

## MCA Shot, Discus & Javelin Notes

### Introduction

It is a great honor to be here presenting today and I owe a lot to some great people around the state and country who have helped me become a better throws coach. People like Wendell Griffin while I was at Dillon, Garrett Middleton and the Corvallis Throws Camps while at Darby and every year that I have coached there with other great coaches from around the state. There are many others out there that I have “borrowed” ideas, cues and technique from, while coaching at the Wyoming Throws Camp in Buffalo, the Ironwood Throws Camp and competing as a Master's athlete at local, regional and national level meets.

Darby High School 3 years, Beaverhead County High School 3 years and just finished my 9<sup>th</sup> year at the University of Providence

I love throwing, I still compete in Master's competition, my latest pursuit is the throw's pentathlon, throwing the hammer, shot put, discus, javelin and weight throw, with each performance is worth points based on how far you throw. I love learning and will never know all there is to know about throwing far, but I am not afraid to try new ideas and research into the possible biomechanics or psychological reasons of why something could or should be better. I encourage all of you in attendance today to be open to new ideas in your coaching and my hope is that you leave here today with something you want to take back and try. Some may work and some may not, I have learned just as much from things that didn't work as I have from the things that did work!

Format of today's presentation – drills and demonstration of technique and progression. If you have any questions at any time, don't hesitate to stop me and go over it.

### Keep it fun

Accuracy Throws, Javelin balloons, hula hoops, in the tire, closest to the pin

Throw of the day, Throw of the Week, best form – reward good form

### Keep them engaged

3-4 throws at a time gives better feedback and correction time

Have plywood sheets, a sidewalk or even grass for drills while you are working with ones in the ring

This is how you can really increase the amount of turns or technique complimentary drills during the season, utilize the practice time with more drills until it's their turn up

## Throws training

Do a lot of early season work from the power position, then progress and increase the number of middle position work, then increase to more full throw position work. Keep a large amount of practice time to “QUALITY” throws, while steadily increasing the number of total throws.

Always emphasize working the ground up, get that foot turning! Make the lower body do the work THEN move upward to the hips, back/abs and finally the arm/shoulders

Each throw can be broken down into 3-4 main phases, with sub-parts for each of those phases. There are drills for every phase and sub-part, that will enhance all critical positions throughout each throwing event that need to be hit.

Throw a lot of weighted balls, med balls and grip balls during bad weather/early season especially.

Questions?

## Form throwing

Get in a lot of 70-80% of max “form” throws in, especially early in the year. You don't go to the weight room and max out at 100% every day. Learning to throw for perfect form prevents frustration and keeps them focused longer, resulting in more “quality” time in at practice. At the end give them the green light to hit a new PR in three tries and film these if possible for your sake to remember what to work on the next time. Then switch it up on them some days, let them warm-up just like a meet and then take six for a new record, then form throw the rest of practice.

I like a lot of throws with "other" implements, towels, sticks, grip balls, med balls. Again, just upping the number of reps you can effectively get in during the season.

Drills are the proactive approach to fault prevention, try not to let it become an engrained problem, break it through lots of drills. I start every practice with some drills as part of warm-up.

Another part in the pursuit of proper form is video analysis. There is nothing better than watching film to show the good parts and the “need to work on “parts of an athletes throw. Reviewing film before the next practice/meet helps you to remember drills that fix problems and may also reveal things even the most experienced coach is not seeing.

Questions?

## Strength and conditioning

I am going to leave the bulk of this to the S & C people, but there are a few things I would like to comment on. The #1 thing I hear from freshmen in college is "Man, I wish I knew how to lift like this in high school!" The #2 thing I hear is "I never knew how important core strength was for throws." If they aren't getting it in weight lifting class, try to at least get in some abs, back, twisting, and plyo work, they will notice a big difference in their throws by the end of the season. A large muscle group, total body lifting program along with compound, multi-joint lifts are what is needed in throws. Compliment these with footspeed, and explosive plyometrics when getting sharp for championship season. Make sure they are tapering off for the championship weeks, as the number of throws increase prior to resting for the championship.

Questions?

## Glide shot put

I believe in teaching non-reverse throws before letting them reverse. You have to get the foot turning as you throw in glide shot as well to utilize the entire body. The leg/hip drive work is done first while the upper body remains passive until the finish.

Progression: proper power position throw, "A" position throw, short glide throw, and "full" glide throw

I have seen some really impressive non-reverse glide shot put throws, especially on the women's side and some who are good non-reverse discus throwers use it effectively in shot put. Again I feel it reinforces good lower body mechanics so don't rule it out as a possibility even if the end goal is to reverse at some point.

