

RESISTANCE TRAINING FOR THE OLDER ADULT— PROGRESSIONS TO ACHIEVE AN OVERHEAD PRESS

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Upwards of 50% of older adults (60 years of age or more) have a life altering limitation called sarcopenia (3). Sarcopenia is the natural degeneration of muscle to a point where regular daily life functions (DLFs) are lost. DLFs include pressing or pulling from overhead, pushing or pulling horizontally, carrying load, hinging at the hip, and maintaining proper posture (2). With the loss of muscle mass needed to perform the DLFs successfully and on a regular basis, the individual's quality of life can be negatively impacted as their ability to partake in healthy and fun social activities can be reduced (1). The good news is that sarcopenia can be defeated with the implementation of resistance and stability training on a regular basis.

Personal trainers will likely have the opportunity to work with clients who have suffered from sarcopenia and have lost the strength, stability, and ability needed in their body to perform basic movement patterns (3). One of the more common joints affected by sarcopenia is the shoulder. The shoulder is vital for maintaining a health posture and for the ability to press or pull from overhead. With a decreased volume of muscle mass supporting the shoulder joint, the client may simply stop using their shoulder on a regular basis. This increases the client's inability to use their shoulder and quickly becomes a major physical limitation for them that can cause discomfort and a poor quality of life (2).

In this article, it is the authors intention to supply the personal trainer with resistance training techniques, progressions, and cues that can assist their clients in overcoming sarcopenia and achieve their goals to eventually press to the overhead position pain free and with confidence. To do this, the personal trainer and their client will need to successfully perform the following progressions. First, the client will need to develop upper body posterior chain strength with a rowing movement pattern that will heavily develop the lats, rhomboids, rear delts, and other posterior chain muscles. Second is the development of the deltoids via multiple angles of shoulder raises. Third is a leverage-based (pivot point) press that will allow a range of motion to be achieved without a large amount of stability. Finally, fourth is a strict overhead press with each individual arm. We will begin with step one, the pivot point retraction row.

PIVOT POINT RETRACTION ROWS

HOW TO PERFORM

Hang a barbell or Swiss bar from suspension straps from a squat rack or pull-up bar. The bar should rest between the hips and the ribcage. Start with one foot staggered back to establish a solid base to pull from. The client should take a comfortable grip on the bar and retract their shoulders. This retraction is initiated with the rhomboids and ranges between 2 - 4 in.

As the "retraction" portion of the row finishes, the client should continue to row the bar back by pulling with their elbows. Placing an emphasis on pulling their elbows back beyond the line of their spine (i.e., not rowing the bar into their chest encourages the posterior chain muscles to do most of the work). "Arm" rowing (i.e., pulling the bar to the chest) tends to encourage the biceps and forearms to dominate and leaves the posterior chain doing very little.

The pull of the weight into the chest should occur quickly and should be followed by a short hold to allow the momentum of the swinging bar to stop. Once the momentum has stopped, the weight can be lowered back down slowly and repeated. As the client gets more comfortable with controlling the weight, they can stand with even their feet parallel to encourage more core work as countering the weight while rowing is very trunk intensive.

KEY CUES

"Shoulders retracted to neutral."

This cue encourages the client to resist rounding their back or tipping forward, but rather to pull their shoulder back to the neutral position.

"Pull the elbows beyond the spine" (Figure 2).

This cue encourages the client to pull the elbows back, not to pull the bar to their chest (do not "arm" pull).

"Control the return" (Figure 1).

This cue encourages the client to slowly let the weight out as they return the load to the starting position.

PROGRESSIONS/REGRESSIONS

Proper progression for increased difficulty can include adding more load, adding bands for accommodating (progressive) resistance, or by moving the bar lower down the straps.

KEEP IN MIND

Select a grip that is comfortable. Typically, the supinated (Figures 3 and 4) or neutral (hammer) grips (Figures 1 and 2) are two of the more comfortable grips for anyone with a shoulder limitation. Pronated grips (Figure 5) can aggravate shoulder impingements due to the internal rotation. If the client's shoulders, elbow, and wrist are healthy, pronated rows should be comfortable to perform.



