

WEIGHTLIFTING FUNDAMENTALS

OLYMPIC MADE SIMPLE WEIGHTLIFTING



MACH 1 BARBELL

INTRODUCTION

"Knuckles down, eyes forward, shoulders packed, knees out, toes down, hips back...", and the list goes on. Still, the bar hasn't even left the ground yet! How do we make something so technical, simple?

Through our years of experience coaching our athletes at Mach 1 Barbell, we utilize a top-down approach to breakdown each lift. What does that mean? At the end of the day, Olympic weightlifting is about getting the bar from the ground to overhead safely and efficiently. So we want to make each lift as simple as that! The key to success is knowing you can control the bar when it is in the overhead position. This is why we start there.

SNATCH

When introducing the Snatch to a new athlete, our first step is developing a proper overhead squat. This exercise is performed isolated and allows the athlete to become familiar with the mobility as well as the stability they have throughout the entire range of motion. When training the overhead squat, we look for common mobility restrictions such as ankle dorsiflexion, hip external rotation, thoracic extension, and shoulder flexion. This can be easily assessed by holding the bottom position of an overhead squat for 5-10 seconds while evaluating the athletes' position from the front, side, and behind. Holding the squat also allows the athlete to feel if anything is uncomfortable and how they would tend to compensate. Once mobility restrictions are identified, we utilize our corrective exercise protocol. We begin with soft tissue work, stretching, patterning, and loading the pattern. Once all identified limitations have been trained and prepared, we retest the overhead squat until the bottom position has improved.

Stability is the foundation of strength. At this point, we refer to the overhead squat as the catch position. We look for instability at the arches of the feet, the trunk, lats, and wrist. Slowly lowering into a deep catch position will allow the athlete to expose or even feel any wobbling of the barbell or their body.

Practicing slow eccentric lowering into a full catch position may take some time. However, you can not expect to catch an accelerated barbell in that position if you feel unstable and not confident in a slow and controlled environment.

After a few practice reps, the overhead squat is feeling natural and confident. Now the exciting part begins! Our next step is the pull under.

Many people view the snatch as lifting the bar overhead. It is actually quite the opposite.

Once the athlete reaches peak triple extension, they begin to pull their body under the barbell.

To train the pull under we simulate peak extension by having the athlete balance on their toes with a big shrug. The bar no longer has the opportunity to accelerate

from this position. This requires the athlete to reposition into a squat and pull their body below the bar. Similar to a little kid pulling themselves down a slide at the park. This is why it is important to build confidence in the bottom of the catch position.

From the floor to the hips you want to maintain two specific positions. The first position requires the shoulders, the barbell, and your shoelaces to be in a straight vertical line with one another. The second position requires a neutral flat spine with your eyes forward on a stable focal point. If both positions are maintained the entire duration of the bar is traveling from the ground to the hips, the athlete will be in an optimal position to generate maximum power output during the extension. Putting these 3 steps together will reveal the magic of performing a proper snatch.



CLEAN

Uniquely, the clean is the only one of the three olympic weightlifting movements that does not move the bar overhead. This could be why the clean tends to be the favorite for a lot of new weightlifters. Since there is less demand on stability, you can see an increase in numbers a little more rapidly compared to the snatch.

Similar to the snatch, we train the clean with a top down approach as well. This requires a functional rack position and proper front squat capabilities. Common areas of mobility deficiencies are ankle dorsiflexion, hip external rotation, thoracic spine extension, and wrists extension. This can be easily assessed by holding the bottom position of a front squat for 5-10 seconds while evaluating the athletes' position from the front, side, and behind. Just like with the snatch, holding the squat also allows the athlete to feel if anything is uncomfortable and how they would tend to compensate.

Once mobility restrictions are identified, we utilize our corrective exercise protocol. We begin with soft tissue work, stretching, patterning, and loading the pattern. Once all identified limitations have been trained and prepared, retest the front squat until the bottom position has improved.

Upon successfully developing a proper front squat and catch position, we utilize a few drills to better understand how to receive the bar appropriately. From the front rack, separating the elbows to allow the bar to nearly roll down the athletes chest gives a feel for how close the bar should be traveling during a clean. Resetting the bar back up into the rack position should be done in a similar fashion. Maintain a tight to body bar path with the elbows separated. Once the bar travels up towards the middle to bottom of the chest, wrap the elbows around the bar and squeeze them together. We utilize a few empty bar, or even training bar repetitions to master this drill. Next would be a pull under.