Teach how to reverse properly, turning the right foot hard and driving leg, hip and back into reverse, switching feet **OVER** the block leg.

## Glide shot put-what to look for

Outside the circle is the longest path in glide

Sit "knee to knee", hip fall, left leg reach, right leg push through heel, then pull under shot, upper body passive "eyes and left arm back", right foot turn to 90, keep turning right foot with left arm block, hips out front "backwards C", left leg block, right side extension over toeboard.

Back too low and not "unseating/hip fall" causes most to be upright in the center "popping up". Starting higher until leg strength is developed is better, this is why some are better with a dynamic start versus a static start, although beginners probably just need to keep it simple. "Unseat and hip fall", is something that is often a cause of the left leg being too high or floating "coming down late, instead of simultaneously" at the toeboard. Foot close to 90 degrees, the 9 o'clock to 10 o'clock position is what you want. Now the left in direction of throw is hard to achieve, but facilitates a quicker hip action for glide shot, can be hard to achieve so I wouldn't worry about it with younger throwers until they have developed some leg strength, just get them off the heel and foot turning "as you throw". You can get the shot off faster with the open hip/closed shoulder method but only if the foot can get to 90 degrees. Armpit over the toeboard gains another 1-2 feet on the throw, you have to push on the ball as far and as long as you can out of the ring and learn how to use the toeboard to stop you. That's why finishing lowering on the right and looking away are so important with a reverse.

Questions?

## Glide shot put drills

On the box Stands, "A" drill, hip fall wall drill, lunge throw, stick push drill, med ball kick, step-back throw, towel partner drill

## Rotational shot put- what to look for

If they like throwing discus, it is worth trying rotational shot, because getting out of the back and most drills are really similar.

Again, non-reverse throws until the athlete can get the foot turn and hip drive and block down, then reverse. Make sure all standing throws are from the proper power position! Wheel turns or ½ turns are mainly done non-reverse, but sometimes you can teach how to reverse off of these when ready. You need to do a “TON” of these early in the season, I have seen some kids doing these in meets early in the year for marks as they progress into full rotations by the end of the season. Modified South African is something I like even better than the South African position because of the turning of the left foot. Too many South African throws lead to incorrect form because they start to push off the right foot instead of the left. If you do South African throws make sure the weight is 70-80% on the left foot and eyes are always on a focal point! I recommend turning properly out of the back into the South African position and then go, I don't recommend an overabundance of South African, that's why I like the modified start. We mostly use South African for rhythm/drill work getting off the left foot. Full throws non-reverse are hard to accomplish but are highly recommended early on especially. The toeboard tends to freak out some throwers in non-reverse full throws but it is worth doing to ensure proper power position and block effect. Athletic stance, half squat and “dropping” into the turn, loading and lowering with transfer of weight onto the left leg, make sure the weight transfer is what "pulls" the right leg off the ground. Don't get carried away with the wind up, keep it simple to start with until the athlete is more accomplished, keep weight between the feet, not right to left at first. Hip set is really critical in rotational shot because of the shot being so close to the centerline of the body, in order to create torque, you really have to get that lower body foot turn and hip cranking to keep the shot “trailing” behind the hip. Get the feel of dragging the shot behind you across the ring. Wide right leg sweep with toe forward and **LOW**. A high right foot to center creates problems with weight transferring onto the left side block early. At right foot touchdown the elbow is the high point (about eye level) and the right hip is pointed out to the middle of the sector with shot behind it. I am a fan of getting that right hip out to the middle first. Left leg has to be quick and low to the front for the block. If left foot is slow then the block affect is lost and torque /power diminishes into the shot. I have seen a lot of rotational shot putters lose torque by not keeping the right foot turning ahead of the hips, and then they jump into the throw. Some wheel turn and full non-reverse throws will help cure this, because you can't stay on balance unless you continue turning the right foot and get the left down and solid for the block. The right foot really has to STAY turning ahead of the hip/shot as you hit the power position. Full height, full extension, armpit out over toeboard, reverse should be a complete rotation looking backward upon landing, keep pulling left arm and shoulder around and the right side will follow, you have to really forget about the shot put and take an extra hop if you need too, with left foot back to center!

