



Specialties

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4x100 Relay

The goal for Tigres is to teach relay fundamentals so that each year athletes will become more proficient. The following information will give coaches and athletes a foundation for learning relays in a consistent way.

General Overview

- Underhand pass to be used in all age groups
- When starting (leg 1), the baton can hang over the starting line, but fingers must remain behind the starting line
- Carry the baton at the bottom to create more room for receiving runner to grab
- Learn to adjust the baton (wiggle hand down) while running full speed
- Never switch hands with baton during the 4 x 100
- Call “stick” only when 1 stride away (approximately 3-4 feet)
- Hand off happens when runners are almost side by side
- Incoming runner runs through the hand off and stays in lane
- Outgoing runner never looks back during the exchange
- Both incoming and outgoing runners should be running at full speed during exchange
- Both incoming and outgoing runners must stay in their lane until the race is over
- The baton location determines in/out of the zone, not the runner
- Tape or a half tennis ball can be used as markers
- Finishing runner must not throw the baton after the race or the team will be disqualified

Relay Zone Definitions

Near the middle of the two large triangles is the ideal exchange zone. The baton can be handed off anywhere between the triangles.

How To Set Marks

- Mark to be set on opposite side of the lane from the runners starting position (leg 2 and 4 inside, leg 3 outside)
- 15 heel-to-toe steps (10 for 8U) to be used to set the first mark for runners 2, 3, and 4. Adjust the mark closer if the incoming runner is slower and longer if the incoming runner is faster.

- Second mark will be set 1 long stride past the first mark. Second mark will always be 1 long stride, regardless of speed.
- Outgoing runner takes off at full speed when incoming runner steps between the first and second mark (each runner stays on their side of the lane)

Guidelines For Choosing Relay Legs

Leg 1

- Fast starter
- Runs turns well
- Stays on inside of lane
- Carries baton in right hand
- Only needs to hand off baton

Leg 2

- Runs longest distance
- May want fastest runner in this position
- Stays on outside of lane
- Carries baton in left hand
- Needs to receive baton and hand off baton

Leg 3

- Runs turns well
- May want slowest runner here
- Stays on inside of lane
- Carries baton in right hand
- Needs to receive baton and hand off baton

Leg 4

- Strong finisher (gamer/highly competitive)
- Stays on outside of lane
- Carries baton in left hand
- Only needs to receive baton

Advanced Strategy

- In a perfect scenario, all four runners will have close to the same speed. In this case, a coach may put the fastest runner as the anchor. However, this is seldom the case.
- Where there is a difference in speed, the fastest runner should be number 2 to maximize the distance they run (up to 110 – 120 meters). This is accomplished by receiving the baton early in zone 1 and passing late in zone 2.
- If you have a weaker runner, it is typically best to put them on leg 3 to have them run the shortest distance (leg 2 hands off late and leg 4 receives early).

Long Jump

Concept Videos

Below are videos that are a good introduction into long jump and some of the drills we use.

- Long jump Cameron Gary basic: <https://www.youtube.com/watch?v=p1Lbskr-vbQ>
- Chair drill: https://www.youtube.com/watch?v=-A8632_Nx6k
- Chair drill to pit: <https://www.youtube.com/watch?v=ChCIKwDB4aw>
- Landing while using standing long jump: <https://www.youtube.com/watch?v=R8YIHpD8tn8>
- Teaching the hang: <https://www.youtube.com/watch?v=de-Nzj6PSdo>
- Box drills: <https://www.youtube.com/watch?v=C08RAUZYWVw&list=PLA81F86E0A628DE18&index=4>
- Box taps/bench drives: <https://www.youtube.com/watch?v=BDdO27eAINQ>

Warm-up Drills

- Low skips with the big arms
- Lateral jacks
- A skips
- B skips
- C skips
- Hip twists
- Skipping for height
- Straight leg bounding (then run it out)
- Hip rotations
- Knee rotations
- Ankle rotations
- Frog hops

The Approach

The objective of the approach run is for the athlete to achieve the ideal speed - fast and controlled. The *length* of approach depends on age, strength, and experience. Jumpers

should reach maximum speed when they hit the board. If an athlete is slowing down before reaching the board, the approach should be shorter.

