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JOURNAL ARTICLES

Hammer Time

Throwing Drills

Robin Lyons

In 2006 I was referred to CrossFit.com to check out a workout called “Nasty Girls.” At the time, I wasn’t sure if I should open a video with that name in a public room. Well, what I found was probably more shocking than what I expected: a workout prescribing multiple rounds of fifty air squats backed up by “crazy” muscle-ups and power cleans, all done with strength, intensity, and perseverance by three truly remarkable women. Out of curiosity, I gave the program whirl and soon after found a renewed desire to improve my own fitness goals.

As a national and collegiate competitive athlete in the hammer, discus, and indoor weight throw, I had been trained to be a specialist in the weight room. Running excessively, doing any “cardio” training, or performing any exercise over five reps was a big fat no (no surprise that I weighed 180 pounds). My long-held belief in what fitness was—bigger, stronger, faster—soon became blurry. (Hmm, or was that blur caused by the CrossFit workout I had just completed?)

The event

In this article I share some drills from one of the throwing events that I believe is the most dynamic and exciting to watch. The hammer throw is an athletic throwing contest where the object thrown is a heavy steel ball attached to a wire (with a maximum length of four feet) with a handle. The weight of outdoor competition hammers used today in the Olympics and nationally accredited (IAAF) track and field events are 4 kg (8.8 pounds) for women and 7.2 kg (16 pounds) for men.

The name “hammer throw” dates back to 2000 B.C.,

from when historians have found records of contests consisting of throwing stones, sledgehammers, and even chariot wheels with a single spoke attached (such competitions are still part of the Scottish Highland Games, where the implement used is a steel or lead weight at the end of a wooden handle).

Like other throwing events in track and field such as discus and shot put, competition in the hammer is decided by who can throw the implement the farthest. Athletes gain maximum distance by spinning the hammer around the front of the body to set up the circular motion. Then they apply force and pick up speed by completing one to four turns in a concrete circle. Most throwers turn three or four times, depending on the kind of technique used. The ball moves in a circular path, gradually increasing in velocity with each turn, with the high point of the ball toward the sector, or marked landing area, for the hammer; the low point of the hammer is at the back of the circle away from the sector. The thrower then releases the ball from the front of the circle. The two most important factors for a long throw are the angle of release and the speed of the ball.

When learning a highly technical skill like the hammer, repetition and more repetition are key to success. This is not a skill you can learn overnight. I encourage anyone who is learning how to throw the hammer, considering competing in the event, or just wanting to incorporate functional throwing work into their general fitness training to use the information and drills here as groundwork for your practice routine.

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Hammer Time (continued...)

Equipment

You will need a throwing surface no smaller than 10 feet by 7 feet. This is essential space for hammer throwing drills. For most of the drills described in this article, you will not need the specified throwing area, but in order to advance you will need to have an area with proper netting and caging.

For serious training and competition, the throwing surface is marked with an 8-foot-diameter circle. Of course, if you're using throwing drills and practice for broad conditioning purposes, the technical details of the environment are less important.

Technical footwork is fundamental to the hammer throw. Common running shoes are not only inadequate but dangerous footwear for learning the hammer throw because of their thick soles and sharp edges. The least expensive, thinnest-sole sneakers are best until you can purchase specialty shoes.

Once you begin throwing the hammer, you will need a glove to protect your left hand (if you are a right-handed thrower). You can purchase a glove similar to the one pictured here from any track and field distributor. The least expensive option, though, is to buy a gardening glove from Wal-Mart, Home Depot, or similar stores and simply cut off the tips of the fingers and the whole thumb of the left glove.

Rotate!

Rotational balance is essential in the hammer throw, along with postural core strength, or spine and trunk stabilization. An athlete with insufficient core strength will bend forward during the throw, which decreases the speed built up in the preparation. Building foundational strength is key to early success in performing hammer drills. Exercises such as kettlebell swings, weighted squats, thrusters, and deadlifts are excellent movements to include in a training program for the hammer throwing event.

In this article we will work on rotary coordination, balance, preliminary winds, and the release before delving into technical turns.

The hammer is an extension of the body, and learning how to move your body and counter against a force is the first step in developing rotational balance and awareness. I have chosen basic cognitive drills that are fun and simple to achieve those skills. They can



be implemented into more generalized workouts or warmups as well.

Partner spin and counter

The first step in learning or becoming a hammer thrower is learning how to rotate, counter and maintain your balance; this drill will introduce rotary skill and countering and balance on the balls of the feet.

Hammer Time (continued...)



five turns and then stop. It is crucial not to let go of your partner until you have both returned to a standing position.

Once you gather the concept of rotating and countering, the next step is to implement a hammer or similar object (e.g., a rope with a weight on the end) into your rotational drills.

If you have a hammer, place the handle across the end joints of the fingers in the left hand. (Lefties will use the right hand.) The right hand will then cover the left hand, as in the photo (to the left).

The walkaround drill

This drill is an excellent way to learn how to move with the hammer without worrying about technical footwork. It will also help teach you to keep the weighted object in front of you while you begin to create momentum rotating. I was taught this drill by U.S. national coach Stewart Toghler.

