

The theory of preparation of young weightlifters for competitive activities

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Abstract

Purpose: Study and analysis of the theory of preparation of young weightlifters for competition activities

Methods: A specially developed training program is included in the training plan of young weightlifters (5 times a week). Before the start of the study, the prescribed norms were observed. After the study, the differences were studied. From the exercises, the number of attempts and intensity were selected mainly according to the methods of counting. the amount of training was calculated based on the number of barbell lifts in weekly weightlifters.

Results: A comparative analysis of the results showed that during the experiment, the participant determined that the arithmetic mean of the positive change in the results of this exercise was clean and jerk +8-9 kg, snatch the arithmetic mean of the relative change was 2,8%. At the same results (kg), the results showed that the arithmetic mean of the group participants changed statistically significantly during the experiment. This, in turn, shows that the method we use gives a positive effect.

Conclusion: Prior to the study, an analysis of local literature showed that weightlifters were determined to develop strength qualities through weightlifting sp.exercises, regardless of whether training or programs were conducted at that time.

Keywords: weightlifting, snatch sessions, lifter and barbell, back squat, front squat, young weightlifters, 14-15 years old, stages of lifters, effectively, competition, preparation

Introduction

After having established the receiving position, the movement of the clean can be learned in the same manner as the snatch. The lifter will learn and practice a series of drills that teach and reinforce the elements of the clean to eventually produce a technically sound lift. These drills follow the same fundamental pattern as the snatch progression.

If the athlete has already learned the snatch, typically the time needed to learn the clean is reduced because of the similarities. However, coaches and athletes should be cautious of rushing or abbreviating the process, as the clean is in its own ways technically nuanced and deserves attention equal to the snatch. What will seem initially to save time can result in more total time spent on instruction as the athlete progresses and technique flaws become

more evident and their influence on lift success increases. It's more effective to teach technique in a rational order that addresses the details as they arise than to attempt to later correct technique faults that have already become habit.

Because of the overlap of many of the details with the snatch, some information has been left out of the clean progression to avoid redundancy. Familiarity with the snatch progression is important for ensuring the effectiveness of the clean progression.

Methods

The theoretical analysis was expressed in the search for the problem, its goals and objectives, the object and subject of research, the logical construction of a scientific article, the method of collecting factual material, a theoretical review of the ways of interpreting the collected materials. In this scientific article, the opinions of mature specialists in the field of theory and practice of physical education, scientific, theoretical and practical information of specialists in cycling, weightlifting were effectively used. The dissertation, authorship, article, educational and methodological manuals on the topic of this article are analyzed. In total, 9 scientific and methodological sources were studied, 5 of which are foreign, and 14 are local literature.

Pedagogical observations were carried out in November and March at all stages of training in the preparation process and at the stages of strength training of young weightlifters in national weightlifting team of Uzbekistan.

Results and discussion

The mid-hang position of the clean, like for the snatch, positions the barbell at mid-thigh. The criteria used to position the athlete is also the same: the shins are vertical, the bar in light contact with the thigh, the shoulders slightly in front of the bar and the knees, the back arched completely, the head and eyes forward, the elbows turned out to the sides and passively ex-

tended, and the weight balanced over the front edge of the heel.

Although these criteria are identical for the snatch, the narrower grip in the clean will result in a somewhat different body position-the lifter's trunk will be more upright and the angle at the hip larger.

Because of this, athletes will be even more likely in the clean to move the bar closer to the knees during the following drills from

balance or incomplete leg drive.

The mid-hang clean pull brings together the aggressive hip and knee extension of the mid-hang clean jump and the precision necessary to produce what will become the second pull of the clean, the final upward explosion. The importance of learning and practicing this section correctly cannot be overstated.

After setting and holding the mid-hang



Figure 1. Clean position of young weightlifters

mid-hang because of what they perceive as being too little distance and time to accelerate and elevate the bar. However, just like in the snatch, this mid-thigh position needs to be reinforced in these early stages of training.

