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## Dialing It In

Not every athlete has ideal proportions for Oly lifting. Bob Takano goes over starting-position variations for the snatch pull, clean pull and jerk.

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By Bob Takano

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Most coaches and athletes who are first introduced to the Olympic lifts through the CrossFit Oly Seminar or the USAW Level 1 are taught technique that works for most people most of the time. It's the vanilla, one-size-fits-all version of technique that will cover most situations.

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If you are a coach, as you move along in your development, you will probably encounter individuals who need to vary their grip and/or stance because their proportions will not allow them to lift effectively using the vanilla prescriptions. This article will explore some of these variants. These alterations have been developed over an extended period of coaching not only weightlifters but also athletes from a variety of sports.

### The Standard Technique

The standard techniques that are taught are based largely on the normal proportions for competitive weightlifters. Because a very specific activity such as the snatch or clean and jerk has very specific requirements, the sport tends to favor a certain body type in terms of proportion and body-mass distribution.



*Alicia Connors takes a narrower grip in her snatch pull (top), while the broad-shouldered Spencer Hendel goes collar-to-collar.*

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**Even if you are built like a lifter, you will find that some of these variants will come into play the more your body develops along your way through the sport.**

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Typically, competitive weightlifters have relatively long torsos and comparatively short arms and legs. The best ones have wide shoulders and hips, and the ratios of humerus to forearm and femur to lower leg are not excessive. Weightlifters also weigh more than other athletes of comparable height.

If you or the athletes you coach have proportions that are similar to those of the typical competitive lifter, you can follow the standard instructions and do very well. If you are not proportioned like a competitive lifter, small variations in technique will be required. Even if you are built like a lifter, you will find that some of these variants will come into play the more your body develops along your way through the sport.

### Grip Variants for the Snatch Pull

Obviously, the longer the arms, the wider the grip. At this point, however, I must interject that the length between the inside collars of the standard Olympic bar is 1,310 mm for both the women's and men's bar. For athletes with proportionate clavicles who stand taller than 6'2" (187.96 cm), maintaining a reasonable snatch grip width may well be impossible.

Most beginning athletes will employ a grip width that allows them to comfortably support the weight overhead while performing an overhead squat. At this point, the narrower grip does not over-tax the wrists or the shoulder development. Furthermore, an optimal grip width will allow the athlete to pull and push under rather than swing the bar. Swinging will interfere with consistent placement of the bar overhead and negate the use of the full musculature.

As an athlete develops more strength in the shoulders, it becomes more efficient to widen the grip, as this will allow the lift to be made without pulling the barbell nearly as high as when the closer grip is employed. It does, however, cause the shoulders to extend forward at the start of the pull, places greater stress on the spinal erectors and latissimus, and raises the hips higher. That has the effect of moving the center of gravity further forward on the foot. This changes the angle of the back at the start of the pull but does facilitate the work of the hip and knee extensors.

Some athletes may find it necessary to narrow the starting snatch grip because of excessive stress on the wrists or a wrist injury. This will allow the athlete to support the snatch with the arms in a more nearly vertical angle, thus placing less lateral stress on the joint. This shift will cause the shoulders to start the pull more directly over the bar, lower the hips and place the center of balance further back on the sole of the foot.

### Stance Variants For the Snatch Pull

Most beginning courses teach athletes to start the pull with the toes pointing straight ahead and the feet hip width apart. For athletes with a proportionately long femur, this stance will move the hip joint further behind the bar pathway and make it more difficult to generate explosive power. To move the hips closer to the bar, the stance can be widened.

This widening of the stance may best be achieved by pointing the toes and the knees slightly outward to shorten the distance between the bar and the hips.

The wide grip employed for the snatch will also cause the hips to be raised higher and thus changes the angle of the back as the barbell leaves the floor. If this places excessive stress on the back, the athlete might adopt a closer stance with the toes and knees pointing out slightly. This variant will enable the athlete to lower the hips slightly at the beginning of the pull.



*Deb Corder's proportions dictate that her hips will be above parallel in her starting position.*

### Grip Variants for the Clean Pull

New athletes should approach the clean pull grip with the knowledge that the racking width changes for many individuals. It is not uncommon for a lifter to begin the clean with one grip width and then make it narrower upon racking the weight at the shoulders. All too many lifters take the front squat with the same grip width as the clean pull, and this is not necessary.

