important to the different throwing events?*

SPEC: Regardless of the event, there are basic exercises that are important for all throwers (e.g., squats, pulling movements including snatches and cleans and certain presses). Specialized exercises and variations may be important for the events as follows:

Hammer/Shot: front squats, 1/3 squats in a rack
Javelin: pull-overs
Discus: Flys

It is important that you do midsection work that includes rotational movements.

However, the most important factor is not any one exercise, but how these exercises are organized and how the sets,

reps, volume and intensity factors are manipulated and sequenced over the training year(s).

L&S: *Talk about some of your more exciting research project of particular interest to throwers?*

SPEC: For the past 10 years and particularly in the last two years we have investigated the relationship between maximum strength and variables such as rate of force development, power and sport performance (including throwing) - this research clearly indicates that stronger throwers are superior. Indeed our research indicates that becoming strong is a necessary prerequisite to gaining exceptional levels of rate of force development and power output.

We are also currently working on several areas including the effects of vibration and potentiation complexes (some of this research is specific to throwers)
Bone Density study - Throwers have a greater bone density (primarily because of their involved weight-training) and this may have a long-term effect on health issues.

L&S*: Can you expand on your research on bone density related health issues and what are vibration and potentiation complexes?*

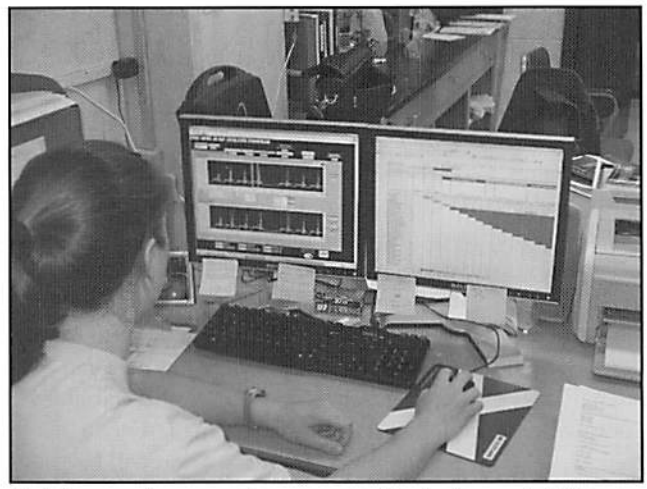
SPEC: Among different sports, we are measuring the differences in BMD. For example, lower BMDs in cross country runners results in a greater potential for stress fractures in the immediate future and in the long-term potentially for osteoporosis. Alternatively, throwers tend to have high BMD and therefore we are looking at the type of training they do and how we might be able to improve the BMD of at-risk groups of athletes.

Vibration
We are investigating the effects of vibration on flexibility and explosiveness. We have data that suggest that it may do both.

Potentiation
Potentiation complexes involve performing either high force or high power movements just before an exercise or sport performance. For example, doing a heavy squat before a vertical jump. We have considerable evidence to show that potentiation exercises can enhance subsequent performance.

L&S: *Can you talk more about how you measure explosive strength? Are there certain quantitative measurements (thresholds) that separate elite level athletes?*

SPEC: Explosive strength deals with the rate of force development (RFD). RFD can be measured both dynamically and isometrically. Basically, the better the thrower, the higher the RFD. This is extremely important because of critical time periods within the throwing movement. For example, for a shot putter (glide) foot contact time in the center of the ring is about 200-230ms. Generally, the greater the force applied during this time period, the better the throw.



Swisher monitors performances with the latest LabView software.

With regard to elite level athletes as a group, there are significant differences in maximum strength and RFD relative to lesser athletes. Please see the above invitation for coaches and athletes to visit our lab for testing so that we may have more information on just what these differences are in the throwing events. If elite throwers come test in out lab, we will assess their abilities.

L&S: *Where can interested parties find your published works?*

SPEC: Look under M.H. Stone , M.E. Stone or M.W. Ramsey in PubMed or Google Scholar;
see: Eliot, M, Wagner, P. and Chui, L. Power Athletes and distance training. *Sports Medicine* 37(1): 47-57, 2007.

We publish in a variety of reviewed journals. We will also begin to put several of our findings on our website (www.etsu.edu/athletics/spec/index.jsp). We also publish in coaching journals such as the *Olympic Coach* which can be found on-line. ***L&S***

HOW STRONG IS STRONG ENOUGH?

By Mike Stone & Gavin Moir

Introduction

Most coaches and athletes would agree that in sports, such as weightlifting and particularly powerlifting, continuous increases in maximum strength would be advantageous. However, there is no agreement with regard to how strong athletes in other sports need to be. The purpose of this discussion is to describe the relationship between strength and 1) sports performance and 2) other variables contributing to athletic performance, particularly rate of force development and power. The discussion will be divided into two parts. Part One will deal with sports more oriented toward strength and power production and Part Two will consider sports requiring great endurance.

Part 1: Strength / Power Sports

From the perspective of this discussion, two variables of importance for most sports are the peak rate of force development (PRFD) and power output. The PRFD is associated with "explosive strength" and is related to the ability to accelerate objects including body mass (Schmidtbleicher 1992).

Work is the product of force and the distance that the object moves in the direction of the force (Force x distance). Power is the rate of doing work (P = force x distance/time) and can be expressed as the product of force and speed (P = Force x speed). Power can be calculated as an average over a range of motion or as an instantaneous value occurring at a particular instant during the displacement of an object. Peak power (PP) is the highest instantaneous power value found over a range of motion. Maximum power (MP) is the highest peak power output one is capable of generating under a given set of conditions (i.e., state of training, type of exercise, etc.). Power output is likely to be the most important factor in separating sports performances (i.e., who wins and who loses). While average power output may be more associated with performance in endurance events, for activities such as jumping, sprinting and weightlifting movements, PP is typically strongly related to success (Garhammer, 1993; Kauhanen, et al. 2000; McBride et al. 1999; Thomas et al. 1994).

Schmidtbleicher (1985, 1992) has presented a theoretical framework indicating that maximum strength is the basic quality that affects power output. He suggested that maximum strength affects power in a hierarchical manner with diminishing influence as the external load decreases to a point at which other factors such as rate of force development may become more important.

Rank Order Studies

One way in which to begin to understand the possible relationships between strength and sports performance is by descriptive (cross-sectional) studies. If greater maximum strength makes a difference, then strong and powerful teams or athletes will perform better than those teams or athletes that are not as strong or powerful. Although this method does not provide conclusive evidence that a cause and effect is in operation, we suggest that cause and effect is certainly possible. We will cite three examples:

Example 1: American collegiate football has 3 divisions (I, II, III). Division one is made up of the larger universities which grant the most football scholarships, Division II grants fewer scholarships and Division III, the least number. Generally, as groups, there are few differences in the type of plays used (strategy) from one division to another. However, if these teams were to play each other on a regular basis, then most of the time Div I teams would beat Div II teams which would beat Div III teams. If strength (and power) plays a role in winning and losing, then one would expect to observe a continuum of strength measures such that Div I > Div II > Div III. Fry and Kraemer (1991) studied several hundred American football players including both offensive and defensive positions. Measures of strength and power clearly followed the expected continuum (Table 1). It should be noted from Table 1 that the stronger players also had better vertical jump heights and sprint times suggesting a relationship between maximum strength and power/speed related measures.

Table 1

Table 1 Performance characteristics of American Football Players (mean ± SD)

TEST	MEAN	DIV I	DIV II	DIV III
BP (KG)	136 9 ± 25.8 (n = 776)	144 5 ± 26 1 (n = 283)	135.2 ± 25 5 (n = 296)	128 6 ± 23.2 (n = 197)
SQ (KG)	185 2 ± 35.7 (n = 297)	192 8 ± 37.6 (n = 115)	182.5 ± 34.4 (n = 114)	176.9 ± 32 4 (n = 68)
PC (KG)	118 1 ± 17 7 (n = 439)	123 0 ± 17 9 (n = 166)	116 5 ± 17 3 (n = 164)	113 0 ± 16 5 (n = 109)
VJ (CM)	70 2 ± 9.1 (n = 505)	72.8 ± 9.3 (n = 193)	69 3 ± 8.5 (n = 181)	67.4 ± 8 8 (n = 131)
36 6 M (S)	4.92 ± 0 27 (n = 768)	4 88 ± 0.27 (n = 281)	4 92 ± 0 26 (n = 282)	4 96 ± 0 27 (n = 205)

Data modified from Fry and Kraemer, 1991

BP - BENCH PRESS
SQ - PARALELL SQUATS
PC - POWER CLEAN
VJ - VERTICAL JUMP
36.6 M - 36 6 m (40 YD) SPRINT

Example 2: It follows that if teams performances are affected by strength, then performances of players within a team should be affected by strength. So, 'first string' players should be stronger and more powerful than 'second string' and so on, again suggesting a continuum of strength (and power) within a football team. Barker ,et al. (1993) studied a Div IAA university team and divided the players into starters (first string) and non-starters. They found that starters (n = 22) had a higher 1 RM squat (174.4 ± 34.5 vs 156.2 ± 24.6 kg) than non-starters (n = 37), again suggesting that maximum strength plays a role in superior football performance. Some evidence indicates that superior strength, especially in relation to body mass, may enhance the ability to perform other motor skills such as jumping (Fry et al. 1991; Stone et al. 1980). Based on the 1 RM squat, normalized by body mass, Barker et al. (1993) also statistically divided the team into 3 relative strength group levels: high, moderate and low (Table 2). Again a continuum is evident as stronger players also had higher

Table 2

Table 2 . Group Performance Measures by Relative Strength (mean ±SD)

TEST	HRS (n = 17)	MRS (n = 27)	LRS (n = 15)
SQ (KG)	180.9 ±30.2	159.8 ±27.8	148.3 ±23.4
RS (KG/BdM)	2.0 ±0.2	1.7 ±0.1	1.4 ±0.2
VJ (CM)	65.8 ±7.6	61.3 ±7.0	55.2 ±6.8
SVJ (CM)	63.8 ±6.7	57.5 ±6.7	52.3 7.0

Data modified from Barker et al. 1993

HRS - high relative strength
MRS - moderate relative strength
LRS - low relative strength

SQ - 1 RM parallel squat
RS - relative strength (1rm SQ/body mass)
VJ - vertical jump
SVJ - static vertical jump (3 second pause at 90o knee angle)

vertical jumps compared to moderate- and low-level strength groups.

Example 3: For many years, throwers (athletics field events) have been encouraged to lift weights in order to enhance throwing ability. Coaches and athletes strongly believe that increased strength (in specific exercises) is linked to throwing ability. Paul Ward (former Elite Throws Co-ordinator for USA Track and Field) presented evidence in support of this belief that indicated better throwers were stronger (Ward 1982). Ward compiled data form 1978 - 1981 which indicated that throwing ability was related to a strength in the power clean, snatch, squat and bench press. More recently compiled data (Stone and Stone, 1999) supports Ward's thesis. These data (Table 3a and 3b) were collected by carefully interviewing (and observing when possible) men and women throwers and their coaches with regard to their lifting ability (1 RM capability) during 1997-1998. Data in Table 3a and 3b deals with throwers in the United States, which compares different levels of shot-

Table 3a

Table 3a . Strength Levels of Throwers (Men)

SHOT MEN (M ±SD; kg; 1997-1998)

	SQUAT	CLEAN	SNATCH	BENCH
GODINA	287.0327*	190	-	236
NATIONAL LEVEL AUTOMATIC	290.3±38.8 (n = 3)	186.0±12.0 (n = 3)	129.3±28.9 (n = 2)	226.8±0 (n = 3)
NATIONAL PROVISIONAL	283.5±11.3 (n = 3)	155.3±1.8 (n = 3)	106.8±9.3 (n = 2)	189.0±15.9 (n = 3)
COLLEGIATE	266.0±38.4 (n = 7)	137.7±17.3 (n = 7)	84.9±39.3 (n = 6)	180.8±23.9 (n = 7)

Table 3b . Strength Levels of Throwers (Women) .

SHOT WOMEN (M ±SD; kg; 1997-1998)

	SQUAT	CLEAN	SNATCH	BENCH
NATIONAL LEVEL AUTOMATIC	168.8±11.7 (n = 7)	106.5±6.7 (n = 7)	76.5±7.1 (n = 7)	112.8±9.6 (n = 7)
NATIONAL PROVISIONAL	147.0 ± 12.3 (n = 2)	100.0 ±5.8 (n = 2)	71.1 ±5.3 (n = 2)	101.5± 5.5 (n = 3)
COLLEGIATE	84.5± 10.0 (n = 5)	61.4 ±4.3 (n = 5)	46.3 ±5.9 (n = 5)	79.8 ±0 (n = 1)

Data from UCLA, USC, Wyoming, Appalachian State University
GODINA - John Godina - world leader in shot and discus at time of data collection
* with knee wraps

putters and discus throwers. The data shown in Table 3 again indicates that maximum strength may be related to athletic performance.

Correlational Studies

A correlation is a method measuring the strength of the relationship among variables - the correlation coefficient (symbolized as r .) ranges from -1.0 to 1.0; the closer the coefficient is to 1.0 the stronger the relationship. A positive correlation between two variables would mean they

Trivial 0.0	Very strong 0.7
Small 0.1	Nearly Perfect 0.9
Moderate 0.3	Perfect 1.0
Strong 0.5	.

increase together, a negative correlation would mean an inverse relationship. Hopkins (1997) has ranked correlations as r .=

By multiplying the correlation coefficient by itself (r2) the shared variance can be determined. The shared variance is an estimation of how much one variable is explained by another.

Correlational studies can be divided into 3 categories

based on the degree of mechanical specificity used in testing force production and power output: 1) studies in which peak force was measured isometrically and then related to peak force, PRFD or power when measured dynamically within the same exercise context, 2) studies which use the same exercise but in which tests of power or PRFD and the 1 RM were performed at separate times, 3) those studies in which strength is measured in one movement pattern (i.e,. exercise) and then related to power production, PRFD or performance (i.e., speed, height, distance) in another exercise. Examples of all three types of studies can be considered:

Category 1: A review of the literature generally indicates that isometric measures of maximum strength have only weak to moderately strong correlations with dynamic exercise variables (Wilson and Murphy 1996). However, they point out that isometric-dynamic relationships can be strengthened by using a test in a position specific (positional specificity) to the performance of interest and by choosing joint angles which involve the highest force outputs in the performance to be used. This would entail isometrically measuring a specific position in the range of motion of the exercise of interest. An example of the use of positional specificity can be found in the paper by Haff, et al. (1997) who studied the relationship between peak forces and PRFD using 8 well-trained male subjects. In this study (Haff, et al. 1997) mid-thigh pulls were performed starting from a knee angle of approximately 144 degrees and a hip angle of approximately 165 degrees. These angles were chosen because of their correspondence to that portion of a clean pull in which the highest forces and RFD are produced. Vertical forces were measured by using a force plate. Force characteristics of the pull were measured isometrically and at 100, 90 and 80% (DP 100, DP90, DP80) of the subjects' best power clean. Isometric peak force showed moderate to strong correlations with dynamic peak forces generated during DP100, DP90, DP80 (r .= 0.8, 0.77, 0.66, respectively). Isometric PRFD also showed moderate to strong correlations with dynamic peak force (r .= 0.75, 0.73, 0.65, respectively) and was strongly correlated with dynamic PRFD (r.= 0.84, 0.88, 0.84, respectively). This study indicated that 1) isometric and dynamic peak forces can share some structural and functional foundation and 2) peak force can be related to the ability to produce a high PRFD. In other words, stronger people tend to generate forces faster, a conclusion shared by other researchers (Aagaard et al. 1994).

Category 2: Moss, et al. (1997) investigated the relationship between the 1RM and peak power at various percentages of the 1RM in elbow flexion. They found very strong correlations between the 1 RM and maximum peak power output (r .= 0.93). However, they also showed a strong correlation between the peak power output at 2.5 kg and the 1 RM (r .= 0.73). This latter finding is quite important as it indicated that even at relatively light weights, maximum strength (as measured by the 1 RM) has considerable influence on power production.

More recently Cronin, et al. (2000) investigated the role of the 1 RM on the power output during the first 200 ms of a bench press for both plyometric and concentric-only conditions. Effects were established for loads representing 40, 60 and 80% of the 1 RM. The results of the study confirmed the enhancement of the concentric phase of the bench press by prior eccentric muscle action (i.e., stretch-shortening). It was also determined that having a high 1 RM augmented power production during the first 200 ms of the concentric phase during a normal (plyometric) bench press. It was concluded that "for stretch *shortening* activity of short duration, greater maximal strength will result in greater instantaneous power production; maximal strength training methods should therefore be an integral training strategy for such activity" (p. 1769).

Category 3: Considering the strong theoretical underpinning and experimental data (categories 1-2), it is logical to assume that maximum strength contributes markedly to strength/power sports performances. However, experimental evidence in which maximum strength or estimates of maximum strength (i.e., 1 RM) have been related to performance or with other performance-related variables is difficult to find, especially studies using well-trained athletes. Several available studies have focused on the relationship of maximum strength and jumping. Seyfarth, et al. (2000), studying the long jump and using mathematical modeling techniques, have provided a strong theoretical basis, which indicates that maximum strength is a primary factor in jumping performance. They found that maximum strength, particularly eccentric strength, was more important than factors such as tendon compliance or muscle contraction speed in improving long jump performance.

Although not all studies agree (Costill, et al. 1968; Hutto 1938; Start 1966), several investigations (Berger and Blaschke 1966; Berger and Hendersen 1967; McClements 1966; Thomas, et al. 1996) using the unweighted standing long jump and vertical jump indicated a strong relationship (r =0.7) between power and measures of maximum strength. Whitley and Smith (1966) and Eckert (1968) found that by adding additional resistance to a movement, the relationship between maximum strength and power and strength and speed tended to increase with the added resistance, a finding supported by Smidtbleicher (1985,1992). However, these studies used untrained subjects and measured maximum strength in a variety ways. More recently, Stone, et al. (1998 - unpublished data) investigated the relationship of the 1 RM squat and the standing long jump (SLJ) among trained (college sprinters, n = 12) and relatively untrained men and women (beginning weight training class, n = 21). The correlation between the 1 RM squat and SLJ was r .= 0.66 for the weight training class, r .= 0.72 for the sprinters and r .= 0.82 for the combined groups (n = 33). Thus, there is evidence that during jumping activities, 50 %

or more (i.e., shared variance) of the performance is due to maximum strength and this can increase with the load.

The relationship between sprinting and maximum strength measures has also been studied. As with jumping, a theoretical foundation for a strong relationship between strength and performance can be found in the work of Weyand, et al. (2000). Using a mathematical model as well as experimental evidence from a treadmill-mounted force plate, they found that peak ground reaction forces (vertical forces affecting flight time and stride length) were the limiting factors in running speed. The peak ground reaction forces were influenced by the maximum available force (maximum force which can be produced) and the rate of force development. Since dynamic peak force and PRFD can be strongly related to measures of maximum strength (Haff et al. 1997) then running speed may be associated with maximum strength. Additionally, investigations of the relationship between "explosive strength" (various types of weighted and unweighted jumps) and jumping or sprinting ability have shown strong to very strong correlations (r .= - 0.5 - 0.83) (Baker and Nance 1999; Manou, et al. 2000). Because maximum strength and jumping ability have strong correlations (Stone, et al. 1998), it is logical to assume that maximum strength should be related to sprinting ability.

