



Why the Olympic Lifts Belong in High School Athletic Development and Performance Programs

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The Olympic lifts and their variations should be fundamental to high school athletic development and performance programs. A growing number of young men and women are participating in middle and high school weight training classes across America. It is my goal to explain what the Olympic lifts are, the many benefits of doing the Olympic lifts, and why the Olympic lifts must be taught systematically under the supervision of a qualified coach.

When people are talking about the Olympic lifts, they are specifically talking about the competition lifts in the sport of weightlifting, the Snatch and the Clean and Jerk. In the snatch lift, the barbell is lifted from the floor to arms length overhead in a single continuous movement, whereas in the clean and jerk, the barbell is lifted from the floor to the shoulders and then to the overhead position to complete the 2-part lift. (5)

THE SNATCH:



THE CLEAN & JERK:

(Images from HOOK GRIP)



**Jenny Arthur was a two-sport high school athlete (track and softball) who started weightlifting for performance her sophomore year and ended up representing Team USA in the 2016 Olympics.*

Variations of the Olympic lifts and supplementary strength exercises are also used to help teach the movements, and provide variation within programming. In the USA Weightlifting's Sports Performance Coaching Course coaches are taught a Top/Down, Part/Whole teaching progression. This approach enhances the learning curve as well as incorporates built in skill remediation with in the progressions (7). Coaches can vary the starting positions of the lifts; high hang (power position), hang (at the knee), and from the floor (below the knee). These different starting positions can also be obtained by lifting off of boxes of varying heights.

We can also vary the receiving positions of the lifts by adding the terms Power or Split. A Power Snatch or Power Clean simply defines the receiving position of that lift to be with the lifter's hips above their knees. The power versions of the lifts are variations to the full lifts, where the snatch is received in a full overhead squat and the clean in a full front squat. A Split Snatch or Split Clean defines the receiving position of that lift to be in a split stance. A split stance is common in the jerk but less common today in the lifts. This variation should be done with alternating legs front to back and with even repetitions. The split variations as well as the split jerk are invaluable to development, performance, and injury prevention (18).

Many different variations of Squats, Pulls, and Presses are also used to strengthen and reinforce proper positions and movement patterns. The Squat variations contribute to overall leg and back strength while also creating strong receiving positions for the lifts. All the Pull variations work on starting positions as well as explosive timing of the different phases of the lifts. The Press variations help develop overhead strength and stability of the shoulders and core, while also working the overhead receiving positions of the Snatch and the Jerk.

The Olympic lifts have unmatched benefits for athletic development and sports performance (7). General benefits of doing the Olympic lifts are improved strength, power, and mobility. Some more specific facts and benefits of doing the weightlifting movements are:

- They are ground based, multi joint, and functional (7).
- Develops functional core strength and stability (2), (7).
- Enhances mobility in ankles, hips, spine, wrists, and shoulders (7).
- Receiving the Lifts in proper positions promotes functional stability, and deceleration mechanics, which helps with injury prevention (2), (3), (7), (14), (18).
- Increased jumping ability and short sprinting performance (3), (9), (11), (13), (19).
- Increases total body power production (8), (16).
- Increases lean body mass, with a concomitant decrease in body fat. (7), (11), (15).
- Increases Neural Adaptation: rate of force development, motor unit recruitment, and synchronization of the motor units (3), (7).
- Development and Improvement of Athleticism (3), (17), (18).
- Allows for training economy, a more efficient use of training time and energies (3), (7), (17), (18).
- Promotes full range of motion through every major joint in the body, all while yielding improvements in balance, coordination, and kinesthetic awareness (3), (7), (11), (12).

- Improvement of resting heart rate, blood pressure, and VO2 Max after only a few months of training (2), (3).

Over the last 14 years, I have also observed some intangible benefits of doing the Olympic lifts for the students as well as the coaches. Each intangible benefit is followed by a question that can be answered by the coach:

- Learning the Olympic lifts is process oriented, and takes time. Will the other coaches and athletes buy into a process-oriented program?
- The lifts themselves are hard, technically and physically. Are the athletes physically and mentally tough enough to do the work?
- I can tell how coachable a student is going to be, by how they handle the teaching process and correction. Will they be committed to doing things exactly right? Will the athletes be committed and disciplined enough to do the movements correctly?
- How do they handle adversity? There will be a time when they miss a lift, don't feel like training, or don't reach a goal they have set. How will they respond?
- Students/athletes who embrace the lifts generally exhibit greater confidence and aggressiveness in their approach to competitive sports (18).

Doing the Olympic lifts helps establish and maintain a culture that thrives on fundamentals, is committed to a process, accepts competition, and is committed to doing the work that it takes to get better.

The benefits of the Olympic lifts are undeniable when it comes to athletic development and performance. But the greatest benefits can only result from a well-planned, long-term program that emphasizes proper technical performance of the lifts while gradually increasing the training capacity, and hence restorative capacity of the athlete. Unfortunately, many of today's coaches have a lack of personal experience with the Olympic lifts and hence a lack of understanding of how to teach the lifts and implement them into their programs (18). I believe that this lack of experience and understanding contributes to many having the opinions that the lifts are dangerous, too hard to teach, and that you can get the same benefits from other exercises. The truth is that when the lifts are taught, supervised, and progressed appropriately they are safe and may be the single most effective type of training for athletic performance (1), (4), (6), (7), (10). I recommend that all coaches start their Olympic lifting journey as I did, by taking the USA Weightlifting Level 1 Sports Performance Course. This course will introduce you to the sport of weightlifting, talk about weightlifting safety, effective coaching, weightlifting technique and proper teaching progressions, introductory programming, and the American Developmental Model (ADM) (7). This course is offered across the nation by USA Weightlifting and taught by experienced weightlifting coaches. It should be noted that of these instructors there are a handful that are also middle school and high school teachers. If you are in a school environment, I highly recommend that you take the Sports Performance Course from one of them.

The American Developmental Model is USA Weightlifting's long-term athletic development plan for the sport of weightlifting in the USA. USA Weightlifting has based its Long Term Athlete Development Model on the work done by Istvan Balyi and adopted by the US Olympic Committee. The ADM is an important piece of the puzzle for every coach to understand and is required training for those getting the Sports Performance certification. Although this ADM is specific to the sport of weightlifting, there are specific progressions that can be directly applied to our programs. Some key

components of the ADM are early participation and late specialization, Malcolm Gladwell's 10,000 rep rule can only be accomplished through participating in many different sports, quality of training over quantity of training, don't rush development, and allow time for free play (7).

The 8 stages of development within the ADM are:

1. Active Start
2. FUNDamentals
3. Learn to Train
4. Train to Train
5. Train to Compete
6. Learn to Compete
7. Compete to Win
8. Weightlifting for Life

As middle school and high school coaches, most of our work will begin in the "Fundamental" stage, and we work our way through to the "Train to Compete" stage. However, I do think that it's a good reminder that we ultimately want our students to develop a love for training that will be carried to the "Weightlifting for Life" stage (7).

The Olympic lifts and their variations should be fundamental to high school athletic development and performance programs. The benefits are undeniable and the resources are available for every coach. It is our responsibility as athletic development and performance coaches to learn how to systematically teach, program, and progress our students through a quality long-term athletic development plan that will ultimately help them reach their genetic potential.

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