FIGURE 1. PIVOT POINT RETRACTION ROW - HAMMER GRIP - START



FIGURE 2. PIVOT POINT RETRACTION ROW - HAMMER GRIP - END



FIGURE 3. PIVOT POINT RETRACTION ROW - SUPINATED GRIP - START



FIGURE 4. PIVOT POINT RETRACTION ROW - SUPINATED GRIP - END



FIGURE 5. PIVOT POINT RETRACTION ROW - PRONATED GRIP

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SHOULDER RAISES

HOW TO PERFORM

Have the client stand with their feet hip-width apart with dumbbells in each hand. Have the client hinge and hold a proper bent-over fly position while raising their “muscularly” straight arms up to parallel and lower them down under control. Muscularly straight means keeping the arms straight without locking out at the elbow (Figure 9). The hinge position should be held via the hamstring and not the lower back (Figure 6). If the lower back is experiencing pain, have the client stand back up, reset, and return to the bent position focusing on the hamstrings. Continue the set until the desired number of repetitions is achieved.

KEY CUES

“Focus on lifting the elbows, not the dumbbells. If the elbows are up, the dumbbells will follow.”

Fatigue can cause poor technique. Proper weight selection is key with auxiliary lifts; lighter weight lifted perfectly will result in great gains.

“Long, strong arms. Up quick, down slow. Suffer good.”

Work the eccentric phase of the lift. “Suffer good” means to enjoy the eccentric burn of the lift as its producing great results, even though it may be uncomfortable.

PROGRESSIONS/REGRESSIONS

Progressions for the shoulder raise are achieved with heavier load or by increasing the eccentric phase of the lift. Regressions include standing up straight and using lighter weight.

If the client experiences discomfort performing the bent-over shoulder raise (Figures 6 and 7), they can adjust the angle of their raise to 45 degrees (Figure 8) or 180 degrees (Figure 9), or by adjusting the hand/wrist position from a pronated to a neutral (thumbs up) grip position. The client needs to be able to perform a comfortable shoulder raise. There should not be any pain when performing this lift.

KEEP IN MIND

The bent-over position does potentially expose lower back weakness/limitations. If the client does experience lower back issues, this lift can be performed standing up straight. The vertical shoulder raise position does place more emphasis on the lateral head of the deltoid compared to the posterior head of the deltoid that is targeted in the bent-over fly. Developing the posterior chain will assist in the client’s ability to eventually press overhead.



FIGURE 6. SHOULDER RAISE - START



FIGURE 7. SHOULDER RAISE - END



FIGURE 8. SHOULDER RAISE - 45-DEGREE ANGLE



FIGURE 9. SHOULDER RAISE - 180-DEGREE ANGLE

KETTLEBELL SINGLE-ARM PIVOT POINT PRESS

HOW TO PERFORM

To perform the pivot point press, use one of the same straps used in the set of the pivot point retraction row. That strap should be tethered to or looped through a kettlebell, allowing it to hang as the barbell did. The client will place their hand under the kettlebell handle holding the top of the round portion of the kettlebell. Ask the client to set up in a contralateral stance and walk forward until the kettlebell is level with the shoulder (Figure 10).

The client will push the kettlebell forward and reach up until their biceps reach their ear, causing the arm to be “straight” overhead (Figure 11). Their arm will not actually be vertical since they are leaning forward, but will be in-line with their leaning torso. Utilizing this lift, the client can develop the range of motion and strength needed to simulate a vertical overhead position. With the proper application of progressions, program design, and previous exercise variations, the client can potentially achieve the strength, stability, and ability needed to press their arm directly overhead.

KEY CUES

“Work the lever, press and reach.”