Several investigators have studied the relationship between maximum strength measured isokinetically and sprint performance. In active, but non-sprint trained subjects, Farrar and Thorland (1987) found a poor relationship between peak leg extension torque and 100 m times at fast speeds (5.24 rads x s-1) or slow speeds (1.05 rads x s-1). However, faster sprinters did show peak torques at the slow leg extension speed which were significantly greater than the slower sprinters.

Delecluse (1997), citing unpublished data on physical education students, studied the relationship of concentric isokinetic knee and ankle extension (5. 24 and 3.49 rads x s-1) and knee flexors (1.13 rads x s-1) and running speed over 40 m. The data indicated that initial acceleration (first 15m) was related to knee and ankle extensor strength and that flexor strength was related to the speed during the final 20m. Dowson, et al. (1998) studied a heterogeneous group of athletes consisting of rugby players, sprinters and physically active young men. They found that performance for 1-15m and velocity over 30-35m were significantly related (r .= -0.41 to -0.69) to absolute and relative (torque/body mass) of several movements. It was further found that these relationships could be improved by using an allometric force model, which considered differences in limb length and body mass. These movements both included concentric and eccentric knee flexion and extension torque measured at a variety of speeds ranging from 1.05 rads x s-1 to 4.19 rads x s-1. Similar findings have been reported by Alexander (1989) using "elite" male (10.83s for 100m) and female (12.03s for 100m) sprinters.

Although these data indicate that peak torque can have moderate to strong correlations with sprint performance, one must question the use of isokinetic dynamometers for strength testing, particularly in trying to relate peak isokinetic torques to sports performance (Stone, et al. 2000). For example, most isokinetic testing uses single joint, open kinetic chain movements. However, sprinting or jumping are multi-joint activities with propulsive phases which are largely closed chain activities. Furthermore, most of these isokinetic studies did not use strength measures in which forces were applied vertically. One might argue that because vertical forces can be shown to be limiting factors in sprinting, then there should be a relationship between measures of maximum "vertical strength" and sprint performance.

Table 4

Table 4. Relationship between Estimates of Maximum Strength & Sprint Times (Baker and Nance 1999)

Strength Measure	10m	40m
3RM squat	-0.06	-0.19
3RM squat/BdM	-0.39	-0.66
3RM HC	-0.36	-0.24
3RM HC/BdM	-0.56	-0.72

BdM - BODY MASS
HC - HANG CLEAN

Using trained subjects (Rugby players, n = 20) Baker and Nance (1999) found only weak correlations between absolute estimates of maximum strength (3 RM squat and hang clean), and sprint times over 10 and 40m. However, when strength measures were normalised by dividing the absolute values by body mass stronger correlations were noted (Table 4). This study points out two interesting possibilities:

Sprint performance may be more related to relative ("normalised") measures of maximum strength. In this context it can be argued that simply dividing by body mass does not necessarily obviate differences in regional body mass (for example some people have relatively more mass and lean body mass in the upper or lower body). Nor does maximum strength increase in a linear fashion with body mass. Thus, other methods of accounting for differences in body mass may be necessary (Dowson, et al. 1998).

The hang clean was better correlated to sprint performance than the squat. However, weightlifting movements (snatch and clean and jerk) and their variations such as hang cleans may be more accurately described as "Explosive Strength" or high power exercises. In this context Baker and Nance (1999) also found that the power output/kg generated during weighted jumps (40 -100kg) had correlations with the 10m sprint ranging from r .= - 0.52 to - 0.61 and r .= -0.52 - 0.75 for the 40m sprint.

Longitudinal Studies

Correlations only indicate a magnitude of relationship and do not necessarily indicate a cause and effect. In order to better understand "cause and effect," longitudinal studies are necessary. It is not the purpose of this paper to provide a substantial review of the many longitudinal studies dealing with increased strength and its effects on other performance variables. As with cross-sectional studies, many factors can affect the outcome. These factors include trained versus untrained subjects, length of study, and the degree of mechanical specificity of the exercises used in training and testing. It should also be noted that in no study has strength training changed selected performance variables (i.e., sprinting, jumping, agility) to the same extent as the changes observed in maximum strength (i.e., the changes are not perfectly correlated). This indicates that changes in other factors (i.e., power, PRFD) may also accompany the increases in strength resulting from training which also contribute to improved performance. It is also possible that the lack of direct correspondence between increased strength and other types of performance is at least partially due to a lag time (Abernethy and Jurimae 1996; Delecluse 1997; Sanborn, et al. 2000; Stone, et al. 2000). Lag time is concerned with a period of time in which an athlete "learns" how to use increased strength in various sports events. It is possible that this lag time may extend many months; if this is true, then this would be beyond the limited experimental bounds of most studies which typically only last a few weeks.

Several studies have examined the effects of resistance training on a number of different performance variables, such as jumping, test of speed, power and agility; generally, these studies have shown that an increase in strength is accompanied by an increase in performance among relatively untrained subjects. (For example see: Augustsson, et al. 1998; Robinson, et al. 1995; Sanborn, et al. 2000; Stone, et al. 1980). Making changes in well-trained athletes is more difficult (Baker 1996) and requires advanced training programs. However it appears that a key ingredient in these advanced programmes is improvement of maximum strength as well as specialised work on speed and power (Harris, et al. 2000).

Summary

Evidence from a number of different types of research as well as observational data indicates that maximum strength is strongly related to sports performances that rely on speed and power. Although explaining performance in strength/power sports is a multi-factorial problem, there is little doubt that maximum strength is a key component. Thus, it may be stated "you are never too strong."

References are available at : http://www.coachesinfo.com/article/246/

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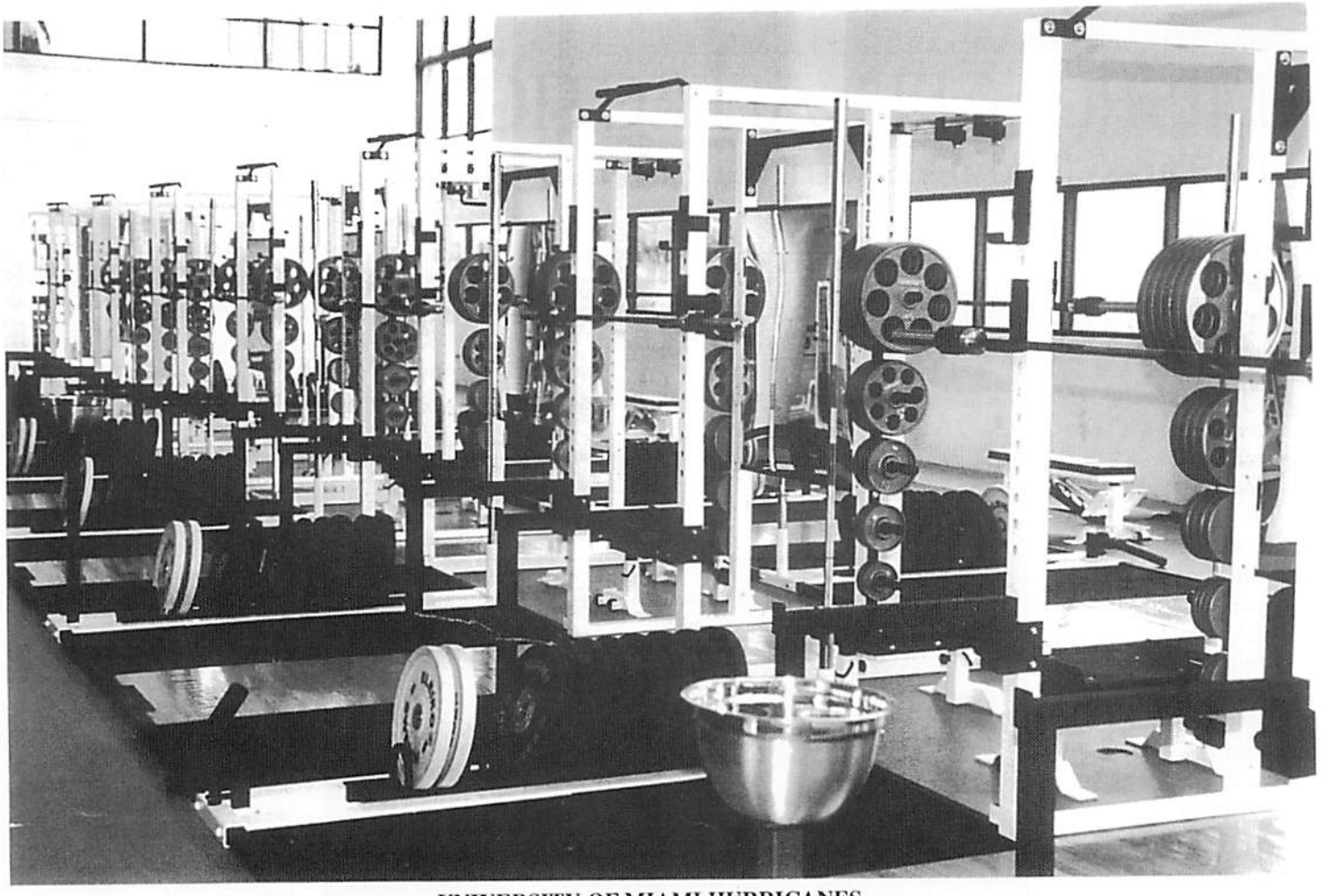

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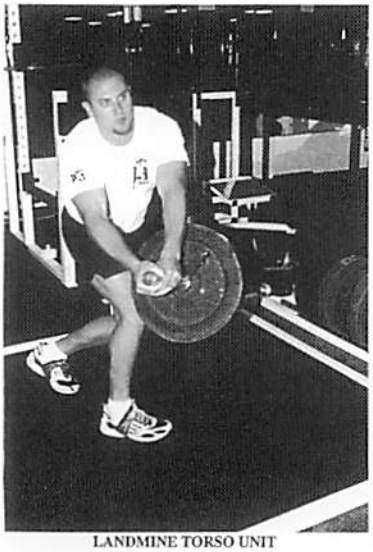

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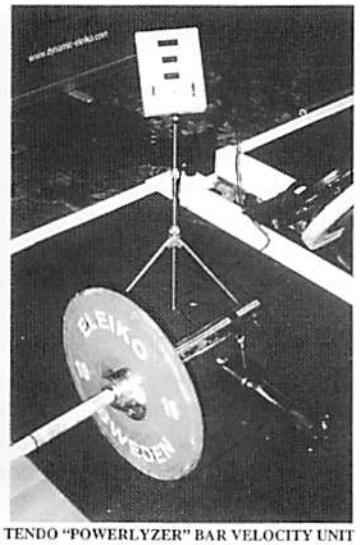
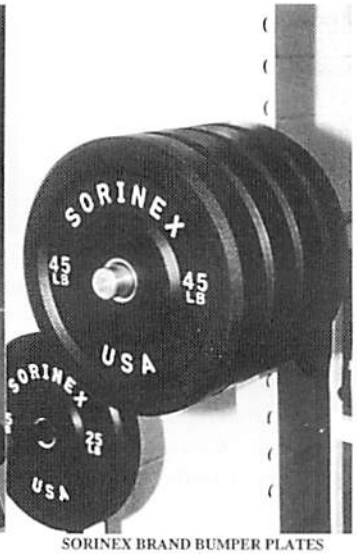


TENDO "POWERLYZER" BAR VELOCITY UNIT

SCORPION SWISS BALL BENCH



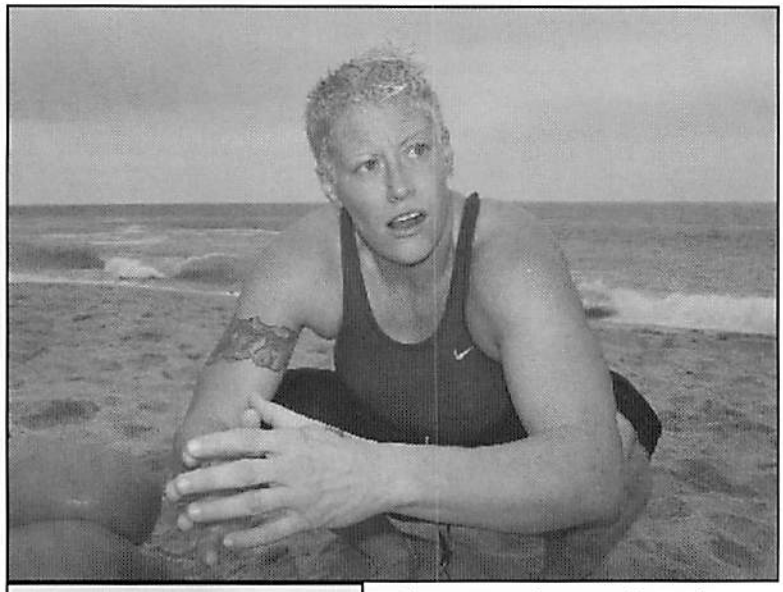
SORINEX BRAND BUMPER PLATES

MISPLACED AFFECTION

By Tressa Thompson with Glenn Thompson

Friday, October 20, 2000
INDIANAPOLIS - USA Track & Field (USATF) announced on Friday that Tressa Thompson will be ineligible for competition for two (2) years effective July 27, 2000, has been disqualified from the 2000 Oregon Track Classic and is being given a public warning as a result of a doping violation. Thompson tested positive at the 2000 Oregon Track Classic on June 25, 2000 for amphetamine, methamphetamine and cocaine metabolites. Thompson admitted to the positive test.

In 1999, Tressa Thompson measured success in feet and inches. A 1998 University of Nebraska graduate, Thompson was America's best hope for battling the European shot putters for podium spots in the coming decade. At 24 years old and an agile and powerful 230 pounds, her athletic peak was well in front of her. She rang up the fifth best performance in the world that year and was on a clear path for the 2000 Sydney Olympic team. But the Olympics went off without Thompson, who on the eve of the Olympic Trials in July, was suspended by the USATF. A post-Olympic USATF news release confirmed a doping violation not for steroids or other performance enhancers, but for recreational drugs.



Thompson, above in November, 2007 on the beach in southern California during her stint at a rehab clinic set up by her family and the A&E network television show Intervention, and below during her collegiate career at the University of Nebraska.

What appeared to be nothing more than a very costly and untimely indiscretion was not the first domino, nor the last, in a chain of massive personal implosions. In fact, her actions were not an indiscretion, which implies singularity or limited occurrence, but was a public outing of an addiction demon which would irrevocably alter the path of her life. Rather than work through her suspension and return to the sport which had paid for her college education and offered the promise of sporting immortality, she began a journey which no one, least of all Thompson, can be sure has reached either its zenith or nadir.

Thompson no longer judges success in terms of gold, silver and bronze or feet and inches. Victory can now be viewed as a day spent sober. But victory, however self-destructive, can also be a weeklong binge, depending on her perspective at any given time.

I first tried to contact Thompson when I found an open letter from her on a webpage maintained by her sister in 2001. Thompson spoke vaguely of her trials and missteps, but also of her hope for the future.

My initial attempts to reach Tressa through her sister bore no fruit. But every so often, I would page through old emails, spot my inquiries to Tressa's sister and give it another shot, always with the same results.

Sometimes the things we want most in life, such as career opportunities and companionship, show up on our doorsteps when we least expect them. So it was that Tressa Thompson wandered into the pages of this publication, as she has many places over the last nine years.

On November 4, 2007, I opened my email that evening, perused my inbox and did a classic double-take, pressing my face a little closer to the monitor. Tressa had contacted me directly and wanted to talk. A dialogue quickly ensued and what you are about to read is, for the most

part, a first person account of her travails. Thompson's candidness about her experience is very powerful. As powerful as the addictive substances that have redirected the course of her life. To rewrite what she has conveyed to me would only dilute her story. This is a tale best conveyed by the person at its epicenter.

To begin my story, I need to go back a few years. I will be recalling situations to the best of my knowledge. Remember that the story that you are about to embark on is my story. I will share my feelings and emotions that I have and am still dealing with. If you or anyone can learn and benefit from these words, I applaud you. I had to learn the hard way.

My throwing career was a talent that just seemed to have fallen into place as the years unfolded before me. As a natural-born leader and seasoned athlete in every sport in high school, it seemed to be a given that I would continue my journey into collegiate athletics. That's just what transpired as I signed an athletic scholarship at the University of Nebraska. That is where I went on to make landmark accomplishments and recognitions that still to this day I look back and say, "Wow!" My records and distances were a success story in themselves.

What happened next in my life was just wreckless abandonment.

I was on top of my game doing everything that was asked of me regarding my training. I was going over and above what was asked because those were the things that were required for an elite athlete be successful. My coach and I were on cutting edge material for perfecting my technique. My strength was increasing at levels to be a force to reckon with. I was happy with my performances and career.

Unfortunately, my life at this time wasn't complete, and it started to foreshadow events to come that would sabotage my future plans. The arc I projected for my throwing career was one that would have occupied my life for the remainder of my adult years. I was planning on the 2000, 2004, 2008, 2012, even 2016 Olympics. Making track and field my life, just like my dear friend Connie [Price-Smith]. She was such an inspiration to me, I can't even start to explain. But those were the footsteps that I planned to follow in. It's so simple to see how drugs can destroy one's dreams overnight and right before your eyes. Within a year of being introduced to drugs, everything that I had been working my whole life for was gone.

Prince had a song about partying like it's 1999. Well, I guess that was my theme song! Unbeknownst to everyone in my life, I began a lifestyle that seemed to embrace me and make me its own.

Through college, I visited the bars and drank socially amongst the college crowd. But I was fighting a feeling of loneliness. I was looking for someone or something to take that away.

In Feburary, 1999, I was invited to Omaha, Nebraska by a second cousin to go to the clubs. I was excited, but yet naïve about what was about to happen to me. I got there and we ended up doing coke all night long. That was a Thursday night; the night I fell in love.

The party was so enlightening and the people were all accepting and seemed like an 'instant' family.
Within weeks I started using crank on a regular basis. I was introduced to ecstasy, acid, GHB, and a little bit of weed. But I fell in love with meth and used it two to seven days a week, pending my track schedule.

In March 1999, after competing at the USATF Indoor Nationals in Atlanta, I found *Backstreet,* a great club where I saw individuals doing lines of coke at the bar, and I also found a hit of ecstasy. That roll began my evening as I was romancing my new love.

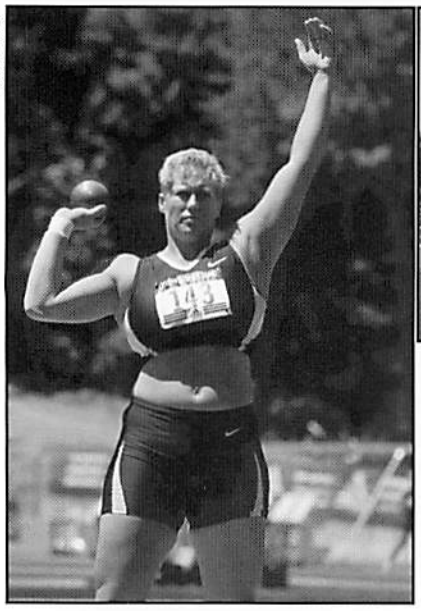
1999 World Rankings
SHOT
1. 20.69i 67-10 3/4.....Svetlana Krivelyova (Rus)
2. 19.85 65-1 1/2.....Astrid Kumbernuss (Ger
3. 19.61 64-4.....Nadine Kleinert (Ger
4. 19.58 64-3.....Yanina Korolchik (Blr)
5. 19.46 63-10 1/4.....*Connie Price-Smith (InI)
6. 19.44i 63-9 1/2.....*Tressa Thompson (Nik)
7. 19.29 63-3 1/2.....Yumileidi Cumbá (Cub)
8. 19.26i 63-2 1/4.....Krystyna Zabawska (Pol)
9. 19.21 63-1/4....Valentina Fedyushina (Aut) NR
10. 19.18 62-11 1/4.....Larisa Peleshenko (Rus)

As the summer rolled around, I do believe I was a full-fledged addict. In June of 1999, I flew to Europe to compete and that was the longest (three weeks) I had gone without meth until later down the road at my first rehab facility.