The pull under is utilizing the same drill as previously discussed with the addition of catching in a squat position. The reason it is called a pull under is the bar should remain nearly motionless as the athlete pulls their body into a squatted clean catch position. This drill is essential for athletes to learn not to flip the bar up and around to catch a clean. We recommend starting from a high hang position or even at peak triple extension for this drill.

Due to the nature of the bar not going overhead, joint stability is less of a concern relative to an overhead movement. However, emphasis for stability in the feet and trunk are crucial for maintaining proper body position as you pull from the floor. To develop the kinesthetic awareness, we begin from a high hang position and lower slowly to an above the knee hang position. This is where the athlete can slow things down and focus on maintaining a "tripod foot" which includes three points of contact, big toe, pinky toe, and heel.

Equal pressure from each point of contact will establish a stable arch on each foot and "root" the athlete into the platform. While loading into the above the knee hang position, the bar path should always be vertically aligned with the arches of the feet or shoelaces. This requires the athlete to hinge at the hips and sit back. Shoulders will remain stacked over the barbell and maintain a secure knuckles down grip. After a few consecutive successful repetitions, progressing to a shrug pull (triple extension plus shrugging the shoulders up and back behind the ears) may be beneficial to developing the athletes timing for when they put the full lift together.

Pulling from the floor is just setting up a proper above the knee hang position. The athlete will start in a squatted position. As they begin to drive the bar away from the ground we emphasize a vertical shin until they clear the knees. From here, they are at the above the knee position.

Step two is transitioning from vertical shins to a vertical torso by scooping the knees under the barbell while maintaining heel contact with the platform. Now the athlete is spring loaded ready to extend and pull under the barbell into a strong catch position.



JERK

Now that the clean has been mastered, it is time to get the bar overhead. The jerk can be done in a few different variations. The most commonly used is the split jerk so we will direct our focus there. Before worrying about footwork, establish a strong overhead pressing position. This requires using the lats and upper back muscles to stabilize the bar over the crown of the head instead of using the deltoids and pressing out in front. Remember, this is more about receiving the bar than actually pressing it. Hold the bar overhead for 5-10 seconds. This allows enough time to cross check vertical alignment of the barbell over the center of mass, knuckles are facing up, and hips are tucked under for proper core engagement.

Once the receiving position is comfortable and automatic, getting the barbell overhead requires power and proper timing.

To develop proper timing, utilizing a push press will establish leg drive and triple extension efficiency with the bar pressing out of the rack position. Once weight is added, there will be a noticeable point where the leg drive momentum stops and the pressing becomes more strenuous. At this pivotal point is when the jerk becomes extremely beneficial. Rather than pushing the bar up the remainder of the distance to lock out the arms, a jerk requires the athlete to reposition their body under the bar. This is where implementing footwork drills comes into play.

For a split jerk, learning where the athletes feet should go is step number one. In terms of width, we coach “train tracks, not tight rope”. This tends to give the image of hip to shoulder width apart. For stride, lower into a lunge position. Adjust so the front shin is vertical and the rear knee is under the hips. Toes should be pivoted inward to keep the hips even and secure. Utilize chalk or tape to mark the feet positions.

After a few practice reps of starting with the feet together and planting on the marked spots, the catch position should feel more comfortable and balanced. Begin combining the barbell with the foot work drills to perform the split jerk. We recommend bringing your feet together after a successful lift by leading with your front foot first. This helps keep the bar balanced over the center of mass compared to potentially pushing the weight forward.



Breaking down the lifts into easy to understand drills can make a complex exercise simple. Utilizing these drills in training will develop of great weightlifting foundation. It is also beneficial to utilize these drills in a warm up during heavy training sessions or peaking towards the end of a cycle. Allowing the athlete to make adjustments before the bar gets heavy provides them with more confidence and better body awareness. Now the only objective is to get the bar from the ground to overhead, or what we like to say at Mach 1 Barbell, Send It!



www.Mach1Barbell.com

TheCoaches@Mach1Barbell.com

 [@Mach1Barbell](https://www.instagram.com/Mach1Barbell)