As a starting point, beginning jumpers think of 5 lefts or rights or 10 total steps and go up or down from there based on competence. **This distance should be measured away from the runway.** Have them start at a fixed point on the track, accelerate and run through whatever number of steps you have determined as a starting point (5 or 6 lefts or rights). Mark where the takeoff foot lands on 6 approaches. Use the most frequent spot they hit and measure back to your starting point. A couple of reminders, do not have them takeoff when running these approaches. When you add the penultimate and takeoff step, the approach will be longer, maybe a few inches. The athlete should know the distance of their approach and never have to “run it back” at a meet; this reflects lack of preparation. It is easier to count lefts or rights than total steps, so count takeoff leg steps.

Take-off Leg

Generally, this is the preferred leg for doing a layup in basketball, the foot they would generally put forward to start with and the opposite of their handedness (right handed = left foot takeoff). There are exceptions to the rule, so try both feet if you're unsure.

Another method is to have the athlete fall forward. The foot which falls first should be their drive leg and the other should be the take-off leg.

Season Training Plan

Early Season (Weeks 1-6)

During this period the athlete will focus on:

- Starting foot and take-off foot preference
- Number of strides (resulting in a mark) for approach
- Drive off the board
- Landing with two feet
- Exiting the pit

Mid Season (Weeks 7-11)

During this period the athlete will focus on:

- Continue practicing full approach, becoming more consistent
- Introduce the penultimate

- Continue working on drive and flight
- Focus on driving through feet during landing

Championship Season (Weeks 12-14)

During weeks 12-14 the athlete will focus on:

- Continue practicing full approach
- Continue practicing penultimate
- Continue working on take-off/flight/landing

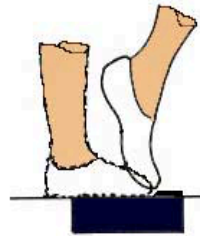
The take off

The preparation for the long jump take-off begins in the later phases of the approach run. The long jumper prepares for take off by sinking the hips and then raising the hips into the take off phase. This usually results in the next to last stride being longer than normal and the final stride being up to 25 centimetres shorter than a normal running stride. It must be emphasised that the hip sink and stride adjustment all happen in response to the athlete's postural adjustments in preparation for the take off. At take off ensure the hips are slightly forward of the shoulders.

When the take off foot is placed on the board, it is slightly in advance of the jumper's hips and should strike the board on the mid line.



The final two foot contacts in the take off should be flat, almost slapping.



The vertical impulse is achieved by the upward acceleration of the "free" limbs, the arms and the non take off leg, against the braced take off leg. These movements should be characterised by short radius (blocked), fast explosive actions.

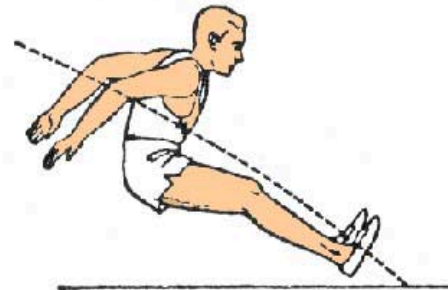
The head should be carried in a normal position, in line with spine, and the eyes should be focused forward and slightly up.

The flight through the air

Speed and lift generated on the runway and through take off can result in a good distance. After a take off the athlete tends to have forward rotation that, if not corrected, will result in the feet hitting the sand early and a loss of distance in the jump. The cyclic forward movement of the legs and arms, as seen in the hitch-kick for example, will correct this forward rotation.