This cue is designed to encourage the client to use the advantage of the strap (lever) and apply the strength of their shoulder and

arm to it. As the client leans their arm on the lever, the lever will provide stability. For a client with a weak shoulder, this support will assist them in working through a new range of motion. This newly developed level of strength, mobility and stability can assist the client in eventually achieving the overhead (vertical) press position.

“Control the momentum.”

The client should continue to work the levers range of motion in a smooth and steady fashion. Do not allow the client to “swing” the momentum of the kettlebell.

PROGRESSIONS/REGRESSIONS

To progress the single arm pivot point press, the kettlebell can be increased in weight or the addition of a resistance band to the handle of the kettlebell (anchored under the client’s foot) can add more resistance and difficulty upon locking the arm out. Regressions include using a lighter kettlebell.

KEEP IN MIND

Controlled range of motion is the key to the success of this lift. Do not allow the weight to “swing,” as this does very little to help the client improve. A controlled lifting tempo of two seconds up and two seconds down is ideal for this lift. Control throughout the lift is key.



FIGURE 10. KETTLEBELL SINGLE-ARM PIVOT POINT PRESS - START



FIGURE 11. KETTLEBELL SINGLE-ARM PIVOT POINT PRESS - END

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SINGLE-ARM OVERHEAD PRESS

HOW TO PERFORM

The client will hold the dumbbell with a neutral grip in the racked position (Figure 12) at shoulder height. They will press the dumbbell vertically until their arm is at 180 degrees (truly vertical) overhead with their biceps covering their ear (Figure 13). Return the arm with eccentric control and repeat.

KEY CUES

“Cookie jar reach.”

This cue is designed to encourage the client to reach as high as possible allowing the arm to truly reach 180 degrees of vertical range. Reaching this range of motion is vitally important for aging adults, as overhead shoulder range can be lost in as little as 12 months of no use.

“Up quick, down slow.”

This cue places emphasis on the eccentric phase of the lift and encourages the client to lower the weight down very slowly. Eccentric strength training works especially well for older adults, as the need to develop strength quickly can be of great benefit.

PROGRESSIONS/REGRESSIONS

To progress the single-arm (unilateral) overhead press, the client can lift a heavier load or they can attempt to press two dumbbells (bilateral pressing). Bilateral pressing can be very difficult for clients who struggle to establish overhead range of motion and strength. To regress the overhead press, the client can reduce the load.

KEEP IN MIND

Bilateral overhead pressing can be harder to perform compared to a single-arm overhead press due to the bilateral stretch-activation of the rhomboids on the scapula while pressing both arms overhead. Often, this stretch can cause the arms to tilt forward instead of pressing straight up. A single-arm overhead press is often a great way to achieve overhead range of motion as the single-arm press does not create a bilateral rhomboid stretch.



FIGURE 12. SINGLE-ARM OVERHEAD PRESS - START



FIGURE 13. SINGLE-ARM OVERHEAD PRESS - END

CONCLUSION

The progression to overhead pressing starts with developing posterior chain strength (pivot point row). A strong posterior chain allows the retraction of the scapula to occur and that frees up the humerus to reach overhead. The development of the deltoid muscles (shoulder raises) assists in the repetitive nature of reaching overhead and supports the joint and the weight to be pressed. The increased range of motion (single-arm pivot point press) to the overhead position assists in reaching a vertical position and developing the strength to support weight as well. These three exercises combine to build the clients ability to eventually reach overhead safely and efficiently, as well as help them to eventually perform the single-arm overhead press.

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ABOUT THE AUTHOR

Robert Linkul is the owner of Training the Older Adult (TOA), a personal training studio and online continued education provider for fitness professionals in Shingle Springs, CA. Linkul is an internationally known continued education provider for fitness professionals with his area of expertise being in resistance training strategies for the older adult with physical limitations and/or decreased quality of life. Linkul earned his Master's degree in Personal Training, is the National Strength and Conditioning Association (NSCA) 2012 Personal Trainer of the Year award winner, and is a 2017 NSCA Fellowship inductee.

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