The mid-hang clean jump is again a drill for the athlete to feel aggressive, concerted leg and hip extension to accelerate and elevate the barbell. The narrower grip in the clean and the consequently lower contact point on the thighs rather than in the crease of the hip will create a significant difference in feel and for most athletes make completing the hip extension somewhat more difficult. Becoming comfortable with this drill will improve the lifter's consistency with the movement.

After setting and holding the mid-hang position and ensuring the proper balance over the front edge of the heel, the lifter will jump vertically as high as possible while actively keeping the bar in light contact with the body. Again, it's important this jump begin from a static mid-hang position without any counter-movement. The athlete should be landing in the same position in which he or she started movement forward or backward indicates improper

position and ensuring proper balance, the athlete will essentially perform the mid-hang clean jump while keeping the balls of the feet connected to the floor. This will require extending less forcefully, but the goal is still a quick and powerful movement. As the athlete reaches extension, he or she will shrug the shoulders up to give a path for the bar to continue moving without swinging forward and to help keep his or her feet on the floor.

At the top of the pull, the hips should be slightly hyperextended to bring the shoulders slightly behind the hips rather than directly above. The glutes must be activated to finalize the extension of the hips, or this hyperextension will naturally originate in the lower back rather than at the hip joint. The final extended position will have the lifter on the balls of the feet, the legs vertical when viewed from the side, and the shoulders slightly behind the hips.

The feet should remain planted in the same position on the floor; if the athlete is sliding backward, he or she has the weight balanced too far back over the feet- and is likely extending the hips and/or leaning back exces-

sively at the top of the pull and is also releasing the pressure against the ground prematurely by not continuing to push with the legs until the final extended position is achieved.

During the pull, the bar should remain as close to the thighs as possible and then contact the upper thigh as the trunk reaches a vertical orientation. This proximity is created and maintained through the activation of the lats and shoulders, which push the bar back toward the body even when the shoulders are in front of

tended position, the shoulders should be shrugged up to keep the bar moving up and against the body rather than swinging forward under its momentum. Again, this shrugging motion is not a direct part of the effort to accelerate and elevate the bar in the clean, but part of the transition into the third pull, and in this drill, a way to maintain the bar's proximity to the body.

If needed, the mid-hang clean pull can initially be performed slowly to ensure the lifter is balanced and extending properly. The positions, movement and balance are more im-



Figure 1. Snatch position of young weightlifters

the bar. Once in contact with the upper thighs, the bar should remain in light contact with the body for the remainder of the movement, never allowed to swing away from the body.

Because the narrower grip places the barbell against the upper thighs instead of in the crease of the hips as it was in the snatch, it's important the lifter not drag the bar up the thighs or bring the shoulders behind the bar prematurely, as this will cause the bar to be pushed forward by the thighs as the knees shift forward in the double knee bend. This is one of the primary reasons that the timing of the second pull is so critical in the clean and why the mid-thigh position is a useful starting position for early clean instruction.

The arms should remain loose and passively extended during the pull. Again, this means that the arms are straight because they are being allowed to hang, not because the athlete is actively extending the elbows. Stiff arms will increase the likelihood of the bar swinging forward in the lift and typically slow the transition into the third pull.

As the lifter reaches the completely ex-

portant than the speed, although the athlete should progress to full speed in the drill before moving to the next step.

The jerk is the second and final phase of the clean & jerk in which the barbell is lifted from the shoulders to overhead. Although appearing with a cursory look to be entirely different from the more obviously similar snatch and clean, the jerk is in essence identical to these two lifts with regard to the actions performed by the lifter and the interaction between the lifter and barbell.

The athlete initially creates force against the platform with the lower body to accelerate and elevate the barbell, and then pushes him- or herself down underneath the barbell to fix the weight in there ceiling position overhead. Conceptually this means that there is much in common among the three lifts, although in practical terms the jerk will require learning a collection of specific positions and movements. However, the learning progression for the jerk is the same in principle.

An empty barbell or light technique barbell should be used for the following drills. A PVC pipe or dowel will not allow the lifter to

establish the proper jerk rack position.