The landing

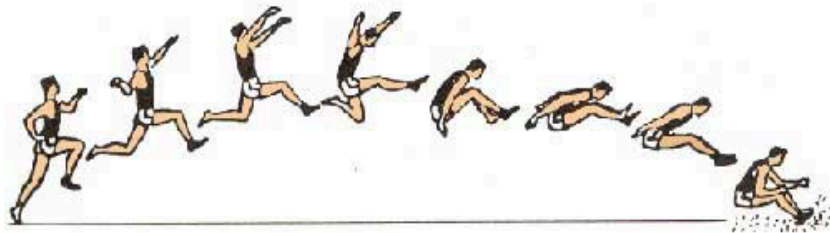
During the landing, the athlete is aiming to get the heels as far away from the take off board as is possible. The ideal landing position is shown in the diagram opposite where the dotted line represents the projected flight path of the body's centre of gravity. The heels will need to land just before the projected flight path to ensure the athlete does not fall back into the sand. As the feet make contact with the sand, press the heels downwards and contract the hamstrings causing the hips to rise. As the hips rise twist them to one side and allow the forward momentum to carry the body past the landing position.



Long Jump Styles

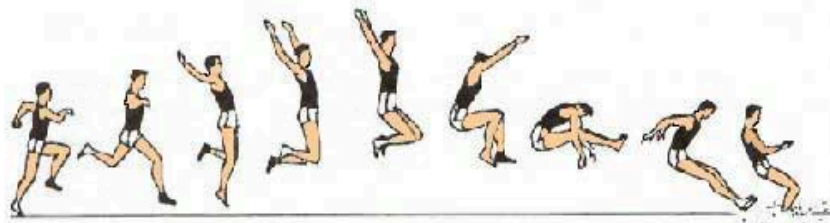
The Stride Jump

In the stride jump style the athlete maintains the take off position for as long as possible and only as the athlete comes into land does the take off leg join the free leg for a good landing position.



The Hang Style

On take off the athlete drops the free leg to the vertical, which is then joined by the take off leg. The arms go overhead to slow down the rotation about the athlete's centre of gravity. The legs are then lifted upwards and forwards whilst lower the trunk. The arms swing past the legs during the landing phase to ensure a good leg shoot.



The Hitch-Kick

Following take off the free leg is straightened and swung back and down as the take off leg folds up beneath the hips and comes forward bent. The take off leg then continues forward, straightening for landing. The free leg completes its backward swing behind the hip and then folds up and moves forwards bent, to join the take off leg ready for landing.



High Jump

Practice Routines

Station One: Small Pits

- Back-overs using the bungee to warm up. Use a bench or wooden block to work on arch.
- Four step approach focusing on technique. Still use the bungee.

Station Two: Drills

- Use wooden blocks with speed hurdles with some cones to do drills.

(More research needed to add more types of helpful plyos)

Station Three: Big Pits

- Back-overs, only for the first group, to warm up. Use a bench or wooden block and better work on getting an arch.
- Work on run-thrus.
- Once a mark is established, alternate between run thru and full run and jump.
- Depending on the size of group, 3-5 consecutive jumps per jumper

Hurdles

The key to teaching hurdling to young athletes is repetition. Constant repetition over a few hurdles, day after day, gives the best results.

Rhythm

The object in all technique coaching in hurdles is to get the athletes sprinting, spending as little time as possible in the air over the hurdles. The athletes themselves can listen to their footfalls and judge if their rhythm is good or not. A constant, fast rhythm of footfalls is to be strived for, not a fast patten with a pause at each hurdle.

Starts

For the average hurdler, an eight-stride runup to the first hurdle is normal. For a crouch start, the hurdler's lead foot over the hurdle should be the back foot in the blocks. For a standing start, the foot of the trail leg should be directly behind the starting line. For an unusually fast, tall and strong sprinter, the runup to the first hurdle may be able to be one stride shorter, therefore making the positions of the feet opposite in the starting position.