Those in the track world could probably see through my performance that I wasn't throwing over 60'. My physical body was suffering, but I thought I was looking good. Something in me kept me from doing the socially right thing and allowed me to live in the two worlds I created.

Now a year later, I thought I was juggling my track career and my social life just fine. In reality, I knew I had no control on my using, and track was disappearing from my life.

2000 adidas Oregon Track Classic 06/25/00
Final WOMEN'S SHOT PUT
1. Connie PRICE-SMITH, Nike International 19.18m (62-11.25); 2. Nada KAWAR, JORDAN 17.56m (57-07.50); 3. Dawn DUMBLE, Reebok 17.48m (57-04.25); 4. Tressa THOMPSON, Nike 17.31m (56-09.50)



Thompson, whose performances were already in decline, took the fateful drug test shortly after this spring 2000 competition in Portland, Oregon. The later announcement just prior to the Olympic Trials signaled the end of her competitive career and the beginning of a downward spiral that has lasted another seven years.

I was upset over a relationship gone sour and was partying the whole week prior to the addias Oregon Track Classic June 25, 2000. I believe I threw on a Sunday and that Thursday night/Friday morning was my last attempt at using because I was aware of the random drug testing. Stupid me, I wasn't realizing that coke and meth were stimulants. It was obvious that my performance was suffering. The drugs sure didn't help me throw any farther. I threw horribly that day. I believe I even came in last place. As we were leaving the ring, here came one of the volunteers with the drug testing identifications swinging from their neck. I kept walking, head down, disappointed with my performance, wondering why I threw like crap!

I was wondering if those two and a half days of not using was long enough. Would it not show up?

I left that meet and kept my fingers crossed for a long time. It was in the back of my mind 24/7, but it didn't stop me from continuing to party.

By this time I had already moved to Omaha with my girlfriend. We were dealing drugs and seemed to have a lucrative business while satisfying our drug habit at the same time. We had a fabulous apartment and we were known by the party crowd downtown. They couldn't wait for us to arrive so they could begin their evenings.
It was a Friday night. The phone rang. I was sitting there smoking meth on tin foil, primping myself for the night. I picked up the phone and Jill Pilgrim (USATF legal counsel) was on the other end and said, "Hello, Tressa?"

"Yes."

"This is Jill Pilgrim from USATF and I have some bad news for you."

My stomach dropped as I knew what she was about to say. She went on to inform me that I had a positive test for coke and meth in Oregon. I don't recall much of the rest of the conversation, but my mind started racing.

Thoughts of how to fight this. Ways or excuses that would turn this test around.

My first instinct was to call my hometown doctor and see if she would help me cover up the scandal, and that's just what I did. That conversation ended quickly with no help.

After realizing that I could do nothing to cover this up, denial started to fade away and my thoughts were of my family and my coach. How was it going it affect them? The pain, disappointment and shame. My two lives had crashed head on at that one moment. That evening I was contemplating the next move to make. As an addict, I continued to numb that pain through using. I went to the clubs acting like nothing happened, but knowing that Sunday morning I was flying to Sacramento for the 2000 Olympic Trials.

Honestly, one reason I am sharing my story is for my own recovery. I don't know if I have honestly dealt with this catastrophic event I brought upon my own life. Now, eight years later, possibly for the first time, I am looking at the merging of my two lives.

Forty-eight hours later I was on a plane to Sacramento. I didn't know how I was going to face the facts, but one thing I did know was I needed to tell my family and my coach. My loved ones were the first to know.

I had feelings of such disappointment. I had failed not just myself and my dreams, but the dreams and investments of others. That's what hurt the most; disappointing all those who I loved as well as my fans. Probably the biggest person I let down was myself. In Sacramento at the headquarters hotel, I shared with my coach [University of Nebraska throws coach Mark Colligan] the chain of events that had played out. My coach is such a tremendous man of integrity and wisdom. I was his lost sheep and he knew how to help me. I cannot say enough kind and compassionate words about my coach, who I call 'Coose.'

At this point I need to incorporate a few things about this pillar from the past. Honestly, that is a book in itself. If one were to wish upon a star for a *perfect relationship* between a pupil and a teacher, the one between Coose and I, was it.

My heart still suffers from the hole I have allowed to widen over the years. There is still no resolution between he and I. The shame and guilt I still carry has allowed me to plummet further into my drug use.

Back to the hotel in Sacramento, I had a decision to make. One to plead innocent, or two, guilty as charged. I chose to plead guilty. My coach and I walked down what seemed to be a long, long gloomy hallway to speak to the USATF representatives.

I used this "walk of shame" as a farewell to those fellow athletes I encountered. I was silently saying goodbye. It was very sad for me, and it was very hard to hold it together.

I went back to my coach's room and hid until I had to get back on the plane to Nebraska. As I turned away and left, I was also turning away and left track and field behind.

Methamphetamine is a very addictive stimulant drug that activates certain systems in the brain. It is chemically related to amphetamine but, at comparable doses, the effects of methamphetamine are much more potent, longer lasting, and more harmful to the central nervous system (CNS). Methamphetamine is a Schedule II stimulant, which means it has a high potential for abuse and is available only through a prescription that cannot be refilled. It can be made in small, illegal laboratories, where its production endangers the people in the labs, neighbors, and the environment. Street methamphetamine is referred to by many names, such as "speed," "meth," and "chalk." Methamphetamine hydrochloride, clear chunky crystals resembling ice, which can be inhaled by smoking, is referred to as "ice," "crystal," "glass," and "tina."

Methamphetamine is taken orally, intranasally (snorting the powder), by needle injection, or by smoking. Abusers may become addicted quickly, needing higher doses and more often.

Taking even small amounts of methamphetamine can result in increased wakefulness, increased physical activity, decreased appetite, increased respiration, rapid heart rate, irregular heartbeat, increased blood pressure, and hyperthermia. Other effects of methamphetamine abuse may include irritability, anxiety, insomnia, confusion, tremors, convulsions, and cardiovascular collapse and death. Long-term effects may include paranoia, aggressiveness, extreme anorexia, memory loss, visual and auditory hallucinations, delusions, and severe dental problems.
http://www.nida.nih.gov/Infofacts/methamphetamine.html

For those who have no experience with addiction, it is a very powerful disease. It can control one's life. It encompasses every aspect of living. Where once you were strong and making wise decisions, you are suddenly faced with a life and death matter. Issues as simple as going to bed, eating, even engaging in a friendly conversation, are not so easy.

I found myself not sleeping for weeks. There were even times of up to a month without sleep. I was barely eating and completely losing contact with family and friends. Some people may never be faced with an addiction. I pray to God no one is ever faced with a meth addiction because of my personal experiences. And studies upon studies have shown that those addicted to meth have the hardest addiction to kick. I'm not lessening the blows from other drugs; addiction to any mind-altering substance is a battle to be reckoned with.

Looking at my physical body and health would be sufficient for most. But to see the real damage we will delve a little further into my mental capacity. For those who are reading this probably think that I do sound stable and have it all together. Wrong. Well, a little wrong, but then again who of us really does have it all together?

Over the last eight years I have done a lot of damage to my brain. I really have been frying it. Do you remember those commercials, "This is your brain (the egg) and this is your brain on drugs (the egg in the frying pan)? This is exactly what meth does to one's mind.

Mentally, meth addicts plow though everything with very little emotion. Being clinically depressed doing meth is a perfect medication to escape reality. When using meth one creates a false sense of euphoria. In the medical field there is this thing called anadonia, which is the inability to find pleasure. Drugs rob addicts of this. I have lost emotions and feelings over the last eight years.

Addiction is a weird disease and attacks people in ways that are unfamiliar to our society today. We are used to dealing with disease medically. So even in me sharing my story and experiences, I'm not sure where to go or even the right words to use because it's so foreign to me also. I don't understand it physically, emotionally or spiritually.

In 1999 I thought my random meth use was trimming excess fat from my hips, thighs, tummy, and all those areas that many of us seem to target when we want to get into shape or look good. But as we are all aware I was a shot putter. That so called *unwanted fat* was a healthy and needed weight to throw far.

When I threw my personal best in Virginia, 63'9$^{1/4}$" inches, my weight was 225-232 lbs. That was a very healthy weight for me to throw at. In the summer of 2000, my weight was down to 200-210 lbs. Today, almost 30 days clean, once again, I'm 194 lbs. I have gotten down to 175 lbs. in the last few years. I felt good, but I was lying to myself.

I was malnourished, very pale and my cheekbones were sunken in. But in my eyes I looked good. Lifting for years so intensely, I had great muscle tone, so the muscle deterioration due to meth is not as noticeable as with others, but I'm doing the same amount of damage. Meth also attacks your central nervous system. Today it's noticeable in my jaw; I smile kind of cock-eyed. I grind my teeth and I have a constant death grip going on between my teeth. It's insane.

One of the biggest target areas is my teeth, as it is for most meth addicts. I believe I've had five or six root canals. I pulled one because that's a little more reasonable for a drug addict, because if I were to continue to use, I'd eventually lose my teeth anyway. Those of you who remember my beautiful smile will notice now that it's not so beautiful anymore (pg. 20).

During the summer of 2003, I began to use drugs intravenously. The lady who introduced me to them was dying of cancer. Those who know anything about the pain associated with cancer and dying know that pain meds go hand in hand with that stage of one's life.

Remember now, I'm an addict (having a life-threatening disease), throw that into a mixture with a dying individual and what do you expect to get? My equation equals death, but I escaped death's grip. I shot some meth, then shot some dilated or oxycontin. I don't quite remember which, but I do remember is that it led me into cardiac arrest.

DIVERGENT PATHS

By Nathan Howland

I met Tressa about seven years ago. Back then she was an Olympic hopeful. The only two things we really had in common were our drug use and sexual orientation. We became close friends, quickly – as is usually the case between a drug dealer (her) and the druggy (me).

During the first year of our friendship we both saw each other go down hill quickly. I quit a job that I had loved, dropped out of college, and bounced around from work place to work place trying to support my drug habit. She [lost her shot at] the U.S. Olympic team. The next few years for her were spent helping her girlfriend sell drugs and of course do them. There were many a time that Tressa and I spent in a drug induced stupor just staring off into space, like a couple of losers, trying not to remember how our lives were before meth and ecstasy.

Eventually Tressa's girlfriend stopped doing drugs and moved away. Around this time Tressa and I lost contact with each other. Several years later we were reunited, this time with me selling the drugs and her buying them. We had also developed a new habit of shooting up the meth. Our former selves had been completely lost; the only thing recognizable in each other was our persistent drug use. This time our time together would be spent mostly high and nothing meaningful. Our friendship was second to our drug use and the times were far from enjoyable or memorable. We were both trying to live an impossible life. A life of numbness and complacency that allowed us to ignore our past and not see how far we had fallen from it.

Eventually we both faced separate criminal charges, which resulted in our both going to treatment and me going to prison for several years. We kept in contact with each other, but I could tell from her letters that she had fallen back to drug use. When I got out of prison I had started a new life, free of drugs. I had decided to go back to college to get a degree as a drug counselor and help other people whose lives were on a downward spiral because of drug use.

I ran into Tressa two months ago. She looked terrible and was talking in circles, much like I must have looked when I was doing meth. It hurt me greatly to see someone whom I love so much be in so much pain, but there was nothing I could do for her. She insisted that it was just something she did when she came to Omaha; this wasn't very often. But I knew better. Her face was sunken in and her body weight was down. Sign of chronic meth use. We talked for a bit but all I could think about was getting away from her, but only because being around someone who was tweaking was difficult for me and my sobriety.

I so wanted to help her, but she had to be ready to stay clean and want the help. I was completely surprised when she called me from California and told me that she was in treatment and getting help. She told me that she probably wouldn't be coming back to Nebraska, which is a good thing for her sobriety. I am happy for her. Tressa is a wonderful person with so much love to give the world. And now she will be able to give it. She is one of my closest and loved friends and I will always be here for her if she asks. ***L&S***

Yes, that's what I said, a heart attack. I laid there sweating bullets, unable to move, my chest with an unbearable amount of pressure on it. I was unable to speak and my *instant* family could do nothing but clean up the mess and scatter like a pack of rats. All I could do at that moment was to cry out to God to save me and I promise I'd never use again.

Two weeks later I was back in that basement shooting up. RED FLAG!!! Any normal human being would have known at that moment that there was a serious problem, and one that needed to be addressed ASAP. That was the point that started opening my eyes to see that maybe I did have a problem and maybe I was an addict. Unknown to me, my life was way out of control and unmanageable. No matter what I do on my own, I am powerless over drugs. They now control my life.

addict
Pronunciation: \a-'dikt\, transitive verb
1 : to devote or surrender (oneself) to something habitually or obsessively <addicted to gambling>
2 : to cause addiction to a substance in (a person or animal)

I started working as a D.A.R.E. role model in college going to various schools telling kids the dangers and the negative consequences that drugs have in one's life. Wow what a blonde moment I was having. I wasn't listening to myself when I was telling those youngsters that drugs were bad.

It didn't take long for me to start having small encounters with our faithful servants of the law. I picked up few shoplifting charges. Assaulting an officer, evading arrest and theft. I had a felony burglary case taken all the way to trial and then dropped by the state due to lack of evidence.

I had a felony prescription charge expunged from my record for successfully completing a drug court program. Plus other drug paraphernalia charges. God has looked out for me because I could be doing a lot of time behind bars for a lot of the mindless crap I did. Now that I look back on it, I was so stupid. But I have learned and I can share and help others who have chosen a similar path and make it somewhat straight and narrow again. There are a lot of potholes and if anyone can avoid any of the ones I hit, I would be more than willing to assist in any way, shape or form.

Thoughts on trying to quit using never entered my mind until it was already too late and a serious problem. When I did want to quit, I found out I was unable to do it on my own. Earlier I mentioned I had a heart attack, and I prayed to God to spare my life and I would stop. Every time I had been arrested and was put into jail I would cry out to God once again saying, "God save me and I will never use again."

As an addict until I was serious about the reality of my illness and got real help on a daily basis to medicate my sickness, nothing was going to put my disease into remission except me.

After my heart attack, the scares led my mom and another close family friend to take me on a 16-hour road trip to Louisville, KY to my first treatment facility, Teen Challenge. This was a Bible-based recovery program that places Jesus Christ as your healer and the center of recovery with no outside Alcoholics Anonymous or Narcotics Anonymous affiliation. It was a great place, but an unhealthy environment for me. They actually asked me to leave five days prior to my discharge date due to my sexuality.

Upon departing there, instead of getting on the Greyhound bus for Omaha, I got into a cab to another inner city woman's recovery center in Louisville where I spent another two months trying to get clean. I would call these first two rehabs a dry drunk phase because I wasn't learning about my illness, but I was staying away from drugs. I wasn't dealing with the real problem at all and that was me and why I had landed myself there in the first place. So now all of a sudden, I found myself relapsing in the heart of the city down in Kentucky smoking crack. Not going anywhere fast there, I drove back to Nebraska to face a legal issue I was ultimately running from.

I found myself having to enter a guilty plea to a felony prescription fraud which automatically made me eligible for the Douglas County drug court, program that they offered to certain individuals who they thought could benefit from such a program. While in drug court, I was then forced into my third treatment facility, followed by ten months of sober living. I had over a year-and-a-half clean time upon graduating this program on January 18, 2006, which in return I was able to have this felony expunged from my record.

On January 19, 2006 I was smoking weed and smoking dope. I thought, which was my first mistake, as an addict that I could pick up and use again, casually. From that day on it was on! I've been off and running until this past October. If any of you are familiar with the *A&E* television show *Intervention*, my story will be aired this season. A family member got involved and I was led to believe I was having a documentary done on me about elite athletes gone bad. The crazy events played out and landed me in Orange County, California, where I find myself today at my fourth treatment facility. To me this is like Division I treatment where I have received a full ride, just like my opportunity at Nebraska. My plan now is to break life records, just like the records I broke during my track and field career.

Drug Addiction Facts

- ***90% of property crimes and muggings are drug related.***
- ***The average individual with a drug addiction needs $200.00 per day to support his/her drug addiction.***
- ***The average individual with a drug addiction has to steal an average of $1,000.00 worth of property and goods to raise the $200.00.***
- ***The average individual with a drug addiction "self medicates" a physical, emotional, spiritual hurt with drugs he/she has not been able to deal with in a healthy manner.***
- ***70% of violent crime is committed by people who are intoxicated with either alcohol or drugs.***
- ***People who have been drinking are at greater risk of being the victim of violent crime, and are also more likely to be involved in accidents, fires and to engage in self-harm.***
- ***Currently, an estimated 20 million Americans are addicted to drugs or alcohol.***
- ***Approximately 80% of all crime in the U.S. is related to drug or alcohol addiction.***
- ***Approximately 135,000 die each year as a consequence of alcohol and drugs, costing about $46 billion dollars each year.***
- ***Every dollar spent on treatment leads to a $7.46 reduction in crime related expenses and lost productivity. When health care savings are added in, every $1 invested in treatment for addiction yields a total return of $12 saved.***
- ***Treatment of all addicts would save more than $150 billion dollars in social costs over the next 15 years.***

Addiction attacked my mental capacity, and I need to approach it with the help of others because if I could do it alone, it would have been handled by now. Honestly, I need meetings (yuk at times), friends, accountability, structure, clean time, goals, and a passion to succeed in life at the things I love. Track is a part of a life that I love, and I need to insert track back into my life, which I am currently trying to do.

In the beginning it was all about me. It's kind of like the little kid who plays hide-and-seek under a blanket. He can't see you, so therefore you can't see him either. Wrong. That was my assumption early in my drug use. I was hurting so I plunged

deeper into the great abyss. Hiding from those who loved and cared for me. Staying out of mind and out of sight, seemingly not hurting anyone, but in reality causing great damage. Damage that has taken years to repair and mend. Wounds that may never heal and scars that will always be a reminder of the wreckage of my past.

I want to ask those individuals closest to me how my addiction affected them, because for me to evaluate the damage I caused, would be a facade of whatever the truth of the matter really is. In reality, I wasn't mentally or physically present during my active addiction.

I asked my father first what kind of damage I caused and his basic feelings were ones that began with ignorance and evolved to sadness. His heart pours out to those individuals that have loved one's that get caught up in active addiction because there is a great sadness in not knowing what to do for your child. Being so helpless and yet wanting the best for them. My father still is concerned for my future because I have nothing to show for myself and seemed to have thrown so much talent down the drain. But a parent's love is unconditional, at least in my case in regards to my father.

My mother, a woman of such great stature and great dignity, has nothing but love for me. But yet, I see the pain and the agony that I have put upon her over the last 8 years. No mother should have to go through the unnecessary agony and heartache because for one, she has raised a beautiful child. Not the one that has been produced from the streets these past few years. She has grown a great deal in compassion for street people and those that are less fortunate. She has a heart of gold and really follows in Jesus' footsteps. She's one in a million and would go to the end of the world for me. Unfortunately, I have taken advantage of her kindness and generosity time and time again. One thing I have learned from all this is that family will always be your family and be there for you, but your friends, and even your partners, will not always stick by your side.