## Discus

Pretty much the same progression as with rotational shot. The starting position is the same, just make it comfortable and athletic with a good controlled wind-up that allows keeping the right foot solid and weight between the feet. Hip set and lowering onto (loading) the left side is critical for a good “jump” to center, pull the right leg off the ground. The right leg should make a wide sweep (the throw is slow to fast). Make sure the right toe leads and the head/chest and left arm are up going to center when the right touches down. At right foot touchdown the feet are at 3 o’clock and 9 o’clock, the discus is at eye level and behind the hip, the hip is out to the middle of the sector (torque) and the right heel is up and right foot is turning ahead of the hip. Same as with the shot, keep the left leg low and quick to the front for the block and I recommend a lot of non-reverse full discus throws to get the hip drive and the feel of maximum torque for pull on the discus. Always keep the discus as far away from the body as possible! Longest radius is straight out = longer pull. The reverse will be more effective by learning non-reverse throws! I prefer athletes in a meet to do their standing throws and wheel turns ALL non-reverse and then if they reverse do that in their full throws. I have had athletes who prefer to reverse, but in a meet are struggling and I’ve had them do a non-reverse throw or before finals practice some non-reverse and they are able to straighten out their problems and go back to reverse throws again. The biggest fault with rotational shot and discus is by far the right foot turn and it is virtually impossible to remain on balance and hit a block correctly by not completely turning the right foot ahead of the hips in a non-reverse throw. Teach a proper reverse, with the right foot turn and right side momentum "propelling" you to switch places with your feet. Reverse with momentum into one or two extra recovery turns on right toe.

## Rotational Shot and Discus Drills

Water bottle foot turn, Load left pull right foot into giant step, Wide right around cone, Get off left foot around center cone, Step-in from South African, Float/Float/Sting, Wall hip set-see right foot lead, Around the pole, 360 right 360 left, Fence power position, Shoulder stick turns, Bungee pulls/rope pulls, Weighted ball/med ball throws.

## Javelin

Standing throws need to be worked on for the foot turn, hip drive and delayed arm strike until the lower body is turned and hips/abs are out front. Work this until you can get the foot turn, hips, back & abs into the throw before adding movement, holding a good solid block leg.

Step and throw or 1-step throw is progression, reinforcing proper power position biomechanics. Stay back on the right, foot turn, hips/abs, shoulder rotate, elbow top of ear, release over left foot.

Three step throws are working the same as the standing but you get the knee to knee “gallop” step into the throw. The biggest thing when adding movement is not to get forward in the power position, but learning to stay back on the right even as you step, making sure the hips lead.

Five step throws are for adding some speed but be careful to still stay back and hit the power position correctly. As you progress into 5 or 7 step throws you need to be doing a lot of 15-20 meter crossovers working on leading with the left hip out front, keeping the weight back on the right. The tendency is to run forward, leading with the head and chest.

In the full throw make sure that the run-up is controlled, going from slow to fast with only enough speed for the athlete to hit the power position correctly and without slowing down. Before you progress to full approach throws make sure you are hitting the 5 or 7 step correctly. I like the four left feet method of approach into the withdrawal of the javelin and into the crossovers where you pick up speed to run away from the javelin (slow to fast).

## Javelin – What I look for:

Smooth, controlled, rhythmic approach that goes from slow to fast and the speed is maintained to the plant.

Javelin carry is level and somewhere around the top of the head or a little higher to facilitate withdraw easier. No pumping or bouncing!

Smooth withdrawal of the javelin and closing of the hips to 45 degrees to runway, run away from javelin in the crossovers. Keep the javelin level and above shoulder height.

I like to keep everything in straight lines with no “wrapping”, make sure the shoulders stay closed and 45 degree angle to runway.

Increase the backward body angle in the crossovers, keeping the weight back on the right leg. You have to do a lot of crossovers everyday learning to run leaning back with the hips out in front of the chest. Practice crossovers everyday as part of the warm-up activity.

Right foot lands at a 45 degree angle forward, 90 degree or worse is hard to get turned soon enough. You want a “soft” right step, lowering and turning the right knee down as you let “the ground come up to you” on the left foot "heel strike". Create as much distance as you can between the left foot and right hand in the power position.

Right foot has to be aggressive turning to create maximum torque between the hip and javelin, delay the arm strike until the hips and abs are out front and the classic backward “C” position is achieved. Right foot should be completely turned over as you drive into the block and deliver the javelin.

On the delivery the release is out over the left foot and right foot should be just breaking contact at the time of release ensuring that all the energy is driven into the javelin. The left leg acts as a hinge for the body as a vaulting action occurs over the block and then 1-2 steps of recovery depending on the speed going into the plant.

## Javelin Drills

Chain drags, Bungee pulls, Jump the creek, off the ramp, off the box, Banana hurdle steps and runs, Discus wall slap, Hip pop/foot turn and "galloping block and foot turn, Carry and cross over, med ball throws, weighted ball wall throws, Hurdles/long jump/200m/bounding