A common fault among hurdlers is to take one step out of the blocks and then lift the head to look at the first hurdle and come to an erect running position too soon. The start for a hurdler should be almost the same as that for a sprinter: shoulders low, knees and legs driving hard to propel the body forward. The hurdler should not look up to the hurdle crossbar until third or fourth stride and should try to skim over the hurdle as low as possible in order not to lose the acceleration of a fast sprint start.

Early Season Training

Using non-weighted or scissors hurdles that can adjust down to 46 cm. (1 ft., 6 in.) in height, set up four lanes of hurdles with the following heights and spacing. See Table 1 (*should be adjusted for different age groups or experience level*).

Each flight should have three or four hurdles. As many as 20 or more hurdlers can be training at the same time using this method.

Lane 3	46 cm. height	11 m. to first hurdle	8 m. between hurdles
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Lane 4	53 cm. height	11 m. to first hurdle	8.7 m. between hurdles
Lane 5	61 cm. height	11 m. to first hurdle	9.5 m. between hurdles
Lane 6	69 cm. height	12 m. to first hurdle	10.2 m. between hurdles

Table 1

- Instruct the athletes to run with an exaggerated knee lift over the lane 3 hurdles taking five steps between the hurdles. It doesn't matter how big or small the athlete is, they start with lane 3. If the athlete is already familiar with hurdling then he would go on to a more difficult lane.
- In all likelihood, the athletes will initially run and jump, run and jump. Therefore constant emphasis must be placed on stepping over the hurdles and running with high knees over the hurdles.
- Also, instruct the athletes to clear the trailing leg by lifting the knee high and out to the side under the arm with the knee in a higher position than the foot. The action of the lead leg is quite different; the knee is driven high in front of the chest toward the hurdle with the foot being snapped up just high enough to clear the hurdle.
- Stride length at this time should be fairly short (five steps between the hurdles) concentrating on rhythm and not speed. As the athletes warm up and are able to do the first lane with ease, instruct them to move to the next lane, progressively running faster.
- The athletes also are likely to stop in front of each hurdle and hop over with considerably diminished speed. Correct this by instructing them to go forward not up over the hurdles.
- The hurdlers should do six to twelve flights of hurdles at each workout. As they improve, they can progress to the next higher hurdle flight. Most hurdlers do well to warm up with a couple of flights with the smallest hurdles even though they may have progressed to the higher heights.
- In this way, the rhythm is easily learned and the tendency to jump over the hurdles is diminished, especially by the sixth or eighth flight when the hurdler's legs are too tired to jump. It is also important for the hurdler to run 10 meters past the last hurdle to get used to the finish of the race.
- The hurdlers will probably begin running over the hurdles slowly to start with but should start running faster as they gain confidence and rhythm. They should be encouraged to run fast or sprint over the hurdles as the objective of the event is to get to the finish line as fast as possible. Even when warming up over the smaller hurdles, the hurdler should move his feet very fast. The hurdle race is basically a sprint race and this should be continually emphasized.
- There is a great tendency for athletes to swing the lead leg up over the hurdle,

much as a high jumper gets extra lift by vigorously swinging up his lead leg. The effect is the same. The athlete will lift up into the air and float over the hurdle thereby interrupting the running rhythm and slowing the athlete down. If this is a problem, have the athlete temporarily use one hurdle and concentrate on driving the knee of the lead leg towards the hurdle using a fast, flicking action of the lead foot to clear the hurdle and snap the foot back down to the track.