You can put family through the ringer time and time again. And for some ungodly reason, they seem to be the foundation that your survival in this life is yet possible. I have found that faith invested in friends and partners is often forsaken. People can only take so much before they walk away. This is true also with family, but it is pushed to a further limit that may never find its borders.

My sisters and their families have been exposed to outside elements that might have damaged my niece's and nephew's lives to come, knowing that their favorite aunt is a drug addict. They mimic my every move. They want to be like me. Kids are very impressionable and at a very young age, they learn quickly. That is why today I'm many

SHARED BURDEN

While most addicts would seem to ultimately lead solitary, desperate lives chasing their substance of choice, they almost always leave a trail of concerned family members who suffer collateral damage. Tressa's mother and sister lend their perspectives to her story.

Syble Thompson (mother):
When I learned of Tressa's addiction, I was filled with a great overwhelming sorrow for her. Shame overcame me and I was unable to speak or look at people. I had anxiety attacks and initially thought I was having a heart attack. The pressure on my spirit was overwhelming. I cried continually and would wake up with tears streaming down my face. As time elapsed, I found myself turning completely to God for strength and deliverance for my daughter. Total dependence and a deep trust in God's willingness to help and protect Tressa has brought me peace.

Rachelle Pinkelman (sister):
I found out that Tressa was addicted to drugs when we went to California for the Olympic Trials. All that kept running through my mind was how could we help her get better. I wondered how someone that had everything could throw it away so easily on drugs. Maybe everything came too easy?! There are a lot of kids and parents that spend a ton of money to try to get to where Tressa was, and never even come close. How could she throw her dream away? But as time passed, I realized it was deeper than just talent. The emotional needs were never being met in her life. Anyway, this addiction caused a serious crisis within the family. There was always drama. Phone calls to come and get her. Wondering whether she would really steal from me. Keeping Tressa from unknowingly affecting my children's character. Babysitting her through her withdrawals in the bad times. There were even times when I felt afraid for my parents' safety. Tressa went through some very angry times. I remember waking up a lot praying for their safety. ***L&S***

states away trying to improve my character once again to be the role model I need to be for them.

I have not been able to maintain a healthy relationship due to my addiction basically because I was in love with meth. I have tried to have a few relationships with all my heart. One for two years, another for three years, and currently one that has lasted two-and-a-half years, but is currently on the rocks, if not ended, due to my drug use now. So obviously, my relationship or my first love after track was meth, and I was fooling everyone else that I ever got involved with because they would always come second to meth. No matter how much of a charmer I may have been, that is the fact of the matter.

To be perfectly honest, I know I have damaged friendships and bonds that were so valuable they may never be mended. I pray that one day those friendships and people I have abandoned and left by the way will find it in their hearts to allow me to be a part of their lives once again. Those individuals who I left that day I left on that plane back to Nebraska from Sacramento were people, what true friendships are made of. You all know who you are and we all know friends like that don't come along every day. So today I say sorry, for running down into the valley and leaving you all in the dust behind. I thought I was heading to a place that would fulfill that void of loneliness, but today I see that you guys are truly the answer to true happiness. You were truly my *real* family all along. I would gladly trade you back for the *instant* family that I was so quickly to trade you in for.

Now today the only way to recovery from the damage I have done to my own life is to pick myself up and give back. This is the beginning. To be honest with my track family and to offer words of encouragement and to try and get back involved wherever that maybe. I really don't know how or where but I am jumping in head first, and I am that same charismatic individual that I have always been. So I know that I will be a blessing to those around me and the knowledge I have and that I have gained in the last few years will add to what I end up doing upon leaving treatment.

Myself and all others who suffer from addiction have one phrase to live by: One is too many and a thousand is not enough. For once I pick up and use again, there is no telling when I will stop, or if I will. For me, today, I know if I pick up, death will be right there staring me in the eyes. Waiting, waiting for me to put just that little bit more in my rig that would stop my heart for good. I have knocked on death's door one too many times in the past seven years to overlook my next use. That is my addiction today. A disease who has overtaken my mind and the only antibiotic for my addiction is complete abstinence.

To say once you go to treatment or put the drug down, you will never do it again is naive. This demon I am faced with today is a battle I will take on every day of my life. But today, I chose to overcome meth and not allow myself to be enslaved to it anymore. ***L&S***

LOSING A BEST FRIEND

By Mark Colligan, University of Nebraska

I have had to give some special thought to this [because] it is a very sensitive issue with me. It's not that I have ill feelings toward Tressa; on the contrary, I love her very much and feel that while I am in my 22nd year as a coach and fully intend to coach 22 more, I may never again stumble into the same talent/chemistry combination that we had together.

Tressa is arguably the greatest female NCAA shot putter of all time. Meg Ritchie threw farther, it's true, and still holds the absolute record, but she was 28 or 29 at the time and really had no rival to beat. Tressa won her last three consecutive NCAA championships and broke the meet record in each and still holds the outdoor record.

When you think about how perfect the weather has been in multiple sites since Buffalo (NCAA Championships) in 1998 when the weather was freezing cold. How many highly touted throwers have come through since then such as Laura Gerraughty, Becky Breisch, Jill Camarena, Kim Barrett, Michelle Carter and Sarah Stevens, and others who have since completed their throwing careers, and I am still amazed by what she accomplished.

Teri Steer might easily have claim to the best ever measure, had it not been for Tressa. Their show down in Buffalo was an epic for all time and my best college story ever.

Tressa had become the first collegian to throw 59' at the NCAA championships indoors in her record-setting 1997 win. Teri was not in the field. Outdoors Tressa became the first to break 60' by setting the outdoor mark at 18.50m in Bloomington. In 1998 Teri took NCAA Indoors meet record for herself without Tressa in the field. The two native Nebraskans and NCAA champions would then meet in Buffalo.

In consecutive throws in the preliminaries, Teri twice broke the meet record and watched Tressa struggle a couple of feet behind. Teri had perhaps the greatest series of throws ever recorded by a collegian.

Tressa waved at me from the infield toward my location outside the fourth turn fence. By pointing to her eye and then to her mouth, and then pointing to me, I knew she needed to talk to me so I pointed to an escort and waved for her to come talk to me.

She arrived at the fence and I tried to smile, but I was nervous. I asked, "What's wrong kid?," to which she replied, "Nothing, I just noticed that you were looking kind of nervous so I thought I should come over and tell you that I am going to go out and kick ass!" On the next throw she broke the record and it held up for the championship even though Teri continued to throw 60 footers until the end.

Colligan

What got lost in the whole experience were a couple of truly remarkable things. First, the competition seemed only about those two girls, although the field was a who's who of the shot put. After Thompson and Tunks were the likes of Nada Kawar, Amy Palmer (18-meter thrower) Marika Tuliniemi (18-meter thrower), Sua (!)(over 60 in her career), Crystal Brownlee, Jessica Cross (over 60 in her career), Kristin Heaston (well over 60 in her career), Cheree Hicks, and ???? Tolson, just to name a couple more.

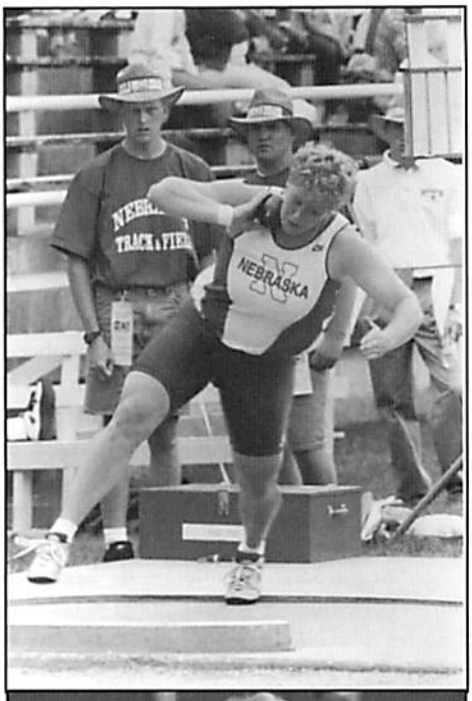
The distance thrown per each placing was unheard of with 55-5 at seventh and 15 women over 51'.

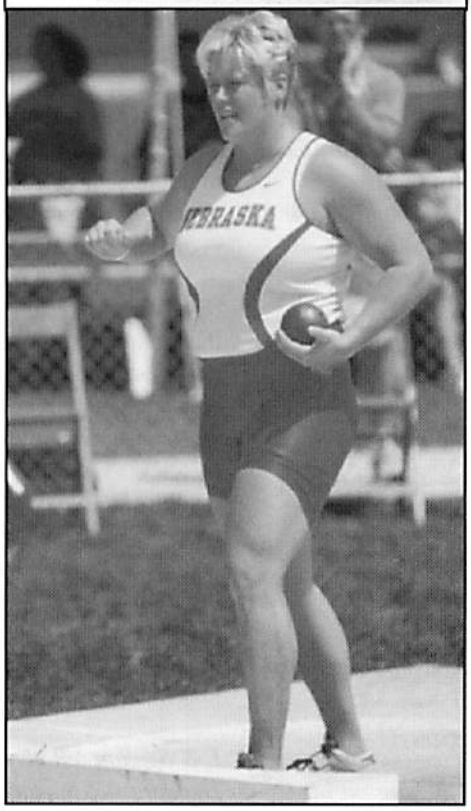
As Tressa's record throw hit the ground, I could not see the distances from my vantage point, but thought it was a good throw. At the moment it hit, a large group of UCLA Bruins erupted from a high view in the stands directly across from the contest. I thought to myself, "Why would a group of athletes with two throwers from their own school in such strong contention react so excitedly to the throw by a Cornhusker?"

Later I ran into the always-gracious Art Venegas who offered to me his congratulations before I could even offer him a hello. After exchanging mutual congratulations for both Tressa's win and his victory with Sua in the discus, I asked about the reaction by his group during the shot. Art told me that they had been trying to predict the outcome of the event prior to the final. The group was unanimous that Teri was just too strong on the day and that it was as good as over. Art masterfully chastised them all as knowing little about throwing and boldly predicted that they didn't know whom they were dealing with and that somehow Tressa would find a way to win. So when Tressa hit her throw, their reaction was toward their coach, whose crystal ball once again put them all in their place under his thumb. I always look back at it all with wonder about how you make such a prediction with two titans of your own in the contest. Not a criticism at all, just the reality that Teri and Tressa had separated themselves in a way from the field noticeable to all.

Now the bad news. A colleague of mine TJ Pierce, who is

now our Director of Operations for track and field here at Nebraska, felt as I did that Tressa was a once in a career find and that we needed to help her get to the Olympics. He started a club called Huskers 2000 and solicited money from our booster club to help her to the Games along with a few others still training. I estimate that she got in the neighborhood of $25,000 toward expenses, which was a lot of money for someone without college debt.





We also got her an Olympic job with JC Penney in Lincoln so she had only to work 20 hours for 40 hours pay. I think she was living better than me at the time. I don't know if success went to her head, but one day she showed up in a convertible. I wasn't pleased. Starting in the late spring of 2000 she quit her job and moved to Omaha and would show up to practice looking like she had not been to bed that night.

She had thrown 63-9 in Detroit during the winter, and I could not believe she was struggling at the beginning of summer. She had become someone I was doubting, but I worked with her separately and we had always found a way before. I always told her I would never accept a dime from her to be her coach and was perhaps blind to her faults because I loved her so much and felt that she had given me her all and at times even more.

Tressa was throwing poorly by her standards but had been to the World Champs and the World Grand Prix the previous year, so I always thought we would get it together. The truth hit me like a ton of bricks.

You see, Tressa was 'A' standard qualified for the Games in 2000. Teri was injured and the fast rising Jessica Cross had suffered a wrist injury of her own. With Connie a landslide favorite to win and also with 'A' standard qualification, any 'A' standard person would just get to go along. All Tressa had to do to go to the Olympics was, check in before the time limit and report to the head official, enter the ring, drop the shot over the toe board and exit the ring and she was on the team.

What happened was quite different. I checked into the hotel and left a key for her at the desk, as she wanted to arrive an extra day before and I said she could crash on a rollaway. My wife was coming in the next day and when I arrived at my room after dinner, Tressa was asleep. Early the next morning I dressed and went to breakfast. When I came back to the room, she woke up and handed me a Fed Ex envelope. The contents were the drug testing report, which revealed a positive result for methanphetamine.

She tried to explain what happened; that she had been doped by a fellow thrower in her drink while at a club in Europe. I called bullshit and asked her one last time, did she take anything on her own, and she said, "After the doping? Yes."

I said, "You are not going to drag the good people of our sport through some bullshit lie about you being a victim and we are going to see our doping control people here right now!" I should have kept my cool.

I marched her into their office. We spoke and then I insisted she withdraw and offer no contest to the process in order to keep her from spending the donations she had on a bullshit defense.

After the women's shot was over, it caught up with me. I remember kneeling on the practice track infield and crying like a child. I had lost the most special opportunity I could have ever imagined as a coach, and in truth, I lost my best friend ever in sport apart from my loving wife. ***L&S***

Brian Blutreich
BOOMER SOONER

By Glenn Thompson

Brian Blutreich (pronounced BLUE-trick) was a pretty fair athlete in his day, but if it weren't for his imposing stature, you might just forget about that given his coaching resume.

A native of Mission Viejo, Calif., Blutreich, earned All-America honors in the discus and shot put three times each at UCLA from 1986-90, winning back-to-back Pac-10 discus titles in 1989 and 1990. 'Blu', as he's known to many, graduated in 1990 with a bachelor's degree in psychology and went on to earn a platter spot on the 1992 Barcelona Olympic team.

After starting his coaching career at UC- Santa Barbara, he headed east to Chapel Hill. Under Blu's coaching guidance, the University of North Carolina became one of the nation's premier collegiate throws programs. In 2007, Tarheel Justin Ryncavage defended his ACC and NCAA outdoor titles in the men's javelin as part of dual 1-2 sweeps with teammate Adam Montague, the NCAA East Region Champion and Field Athlete of the Year. Blu also guided Nick Owens to two All-America honors and ACC titles in the weight throw and hammer throw. His 2006 labors earned him his second National Assistant Coach of the Year honor as voted by the U.S. Track and Field and Cross Country Coaches Association.

The 2007 season capped a career in Chapel Hill that included:

- Ø *Seven individual NCAA champions (three in 2006)*
- Ø *29 All-Americans*
- Ø *45 Atlantic Coast Conference event champions*
- Ø *Two 2004 Olympians*
- Ø *Men's throws coach for Team USA at 2002 World Juniors*
- Ø *Coached wife Lynda to 3x USATF champion in the javelin, AR and 2000 Olympic berth*

In July of 2007, after 11 years at UNC, the 40-year old Blutreich stunned the throws world by packing up his family and lengthy resume and migrating west to Norman, Oklahoma, where he took over the reins of the largely anonymous University of Oklahoma throws program. In the process he left behind a cupboard full of talent, including incoming freshman hammer superstar Walter Henning.

Blu was kind enough to take some time out of his busy schedule to discuss his recent move, coaching philosophies, and more.

***Long & Strong:** It will be strange seeing you in a color other than light blue. What were the factors that prompted your move from Chapel Hill to become a Sooner?*

Brian Blutreich: I am still not used to being in Oklahoma colors. I remember the first time I put on the OU shirt and it felt pretty weird. I have been some shade of blue for many years. Whether it was as an athlete at UCLA, a coach at UC Santa Barbara, or the past 12 years at UNC. To be honest I was not looking to leave North Carolina this past year. Oklahoma approached me after USA's and presented me with an opportunity to take a look and see if I would be interested. I personally had never been to the state of Oklahoma in my life. So I had no idea what the state and the university were like. Growing up in California, we were taught about the dust bowl and it was Native American country. From what I knew about the track and field program over the years, it had a sprinkle of people here and there but not a lot of track and field tradition.
The first factor that interested me about OU was my wife and I had really been trying to figure out what we wanted to do since our oldest daughter was entering kindergarten. Having two coaches in the family made it tough for everyone. As many coaches know, our business consists of long hours and not a lot of pay. The second factor was UNC made it clear (on a very positive note by the way) there really was not any room for advancement. Whereas OU was quite the opposite; do a good job, do it the right way and you will be rewarded for that work. Working at OU has allowed my wife to be a full time mom and that is priceless. Finally, professionally there were a lot of roadblocks to navigate and you had to wear many hats as a coach at UNC. I had no problem with that because I had learned so much about the running of a track and field program. The problem is that at times it outweighs actually coaching and recruiting. In that respect I was ready to move on and have the freedom to push my coaching ability to see what I could actually achieve.

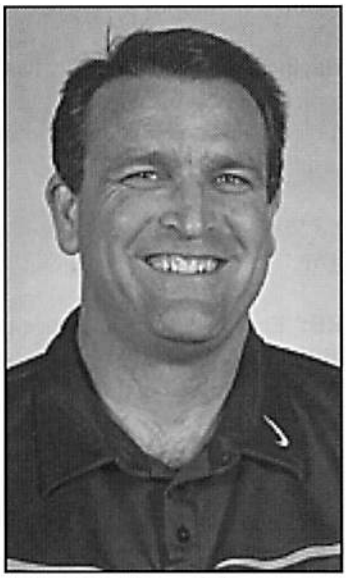
***L & S:** You left behind one helluva recruit in Walter Henning (L&S, April 2006). How difficult was it to tell him and your athletes you were leaving?*

BB: I would have to say making the phone calls to the existing team members and the incoming recruits is by far the toughest thing I have had to do as a coach. There is a lot of blood sweat and tears that go into coaching from developing relationships with the kids in the recruiting process to the day-to-day effort on and off the track. Having the chance to see these kids grow, pursue their dreams, help them become better citizens, and having the opportunity to make a difference in people's lives is what it

is about. We came a long way in my time at UNC, and it is always hard to say goodbye to family members.

In terms of my incoming recruits, especially Mary Angell and Walter Henning, it was even more difficult. There are times you just click with a person and I think with these two we were pretty dialed in. My wife put it best: "I do not even want to be in the same state as you when you call Walter and his parents." I have been coaching for a decent amount of time now and have been fortunate to work with some talented people and great human beings. I am at the point now of new challenges. Laura Gerraughty, Nick Owens, Vikas Gowda, and Justin Ryncavage really pushed me to become a better coach in all of the events. I think Walter was that new challenge for me. Not to see if he can win an NCAA championship, but to see if I could help him maximize his potential, whatever that may be. In that process I know I would have to take things to a new level in all aspects and that is what gets me excited to have a chance at that. I am going to miss that opportunity. The amount of stress I put on myself that week I informed everybody was unreal and took a toll on me mentally and physically.

L & S: *What appeals to you the most about the Oklahoma program? What will be your greatest challenges in building the throws squad in Norman?*



Brian 'Blu' Blutreich

BB: There were many things about OU that caught my interest once I took a visit here. First, as mentioned above, my wife could be a full-time mom and the education for my daughters is much more desirable. In terms of the track and field program, the current staff all came in two years ago with an absolute bottom of the barrel team finishing I think10th and 12th at conference. In two years the men won the Big 12 conference meet and the women placed 4th. So I knew it could get done with the right commitment. The athletic director has made track and field here at OU a pretty big priority with a new outdoor track facility a few years back and a very generous budget that gives us a lot of freedom to recruit, travel and supply us with the tools we need to be successful. It was nice to see people excited about track and field and administrators showing a genuine interest in all facets of the program. Another positive here is since the state is right in the middle of the country recruiting both coasts and traveling to both coasts will not be so extreme.