Just as in the snatch and clean, the first step in learning the jerk is to establish the proper receiving position to allow the lifter to receive and support maximal loads safely and effectively.

There are three styles of the jerk that rely on different receiving positions: the power jerk (or push jerk), squat jerk and split jerk. The split jerk is by far the most common competitive jerk style, and will be the end of the jerk

trum. Additionally, there exists the need for precision in bar placement seen in the power jerk--little can be done to stabilize a bar that is even slightly out of position. Finally, consider the difficulty of recovering from the bottom of a close-grip overhead squat, often from a dead stop, particularly immediately following the effort to clean the weight. It is an extremely rare individual who possesses the mobility, precision and leg strength to make this jerk style successful.



Figure 1. Jerk position of young weightlifters

learning progression. However, the power jerk will also be learned as a part of that progression. The squat jerk will be discussed in more detail in the following section of the book.

The power jerk is named such because the receiving position is identical to those of the power snatch and power clean--feet in the squat stance and thighs above horizontal. (The name push jerk is often used synonymously for power jerk; the two can be distinguished by defining a push jerk as a power jerk in which the feet remain connected to the platform rather than being lifted and replaced.)

While the power jerk is a fairly common training exercise, it's a comparatively rare competitive jerk style because of its great demand on bar elevation. Additionally, there exists little margin for error in bar position--the bar must be driven quite precisely into position overhead in order for the athlete to maintain its stability.

The squat jerk is identical in foot position to the power jerk, but as the name implies, the ultimate receiving position is a squat. This clearly requires less elevation of the bar than the power jerk, but also introduces a few unique elements of difficulty. Mobility is an immediate limiting factor for most athletes a relatively narrow-grip overhead squat is out of reach for lifters outside of the most mobile end of the spec-

This said, there will likely be an increase in the frequency of squat jerking in coming years, particularly among the smaller weight classes, as coaches and lifters find that jerk weights cannot keep pace with increases in the clean, and find ways to better train lifters from the start of their careers to receive and recover from squat jerks more effectively. This will allow larger weights to be jerked without having to be elevated farther, much like the squat style in the snatch and clean allowed greater weights than the split, not by increasing the ability to elevate the bar, but by moving the body lower under it. However, the likelihood of the squat jerk taking over as the dominant competitive style is still small.

The split jerk is the most common style used by competitive weightlifters for very simple reasons it allows relatively great receiving depth while keeping recovery from such depths relatively easy, accommodates much greater imprecision in the overhead position of the bar than the power or squat jerk, and provides greater stability in all directions than the power or squat jerk.

The split stance, at its most extreme in the jerk, allows about the same hip depth as a parallel squat. Such a position is extremely difficult in a power jerk simply because the knee joint is

at its weakest position in terms of leverage, and this depth is the point at which the hips must be farthest back, meaning there is significant forward inclination of the torso and consequently huge demand on shoulder and upper back mo-

either side, in order to better position the support structure under the weight.

Over time, each lifter will find the jerk style that will allow the greatest weights to be

Table 1. Weekly training plan for a young weightlifter

	Monday	Tuesday	Wednesday	Friday
For week	Snatch Technique Primer	Snatch or Jerk Technique Primer	Clean Technique Primer	Jerk Technique Primer
	Snatch - 70% x 3, 75% x 3, 80% x 3 x 3	Power Snatch - 70% x 3, 75% x 3, 80% x 3 x 3	Clean - 70% x 3, 75% x 3, 80% x 3 x 3	Jerk - 70% x 3, 75% x 3, 80% x 3 x 3
	Snatch Pull on Riser - 90% x 5, 95% x 5 x 3	Power Jerk - 70% x 3, 75% x 3, 80% x 3 x 3	Clean Pull on Riser - 90% x 5, 95% x 5 x 3	Power Clean - 70% x 3, 75% x 3, 80% x 3 x 3
	Back Squat - 65% x 8, 75% x 8 x 3	Snatch Push Press Overhead Squat - 70% (of Snatch) x 5+1, 75% x 5+1 x 4	Front Squat - 70% x 5 x 2, 75% x 5 x 2	Snatch Balance - 70% x 3, 75% x 2, 80% x 3 x 2
	Stiff-Legged Deadlift - 3 x 5	Stretch exercises 15-20 min	Jumping - 4 x 5	Push Press - 70% x 5 x 2, 75% x 5 x 3
	Back Squat Jump - 20% (of Back Squat) x 5 x 3			
	Time during 90-100 min	Time during 110-115 min	Time during 120 min	Time during 1,45 min

