

Finish the Pull to Finish the Throw

Robert J. Townsend MS, CSCS
Head Throwing Coach
Millikin University
Decatur, Illinois

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THE SNATCH AND THE CLEAN
and jerk are commonly used in the training regimen of the throwing events in track and field. Many benefits come from using the lifts, as they involve the entire body in an explosive manner. It has been reported that major muscular forces are applied to the bar in just 0.8 seconds during a snatch lift or a clean lift and are applied in approximately 0.2 seconds in the jerk (4). Throwing events require high amounts of force production in fractions of a second, as well. It has been documented that the delivery of the shot put and javelin takes between 0.15 and 0.18 seconds (5). The activities both of throwing in the field events and of the sport of weightlifting are total-body efforts in which proficient performance is directly related to full extension of the hips, knees, and ankles. The similarities between the 2 activities suggest reasons for throwing coaches to implement the snatch and the clean and jerk into their training programs.

Many commonalities exist between weightlifting and throwing.

The snatch and the clean both include an extension of the ankles, knees, and hips. This can be seen in the delivery of the shot put, discus, hammer, and javelin (1). The strong pull that occurs is needed in the stabilizing muscles during the hammer and discus. The jerk is very similar to the force development that occurs from legs to upper body in the shot put (1).

Many throwing athletes and coaches concentrate on technique in the ring but do not emphasize critical technique in the weight room. Some coaches have accepted improper technique in a clean or a snatch as long as the athlete has thrown well. However, poor pulling technique in the snatch and the clean and jerk may carry over to poor delivery technique in the throws.

Formal progressive instruction in the power snatch and the power clean and jerk would be very beneficial to a thrower's training. In order for the lifts to meet the demands of the thrower, educating athletes on the similarities between lifts and the throws would

be beneficial. The power clean and the power snatch should be instructed from the top down or beginning with the second pull or with the double knee bend. The athlete should first learn to "set" the back with instructions to inhale and to hold the breath during the pull, which will allow the athlete to keep the chest high and hips low (2). While keeping both heels flat on the platform, the athlete should be instructed to bring the bar to just above knee level while maintaining the lordotic curve of the spine (2, 3). When the athlete begins to pull in a vertical direction while keeping the heels flat, a double knee bend occurs (2). This allows for more explosive force to be developed when the triple extension of the ankles, knees, and hips occurs simultaneously with the shoulder shrug while the arms are kept straight—see Figure 1. The explosive jump and shrug occur when the bar is at approximately a mid-thigh position for the clean and is near hip level for the snatch. The vertical displacement of the bar will allow



Figure 1. David Peabody demonstrates full extension of his ankles, knees, and hips during a power snatch.

the athlete to catch the bar in a racked position on the shoulders for a clean and overhead with locked-out arms for the snatch lift.

Both the power snatch and power clean can be performed from the floor or from a mid-thigh position if pulling blocks are available. Coaches should be aware that full extension of the ankles, knees, and hips is crucial in quality performance of the 2 Olympic-style lifts as well as in the shot put, discus, and hammer (4). Notice that the ankle, knee, and hip flexion during the second turn of the discus throw can be seen in Figure 2 and that the full extension during the throw can be seen in Figure 3. When the lifts are broken down in segments while instruction is given on proper



Figure 2. Korrin Stanek moves into the final turn of a discus throw.

technique, the coach will be able to identify the specific movements that are most beneficial to the weight events in track and field.

Coaches should pay special



Figure 3. Full extension is easily seen during the block and release of the discus.

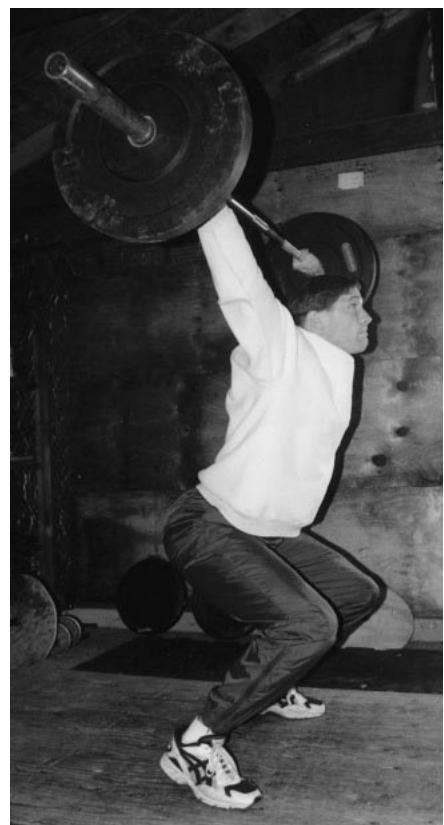


Figure 4. The receiving position of the power snatch has similar joint angles with the power position of the shot put and discus.

attention to the athlete's full extension, both during training sessions in the weight room and during time in the ring. The same athletes who do not fully extend in the ring may tend not to finish the pull segment of the power snatch or the power clean in the weight room.

Changing a preexisting bad habit of a thrower is not a fast or easy task. An athlete should be taught first to fully extend the body in the weight room. This initially may require terminating the Olympic lifts and replacing them with pulls. Pulls should be prescribed from various heights (floor, knee, or mid-thigh levels) and with various grips (snatch width or clean width) to provide variety.



Figure 5. **Josh Ward prepares to throw the hammer.**

Once the athlete learns to extend fully and explosively during pulling exercises, the Olympic lifts should be implemented. However, special attention should be given to progression from pulls to snatches or to cleans. The coach should begin the Olympic lifts from the mid-thigh position and instruct the athlete to begin each repetition from a dead stop. The coach should emphasize to the athlete that a reduction in weight will be required. Swinging or rocking forwards not only will increase the possibility that the athlete will pull with the arms but also may be more likely to cause injury from the improper technique. Starting from mid-thigh or from a dead stop for each repetition will encourage an explosive full extension.

Many athletes may be frustrated because they will be cleaning and snatching less weight. However, the coach should remind athletes that they are competing at track and field and not at weightlifting. Athletes also should

be educated about the purpose of performing the 2 Olympic-style lifts in a workout. Coaches should see measurable results by implementing the power snatch and the power jerk. Proper technique in the weight room may maximize throwing potential when athletes are taught to finish the pull. ▲

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Townsend

Robert Townsend is currently an assistant Track and Field coach at Millikin University. He has held this position along with coaching strength and conditioning at Benedictine University. Robert is also actively involved as an athlete and coach with U.S.A. Weightlifting. He has coached national qualifiers in the shot put, discus, and indoor weight throw. He has also coached lifters at collegiate nationals and at the American Open.

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