



European Powerlifting Federation

COMPETITION POWERLIFTING SQUATS

Starting Position

This is probably the most important of all in execution of this lift because to start wrong is to invite failure. In powerlifting once you have adopted the starting position you will not have another opportunity to adjust your stance. Whilst the bar is still on the stands the lifter must adopt the correct position of his or her hands on the bar. The distance between the hands will depend on the lifter's wrist, elbow and shoulder flexibility. Those lifters with good flexibility in these joints will be able to take a narrow grip. This close hand spacing will allow the trapezius muscles to bunch up, which will allow the bar to rest without aggravating the upper vertebrae. Furthermore, with the hands in tight, the lifter will be able to push out the chest and, thereby, counteract the tendency of the torso to bend forward excessively while the squat is being executed.



Lifter under the bar

When first learning to squat, it is often best to position the bar on or near the top of the trapezius muscles. Later as the lifters become stronger in the midsection and more comfortable carrying the bar on the back, they may be encouraged to place the bar lower on the back. Keep in mind, though that in order to stay within the specifications of the rules, the top of the bar should be positioned no lower than 3 cm from the top of the anterior deltoids. A low bar placement allows greater weights to be lifted because of a reduction in the lever arm.

The hands should grasp the bar firmly in a position which the lifter finds comfortable. He or She will then bend the knees and lower the body under the bar in between the hands, and rest the bar on the back of the shoulders as low down as is possible whilst conforming to the rules of the lift.

Before clearing the racks, the lifter's feet and hips should be placed directly under the bar. The feet should be approximately shoulder width apart, with toes pointed slightly outward. The head should be held in a neutral position with the eyes focused straight ahead. A breath should be taken and the chest held high. This will give a firm and positive position for the upper body and helps to establish balance and a sense of determination. The lifter straightens and locks the knee and muscles of the back, whilst pushing upward on the bar.

The bar can now be taken from the racks and brought to the starting position in two distinct movements. First the bar should be lifted straight upward off the rack using the legs and not the back. Second, the lifter should step back. The backward movement should be made in as few steps as possible – preferably, one lead step with the other foot being brought back into line. The feet should still be about shoulder width apart and toes pointed slightly outward, the head should be held erect. The lifter should now exhale, but continue to hold the chest high. Pay careful attention to keeping the hands cocked back with the elbows up and behind the bar. In this position one may feel the shoulder blades being squeezed together. Failure to maintain this position will cause the chest to concave and the shoulders to stoop forward, consequently the back will bend forward. If this forward rounding happens, the lifter will find it difficult to stand up straight with a maximum weight and the problem will only magnify itself as the lift progresses.

If all the technical points have been followed, the lifter should be standing upright with no forward lean and no bend at the knees. The lifter is now ready to begin the movement.



Lifter in the Starting position

The Descent

The lifter should now take another deep breath, keeping the eyes focused straight ahead, the chest high and the elbows up behind the bar.

The descent is initiated by “breaking” at the hips. This action is similar to sitting back in a chair and should coincide with a tightening of the lower lumbar muscles. A break at the knees will follow automatically. The lifter should feel the weight balanced over the middle of the foot or the heels and not over the toes.

The downward movement which follows should be made in a controlled manner – not too slowly nor too rapidly. A quick drop is much more dangerous than a slow descent. Therefore, the coach may wish to have a beginner learn to squat down slowly, and then gradually increase to a moderate descent speed as the individual makes gains in eccentric strength.

From start to finish of the descent, the knees should travel directly over the feet. The lifter should also maintain an erect torso with a slightly arched back. The lifter must also resist the tendency for the spine to round, if the head is kept up this will help to keep the back flat. This tight position should be held as the lifter moves to breaking parallel point. This point is reached when the top surface of the legs, at the hip joint, is lower than the top of the knees. The lifter has now reached the critical bottom position and is set to change directions upward. The lifter in training should ensure that he or she learns to feel this position.



Lifter in the bottom position

The Recovery

Once the lifter has gone deep enough, it is time to reverse the downward motion by driving explosively upward from the bottom of the lift. At this stage it is vital that he or she remains well balanced with the knees turned out, back flat, chest high and head up. It is here that most lifters fail. The strong adductor muscles on the inside of the thigh tend to pull the knees inward. This will force the hips backwards and in turn incline the trunk further forward, placing the lifter in a bad mechanical and anatomical position, throwing a lot of resistance on the lower back. At this point the coach should ensure the lifter keeps his or her knees out, chest high and head up, to prevent the back from rounding. At no point in the ascent should the torso be relaxed. However, the breath that was taken just prior to the descent may be expelled slowly once the lifter has passed the sticking point, about thirty degrees above parallel.



Lifter in the Recovery position

Although the emphasis must be on driving or exploding upward, once the lifter has reached the last few inches before lockout, there should be a slight deceleration. This gentle breaking action will keep the bar from bouncing on the shoulders and will allow the knees to straighten in a safe and controlled manner.

Key note for Coaches

Coaches must ensure that their lifters know each technical point of the squat and in the beginning stages they do all repetitions with strict attention to every little detail. So, even warm-ups cannot be done in a sloppy fashion, or the little points will become automatic when heavier weights are employed.

It is also vitally important that lifters know each and every rule pertaining to the squat (signals and causes for disqualification) Lifters that study their rule books are more likely to adhere to proper form during training sessions when the coach is not present, and they are less likely to receive red lights for little technical errors in competitions. Since the squat is the first lift in Powerlifting competitions, good solid successes in the opening attempts help to set the stage for personal bests in the other lifts.