- This must be constantly repeated until the action is learned and then have the athlete return to running hurdle flights. Also continually emphasize the use of a very high knee action to clear the trail leg. If there is a lot of difficulty teaching these two points, use the lead leg and trail leg exercises as described in Single-Leg Exercises below.
- Driving quickly forward over the hurdles should be emphasized as should stepping not jumping over the hurdles

Mid Season Training

- After a few weeks of practice, the hurdlers should be ready for two actions necessary to increase the speed of hurdle clearance: leaning towards the hurdles and driving away from the hurdles.
- The lean towards the hurdle and off the hurdle is necessary to counteract the upward, lifting action of the lead leg. If the action of the lead leg is allowed to lift the athlete's center of gravity above the horizontal plane of normal running, horizontal speed will be lost.
- To teach the lean, instruct the athletes to lean towards the hurdles with their whole body, hips and chest, and not to merely duck the head and shoulders over the hurdle. The hurdler should drive his chest over the thigh of the lead leg and, to further counteract the thrust of the lead leg, drive the opposite arm in an overemphasized sprinting action, forward and up.
- The drive away from the hurdle with the body and knee of the trail leg is probably the one feature that distinguishes a good hurdler from a mediocre hurdler. An aggressive drive away from the hurdle could be considered the secret to good hurdling. Too many athletes float after clearing the hurdle and thereby add costly time to their hurdle races.
- Instruct the hurdlers to drive the trail knee forward into the stride off the hurdle. The knee should already be in a high position and should be driven forward at this point. It may also be beneficial to instruct the hurdlers to lean slightly forward off the hurdle as the lead foot touches the track so that their hips do not accelerate ahead of their shoulders.
- At this time, also, the arm action during hurdle clearance should be watched. Often hurdlers will use a sideways action of the arm, introducing a detrimental

lateral movement. For a hurdler leading over the hurdle with his right foot, the left arm should be driven forward and up in a bent position, thereby forcing the upper body forward and down. As the right foot is snapped down to the track, the left arm also moves downward and back into sprinting action and is not flung out to the side. Lateral movement in hurdling should be avoided and concentration placed on forward movement of the body and vertical movements of the arms and legs.

Mechanics

Take Off

- Lead with the knee
- Don't lead with the foot
- Watch to wallet
- Lead arm thumb turned down and to the forehead or above for men
- Lead arm thumb turned down and to the mouth or above for women
- Stay square

Flight

- Stay tight
- Hurdle through the window
- Knee should be bent, not straight.
- Chest over thigh
- Toe down, go down
- Evert the toe to ensure clearance of the hurdle and put your foot into a better position to run off the hurdle

Coming Off the Hurdle

- Active lead leg
- As soon as the front foot crosses the hurdle it should move toward the ground
- The back arm waits at the hip and races the lead leg through the hurdle
- Sweep the arm back
- The trail leg will be tight to the body moving into the armpit
- The arm needs to sweep back accordingly to make room for the trail leg
- Do not swing wide
- Push your shoulders up
- Don't stand up too early
- Wait until the trail leg goes through the hurdle