I think the biggest challenge for me here will be getting kids to take a look at the university. As I have already told many people, the campus here at OU is not what you think. I am still impressed as I continue to explore the university. The President here has done a tremendous job over the last decade raising the bar for the whole university to where it is in the top ten public schools for education/cost. What kind of took me aback is OU has the #1 enrollment of national merit scholars per capita in the nation. This is not just an athletic factory. We do have something for everybody at every level. It is just getting kids to take that leap of faith and get on board.

L & S: *In recent years you've been as successful, if not moreso, as any other Division I throws coach. What are some of the keys to your success?*

BB: I try to keep things pretty simple in my life and my coaching. I have never tried to be something I am not and think that I am a better coach than I am just because my teams have had success. If I need help, I try to go get it. The ability to continue to evolve as a person and as a coach is the key. It was time for me to leave UNC to continue the evolving process. So far it has been great. As I stated earlier, I try to make things simple, even if they are not, and do those simple things with great passion and expertise. As anyone knows, some kids buy into it greater than others. Finally, my goal is to try to maximize the ability of each individual based on their genetic makeup and how much love they have for the sport. It cannot be forced or you will lose that person in the end.

L&S: *Does Lynda miss coaching?*

BB: She does miss the day-to-day interaction with the kids and teaching, but does not miss the long hours at meets or recruiting.

L&S: *We've all heard about the constant letters, phone calls and text messages to high profile gridiron and hoops recruits. You've pulled some of the best talent in the country, including Henning, Laura Gerraughty, Nick Owens, Vikas Gowda and Justin Ryncavage. How does recruiting star throwers differ?*

BB: Recruiting is crazy. Sometimes it makes no sense whatsoever. As the world of quality throws programs grow, the talent pool seems to also be dropping. It is becoming more difficult every year to recruit. There are great programs all throughout the country now as opposed to 20 years ago. I am sure if you ask any coach, they probably could tell you many crazy recruiting stories. Sometimes you really think you have someone committed, and the next minute they change their mind and many times their reasoning is a bit odd. That is the mind of many 17-18

year- old kids. Sometimes it does make you lose your mind a bit.

As for me, you win some and you lose many. I hope to try to attract one solid kid a year and over a four-year period, I would have a few good ones like you mentioned in the question. Now there are also years that I came up empty. That is the nature of the profession not to mention how much scholarship allotment is provided.

I do not do anything special in the recruiting process. I was a highly-recruited athlete out of high school, and I could tell the programs that were trying to sell me a bill of goods and that did not turn me on. Kids are pretty perceptive (not all, of course) but if I truly have to sell something, it probably will not work out because I am a horrible salesman. I present what the school and I as a coach have to offer and see where it goes. I think it is important to recruit character as well. Sometimes that might keep the group going in those tough times. All the kids I had at North Carolina were completely different from each other but had the same common goal and that was to throw far. Being at the University of North Carolina did get my foot in many doors, but the bottom line is to get top kids, you need to know what you are talking about and then prove it to them.

L&S: Tell us what you are looking for in a scholarship thrower (size, grades, distances, personality, etc).

BB: Every event has its certain prototypical size and abilities as you can see watching a world championship meet. At the collegiate level if you can find those types of people, that would be great. The bottom line is the ability to move something fast. That critical moment that cannot be taught but just enhanced. You cannot make an 11.00 100-meter sprinter into a 10.00 sprinter. Sometimes genetics is a tough thing to beat even if your kid has the best technique and the best training plan in the world. I can not tell you how many times I told my athletic kids you got out massed today. So in terms of athletic scholarship from partial to full aid I try to find as close to a prototypical kid as I can and work your way down. Understanding, from a pure athletic standpoint, height is not always a critical factor as many people think at the collegiate level. It is a nice bonus to have, but there are just so many total package athletes out there you are going to have to show how good a coach you are to take the other kids to the next level.

Another factor I look for which is hard for head coaches to understand sometimes is the heart and will factor. There are a lot of decent kids athletically who can develop with the: I will do what it takes and live the sport approach. I think this may be the most important factor in recruiting that gets lost in the pure raw numbers as the indicator for the business end of the sport.

As far as grades go, you need to find the right fit for your university. I have found most, not all, of your upper echelon throwers are on the brighter end of the spectrum. Some may be book smart and others street smart. For me there has been a pretty good correlation of hard-working intelligent kids and good throwing. As a college coach it is nice not to have to worry about whether or not they will be eligible to compete. Let's face it, if you want to compete at the collegiate level, you must pass classes whether you like it or not. To throw for me, there must be a genuine motivation to graduate. I have had a 100% graduation rate in 15 years of D1 coaching.

L&S: Can you contrast who you were as a coach when you started your career, and who you are now?

BB: I am pretty much the same person now as I was when I got into the profession. I would like to think I am wiser and a better teacher now having gone through the rigors of recruiting, learning about the sport, and teaching through a trial and error process. Most good coaches go through this process because each kid brings a new challenge and that is what I like about my profession, and I think I am getting better at that every year. I think my gift is the ability to get kids to understand what I am trying to teach them.

Having a wife and kids now has changed my view on many topics in my profession, but the passion to help kids reach their dreams and goals on and off the track still burns inside me.

L&S: Which event is the most challenging for you and why?

BB: Each event has its issues but the most common difficulty is teaching someone hammer from the very start. We are so limited in time with the NCAA calendar, and hammer takes probably the most time in terms of repetitions in the early development phase. The indoor season creeps up on us very fast, and the worst thing to do is have your kids throw the weight for long-term development of the hammer. Getting shot/discus kids to understand how not to drag the hammer in such a short time is probably the biggest challenge because they want to see instant results, especially when it comes to early season. That is the nature of competition. Our system is pretty much backwards for newcomers but not bad for kids who understand the event later in their development.

Javelin can be difficult as well. Fortunately, there is more time to work on technique, and most of your javelin throwers are not doing another event. First, I have found unlearning years and years of baseball, softball and football throwing mechanics is the biggest challenge. Second, understanding how to fall into your plant and not push into the plant is tough. Finally, getting kids to

understand how to stay healthy whether it be how to dress and warm-up during practice, working on technique (not trying to kill most of the time), and paying attention to the details of all of the conditioning facets of how to train for the event.

L&S: *Can you give us an overview of your training strategies?*

BB: From a throwing standpoint, I am a big advocate of as many correct repetitions as possible. Most workouts do not necessarily have a flat bottom number of throws. I try to get as much quality out of a session as I can in terms of just general training. Some workouts may be long if we can keep putting good numbers into the bank but can be very short if the brain and body do not work with each other on a given day. If we have a long throwing session, I might lighten up the lifting session or vise-versa for a short session. I do treat the javelin differently. I am much more cautious and not very lenient on "oh just one more coach". Health is everything in the javelin, and I just have to have a different mindset when I coach that event. To use an analogy, you can only drive a car into a wall so many times before it breaks. In terms of multiple event athletes, I do have to keep an eye on number of repetitions a little bit because there is only so much fuel in the tank for the whole session of the day and the amount of mileage you can put on a car in a given year or over a long haul of a career. As you can see, I like to use analogies in my teaching.

I always tell my kids make something positive happen every day, and you are bound to improve. If you have a bad throwing session, kick some butt in the weight room, get positive reinforcement in a film session, or just catch up on some sleep. Whatever it is, you make something good happen everyday.

L&S: *What advice would you give throwers looking to break into the profession, and young coaches looking to climb the ladder?*

BB: Well, if you are looking to get into the profession these days, try to get your foot in the door wherever you can. The problem becomes can you or are you willing to do what it takes to stay in the profession financially? Most entry-level jobs require some supplemental income. Once you do get in, try to network with a lot of different coaches, not necessarily just throws coaches. When it gets down to it, this is a who-you-know business. A great way to do this is attend as many seminars/clinics as you can, meeting and learning as much as you can about the profession and the sport. People will notice, no matter what level, the programs that consistently get kids to improve and have success. ***L&S***

Olympic Shot Hopeful

ABBY RUSTON

By Steven Falk

If you live outside the borders of Texas, you can be forgiven if you don't know who Abigail Ruston is. Actually, even if you do live in the Lone Star state, not knowing this San Antonio-born shot putter is no cardinal sin. That's because prior to last season, Ruston had pretty much disappeared from the college throws scene since a successful freshman campaign at Texas A&M.

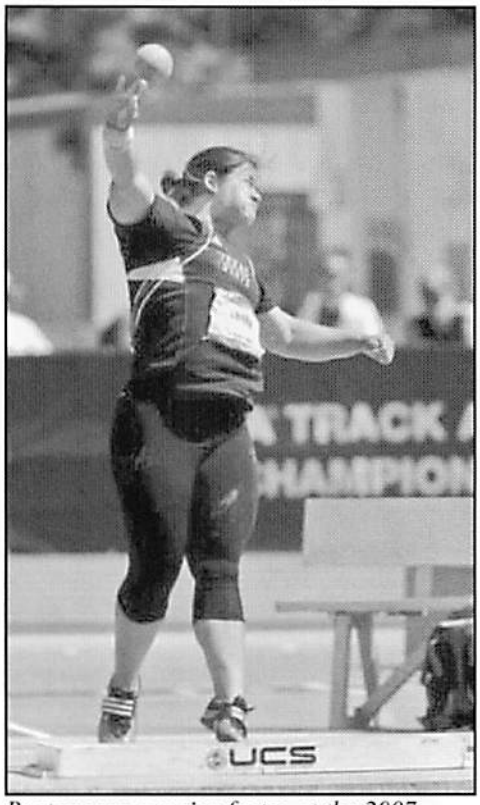
A transfer to Texas State and the tutelage of James Parman revived Ruston's career and catapulted her to the NCAA Division I medal stand last June

Abby recently took some time out to give *Long & Strong* readers some insight into who Abigail Ruston is, where she's been, and more importantly, where's she's going.

L&S: *Tell us about your high school career.*

Abby Ruston: That seems like so long ago (I know it's only been 5 years). The thing I was most proud of from high school was breaking the San Antonio city records. The shot record had been there for over 20 years. It was also very special to break the discus record because the former record-holder I really looked up to when I was younger. It was a major honor to be at that level. One meet that sticks out is the Golden West Invitational where I got 3rd. It was special for me.

L&S: *What do you feel allows you to be so successful given your small stature (5'7.75")?*



Ruston was a major factor at the 2007 NCAA's.

AR: I believe my greatest strength is my heart. My desire to make my dream of being on Olympic team has consumed me since I first realized that's what I wanted to do when I was 5. The genetics that my parents have given me also doesn't hurt. Both of my parents are built pretty solid. I believe that my explosive power and strength also make up for my vertical challenge.

L&S: *Tell us about your college career.*

AR: The best word that describes that experience is pivotal. Even though I had some very hard times and doubted my abilities at times, I would never change one aspect of that experience because of what I learned about myself. My freshman year was such a high for me and I felt I was on track; the next two years changed my life. Those were some of the lowest times of my life because I lost belief in myself. Regaining that and learning to be stronger has been one of the best things that throwing has taught me. I discovered an inner strength that I never knew I had. It's been an amazing journey and the fact it's only just begun is really exciting!

L&S: *What are the primary factors that led to your success in 2007?*

AR: First off, I would certainly have never even been in the place to start over without the endless support from my friends and family. They have helped to keep me going when things seemed dim. One huge factor was learning the mentality of 'Planning the Work and working the plan!!' That is one major thing that Coach Parman has taught me. The trust I have in him and this program is comforting. I completely and totally believe that Coach Parman and his program will take me exactly where I wanted to go. Another factor is that Coach Parman didn't let me get away with anything. He had a certain quality level and he would accept nothing less. He pushed me and caused me to make higher levels for myself as well as expect more from myself.

L&S: *You came out of nowhere last year; what have you been doing the past 4 years?*

AR: On the journey of my life! I have discovered more about myself in the past 4 years than the first 20 years. I was at Texas A&M for the 2 of the past 4 years. That was a struggle because as much as Coach De La Garza wanted to help me reach my potential, things just didn't work out with us. I actually gave back my scholarship my senior year. I didn't have the fire I once had and thought that I was done throwing. That semester I did some major soul-searching and what I realized is that I was born to do this and I would not give up! That spring I competed unattached and did

the best I could since I hadn't trained during that fall. I was blessed to have Texas State give me an opportunity to continue training last year.

L&S: *What went so wrong during your sophomore and junior years after such a great freshman experience?*

AR: My freshman experience was amazing. I met all my seasonal goals, I was having a blast meeting new friends at school and I made it to the NCAA Nationals. There were no expectations and no real pressure. Because I was so young, I didn't know any better. During my sophomore year, I started to get greedy. I wanted to throw farther and farther. I started to lose focus on what got me there, and I started trying too many new things with little attention to the training that had attributed to my success the previous year. This problem only intensified my junior year, and I went into a panic mode because it seemed *nothing* would work. My problem was my confidence seemed to be depleting in mass quantities. I put a lot of pressure on myself and I've always been my biggest critic. When I took the break, I realized that this was supposed to be for fun, and it had been fun, but my perspective had changed. When I had that paradigm shift, I enjoyed throwing again and had fun even when there was pressure. Historically, I have operated best in high pressure/stress situations.

L&S: *What is your current training situation like?*

AR: I am currently training in both San Antonio and San Marcos. I live in San Marcos and am able to use the facilities at Texas State to do my throwing as well as plyometrics and running. I do my lifting in San Antonio at Olympic Gym.

L&S: *What do you do besides throw?*

AR: I am enrolled full-time pursing my graduate degree in Physical Education with a specialization in Sport Management. Other than that, I am the owner of a dachshund, and anyone who knows the stubborn and hyper nature of that breed knows that it's a full-time job!

L&S: *Who are your role models in throwing?*

AR: Mike Stulce ('92 Olympic shot gold medallist) made a huge impact in my throwing career. It was when he believed in me and helped me that I started to regain confidence and hope that I could achieve my dreams (explain). I would say that Resse Hoffa has also been inspiring. He shows me that height and weight aren't the only factors. His technique is awesome and I hope to be at his insanely high consistency level one day. Another influence has been Ramona Pagel. Her level of expectations for herself as well as her work ethic is admirable. Her personal effort to help women's throws is also greatly appreciated.

L&S: *What are the key technical components of your throw? What are your strengths? What are your weaknesses?*

AR: My throws are made from the back of the ring. My main focus is getting a good start and getting a good stretch in my left side. This helps me to drop my left hip and let the momentum pull me. My strengths, I believe, are the fact I feel I can really attack the ring since it's so big! My biggest weakness is what Coach Parman likes to call "my big right arm." Sometimes, I get so impatient and just want it to go far and try to muscle it out. I've found that this is not the most efficient way of throwing.

L&S: *Talk a little more about the role Mike Stulce played.*

AR: Mike lives in College Station and has his own company there. I met him at a home meet my freshman year, and he told my dad that he believed I could be a 60' thrower and if I ever needed anything to stop by his store. Well, when things started to get really bad and I didn't' know what else to do, I stopped by his store. He made time for me, and we would sometimes go throw together. The fact that someone of his level of achievement in the sport believed in me and would give me the time and try to help me really did save throwing for me. I know that his belief in me and his continual encouragement was a major influence in me wanting to give myself one more chance in the sport. I will forever be grateful to Mike and Katie Stulce for all their support and guidance during that time of my life.

L&S: *Give us some insight into your relationship with Coach Parman.*

AR: Oh where do I start? I will admit it has been somewhat of a love/hate relationship. When I started full-time

By The Numbers

PERSONAL BESTS

Shot 17.47m
Discus 50.97m

Bests with heavy shots

12# 14.81m
16# 12.01m

Ht: 5'7.75 **Wt:** 90 kg.

Weightroom Bests

Snatch	90 kg.
High Back Squat	365 lbs.
Front Squat	300 lbs.
Incline	220 lbs.
Bench	255 lbs. *

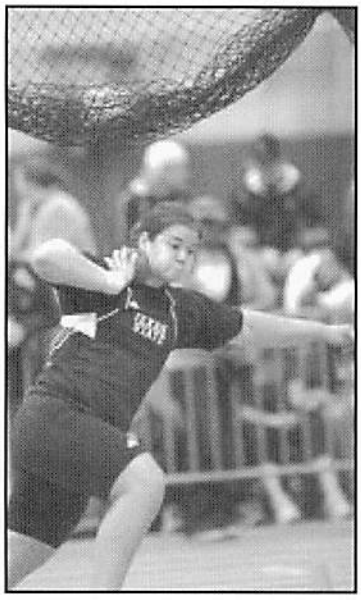
(* as college sophomore, no longer benches)

PROGRESSION:

Shot Put

HS
15.45m
College
14.85m
15.12m
16.32m
17.47m

training with him, it was more of a hate because he would constantly be on my case. And there were many times when I felt that I would *never* be able to meet his expectations. But as time went on, I caught on to different concepts; I learned that he was a much happier and more pleasant to be around when I was throwing far. I began to love having confidence and throwing far. I think that one thing that helps is his ability to explain concepts and ideas from different angles and in different ways. The language he uses has really helped to spark new ideas practice after practice. His understanding of the throw is so comprehensive that if I can even learn 70% of it, I know I'll be throwing far!



L&S: *Can you give us an overview of your lifting program?*

AR: My coach has me on a inear periodization program. I weight train three days a week with one heavy workout per week per strength/ power movements.

L&S: *You don't appear to do any flat bench pressing.*

Coach Parman: I believe if you truly analyze the relationship of the throwing arm to the torso during the delivery phase, you will find it has a much closer relationship to the incline press than to the bench press. I do several movements between 20 and 40 degrees incline.

L&S: *What do you do for fun?*

AR: Of course I love spending time with my friends/family and having lots of laughs. I also love making people laugh. But I also enjoy playing my guitar and writing. A unique pastime of mine is racing my dog. Oh yea, speed runs in the family! ***L&S***

Coach Parman on Abby:

Abby has come a long way in the past two and a half years. She has mastered most of the basic principles of the rotational shot technique. She is now working on the finer points that separate good throwers from great throwers. Abby has always had the heart and physical talent needed to be a world-class thrower; she just needed some technical help to allow that gifted thrower inside to come out. Judging by her improvements in the short time I have known her, the sky's the limit on how far she'll ultimately throw. Abby has worked as hard as any athlete has ever worked to make an Olympic team. She has spent most of her life working towards this one dream. Next summer, she'll be prepared to throw a lifetime best for her shot at Olympic glory.

LONG & STRONG THROWERS CLUB

USA TRACK&FIELD℠

Dear Prospective Member,

The Long & Strong Throwers Club (LSTC) will once again offer extended benefits to our membership benefits for 2008.
The 2008 membership dues will remain at $50. 2008 members will receive:

1. 2008 LSTC tee-shirt
2. one year subscription to the Long & Strong Throwers Journal (or 1 year extension to existing subscriptions)
3. 20% discount on throwing shoes (all major brands) from InsideTrack
4. 10% discount on M-F Athletic purchases
5. 50% discounted NTCA 2008 National Throws Coaches Association (NTCA) membership ($25)

Once you join, you'll get the details by email or post. You'll recoup your dues (and more) in no time!

Who should join? To carry the Long & Strong name, members should demonstrate (1) a sincere love for the throwing events, and (2) good sportsmanship. Kickin' butt in the circle, on the runway or behind the trig is a bonus!

