Exercise Techniques:

The overhead squat

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The overhead squat is an assistance or utility exercise used almost exclusively by weightlifters in order to handle heavy weights upon reaching the deep squat position in the olympic snatch movement.

In weightlifting, as in other sports, the successful combination of balance, timing, coordination along with strength/power, are vital ingredients to any well-conditioned athlete. The overhead squat combines full body squatting movement, which is critical for development of leg and hip strength, and balance/coordination which aids in the development of mind-body synchronization. In addition to the benefits from full-body squatting, which have been described elsewhere (1, 2, 4), consider the added benefit of increasing the functional development of the triceps, deltoids, and trapezius muscles from holding the bar in an extended arm position overhead.

Once the athlete has accomplished proper technique in the back or front squat, transition to overhead squatting will be minor. After the proper technique has been attained using the bar, the athlete can begin adding weight to provide the necessary functional overload to the muscle. It will not take long for the athlete to realize benefits of this complex multi-joint exercise. Because of its complex nature, mind and body must be in complete harmony for successful completion of overhead squatting.

Method of execution

To execute the overhead squat, the bar may be either power snatched from the floor or taken from a rack. The athlete shown in Figure 1 has taken the bar from the rack and is in the pre-starting position.

At this point notice the bar is placed high on the shoulders with the torso in an erect position. The feet are placed approximately between hip and shoulder width with the toes pointed slightly outward. To achieve a proper grip width, the lifter, standing erect, holds the upper arms horizontal. The distance from elbow joint to elbow joint across the back is measured and marked on the barbell with chalk. The lifter then grips the bar so that these marks lie between the first and second fingers (3). Now, the lifter will drive the bar overhead by doing a behind-the-neck push press (Figure 2).

In this position, the athlete must maintain a firm grip on the bar and have the abdominals and erector spinae contracted to allow stabilization of the torso. The lifter is prepared to begin the descent to the parallel position. Figures 3 and 4 demonstrate the mid and final parallel position of the overhead squat.

Figure 1. The prestarting position.
Notice as the lifter descends there is a slight outward rotation of the shoulder joint. The amount of rotation will depend upon two factors: first, shoulder flexibility, and second, Achilles tendon flexibility. If the athlete has poor Achilles tendon flexibility, the trunk is forced into greater flexion and the shoulder joint must increase its outward rotation. From the bottom position the athlete will drive the weight up as in a normal squatting movement. It is important here to emphasize that the knees are to remain in line with the lower legs and feet to reduce any unnecessary load on the knee joint. As the weight increases, the lifter will recognize very quickly that concentration is a must for the acquisition of proper technique.

Recommendations

Because of high technical skill required in performing overhead squats, the following recommendations are made based upon the two authors' experiences in performing this exercise:

1. An area free of people and weight equipment should be used in case the weight is lost or dropped.

2. Bumper plates and collars should be used to protect the floor and lifter if weight is dropped.

3. If possible, weightlifting shoes should be worn. This is not necessary, but they will provide a safer and more secure feeling.

4. A lifting belt, knee and wrist wraps may be worn if necessary.

The overhead squat is a highly technical and rewarding exercise which can benefit athletes involved in any sport. This squatting movement is an excellent warm-up exercise for regular squat routines, or it can be used as a core exercise if involved in olympic weightlifting.

References

Figure 2. Top position of behind the neck push press.

Figure 3. Mid-position of overhead squat.

Figure 4. End position of parallel squat.