Get-Away Stride

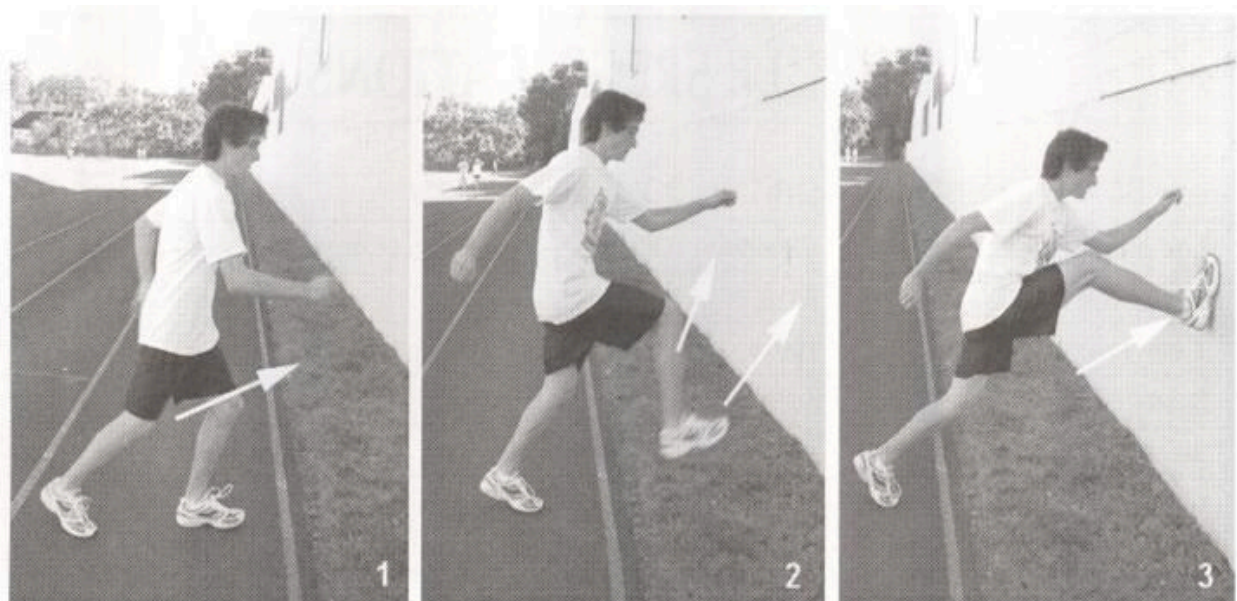
- KEEP RUNNING!!!
- No Bounding
- After the first hurdle the athlete's eyes should be up looking at the next hurdle.

Single-Leg Exercises

Lead Leg

To teach the proper movement of the lead leg, have the athlete stand four (of their) feet from a solid wall. Instruct them to stand on the takeoff foot and lean forward toward the wall from the toes, then drive the knee of the lead leg towards the wall quickly snapping up the foot of the lead leg to contact the wall at a point $2\frac{1}{2}$ - $3\frac{1}{2}$ ft. from the ground—depending upon the height of the hurdles to be cleared plus 10 inches.

The athlete returns to the starting position and does it again repeatedly, trying to get the chest forward and down towards the thigh of the lead leg. Look to make sure he is driving the knee towards the wall and not a straight leg. The arm opposite to the lead foot should be driven forward and up in an exaggerated sprinting action to balance the high drive of the lead foot.