For information about the club, please visit our website at http://www.longandstrong.com.

Yours in throwing,

Glenn A. Thompson
Minister of Propaganda

Detach Here

LONG & STRONG THROWERS CLUB

2008 Membership Application

Name_____
Street Address_____
City_____ State____ Zip Code_____
Phone Number_____
E-mail Address_____
Events_____ T-Shirt Size _____

***Please enclose a check for $50 payable to:**
Long & Strong Throwers Club
c/o Warren Taylor,
315 Sylvan Retreat,
Columbia, PA 17512

Do you have any special skills or resources you can make available to the club?

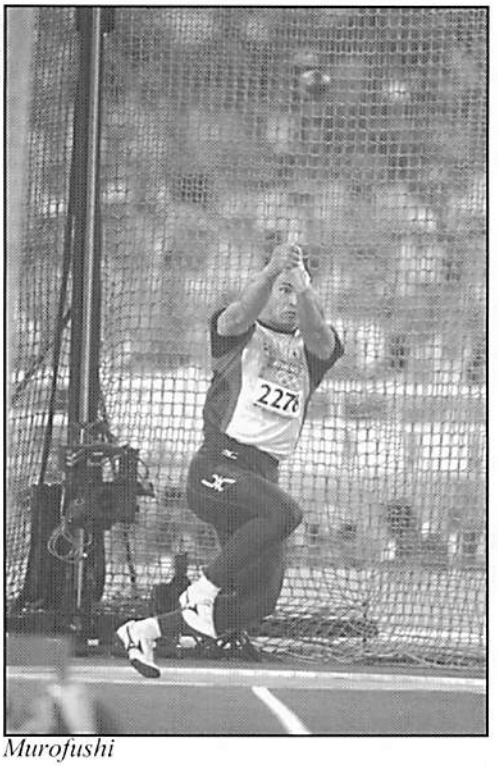
_____

Maximum Hammer Throwing Results

CRACKING THE TECHINQUE CODE

By Harold Connolly

In Koji Murofushi's article hammer acceleration due to thrower and hammer movement patterns (Sports Biomechanics, September 2007), he points out two significant forces in hammer throwing (horizontal and vertical) that contribute to the acceleration of the hammer head throughout the turns, and he suggests how the thrower can positively influence the increase of these forces during the throw.



Murofushi

Horizontal Force:
The horizontal components of the ground realign force into the throwing direction and the lateral direction are mainly produced by the right foot with some contribution from the left during the double support phases.

The thrower can increase the horizontal force primarily by rotating the right foot and the right side of the body when stroking the hammer with the hands around the front on entering turn one and by repeating the same right side action from right foot touchdown to lift off in each subsequent turn. In most beginners and also many advanced throwers (right-handed), because the rotating direction is to the left around the left foot, some coaches have overemphasized for the throwers the initial rotation of the left side of the body. It would appear that from the earliest learning stages throughout the hammer throwers continued technical development, greater emphasis must be placed on the primary importance of turning the rotating right side of the body towards the hammer head. The left foot should read to the initial, rotating action of the right foot, and should not attempt to initiate this horizontal force into the movement of the hammer.

Vertical Force:
The thrower can generate an increase in the vertical force applied to the hammer by raising and lowering his/her center of mass asynchronously against the rising and lowering of the orbits' outward pull of the hammer during the tubs, thereby increasing the speed of the ball throughout the turns through the release phase.

Presently I see Ivan Tsikahn as the most complete technician, utilizing what I conjecture are the key technical elements for the great throw, where his closest competitors, Murofushi, Devyatovsky, etc., do not have as many of the optimal elements honed as effectively as Tsikahn. My description of what I see applies to the four-turn throw. But the same elements Tsikahn so effectively applies in his technique are essentially the same as what Sedykh did with three turns and Litvinov (Tsikahn's coach) did with four.

After two preliminary winds, Tsikahn, on the entry into turn one with shoulders, arms, and line of vision aligned with the hammer as it passes zero degrees, has established the angle of the orbit so that it lets the hammer rise sufficiently at 9:00 so that he can begin countering / hanging more effectively against the upward pull of the ball than the four-turn, flat entry throwers of the past. Tsikahn allows the hammer to turn the system (hammer + thrower) to a stable, balanced landing position.

Major countering/hanging really begins happening as he enters turn two. Staying lined up with the hammer, his eyes roll up; and he begins gradually elevating his chin, which he continues throughout the remaining turns, thereby lengthening the distance from the back of his head to the bottom of the ball, the most effective way to incrementally increase the speed of the hammer to arrive at optimal acceleration at the release.

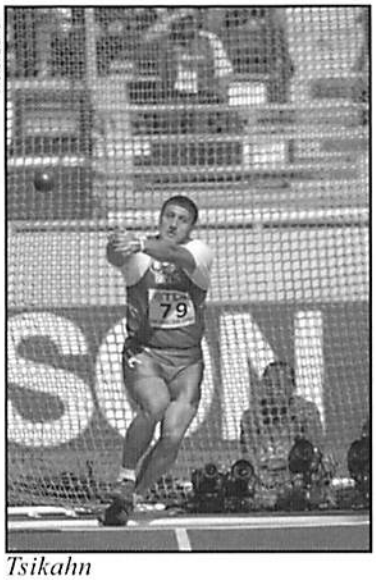
With his upper body (line of vision, head, shoulders, and arms) remaining aligned with the hammer, he initiates not only the first turn but also the beginning of the second and all subsequent turns primarily with the rotation of his right foot and right side of his body, keeping his right knee in very close to his left. The left foot's rotation must be a reaction to the rotating / pushing of the right foot and right side. The left foot does not initiate the movement of the body into the turns.

The knees are tightly together (very different from discus turning technique) and at right foot lift off, the right foot is lifted over, not around the rotating left foot. He repeats this technical procedure with increased emphasis with each subsequent turn, which significantly increases the speed

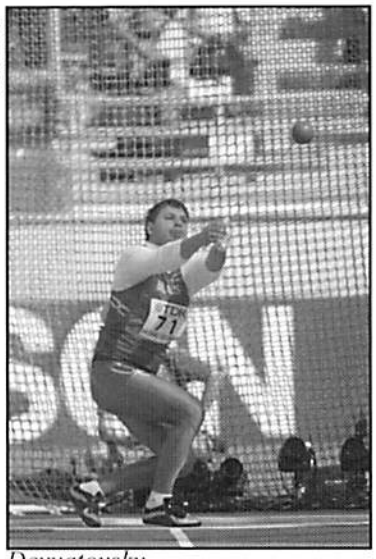
*** All photos by Victor Sailer**

of the ball through the release. He does not need to hit the hammer with any dramatic explosive reaction at the final right foot touchdown, just smoothly let it go. Unfortunately many throwers have conditioned themselves to rely too heavily on the final turn and a dramatic explosive release that will rarely produce the ball speed achieved by the thrower who can more effectively counter / hang against the hammer through all the turns.

In Koji Murofushi's biomechanical article, he suggests a horizontal and vertical rhythm whereby the thrower can exert increasing augmentation to the speed of the hammer. I think every thrower has to find this rhythm for himself/herself, responding to the cues that work for them. Some throwers feel this rhythm if they collapse the left knee in the back half of the single support phase, but Sedykh, Murofushi, Deal and others have reported that, despite video analysis showing a lowering and rising of the center of mass during the turns, they do not deliberately try to drop against the upward pull of the ball nor rise with their legs against the downward pull of the hammer as it descends past 00. They try to maintain what they feel is a level, balanced, countering position of the hips against the risings and lowerings of the hammer's orbits. However, here are a few observations I am quite certain about:



Tsikahn



Devyatovsky

After the winds and a sweeping orbit into turn one, the thrower must execute each turn tightly enough with his feet and legs so that on each right foot touchdown the back of his/her shoulders and the back of the head must be facing in the opposite direction to 0*. This provides for very long double support phases and release phase resulting in the optimal distance.

In the turns the thrower's line of vision must never look down at the ground or beneath the head of the hammer anywhere in its orbits. Too many throwers rely on visual fixation cues to execute the turns.

I think it's essential in coaching beginners, after they learned to keep their head, shoulders, arms, and hands aligned with the hammer, to spend some time teaching them to rotate with the hammer with their eyes completely closed or blindfolded. First employ a rotating drill on the soles of their feet and then while actually executing heel-toe turns. This will establish at the earliest stages reliance more on proprioceptive rather than visual cue: for balance when countering the hammer during turns. As the thrower executes these eyes-closed drills, the coach can instruct the thrower as he's turning to raise his or her chin (not abruptly or radically) in order to lengthen the distance from the back of his her head to the bottom of the ball. These drills develop the proprioceptive senses for more ejective countering rather than relying too heavily on fixed visual positions. I believe the beginning hammer thrower who includes balanced turns drills with the hammer with eyes closed will arrive at superior technique sooner than the thrower who does not.

In executing the turns, the thrower's chin must very gradually rise throughout turns two three, and four, (without disrupting the orbits) culminating in a balanced chin high, head way back position in the release phase - a countering back against the outward pull of the ball so that the thrower s line of vision is straight up to the sky. Most 80+ meter throwers achieve this head countering back release, but too many of them achieve too little effective countering in the preceding three turns, ending up relying too heavily on an explosive release phase. These latter four-turn throwers frequently make their first three turns with their heads in a fixed, tense position throughout the first three tubs, a far less efficient and reliable throwing technique to achieve maximum speed on the ball at release. ***L&S***

There are no slow lifts...

JUST SLOW LIFTERS

By Mark Valenti, Dynamo Sport Athletics

Disclaimer

I would like to start this article by saying, I have never invented anything. Everything I chose to do in the last year has been stolen from one source or another and pieced together to suit my needs. Yes, there is an art in forming a solid training program, but I just wanted to start this article by saying ...My name is Mark and yes, I am a pirate. If you have a great training idea, I'll steal it and use it. I'm sorry I can't help myself; it's who I am. I hope you can forgive me.

With that being said, I would like to thank Louie Simmons, Joe Defranco, Matt Wenning, Kerry Overfelt, John Smith, James Smith, Craig Smith and any other Smiths I may have forgotten.

The Problem

I am a fan of everything strength/throwing-related. I am a professional Heavy Events athlete (the best and only summer job I have ever had), and the training I do for that sport is pretty intense. Many of the people outside the Heavy Events circuit have a hard time understanding what it takes to compete at the highest levels of that sport. The number of events that have to be mastered and the sheer weight of the implements thrown can be overwhelming at times. Needless to say, you don't find many athletes on the Highland Games circuit that, if they were being honest, will tell you they are weak.

I have been in the sport for sixteen years (I started when I was 16 years old) and for 15 of those years, I trained the way I was told to train. I did my cleans, snatches, Olympic squats and core work like a good little thrower. I searched for any bit of information that would help me throw things farther, higher or straighter. I got pretty strong in the Olympic lifts. I cleaned 355 lbs. and snatched 270 lbs. in 2006 and had a rock bottom Olympic squat of 550lbs.

I hated to clean because it hurt and the fact that I was inflexible in my upper body prevented me from racking a weight until the weight was heavy enough to push my hands down to my shoulders. My wrists hurt, my elbows hurt, and I would get frustrated because some days I would be able to rack a heavy clean and other days the weight would be shot away from my body because of my rubber band-like muscle tension. I could pull a clean grip high pull to a pin set at mid chest with 475lbs. Yet, my best clean was only 355 lbs. Although my clean and snatch were getting better, I had not hit a personal record in the weights or stones in over two years. Something was wrong.

A Possible Solution

I started to search out other ways of training, and I found my way to Westside. No I'm not a lifter at Westside, but the training they do there caught my eye. At first I tried to incorporate the Olympic lifts into the Westside template. I asked Louie Simmons about how to do it at a seminar and he made the comment, "I don't like the Olympic lifts, but this is how you should do it." I blew it off as a powerlifter talking trash about Olympic lifting and took his advice. Then I heard him talk again, and he talked about how there were much better ways of developing power besides the Olympic lifts.

Louie said in his 2006 article entitled, *Did You Know...*, "No one tries to lift a heavy weight slowly." In powerlifting , one must lift great loads. While these loads appear to move slowly, explosive strength is a must. In the United States, every university does some Olympic lifting. I ask them why. Their reply is that it builds explosive power. But in Europe, particularly in the old C.C.C.P, who invented the term "explosive power," they never mention the Olympic lifts. Dr. Yuri Vekhoshansky, who invented shock training, or as we call it, plyometrics, talks about bounding, jumping, plyometrics, and depth jumps, but never Olympic lifts."

So I started reading everything I could from strength coaches who were
A. NOT USING THE OLYMPIC LIFTS *and*
B. HAVING SUCCESS WITHOUT USING THE OLYMPIC LIFTS.

Louie Simmons, Joe Defranco and James Smith became required reading and I read everything they wrote.

Joe Defranco had a fantastic quote:

"To me, the Olympic lifts are kind of like a distant cousin...although you never see or talk to this cousin, you feel obligated to invite him/her to family parties, weddings, etc., because he/she is *family*. Like distant cousins, the Olympic lifts won't go away because coaches feel obligated to *invite* them into any training program where *explosiveness* is one of the goals. The reason that most coaches feel obligated is because that's what the coach before him/her did; and it's what the coach before that coach did; and it's what two coaches before that coach did. Hopefully you get my point."

"Well, it's time to get out of this rut that we've been in for so many years and try something new. There are so many other options to develop 'explosiveness' in athletes. Let's

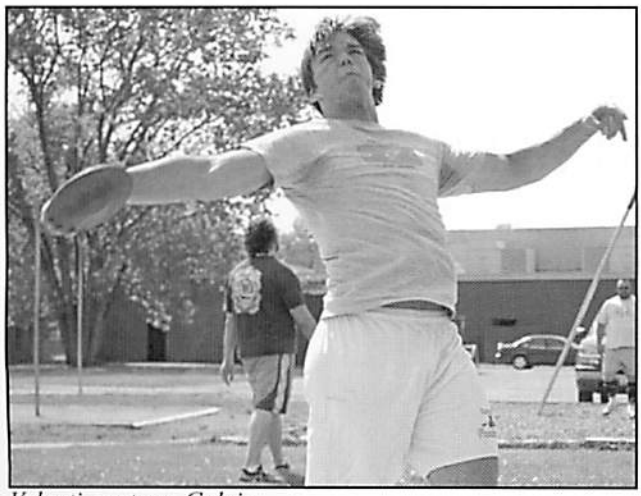
start incorporating some other options! Hell, while we're at it, let's stop inviting distant family members that we barely even know to family parties and weddings!"

I decided to give it a shot, so I dropped the Olympic lifts to see what would happen. At this point I was almost sure I was going to fail and be back to the clean and snatch in a matter of months. My major problem was I knew I had to pull. The Heavy Events are almost all pulls. The caber, weights, weight for height, hammer, and even the stone is a pull. I looked around and didn't have to look much further than some other pros on the heavy events circuit who had already followed the path I was about to travel.

Craig Smith was known as a super powerful dude. 600 lbs. Zercher squats and 700 lbs. deadlifts are cornerstones to Craig's training. I listened when he talked and watched his videos online. I would add the deadlift to my training. Here is another tough pill to swallow. I have been told my whole life that the dead lift was too slow of a lift to help throwers...matter of fact it will MAKE YOU SLOW! [Even though this statement is a common one heard in throwing circles, it makes as much sense to me as lifting of any kind making you *musclebound*.] Craig was anything but slow and his throws were, and are, through the roof. I decided to take his advice and add the deadlift.

The other pro I talked to was Kerry Overfelt. Kerry, ranked in the top five in the U.S., was another dead lifter. He is also a jumper. Kerry spends a lot of time jumping and doing Olympic style pulls in his training. Notice I said Olympic style pulls, not Olympic lifts. So I had my program set. I would deadlift, high pull, box squat and do good mornings. Add in a few (very few) assistance exercises and I was good to go.

I also dropped the majority of my core training. I used to do endless amounts of twisting and turning, sit-ups and leg lifts. Now I do landmines, bar twists and standing, weighted crunches with cables. Sometimes I do one exercise per workout, sometimes I say screw it and go home early. My thinking here came from John Smith of Southern Illinois University. He once told me that the best core training I could get would be from throwing and heavy squatting and pulling.



Valenti protoge Colvig

The Results

I spent the winter training and working my new plan. I would throw indoors with the shot put once a week or so and I was noticing my standing throws going further. I chalked it up to the increased strength levels, but I was sure when I went outside and started moving my throws would be down and I would be in big trouble. Well to make a long story not quite so long, my throws went up. I PR'ed in the 28 and 56 #weights for distance and also the heavy hammer. My caber was much better and although I had a technique issue with my weight for height, by the end of the season, I was back on track with that as well. I was stronger, faster and more explosive, AND I HADN'T DONE A CLEAN OR SNATCH IN ALMOST A YEAR!

My Athletes

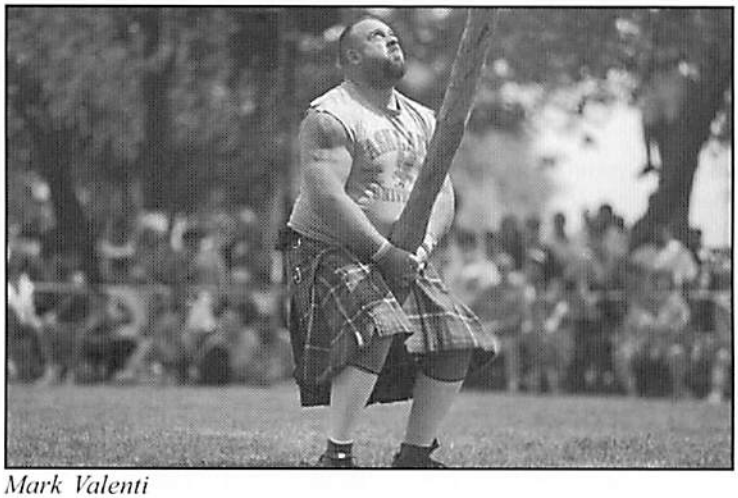
That's me though, maybe I have some freak genetic mutation that makes me throw like junk when I do the Olympic lifts and throw far when I do the "slow lifts." I needed a better test.

For the last three years, I have been the strength coach for Marion L. Steele Amherst football and for the last ten years the throws coach as well. I am a Certified Strength and Conditioning Consultant and a USA weightlifting club coach. I work with athletes both at Steele High School and in my private strength and conditioning business. So when I dropped the Olympic lifts from my program, I dropped them from the programs of the athletes I trained as well. Guess what? We improved! The kids got faster, they got stronger and they threw farther. Between the throwers I coach at Amherst and the athletes I work with in my private business, I trained four throwers at the Ohio State Track and Field Championships last year. Adam Altabbaa went from 158' to 171' (discus) and placed 8th (All-State in Div.1), Drew Ebersole went from 155' to 179' (discus) and was third in Div.1, Steph Liptak was 12th in Div.1 (126' discus) and Kailey Volk was 12th in Div.2 (120'discus). Their program consisted of wide stance box squats, good mornings, heavy benches and deadlifts and lots of jumping. None of them did any Olympic lifts in 2006 or 2007.

In week ten of our football season, I needed an exercise that would not tax my players' legs and still give them a nice solid test and a fun workout before rivalry week. I decided that I would let the kids hang clean for the first time in about 9 months. I decided to keep them from trying to go for a PR so late in the season. I would let them go for a heavy set of three. We had at least ten athletes clean their former max or more for three reps without doing the power clean! How is it possible? Deadlifts, box squats, high pulls and weighted jumps. Stronger, faster athletes and no sore wrists, elbows or shoulders.

