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Hammer Time

The CrossFit Games have twice exposed athletes who didn't know how to swing a sledgehammer. Moe Kelsey and Dan Hollingsworth offer tips for mastering this basic functional movement.

By Hilary Achauer April 2015



It was a "blue-collar test."

The fourth event at the 2009 CrossFit Games started with a 500-m row. Once the row was completed, athletes had to drive a 4-foot stake into the ground with a sledgehammer until no more than 6 inches remained above the ground. Then it was back to the rower for another 500 m.

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Reactions were mixed when athletes heard the event details.

"This event could end my day," Josh Everett said. "My hand-eye coordination is very poor."

Moe Kelsey, on the other hand, was thrilled. A relatively new CrossFit athlete at the time, Kelsey was a firefighter and had worked in concrete construction.

"I would pound steel stakes into the ground like four to five hours in a day," Kelsey said. "It was in my wheelhouse. There couldn't be anything really better."

Many competitors in 2009 struggled to pound the stake into the ground. They were unsure how to hold the sledgehammer and weren't able to accurately hit the stake with power.

Kelsey knew exactly what to do. He finished the event in 4:46 and took third place, and he went on to finish third overall. As he predicted, Everett did not do well in the event. He took 57th place.



It isn't surprising that many great athletes possess impressive skill when swinging a stick, club, hammer, bat or racket.

Farm kids, firefighters and people with construction experience thrived in this event. Other competitors bloodied their hands with inaccurate swings, and one turned the sledgehammer upside down and used it like a potato masher. Poor accuracy resulted in so many snapped sledgehammers in Heat 1 that CrossFit Games staff members obtained cash from the beer garden to buy more equipment from local hardware stores.

Swinging a sledgehammer or other implement is useful in sport, at home or at work. In the box, hammer strikes can be used to develop strength, explosive power and accuracy.

"I think that if you can't with just minimal proficiency wield a bat, strike something with a hammer, defend yourself with a club or work a machete to some advantage, it speaks to a deficiency in your fitness," said CrossFit Founder and CEO Greg Glassman, who had suggested the stake-drive event for the Games after a tough experience pounding a grounding rod into the earth.

Here, Kelsey and trainer Dan Hollingsworth take apart the sledgehammer swing, offering tips for more efficient, effective movement.

Start Small

Kelsey has been doing CrossFit since 2008. He followed up his 2009 podium finish with 14th at the 2010 Games. Today, Kelsey is a firefighter and a trainer at Mt. Baker CrossFit in Burlington, Washington. In addition to construction work, Kelsey chopped wood when he was growing up and is accustomed to swinging an axe as a firefighter.

His years of experience meant Kelsey knew exactly how to approach the sledgehammer challenge at the 2009 Games. Many athletes started with wide, over-the-head swings, but Kelsey choked up on the handle, putting his right hand next to the head and his left hand on the stake itself.

"(The stake) was so long, you needed to get it established into the ground first," Kelsey said. "I knew you couldn't start swinging with any force ... I made sure (the stake) was nice and vertical and pounded with little, short strokes until it was really purchased in the ground."

Those who swung the hammer too aggressively ended up with the stake tilted sideways.

"You can't be efficient if (the stake) is not vertical," Kelsey said. "If you are taking big, huge swings and are not accurate, you are just wasting energy. If you don't have the accuracy, better to take smaller, more accurate blows, versus some big, huge, powerful swing and then you miss. Some people hit their hands. Or they hit the handle."

The key to accuracy, Kelsey said, is keeping your eye on the target during the entire swing.

Big Swings

Once the stake is well established, it's time to really start swinging. If you're hammering a larger target, such as a tire or concrete, you can skip the small swings and start off with full-body swings.

First, establish your stance. Some people prefer to stand facing the target with their feet shoulder width apart. A diagonal

"If you can't be accurate, take smaller swings."

—Moe Kelsey

stance, with one foot behind the other, is the best option if you're a beginner or if you're using a heavy sledgehammer.

Try out both stances to see which one feels most comfortable for you, and go with the stance that gives you the best accuracy. Start swinging slowly, and increase power as your accuracy improves. Nobody wants to take a 16-lb. sledgehammer on the toes, so stay focused and keep your eye on the target. As with firearms, always consider where a missed shot might end up.

Kelsey prefers a diagonal stance similar to that seen in a split jerk, though the feet are closer together. He's right-handed, so he stands with his right foot back and his left foot forward.

Once the stake is solidly in the ground, take your hand off the stake and put both hands on the hammer. Kelsey recommends putting your dominant hand up by the head and your non-dominant hand midway down the handle.



In this shot from the 2009 CrossFit Games, Kelsey has placed his dominant hand at the bottom of the shaft. In general, the non-dominant hand would be the lower of the two.

Starting with the handle between your waist and mid-thigh, make an arc—almost like a J—with the hammer. As the hammer comes down and the head nears the target, your dominant hand slides back to meet your other hand.

The bottom hand, your non-dominant hand, should hold the handle tightly, almost in a death grip. Loosen up your dominant hand so it can easily slide down the shaft.

"As (the stake) goes further and further down, you can start moving the (non-dominant) hand further and further down the handle," Kelsey said. When the stake is at chest level, it's difficult to execute a full swing, but once the stake reaches about waist level, that's when it's time for the big swings.

Accuracy, however, trumps all.

"If you can't be accurate, take smaller swings," Kelsey said.



Swinging a sledgehammer is a core-to-extremity movement that relies on hip flexion, which is seen less often than hip extension in CrossFit gyms.

Body Position and Flexion

During a sledgehammer swing, the body moves much as it does in a ball slam. The core-to-extremity movement starts with the body upright. The sledge comes overhead, and as it swings down, the chest comes toward the target, just like at the end of a ball slam.

Hollingsworth owns Kitsap CrossFit in Poulsbo, Washington. He's been a member of CrossFit's Level 1 Seminar Staff for four years, and he's also on the CrossFit Kids and CrossFit Endurance staffs. He holds a master's degree in physical therapy.

Hollingsworth said swinging a sledgehammer is a flexion movement—as opposed to shoveling snow, which is an extension movement.

"The sledge (is) overhead, then you're pulling down to a really aggressive hip flexion to create power. The corollary in the gym would be GHD sit-ups, where we're doing an aggressive hip flexion," Hollingsworth said. He said two other exercises that use hip flexion are toes-to-bars or, as Kelsey said, ball slams.

"But our library of movements that train hip flexion are much smaller than hip extension," Hollingsworth said.

When CrossFit athletes swing a sledgehammer, it's usually aimed at a tire. This is an effective, full-body movement, but indiscriminately hitting a tire takes away the accuracy component. Kelsey has a solution for this.

"If you have a spot that you are aiming for, let's say on the sidewall there's a letter, or there's one small target you can aim for, try to hit that one specific spot rather than just blindly hitting the whole tire," Kelsey said.

Swing Away

The sledgehammer is a useful tool—in fitness, sport, construction, do-it-yourself jobs around the house and even at the state fair. Whatever your purpose for swinging a sledge, keep these tips in mind to improve your effectiveness and accuracy.

The sledgehammer has appeared at the CrossFit Games twice—in 2009 and in the Double Banger in 2012.

Perhaps it will appear in your next workout.



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