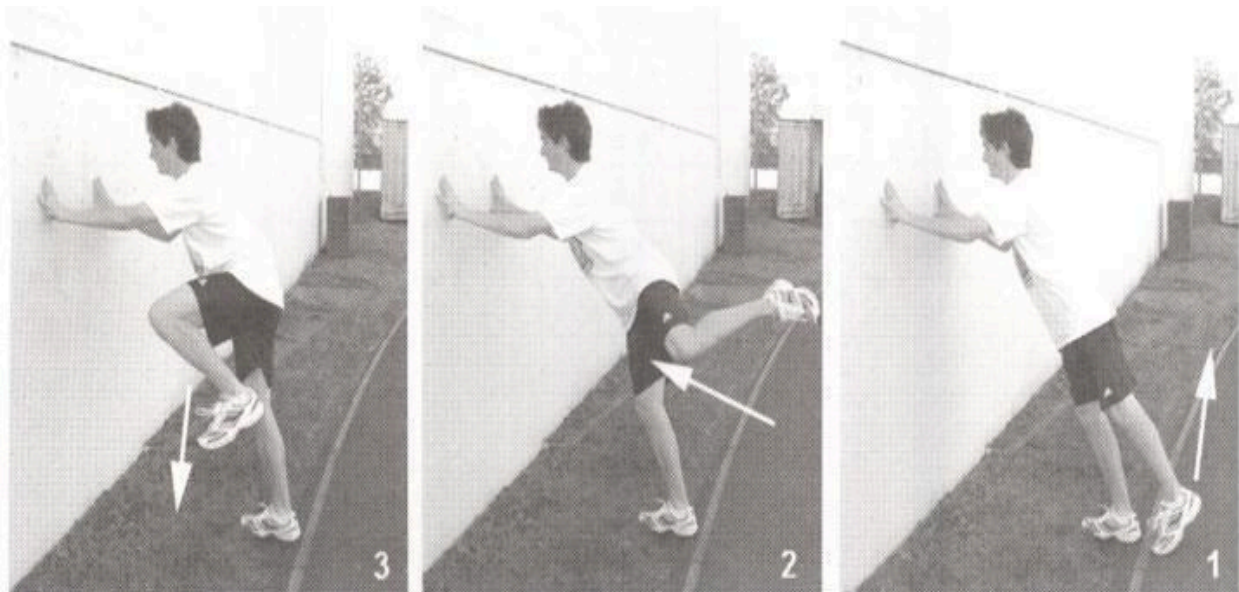


Lead-leg exercise

Trail Leg

To teach the correct movement of the trail leg, instruct the athletes to stand with their toes five (of their own) feet from the wall and then lean against the wall with both hands a little above shoulder height. They then place the toes of their trail leg on the ground as far away from the wall as possible and pull the knee of the trail leg forward and up out to the side in a circular motion with the foot following and then pawing the ground slightly ahead of and to the side of the lead-leg foot on the ground. They should do three circular motions with the trail leg, stop, then repeat several times to learn the rhythm.

These two exercises should be incorporated into the warm-up of every workout for beginners in their first year of hurdling.



Trail-leg exercise

Correcting Problems

Often coaches are presented with the task of re-teaching proper hurdle technique to an athlete who is hurdling incorrectly, whether that athlete is jumping the hurdles, over-striding, swinging the lead leg up, sitting on top of the hurdle, pulling the trail knee through low or a myriad of other faults. Generally the athlete will spend too much time in the air over the hurdles and the following three steps have a dum-da-dum rhythm instead of a quick da-da-da or 1-2-3 action - in other words, a quick, even three-stride action between the hurdles.

To remedy the problem, first reduce the height of the hurdles to a height easily cleared without jumping and reduce the distance between the hurdles so that the athlete does not have to overstride but can run relaxed and quickly. At this point, work on the technique corrections needed.

Once the athlete is sprinting over the hurdles with the correct technique, gradually increase the distance between the hurdles to approach the specified distance for the age group of the athlete. Use four hurdles. Keep looking for relaxed, fast sprinting between the hurdles. Then gradually raise the height of the hurdles (1.5" at a time) until the athlete is hurdling at the specified height for racing.

Be alert to any changes away from a sprinting rhythm. If problems occur with the clearance technique while doing the increases, revert to hurdling over three hurdles set to allow five steps between the hurdles. In this way, the athlete has more time between hurdles to concentrate on the clearance technique for each hurdle.

Shot Put

Introduction

Shot put can be contested by anyone big, small, short or tall does not matter. What is best is tall quick kids as explosive movements will garner the best results. However, any athlete can do it (not just the large ones).

Different kids will pick up the movements at different rates. It is important to not try to introduce too much at one time. Make sure a kid understands and can implement the basic techniques before pushing more advanced techniques. The below tasks should be presented to the kids in the order listed and only after they have mastered the earlier tasks. When you start a throwing session, always work through this progression.

Safety

If the shot hits someone in the head it will probably kill that person. If they are lucky they would spend a week in a coma and wake up without brain damage. Kids require close supervision when handling shots; even dropping it on one's foot could shatter a toe. Make sure all your kids are behind the ring and watching the thrower, not playing grab ass, as a shot can come loose at any time. Always think in terms of safety.

Grip

Hold the shot with the fingers mostly closed and nestled at the palm finger juncture. Avoid gripping the fingers and thumb around the shot; this makes release difficult.

