

The Jerk Series Parts I-III

The jerk is a temperamental beast. It requires the technical precision of the snatch but of course must be executed with the weight of your heaviest clean or more. It is no small feat to master the jerk and it hands most of us our asses daily. Fortunately, just like in the snatch, there are exercises to improve technique and both overhead and dip strength.

The first step in learning the jerk should be bar placement and orientation. Overhead barbell presses and push presses start the progression to teach an athlete where the bar should end up and the bar path to get it there. The bar path should stay as close as possible and the finish position should be aligned so that bar is at or behind the ears, this depends on how much you bring your head through your arms. It is paramount that the weight be distributed down to the legs through the skeletal structure while the body remains under tension. So bar is essentially over the hips visually.

The drive is initially learned as the “pop” off the chest in the push press. When teaching the push press and then power/push jerk, an athlete must learn the proper dip technique as it will carry over to the split jerk and is executed the same in all three movements. The dip really is the aberration in lifting. In almost all other lifts, the lifter is taught to flex the lower back which causes the hips to flex, thereby misaligning the hips and the shoulders. This is NOT the case for the dip. In the jerk dip, the athlete’s shoulders must stay aligned with the hips in order to keep the weight over the middle/heel of the foot. The knees jut forward (something we work years to avoid in most other movements) as its angle closes. Visually you should be able to draw a straight line from the shoulders to the hips to the heels. The depth of the jerk dip is quite shallow and is not really a squat movement although referred to that way in literature. It is misleading to call it a squat, as again there should be no hip flexion executed by driving the hips back. The closing of the hip angle occurs as a result of the knee flexion. The challenge in the dip is to keep the chest up and bar over the hip/heel line on the descent and reversal of direction in the drive. You only go as deep as you can quickly change direction from. The knee angle closes/flexes to a calculated average of 118 degrees if you happen to have a protractor (Laputin and Oleshko 88,89). The point: it is possible to dip too deep. The total time consumption for the dip is an average of 0.48 seconds in this first period of the dip (Laputin and Oleshko 88,89). It is, however, important that the bar stay in contact with your chest/shoulders while executing the dip. A very common mistake is to dip “out from under the bar.” This means YOU dip faster than the bar and you lose contact. The result is a collision with the bar when you reverse directions for the drive. You can only drive a bar optimally if you move down and up as one entity. Do make sure that you dip with the bar staying in contact or resting on your chest/ shoulders.

The drive is the reversing of the bar upward or throwing the bar off the chest, which occurs by completely opening the angle of the knee, or full knee extension accompanied by hip extension. This takes an average of 0.26 seconds (Laputin and Oleshko 89).

FAST! The bar path is that which is learned and practiced in overhead press, push press, and power jerk.

Laputin, Nikolai P. and Oleshko, Valentin G., *Managing the Training of Weightlifters*. Trans Andrew Charniga, Jr. Kiev: Zdorovya Publishers, 1982. Print.

Jerk Part Dva

In the last article, I wrote about the dip and drive of the jerk. There were a few key points in that article that I want to reiterate and clarify. I mentioned some time specifics of dip versus drive and dip depth. We can find other research that gives us differing information on the specifics. For example, Roman gives us a knee angle of 104 degrees at the bottom of the dip, or the mean of a range of 114 to 132 and dip speeds correlating to different heights ranging from .85m/s for an athlete that is 150cm to 1.1 m/s for an athlete who is 190cm (23). Roman gives us comparable information to Laputin and Oleshko (see previous article) in regards to time consumption of each the dip and drive. Roman states dip time as .4 seconds and .19 seconds for the drive (26). So we get comparable information and can conclude that drive time is about half that of the dip.

For clarification, conventional thought is that the dip is an average 10% of the athlete's height. Another very important point I made is that not only can you dip too deep, you can dip too fast. It is important that you do not "dip out from under" the bar. This means the bar must remain on your chest as you dip. The Jerk Dip is an excellent exercise to train the correct movement and speed of the dip as well as strengthening the torso to hold the correct posture while executing the movement. I have typically overloaded (100% plus of jerk weight) to work on the ability of the athlete to stay straight (shoulders/bar over hips and heels). I was taught to do them slowly and deliberately. I have seen videos of the Chinese lifters doing them fast and heavy and have employed this at times as well but it is difficult to maintain posture, exactly the point of doing them I suspect. So you may want to wait to employ this version of the exercise.