I remembered something Louie had mentioned at the National Throws Coaches Association (NTCA) conference last year. He said that if American lifters would do special exercises to increase the power and strength in the muscles that are used when cleaning and snatching, their clean and snatch would get better. I think he may have something here. It sounds simple, but many American Olympic lifters do not follow that advice. They spend all their time snatching, cleaning, front squatting and back squatting, but don't do enough special exercises to increase their lifts.

I know the thought of dropping the Olympic lifts from your program might make you cringe. Believe me it made me cringe. Once I took the leap though my throws went up, I got stronger , my nagging injuries healed up and I was able to transfer my new-found power to the field. My athletes improved and got faster in the ring and on the football field.



Mark Valenti

My advice to coaches is to stop taking months or years teaching your athletes to clean and snatch so they can have "perfect technique." I want my throwers to have perfect THROWING TECHNIQUE I don't care how well they can do a snatch. You have four years at best to train your athletes; get them strong now. Don't take weeks or months teaching them to do cleans with PVC pipe when you can take five minutes and teach them to box squat or jump.

I don't expect many coaches or athletes to drop the Olympic lifts from their training. I would be surprised if that happened. But if one athlete takes the path less traveled…well, then that would make all the difference! ***L&S***

AROUSAL REGULATION TECHNIQUES IN TRACK & FIELD

By Katie Zackowicz

Nerves can affect performance in everything from a test to a job interview to athletic performance. As we mature most people become better at handling these stressors and become less affected, but is time the only thing that will allow a person to handle stress better? There are many techniques in dealing with stressful situations, and many of them are specifically directed toward athletic competition.

Track and field, like all other individual sports, requires a completely different preparation for competition than sports such as football or basketball. Instead of a team doing a cheer together and psyching themselves up as a large group, each athlete must get himself mentally prepared to race. The butterflies must be quelled yet the adrenaline still rushes through the muscles. It's a balancing act between being nervous and not being excited enough to compete at a personal best.

Although track and field still is a team sport and the collective team's score is what wins championships, the events are staggered throughout the day and each event lends itself to its own unique ideal arousal level. Sport competition can generate much anxiety and worry, which in turn can affect physiological and thought processes so dramatically that performance often deteriorates (Williams & Harris, 2006). So how do we teach our runners, throwers, and jumpers how to reach the personal ideal level for themselves?

Gould and Udry (1994) identified five major models to describe the relationship between arousal and performance. The first and most widely known is the inverted U hypothesis. In this model, there is a direct relationship between arousal and performance. Performance increases linearly until an optimal level of arousal is reached. At this point, there is a temporary plateau in performance and, if arousal continues to rise, there is a drop-off in performance. This would be a state of over-arousal. An athlete is looking to achieve this plateau, also sometimes called "flow-state" or being in "the zone" (Singer, 2002).

A second popular model of arousal and performance is the catastrophe model. This model is very similar to the inverted U hypothesis except that it is a 3-dimensional model that also considers cognitive anxiety. As cognitive anxiety rises, the drop-off sustained by over-arousal becomes more and more drastic (Gould & Udry, 1994). This model seems applicable to track and field, since not only is arousal level important, but anxiety really does make or break a performance because of anxiety's effect on technique. A breakdown in technique will destroy an otherwise successful performance.

How can we measure arousal levels in order to do this research and come up with ways to help our athletes? There are several physiological measures used including generalized bodily activation or arousal state, biochemical measures such as epinephrine or norepinephrine in the blood as well as a variety of corticosteroids associated with stress, and questionnaires distributed to the athlete immediately before or after competition (Landers, & Arent, 2006). Physiological measures can be recorded using heart rate monitors, EEG, EMG equipment that measures muscle activation, skin temperature or sweat rate. Biochemical measures can be made through blood samples or urine, although it may be argued that urine would have a delayed output, whereas blood concentrations would be accurate at the time the sample is taken. Finally, some of the major questionnaires used include the Activation-Deactivation Adjective Checklist and the Somatic Perception Question (Landers & Arent, 2006).

Is there one ideal mental state for all track and field athletes to strive for? Lawton, *et. al.* (1998) stated that they believed that there are mental states that distinguish individual athletes from one another and distinguish the performances of a single athlete at different times. Because the hammer throw is so different than the steeplechase and the high jump varies from the 100m hurdles or 4x400 meter relay, each individual event requires a different ideal emotional state. There is one common moment, however, and that is the moment before it begins. A javelin thrower pauses at the end of the runway before their throw, and this can be compared to the moment the sprinter holds still in the blocks before exploding when the gun fires. Although not much published research has focused on these exact situations, much research has been done with skilled marksmen. The calm they strive for before pulling the trigger can be compared to the calm before the gun goes off at the start of the race or as you walk into the circle before a throw.

Research on these skilled marksmen by Hatfield, Landers, and Ray (1984) has shown that the brain wave activity of these shooters can be accurately measured by use of an EEG. These EEG results showed that there is an initial increase, flowed by a decrease in left-brain activity as the shooter settled in for a shot. This is significant because not only is anxiety thought to be a left-brained phenomenon, but the left hemisphere is also responsible for self-instruction and covert verbalizations. This would suggest that after an initial thought pattern reviewing the goals of the performance, these skilled marksmen are able to quiet these voices and relax before taking a successful shot. This knowledge can be applied to track and field by teaching athletes to take a moment and think about

coaching cues before taking the "set" position, and then learning to quiet their mind and clear their head. For the throws, this would equate to mentally rehearsing the throw before stepping in the circle, clearing the mind, and executing the throw.

Williams and Harris (2006) present a skill called momentary relaxation that may help achieve this quiet mind immediately prior to competition. They suggest that the more anxious an athlete is, the longer the moment of relaxation should be. Having the athlete focus on his breathing, such as a rhythmic breathing technique where the athlete breathes in for a count of 4, holds it for a count of 4, exhales for a count of 4, and then pauses for 4, is useful for achieving this moment of relaxation. Also, focusing on a key word, such as "calm" or "peace" can be helpful. The word should be very individualized to the athlete and the event. This also allows the athlete to take ownership of the relaxation.

Not every athlete needs to calm himselfdown for competition, however. Although the majority of athletes suffer from overwhelming anxiety and have to calm themselves down, there is a large group of athletes who have trouble getting themselves "psyched up" for competition. Gould and Udry (1994) found that the research done in this area has focused on identifying and describing mental preparation methods used by athletes and whether these techniques could enhance performance in a laboratory setting. Unfortunately for track and field athletes, these techniques were not found to be effective on motor tasks requiring more skill and timing.

Some arousal techniques that may be effective in track and field involve breathing, imagery, and energizing verbal cues (Williams & Harris, 2006). Have an athlete increase the rate of breathing and imagine himself as a machine capable of generating energy at will. Have them picture the feeling of crossing the finish line or achieving that maximal jump. Words such as *explode, charge, psych up,* and *go* are good cues as well (Williams & Harris, 2006). Other things that Williams found may be effective include drawing energy from the environment, such as a cheering crowd or the smell of the rubber from the track or listening to music to get ready. Finally, if the athlete is in need of an increase of arousal due to fatigue, distraction can be a great way to deal with it (Williams & Harris, 2006). Having the athlete focus on what is happening and about to happen in the competition can distract him from the exhaustion or fatigue he is experiencing.

For the athlete to compete at his best, he must learn how to repeatedly achieve the ideal emotional state. Singer (2002) theorized that the ability to self-regulate arousal level, expectations and confidence, and attention immediately prior to and during performance may be as critical as becoming skilled in carrying out the act itself. One method of making a person more aware of their physiological state is with the use of biofeedback. Biofeedback involves the use of instrumentation that provides individuals with information not ordinarily available to them about their physiological states (Gould & Udry, 1994). This information has been used to reduce anxiety, increase muscle strength, reduce pain and fatigue, increase flexibility, and regulate heart rate (Bar-Eli, *et. al., 2002).* In track and field, biofeedback devices such as heart rate monitors are routinely used to achieve optimal results during workouts. The use of biofeedback during training sessions to regulate emotional and mental states, however, is new.

All the research done with biofeedback and mental training in sport, for the most part, has focused on adults. However, most track and field athletes begin running during childhood. With the growth of youth track programs in the United States, the number of youth athletes competing should only continue to grow. There is newer research now being published that supports the idea that these mental training techniques are just as effective with youths. Bar-Eli, Dreshman, Blumenstein, and Weinstein (2002) used biofeedback and mental training with competitive swimmers between the ages of 11 and 14. They adapted the techniques to be age appropriate, and the results were fantastic. Considering the many parallels between swimming and track and field, including the variation in length of events and importance of technique as well as the individual nature of a team sport, the crossover implication of this study is very promising.

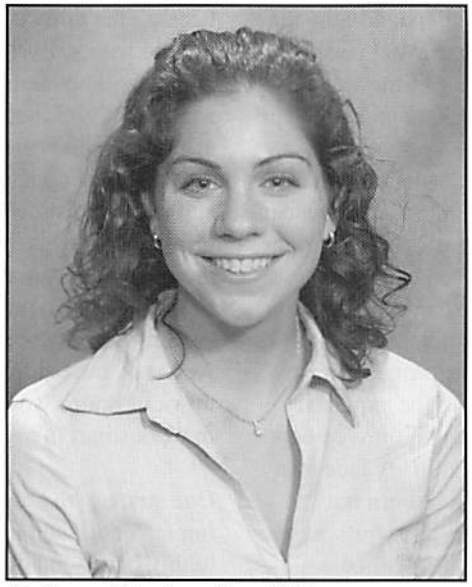
Biofeedback in track and field doesn't need to require expensive EEG equipment or sweat/temperature monitors. Heart rate monitors, as mentioned earlier, can be used to help the athlete recognize arousal levels. They can be used in conjunction with breathing techniques, like those discussed earlier. Other breathing techniques that can induce relaxation include sighing with exhalation, where you breathe in slowly and then exhale through the mouth, letting out a small sigh or concentration breathing, where the athlete focuses only on his breathing, and nothing else. If thoughts wander, he is instructed to consciously bring all thoughts back to breathing as soon as a deviation is noticed (Williams & Harris, 2006). Blumenstein *et. al.* (1995) have looked specifically at the effect of breathing patterns on the regulation of mental states and biofeedback techniques and found that changes in breathing pattern were within the same realm as the changes in heart rate and other measurable biological reactions. This is validation in the power of respiratory regulation in arousal regulation.

Another biofeedback device that is quite inexpensive is a video camera. Bar-Eli *et. al.* (2002) used a video camera to analyze swimming strokes to make athletes more aware of what they needed to focus on and help make visualizations more vivid. Visualizing competitions can reduce cognitive anxiety which can help improve performance, as the

catastrophe model (Gould & Udry, 1994) showed earlier. Steven Ungerlieder (1996) stresses the importance of becoming aware with the competitive environment before competitions. A video camera can be used to walk through the cross country course or around the track, circle, or runway so that even when a competition is far away from the regular practice environment, athletes can desensitize themselves to the environment and visualize themselves competing in that environment. This reduction in fear of the unknown can make all the difference between a successful performance and choking.

Blumenstein, *et al.* (1995) found that the combination of biofeedback with autogenic training is one of the most effective relaxation techniques in terms of well-being and performance. Autogenic training is a technique consisting of a series of exercises designed to produce warmth and heaviness (Williams & Harris, 2006). It is a type of self-hypnosis where you progressively focus on each body part feeling very heavy. Each body part is repeated 6 times. The next stage involves telling yourself you are at peace or quiet once, and then feeling each body part as very warm 6 times. Autogenic training was developed by Johannes Schultz in Germany in the early 1930's and has been used extensively with European athletes (Williams & Harris, 2006).

While this type of relaxation may not be appropriate immediately prior to competition or even during the event itself, it can be used as part of warming-up or even during transportation to the meet or in bed the night before. This autogenic training can be used to get into a highly relaxed state before going into visualizations of the performance which could be considered ideal. In this highly-relaxed state, the body can begin to equate peak performance with relaxation.



Kathryn Zackowitz, ATC

While visualization and breathing techniques as well as biofeedback are all useful tools, in order to routinely achieve a state of optimal emotional arousal, many athletes are turning to preparticipation routines used before both practices as well as competitions. Ungerlieder (1996) stresses the importance of following a pre-race ritual. These mental preparation routines are defined by Gould and Udry (1994) as systematic, routinized patterns of physical actions and preplanned sequences of thoughts and arousal-related clues. Gould and Udry (1994) also suggest that these routines facilitate performance by helping athletes divert their attention from task-irrelevant to task-relevant thoughts and by assisting them in achieving optimal arousal levels. These routines can consist of eating a specific breakfast, tying shoes in a specific pattern, going through a specific pattern of stretching exercises, and even reviewing specific key words prior to competing or practicing. If an athlete routinely experiences excessive anxiety, then incorporating some of the relaxation techniques discussed earlier could be an essential part of the mental preparation routine.

Using all these tools presented here, as well as others, each athlete should be encouraged to develop his own mental preparation routine which helps him achieve his potential. As a coach or parent, we can help guide them by providing age and ability appropriate cues. It is useless to try to tell a five-year-old to focus on visualizing themselves running with perfect technique as they run around the curve. Someone that age would be much better suited for a few deep breaths and being reminded to really have fun and show off how hard they have trained. A teenage athlete who seems to have a large drop-off between times in practice and times in competition may benefit more from relaxation techniques like the autogenic training explained above or concentrating on his breathing. By paying attention to the individual needs of each person, we can be the best coaches as well as his number one fan.

When developing your own mental preparation routine, the most essential cue is to really listen to your personal needs. Begin keeping a training journal where you not only record workouts and weather conditions, but also meals and emotional states. Look back at this training journal and try to identify commonalities in days you had successful performances and try to emulate that. Not everyone has access to great coaching, so biofeedback techniques such as a video camera or heart rate monitor can be especially useful in these situations. Experiment and find your own unique optimal arousal level, and then figure out how to re-create it. With these cues, you can give yourself every opportunity to achieve your maximum potential in performance.
L&S

Choose SMART To Beat Burnout

By Conrad Woolsey, Lincoln University (MO.)

In college, many athletes transition from multiple sports to a single specific sport. In doing so, they will likely experience frustration, staleness, and burnout when they see little improvement. In year-round sports, such as track and field, we can help athletes beat burnout by teaching them the realities of sport and how to practice SMART while on the plateau. In this article, I will describe the realities of sport, some of the common 'pitfalls' that throwers fall into, and practical methods that we can use to beat burnout.

In order to beat burnout and keep from becoming frustrated, we must understand three important realities of sport. First, sports are games of mistakes and everyone will make them. Increase opportunities for success by creating an environment where athletes are not afraid of making mistakes, because what really matters is how we respond after mistakes are made. Second, there is no such thing as perfect. Trying to be perfect is an unrealistic expectation, and when we try to make sure we perform perfectly, the only thing that we can be sure of getting is frustrated. Practice does not make perfect, and perfect practice does not make perfect. What practice does is it makes learning more permanent. The goal in sport should be to perform effectively and to get the job done. To perform at our best, we have to allow ourselves to let performances happen.

The third reality of sport is, the better we become, the harder it is to improve. Athletes must understand how the plateau works in the progression of training and performance. In sport, plateaus are the periods of time we spend in between making improvements or 'backsliding' (Leonard, 1992). The better we become, the longer we should expect to stay on the plateau, for it is a difficult task to maintain a high level of performance. Learning to embrace the plateau is a healthy attitude and a good example of "thinking right in sport" (McGuire, in press) because even when we are doing really well, we will still be spending most of our time on the plateau (Leonard, 1992). While expecting quick fixes and constant improvements has been the "American way," it is not the reality of sport and should not be expected (Leonard, 1992). When we expect constant improvements in our performance, the fun of sport will quickly fade away into disappointment and eventually we will burn out. Therefore, to increase our chances for consistent success, we must learn to embrace the plateau, as we will be spending most of our time on it. Refer to "Mastery" by George Leonard to understand how and why we should 'learn to love' the plateau (1992, Ch. 4).

Teach athletes to practice smart, not hard, because practicing as hard as we can is not necessarily giving our smartest effort. If a thrower gives 100% effort everyday, he or she will eventually become injured or burn out. As the coach, we want athletes to go home everyday feeling like they have more 'in the tank' to give. While training, the goal should not be to give so much every day that we feel like we have nothing left, because over the course of an entire year the body will not handle this type of stress. Training smart includes resting and means carefully planning the right combination of easy, medium, and difficult days. Set athletes up for success by teaching them the importance of rest and recovery. Many throwers take it for granted, but there is a fine line between the passion and poison of training in sport.

Now, I will describe some of the common 'pitfalls' that lead throwers to burnout and strategies to overcome them. Many throwers fall into the trap of always throwing hard in practice, or finishing technical practices with a few hard throws. We do this because at the end of the day, it just feels good to see the implement go far. However, instead of solidifying the technique that we have practiced, we reinforce or re-learn our old habits. As a result, many athletes struggle with any technical changes and become frustrated. We know that when we give an all-out effort, our brains switch to an automatic mode where our previous muscle memory takes over. We also know that even for a skilled athlete, it takes several repetitions of the same movement over time to change his or her muscle memory. Therefore, in this situation, technical learning is hampered because the thrower will automatically revert back to his or her old habits. Even worse, there is a good chance the athlete will not realize the changes, as he or she will lose some 'feel' or kinesthetic awareness during their all out effort. For this reason, it is a good idea to teach athletes to throw at lower intensities while learning new fundamentals, and not to finish technical sessions with 100% effort throws. While teaching technique, try to remove the thoughts of distance from the thrower's mind. It could be as simple as removing the lines from the throwing sector. If we are worried about how far the implement is going, then we are distracted from learning. With what we know about how our brains work, we must make the conscious choice to work smart in practice to allow our technique to improve.

One strategy to help with this is to train with lighter implements, such as the 15-pound shot put. This can be highly beneficial during practice as the thrower can stay closer to his or her competition speed with less effort. Not to mention the mental benefits that go along with seeing the implement fly farther! Many throwers swear by using lighter implements in practice to get a closer feel of their competition technique. As a thrower, the 15-pound shot allowed me to work on my technique without the adrenaline and effort that should only come in a competitive environment. During the championship season, an athlete's goal is

often to throw farther than they have ever thrown. Teach athletes that this is a sure way to experience burnout, frustration, or even injury because practice is not the right environment for this to happen. We want to throw our best during competitions, when it counts, and to practice with that in mind. We should not expect ourselves to throw as far in practice as we do in competitions. Throwers usually do this to increase their confidence going into a competition, but if we base our performance confidence on how far we throw in practice we are setting ourselves up to become very frustrated. Furthermore, over the course of a long season, we only have so much stored adrenaline in our bodies, so don't waste it during warm-ups or practice. Calling on the adrenaline rush on a regular basis in practice is a sure way to burn out and become flat during the championship season.

For most athletes learning to adapt to long-term training on the plateau is difficult. Athletes want to see quick results and are taught at a young age that there is no such thing as working too hard. But, there is! Unfortunately, many have to learn this lesson the hard way by suffering from injuries. As the coach, we need to help our athletes avoid the negative consequences of overtraining and the frustration that goes along with it. We can do this by teaching them how the plateau works and prepare them for this situation to occur, because it will.