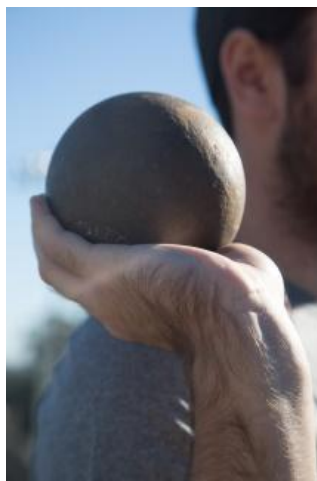


Figure 1

Hold

The shot put is held against the neck right under the jaw, elbow up, thumb down (see Figure 2). The throw is achieved by pushing it out and up (about 40 deg.) chest hips and chin facing up at this 40 deg. The hardest thing to get across to the kids is pushing the shot, not trying to throw it like a ball. You must have the kids pushing the shot elbow up thumb down before you build upon the technique.



Figure 2

Stance

The stance at the front of the ring for a right handed thrower(all reference is for a righty, mirror image for a lefty) is left foot forward right foot back about 2 shoe lengths apart and split shoulder width. This is known as the power position (see Figure 3). While pushing against the ground with the right foot push the shot up and out using the right leg push against the ground following with the arm push make these motions as fluid as possible but maintain the sequence.

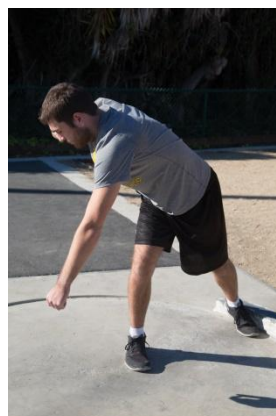


Figure 3

Full Stand Throw

Assume the power position. Now twist the torso to your right, bend the right knee as much as you can down to 45 deg., keep the left leg straight, pivot the feet 90deg. Clockwise be on the balls of your feet, holding the shot as discussed. You are now ready to uncork a throw. Using your right foot as a trigger, pivot your foot back towards the sector driving your hip up, untwist your torso as your shoulders square up to the sector push the shot out and up (see Figure 4).



Figure 4

Step Backs

Facing the back of the ring with your right foot's toe at the ring and your left foot near the center of the ring, left leg straight, right leg bent at the knee about 90 deg. (see Figure 5). Step your right foot back even with your left (see Fig 6), then step your left towards the toe board and open you are now at the power position of the full stand throw, make the throw as discussed above. The movements discussed need to stay in order but move fluidly.

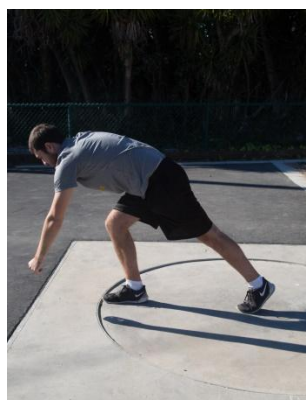


Figure 5



Figure 6

Glide

Like the step backs assume the beginning position. To begin the movements kick the left foot towards the toe board while pushing your body towards the toe board with your right leg/foot. You should be both feet off the ground facing the back of the ring while in the air turn your feet counter clockwise, as you land both feet at the same time on the balls of your feet. Landing should trigger the throw in that you should land in the full stand throw position, once again keep the movements fluid.

Rotational Throws

99% of pre high school kids will have extreme difficulty learning the rotational movement and unless you as a coach are extremely knowledgeable of the technique the suggestion would be to not attempt to teach it. If you have great experience with the technique then you are not in need of this tutorial. Regardless safety needs to be observed even more with a young thrower trying to learn the rotational technique, shots will end up flying in all directions.

Warm Ups

Every throwing session needs an appropriate warm up session. If your throwers warm up with the team this is good enough, minimum is a lap and dynamic warm up. Then proceed through the progression of throws as listed.

Expectations

Kids learn at different rates; don't try to push a kid on to a higher task in the progression until they have mastered the earlier tasks. Some kids will never progress past stand throws in their first season. As a coach if you have never thrown before use you tube and any clinics offered to educate yourself about shot put and other drills associated with shot.