- Start with your feet shoulder-width apart and the hammer held in front of you on the ground, with your arms straight, relaxed, and down in front. Don't hold your arms out in front of you with the weight off the ground; when you begin to move, your momentum will raise the ball and your arms automatically.
- Step your feet around in a small circle, keeping your head, shoulders, hips, and feet all facing the same direction. The hammer also needs to stay in front of you; don't let it lag behind.



Grab a partner by the wrists and sit back to *counter* your partner's weight. The "counter position," as it's called, is sitting back with your hips while maintaining an upright torso and tight midline, as you do when front squatting.

Once you have grabbed your partner's wrists, lean back against them in the counter position and quickly move in a circle around your partner on the balls of your feet to create rotational speed. Be sure not to bend over or round your shoulders. Spin around for a total of



Hammer Time (continued...)

- Take eight steps around to time you back to your starting position.
- Make sure your feet, head, and shoulders are not leading the turns, causing you to drag the hammer. Everything must move together.
- Once you can get your body and the hammer as a unit back to the position you started from, start reducing the number of steps you take to complete the circle. For example, start with eight, and then reduce to six, and then, when you can do that cleanly, to four.

Wind-up drills

Winds are essential in starting the momentum in the hammer throw. Without winds it would be very difficult to create a rhythm or tempo along with the speed needed to throw the hammer a competitive distance. Key points here are to keep the arms relaxed and use the shoulders to create rotational momentum.

1. In the starting position, stand at the back of the circle, facing out.
2. Standing in the back of the ring, feet parallel to each other and legs bent, hold the hammer on the ground behind the right side of your body.
3. Swing the hammer out in front of your body by straightening your legs and pulling with your left arm.
4. Curl your left arm as the hammer passes overhead.
5. Rotate the shoulders to the right and sweep the hammer out in front again.

Once you can wind the hammer and maintain balance, a great drill to improve specific core strength and stability for hammer throw is to walk and wind with the hammer. Wind the hammer as described above and begin walking forward. You must time your walking and winding to coordinate the movements and optimize execution.

This is a great drill to include in your warm-up prior to throwing. I also have used this drill for golf and long-drive training.



Release

To learn the release, I recommend working with an object similar to the hammer but lighter to give yourself a chance to practice before actually attempting to release a heavy steel ball. A broomstick (approximately four feet long) is an excellent tool for practicing extension, throw direction, and finishing balance.

Hammer Time (continued...)

To begin, stand with the feet no more than shoulder-width apart, grasping the end of a shortened broom stick (a straw broom can remain on the end).

For a right-hander thrower:

1. Hold the end of the broomstick in front of the body with straight arms and the left hand over the right.
2. With the hips square to the front and the back facing the release area, sweep the broom to the right side to initiate swing momentum.
3. Once the stick has passed the right toe, reverse the direction of the swing and powerfully push the broom around the left side of the body.
4. Turn the hips and feet together, and pull back with the head and shoulders
5. Release the implement when the hips and shoulders have turned 90 degrees.
6. Continue rotating and finish with hands high, facing the sector. (You should look like a football referee signaling a touchdown.)

The thrower must rotate enough that the implement lands approximately in the center, or slightly to the left of center, of the throwing sector.

Once you can execute proper releases consistently with a broomstick or aluminum baseball bat, you can try them with a light hammer. For general conditioning, do throws from both the left and right sides for balanced body development.

Medicine ball release

Another great tool to work on releases with is a good ol' medicine ball weighing around 4 kg for females and 6 kg for males.

1. Stand with your back about four feet from a solid wall.
2. Hold the medicine ball between the hands with arms straight.
3. Keeping your arms straight, swing the medicine ball from the right hip (for a right-handed thrower) around and up the left side of the body.



4. Keep the hips and feet turning as a unit, and keep the eyes focused above the ball.
5. Finish with the arms raised high (touchdown!) and chin up. Prepare, with arms extended overhead, to catch the ball when it rebounds from the wall.
6. Return to the start and repeat.

The goal is to create a rhythm and string the throws together. Try to get three good sets of twelve throws.

Hammer Time (continued...)

Wind and release

Once your release technique is solidified, try adding the winds to the release with a light hammer. Make sure you have proper netting/caging before trying this drill.

Once you can wind the hammer twice under control, release the implement into a net or open field. It is imperative that you not make extra effort at the point of release. This will cause loss of balance and decrease the speed of the ball, in turn minimizing distance. Don't worry about trajectory at this point.

Keep the body working as a single unit—head, shoulder, hips, and feet all moving together. As soon as any part of the unit separates from the others, you will lose speed and balance prior to the release. Work on the walkaround drills to establish the way the body works as a unit. Wind and release the hammer until you can finish in balance on every throw.



Walk and Wind



Walkaround Drill
NO Hammer



Walkaround Drill
WITH Hammer



Wind and Release



Robin Lyons is a two-time Canadian National Champion in the hammer and discus. Her NCAA career highlights include five-time All-American titles in hammer, discus, and indoor weight throw and Mountain West Conference Championship titles in hammer and indoor weight throw. Robin's passion has always been fitness and sport, and she has now diversified into other sporting arenas. Most recently, she competed six times at the World Long Drive Championships (farthest drive 338 yards), placing second in 2004. She also has competed in the American Cup bobsled circuit as a brakeman. Today, she is co-owner and a trainer at the Edge Athletic Club in Mesquite, Nevada.