Give athletes structure in practice and describe the goals that you want to accomplish together each day. Set "S.M.A.R.T" goals that are specific, measurable, action-oriented, reasonable, and timely (McGuire, in press; Vernacchia, et al., 1996). Write down these daily, weekly, and long-term goals and keep them where you can see them. This will help athletes mobilize their efforts and stay positive about their training while on the plateau. When talking about goals, teach athletes to "Ink 'em and think 'em, view 'em and do 'em, believe 'em, and achieve 'em" (Vernacchia, 2003, p. 91).

Utilize athletes' input as much as possible, as making decisions for and about themselves is a critical component to their personal and athletic development. When athletes are involved they will be happier, and happy athletes have a better chance to succeed. For this to work, we need to create an environment of trust with our athletes. Teach athletes that you trust them to invest in themselves to become the best that they can be. Teach trust by listening to athletes and allowing them to adapt their training. Enable them to work smarter and to be happy with what they are accomplishing. Help create a more productive, self-motivated athlete that is healthy and ready to compete. Teach throwers to listen to their bodies and encourage them to express how they are feeling. Forget about using the 'tough love' clichés. Only the athlete truly knows how they are feeling, and having them choose to ignore the warning signs of overtraining can ruin his or her season. It is always better to err on the side of caution, then to lose an athlete to injury.


Conrad Woolsey

For throwers, here is my advice on how to deal with being on a plateau in training or throwing. Learn to embrace it, because if you are consistent on a daily basis and keep training with a positive attitude, the results will be exactly what you want when you need to be ready to throw far. Go to practice with a plan of action and work on specific aspects of your technique. Make a conscious effort to focus on using positive self-talk and positive visualization on a daily basis. Positive self-talk is simply being your own best friend. At any given moment we can only think one thought at a time, and what we decided to think about is our choice (Vernacchia, et al., 1996). We know that when we are thinking positive thoughts, we are more likely to be successful. Therefore, choose positive-self talk because what we say to ourselves makes a big difference in how well we perform. When you have a negative thought pop into your mind, make the choice to change your thoughts to positive ones that will help you succeed. Positive visualization is seeing what you want to have happen before it happens. Choose to use positive visualization because it presets our mind and body for successful performances. Always choose to see positive outcomes, because what we see is generally what we get. When we are thinking and seeing the right thoughts, good things are more likely to happen. Remember to focus on the process of improvement and to not worry too much about how far you are throwing in practice.

There is no exact science on how to keep athletes from being frustrated while training on the plateau. However, what we can do is prepare ourselves and expect for the plateau to occur as it is a normal part of training. As the coach, protect the hard-working athletes from working too hard, by teaching them to work S.M.A.R.T. We can help athletes beat burnout and believe in their potential by giving them opportunities for success.

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The Miraculous Midles

By Lane C. Dowell

Every successful athlete seeks the competitive edge. This quest is manifested in many forms. Some are within the bounds of the rules of the game and good sportsmanship while others cross the line of acceptability. This is a story about the good guys.

The sometimes elusive edge may be found in an obsession for competition hammered into one's psyche during the formative years, which, in the case of the Midles brothers, led to the development of sibling rivalry.

Dwight Midles, the third-in-line of the four brothers, offered this insight. "Our father died while in the military, and left my mother with five children ages 2 to 12. The lack of income from my deceased dad forced my mother to work. While mother was at work, this gave us the opportunity to rough house a lot without any adult supervision. It was in polite terms, survival of the fittest, and it also honed our male competitive skills. Of course, for my mother, who always came home to a dirty house with each room built like a fort, it would have a different view."

Thus, the edge appears to be a birthright in the Midles' family and is being passed on from one generation to the next.

The vehicle of competitive expression, first chosen by oldest brother Brian, a retiring high school principal in Alaska, was the Hammer throw. Brian Midles threw the hammer in the 1960's at Central Washington University and qualified for Nationals.

Recently, Long and Strong spent some time chatting with the Evergreen State's first family of the Hammer throw, the Midles. We discussed the passing of the torch through the family lineage

Even in the hammer community, there are many who have trouble keeping track of the Midles' family tree. So let us begin our narrative of the development of a passion for an event, which is, in part, fueled by a family rivalry, by identifying the characters.

***Dwight Midles:** (224' 10") qualified for the U.S. Olympic Team in 1980...NCAA All-American at Washington State University in 1977...longtime Evergreen State prep hammer coach...sons **Adam**, (242' 1"- 12lb) three time collegiate All-American at University of Southern California and **Zack** (226' 9"...12lb.), a sophomore at the University of Washington who scored at the 2007 Pac 10 Conference Championships.*

*Dwight's oldest daughter, **Olivia**, is currently in her sophomore year at Olympia's Capital High. At the 2007 US Junior Olympics, Olivia took the silver medal with her PR of 147'. Olivia broke the state freshman record with this throw.*

***Henry Midles:** Youngest of the four Midles brothers, Hank followed in Dwight's footsteps and has coached many a successful high school hammer thrower. Hank's Camas High has built its own Hammer cage.*

Hank excelled in the hammer at Central Washington and qualified for NAIA Nationals. His PR was over 170'.

*Henry's oldest daughter, **Gabriella** (173' 7"), set the state record this past season and accepted a scholarship to throw the Hammer at the University of Idaho. On her last throw of the competition at the National Junior Championship at Indianapolis, she claimed second place.*

***Madeleine** (140' 8") is a junior at Camas High and one of the top returnees in Washington.*

Dwight and Olivia Midles

***LSTJ:** How and why did you get into sports (particularly throwing)?*

DM: I had an older brother, Brian, who graduated from North Thurston High school in 1964. He used to take me to track meets with him in his senior year in high school. I was only in 4th grade at the time, but I was excited to watch Brian compete. He eventually won the Washington State High School discus title in 1964.

When I was a 5th grader, he brought home an 8 lb shot put for me. I used to go out in our cow pasture and practice in a dirt ring. We would have competitions with all the brothers, and spot distances depending on age and size of the implement we would throw. It was great fun.

HM: In high school I was involved in football, wrestling, and track, but my first love was the throws. The throwing events have always been a passion for me and my older brothers. Having two older brothers who were accomplished shot put, discus, and hammer throwers was always an incentive and a good coaching resource.

LSTJ: *How much did sibling rivalry play a role in your development of a competitive edge?*

HM: As brothers we would fight constantly. However, my two oldest brothers were 12 and 14 years older than me. My brother Dwight was three years older, so our age difference made being competitive with each other mostly irrelevant. That is not to say I was not always trying to beat their marks.

Although sibling rivalry for the most part did not exist, I consider myself to be a very competitive person as a coach and an athlete.

DM: There is no doubt that those backyard competitions off a dirt ring stirred the competitive feelings within all the brothers in our youth. I did not ever want to get beat by my little brother. He was two years younger than I was, so in my youth I had a huge advantage over him. As the years passed, the age difference I had over him, became less and less of an advantage, and I could always see him working to catch up with me. In simple terms it scared the hell out of me that he might overtake me, so it was one reason to work hard.

Olivia Midles

LSTJ: *If this exists, does it still drive you and your family to excel? Does it help make you an even better coach?*

DM: I do not feel that my competitive drive between my brothers causes me to excel any longer. My brothers and I do constantly tease one another as to which one of us is the smartest, tallest, best looking, and the better coach. I like to brag to my brothers that I win in all of those categories.

HM: Yes, I consider myself a very disciplined and competitive coach. I expect my athletes to be the same.

LSTJ: *What drove you to the hammer? Was it your best event?*

HM: I went to Central Washington to throw the shot and discus, only to find out that I could not make up for my physical short-comings in the shot and discus.

In the hammer I was able to develop technique that would allow me to out-throw bigger and stronger athletes, because I was disciplined and very competitive.

DM: My achievements in high school were only average. I recall one summer day when I was out practicing, my older brother Brian came out to watch me. I had just graduated from high school, and I had high hopes of continuing my throwing career in college.

Brian told me that I would never make it as a successful Division 1 discus or shot putter. I was just not big enough, tall enough, or strong enough. He broke my heart in an instant. Then he said, "Dwight you can make it in the hammer. It is a very complicated event that few people know much about. If you practice hard, I think you can be successful."

I knew nothing about the hammer. We took an old sludge hammer maul with a hole in the middle and put a rope around it, and used a stick for a handle. We practiced with that home-made hammer off our old dirt ring. That was how we started to throw the hammer.

LSTJ: *How much do you think having been introduced to the ball and wire in high school would have helped you develop?*

DM: I had only just started throwing my practice hammer when I got out of high school and I knew little about the event. John Chaplin, who was the head coach at Washington State University, took a chance on me and offered me a tuition-only scholarship. No other school was interested and I can not say as I blame them based on my marks. But marks do not measure heart and I had a lot of that. When I got that scholarship, I was determined not to let WSU down.

What I learned the hard way, however, was how difficult the hammer is to master. With the practice tips and motivational tools I have learned, I would have been able to help myself much more now than I ever could then. In fact, with the benefit of hindsight, I now know that many things I was attempting to do in my high school and my college days, actually hurt my development.

HM: Being introduced to the ball and wire earlier in life would have helped me immensely although back in those days we didn't have the coaching we have today. I can only imagine what it would have done for me if I would have started in high school.

LSTJ: *Why do you coach the hammer?*

HM: I love what it teaches kids in terms of self discipline, not to mention the cool shoes and the incredible hole a hammer can put into the ground of a soccer field. The truth being, when done really well, to me it is a very beautiful event to watch and be a part of.

Over the years I have seen the event flourish in the state of Washington although recently I have seen a decrease in

the available coaches and an increase in the demand for good quality coaching. The love of the sport is what the coaches have to sustain themselves which is probably why it has been an uphill battle to get coaches to stay with it for any length of time.

DM: When I was in college at WSU, there was a huge foreign athlete influx in the hammer at the university level. I competed against some great people, but I still resented the fact that so many U.S. colleges gave scholarships to foreign hammer throwers instead of developing U.S. talent..

Every time a foreign athlete comes to a US college on a scholarship, that is one less scholarship for an American athlete. Track and field does not have that many monetary advantages, but a college scholarship is one of them. I wanted to do my part to give US youth and my children a better chance to get one of those few track and field scholarships.

I also get a great deal of satisfaction out of coaching and helping young people with the hammer. The high school meets that we put on in Washington, and the clinics that we have sponsored have given so many young people in the state an opportunity they would have never had, were it not for their exposure to the hammer.

LSTJ: *What is your proudest moment as an athlete/ coach?*

DM: When I took my last throw at the 1980 Olympic Trials in Eugene, Oregon, I thought nothing would ever replace the joy and excitement I received from competing. I am happy to say I was totally wrong.

The joy and excitement of watching all my children compete, as well as high school athletes that I helped coach in the hammer, far exceeds anything I ever felt as an individual athlete.

My proudest moment as a father/coach would be watching both my sons (Zack Midles and Adam Midles) score at the 2007 Pacific10 Championships and compete at the NCAA West Regional Championships. I also got a great thrill out of watching my oldest son, Adam earn All-American honors at USC for three years in a row.

HM: Three moments come to mind. One was when Alayna Mills broke the state meet record. She was the first athlete I had coached who excelled so far and became the first Camas Hammer State Champion,

The other two had to do with my daughters. The first was when my oldest daughter, Gabriella broke her own all-time state record and went from fifth to second at Jr. Nationals on her last throw (my wife says I got emotional, but I am much too macho for that!).

Third was when my daughter Madeleine broke the freshman state record, a record held by her older sister, Gabriella.

LSTJ: *We have heard from the first generation of the Midles family. What about the current crop of throwers, the second generation?*

Why do you throw the hammer?

MM: I have thrown the hammer for about five yeas now, and have always been pushed to succeed to get a great scholarship to a good school. Though the money has a lot to do with it, I appreciate the sport for its competition.

Not only are the people incredibly supportive and encouraging but all the throwers know how hard it is to work and practice and then foul. Every thrower respects their competitors, so we're all friends.

OM: I love the complexity of the event and the feel of the speed in the ring with the hammer. There is a lot to remember when you throw the hammer, but with practice you learn to not even think about it.

LSTJ: *Is there a rivalry between you and your cousin?*

OM: We talk with each other at meets and give each other support. We both were able to make the trip to Junior Olympic Nationals with our dads this summer and had a lot of fun on the trip.

That National Junior Olympic meet was the highlight of my career in the hammer. I was able to throw a life-time best on my last throw of the competition and capture the silver medal. This was the last attempt of my of freshman year. It made all the work my dad and I did over the summer worthwhile.

MM: Yes and no. Like at Junior Olympics when we shared a hotel room, the few nights before the meet we would be up discussing our strategies (even if 'strategy' was how to get Starbucks the next morning). I love having a close cousin to compete against, and I think we are rivals in the best sense.

Throughout the spring and summer, I remember every time we had a meet, we would be pushing each other, because we were throwing around the same distances. Whenever she threw a big one, I would have to push it a little harder on the next throw. Sometimes it is easy to sit back and not go for it when where are no other throwers around your mark, but with someone holding that medal a few feet, a few inches from you, it helps keep the competition going. Of course, it gives us something to poke fun at each other for later.

What began as four brothers finding a positive outlet for their youthful energy on a dirt ring in a cow pasture, led to the development of some pretty fair country throwers. Man, I'll bet their Mom was glad to see them find a challenging outdoor activity.

When it came time to retire those throwing shoes, the Midles brothers hadn't had enough. The competitive edge would not be retired. It persisted and manifested into two, very successful youth hammer coaching careers.

I think it was someone famous who once uttered the immortal words, "The proof's in the puddin'." Even though Dwight and Henry do not coach all of our state's prep hammer throwers, they do make the pathway to success much easier for these youngsters.

*There were 24 finalists at the **NCAA D-1 meet** this year and **six of these throwers started their hammer career at an Evergreen State high school.** Only one of these masters of the ball and wire did not place in the top eight. She was ninth.*

Since 2000 over thirty preps from the Evergreen State have received scholarship money to spin the ball and wire.

*There are many more to come. **Five Washington prep hammer throwers received college help this year to ply their trade.***

Coming in the 2008 season, Washington preps will have a new hammer cage near a large metropolitan area in which to test their mettle.

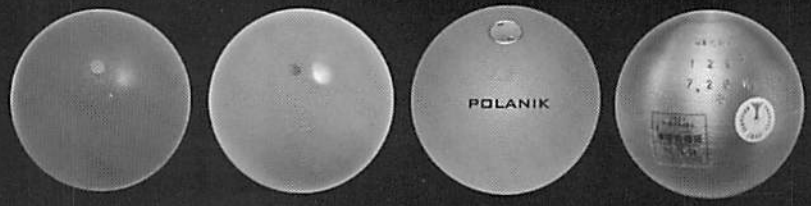
This unique event, which caters to all body types who possess a great work ethic and that competitive edge, provides numerous opportunities for our KIDS!

The high school hammer throw, like tackling in football, is as safe as we want to make it. ***L&S***

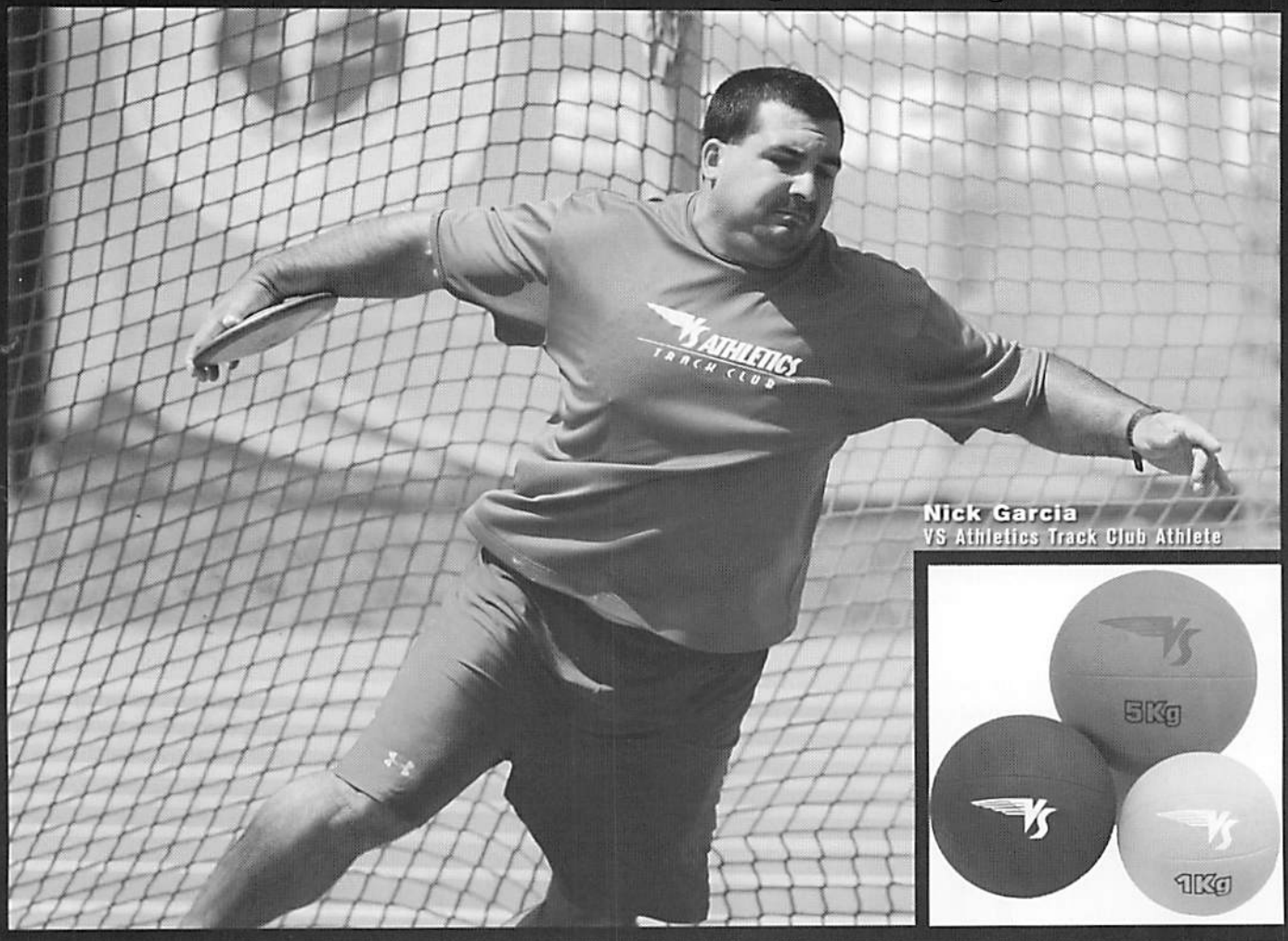
ATHLETICS

TRACK & FIELD

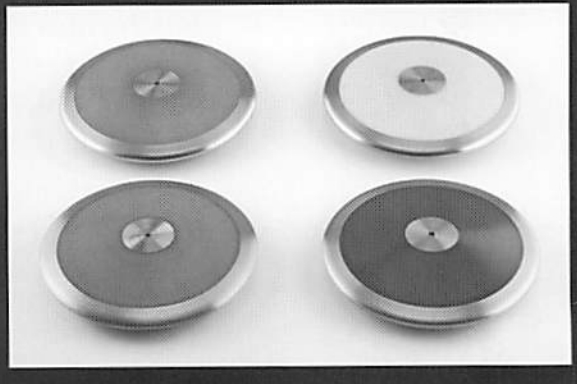
Spring/Summer 2008



Throwing and Training Starts Here



Nick Garcia
VS Athletics Track Club Athlete



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