A grip spacing slightly wider than shoulder width is the norm. As the athlete develops shoulder musculature, the grip may move out. Long-armed lifters should move the grip further out in order to avoid having to start the lift with the hips very low and most of the stress on the legs. This is especially true if the legs are relatively short. Even though short-legged lifters may want to use the shorter levers to begin the pull, they will be at a more advantageous position with the hips being relatively higher. This may, however, put undue stress on the spinal erectors. Compromises might have to be made.

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**The narrower the stance,  
the higher the hips.**

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Larger lifters with extreme thigh development may be forced to take a wider grip in order to accommodate the mass of the thighs in the starting position.

### Stance Variants for the Clean Pull

The stance is more critical in the clean pull than the snatch pull as the weight is going to be approximately 20 percent heavier. The higher the hips, the greater the stress on the back musculature. The lower the hips, the greater the stress on the thighs and hips.

Athletes with long thighs need to start the movement with the hips relatively high. Fortunately most athletes with long thighs have relatively short torsos that can handle the stress on the back. The narrower the stance, the higher the hips. Athletes with longer thighs should assume a narrower stance with the toes and knees pointed slightly outward to bring the hips closer to the bar.

Athletes with short legs have better levers for initiating the pull with lower hips, and this can be facilitated by assuming a slightly wider stance. There is less of a need to point the feet outward.



***Athletes with long femurs will need to place the hips relatively high.***

## Jerk Grip Variants

The standard approach is to assume a slightly wider than shoulder-width grip. Problems arise when the upper arm is long compared to the forearm. This will necessitate a racking position where the elbows are especially high at the beginning of the jerk, which will inhibit the use of the arms in driving the bar off the shoulders. Any attempt to employ the arms prematurely will result in the athlete pushing the body away from the bar as soon as the feet leave the floor to split.

In an ideal starting position, the upper arms should form no more than a 45-degree angle with the vertical axis of the torso. This is not possible or is very difficult for those with an excessively long humerus. When the arms are held at the optimal angle or less, they can be effectively employed in the initial jerk drive.

Athletes with long upper arms should take a wider-than-normal grip and learn to use the legs to initiate the driving of the bar. They cannot use the arms until the bar has passed the top of the head, and at that point the arms are used to drive the body under the bar.

Most athletes with short arms have a short humerus and can comfortably rack the weight with a close grip and still maintain the elbows at an optimal angle for employing the arms in the initial driving of the weight overhead.

As a general rule, the wider the grip, the lower the height to which the weight must be lifted. It is not unusual for athletes assuming a wide grip to accommodate a long

humerus to move the hands outward in the middle of the jerk to catch the weight at a lower height. This is legal and efficient but requires considerable practice to perfect.

## In Conclusion

Ultimately, all hand and foot spacings will have to be individualized over the course of a lifter's career. The initial one-size-fits-all prescriptions taught in most courses will work for most people, but those with extraordinary proportions should seek the guidance of a knowledgeable coach in making adjustments.

Due to developmental changes as the athlete progresses through a career, the spacings may have to be altered in order to maximize efficiency in performing the lifts.



Bob Takano



**Chad Vaughn keeps his elbows slightly high in the jerk, while many athletes find success with the elbows lower.**

## About the Author

Bob Takano has developed and coached some of the best weightlifters in the U.S. for the past 39 years. A 2007 inductee into the U.S.A. Weightlifting Hall of Fame, he has coached four national champions, seven national record holders and 28 top 10 nationally ranked lifters. Fifteen of the volleyball players he's coached have earned Division 1 volleyball scholarships. His articles have been published by the NSCA and the International Olympic Committee and helped to establish standards for the coaching of the Olympic lifts. He is a former member of the editorial board of the *NSCA Journal* and an instructor for the UCLA Extension program. He is currently the chairperson of the NSCA Weightlifting Special Interest Group. For the past year he has been coaching in the CrossFit Oly Seminar program. Website: [www.takanoathletics.com](http://www.takanoathletics.com).