Regarding the drive, direction is important and is affected by the direction of the chest, the action of the arms, and how the athlete drives to the toes. The athlete must keep the heel on the ground during the dip. If an athlete's heel lifts off the ground during the dip phase, you can either work on the ankle flexibility OR sometimes it's as simple as opening the stance a little, which requires less ankle flexibility. The athlete should also drive the knees over the toes and try to keep them from buckling inward. The athlete should throw the chest upward like the top of a pull in the drive. This movement, like in the pull is sharp and fast. If the chest leans forward, the bar will be driven forward. If the hips move out of alignment with the shoulders, a closing of the hip angle occurs and this will result in the bar being inadvertently driven forward as well. The key is to keep the chest up high and over the hips heel line until the bar is off the chest, any sooner changes the trajectory. It is common to take a large breath and to use the Valsalva maneuver (holding your breath) to increase intra-thoracic cavity pressure to create a solid torso. It is

important not to hold the breath too long. Lifters often get dizzy and can pass out during a jerk, so the big breath should immediately precede the actual dip and drive.

Push Press and Power Jerk are good exercises to get the feel of a “straight” drive. You should work to keep the bar as close to the face as possible as it drives around the head. Minimizing the arc on the trajectory is accomplished by pulling the chin back as it passes. The more the bar drives forward the more difficult it will be to get the bar back into the line over the shoulders, which is typically at or behind the ears. The push press is a telling exercise in how the athlete gives direction to the bar. Most commonly, athletes will bring their head through somewhat and sometimes deliberately to get the bar back and over the shoulders.

In the receiving of the bar, the athlete splits by moving one leg forward and one back and receiving the bar by “braking” the bar’s downward movement when performing the split jerk. In teaching the Split Jerk, the athlete must learn to quickly amortize, or “brake” the bar with the legs and this can be reinforced by practicing Jerk Balance. In the Split Jerk, the hips typically align with the bar so that the weight can be distributed between the front and back leg. The jerk push press works to teach the overhead receiving position without the athlete being concerned with foot movement. The jerk is a press under NOT a press up. The drive is followed by dropping into the jerk, much like one drops into a snatch. Once that is achieved the athlete can try the same exercise moving only the front leg, jerk balance with a step, to learn how to step into the jerk and to reinforce proper front foot placement. The back leg typically has a slight bend to it, but it is a tight bend as it is braking the bar along with the front leg. It is unadvised to sink into jerks as they can push you further down than you intended to go, although sometimes it can happen and have no ill-effect. Appropriate tension in both legs will prevent this. The next step would be to work speed in the split. The Jerk Under is the appropriate exercise to work on the speed of the split.

If performing a Power Jerk, the athlete moves both legs out to their receiving position with the lower back flexed (butt out) and jumps the feet slightly outward to about a quarter squat. In the power jerk, the head is through the arms and the butt is out to balance the bar since there is no front and back leg split, which distributes mass forward and backward. If performing a Squat Jerk, the athlete would drop into a full squat. The most commonly performed jerk for optimal performance is the split jerk but there are athletes who change from split to power or squat jerk to attain a heavier jerk result. Some lifters, although not the majority, can lift more in the power or squat jerk than split jerk. I would suggest a coach attempt to teach the split jerk and give the athlete a chance to learn it before making the determination to switch.

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Roman, R.A. ., *The Training of the Weightlifter*. Trans Andrew Charniga, Jr. Moscow: Fizkultura I Spovt. Publishers, 1986. Print.

Part III Receiving and Recovery

A common problem for novice lifters is the lack of familiarity and comfort with the split position. Athletes may rush to recover as they don't feel stable and strong in the split. The obvious solution is to create the same comfort developed in the overhead squat as applied to the snatch to the jerk. Both pressing and push pressing while the legs are in the split position is a simple and effective way to get more time spent in the split. I often give my athletes push press in the split position instead of regular push press. Strict press can also be performed from the split and help develop balance, the intra and inter-muscular coordination, basic strength and kinesthetic sense applicable to the split jerk. My favorite exercise for the split jerk is probably the jerk recovery, which I describe in my article on isometrics and core strength. I am also a fan of jerk from behind the neck. Although the drive is performed differently than a dip in a jerk from the chest, the confidence it develops in an athlete due to the ability to jerk more from behind the neck is great for confidence and the psyche of the lifter.

Train hard and train smart.

Weightlifting Wise

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