bility. Additionally, an athlete can recover if necessary from such a split depth by wedging up under the bar through alternating between very small movements inward by each foot rather than being forced to simply drive straight up in a single effort. It's rare that such depth is actually achieved, but the position will allow it.

The split also offers great stability in all directions by expanding the lifter's base. The width of the feet is at least that of the squat, and the length is extensive. Such a broad base, particularly in the fore-aft direction, not only improves the immediate stability of the system, but allows for much more corrective adjustment to stabilize the bar overhead. That is, unlike with a power or squat jerk in which bar position overhead must be remarkably precise, the split allows the athlete to quickly and relatively easily shift forward and backward, and even to

lifted and spend the bulk of his or her effort developing technical proficiency and strength in that style. However, all lifters would be well served to become at least moderately competent in all three styles; each will have value as training exercises, and experience with them will allow proper evaluation of their viability as the lifter's chosen jerk style. New lifters are encouraged to learn, practice and train the split jerk until good reason is found to adopt another style.

The feet are in the pulling position with the weight balanced over the front edge of the heel.

The shins are approximately vertical.

The knees are bent slightly, and the back is set tightly in complete extension with the trunk pressurized.

The shoulders are slightly in front of the bar and knees.

Table 2. Weekly training plan for a young weightlifter

	Monday	Tuesday	Wednesday	Friday
For week	Clean Technique Primer	Snatch or Jerk Technique Primer	Clean Technique Primer	Snatch Technique Primer
	Clean - 80% x 2, 70% x 4, 85% x 2 x 2	Power Snatch - 60% x 3, 65% x 3, 80% x 3 x 3	Clean - 70% x 3, 75% x 3, 80% x 3 x 3	Power Snatch - 60% x 3, 75% x 3, 80% x 3 x 3
	Snatch Pull on Riser - 80% x 5, 95% x 5 x 3	Power Jerk - 80% x 3, 75% x 3, 80% x 3 x 3	Clean Pull on Riser - 80% x 5, 85% x 5 x 3	Power Clean - 70% x 3, 75% x 3, 80% x 3 x 3
	Back Squat - 95% x 4, 75% x 10 x 3	Snatch Push Press Overhead Squat - 70% (of Snatch) x 5+1, 65% x 5+1 x 4	Front Squat - 70% x 5 x 2, 75% x 5 x 2	Snatch Balance - 70% x 3, 75% x 2, 80% x 3 x 2
	Stiff-Legged Deadlift - 3 x 5			
	Push Press - 70% x 5 x 2, 85% x 5 x 3	Stretch exercises- 20 min	Jumping - 6 x 6	
	Time during 90 min	Time during 115 min	Time during 120 min	Time during 1,45 min

The bar is held in light contact at the mid-thigh. The arms are long and loose with the elbows turned to point to the sides. The head and eyes are directed forward.

Conclusion

It is established that training program loads have a positive effect on the specific working capacity of the body of young lifters.

The program that we developed was implemented in the training of Uzbekistan national team of weightlifting lifters and allowed us to achieve a high sports result.

Based on the program developed by us, we recommend that weightlifters use this program during the training of weightlifting from the Children's and Youth Sports School and the Olympic Reserve College in order to improve the quality of their strength.

In addition, a reliable and effective set of exercises is recommended. (squats with a barbell, jerk, deadlift, lifting the barbell while lying down, developing the strength of the arm muscles with the help of dumbbells, tilt forward with a barbell, lifting back to 90° with a barbell on the shoulder, squats with a barbell on the

chest). It is advisable to use this set of exercises during the training period. The exercises of this group will effectively help weightlifters to increase their physical training.

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