

RESISTANCE TRAINING PROGRESSIONS FOR THE OLDER ADULT—PULLS AND ROWS

ROBERT LINKUL, MS, CSCS,*D, NSCA-CPT,*D, FNSCA

Developing the posterior chain, the muscles on the backside of the body, is vitally important to maintaining a healthy thoracic spine and posture in the aging body (5). Posterior chain development can increase loaded carry strength and potentially reduce unwanted joint stress in the shoulders, hips, and lower back (2). It is estimated that between 20 – 40% of all older adults have kyphosis, which is the rounding of the thoracic and cervical spine to a point of increased risk rate of fracture and overall mortality (2).

Kyphosis is associated with impaired physical performance, decreased overall health, and poor quality of life (3). Rowing and pulling with heavier loads can improve the musculature of the posterior chain including the latissimus dorsi, rhomboids, trapezius, and the posterior deltoid (1). With regard to older adults, this article provides four exercises (including progressions, regressions, cues, etc.) that are specifically designed to assist in building efficient posterior chain strength (anti-sarcopenia) that can ultimately improve quality of life, ability, and performance (1). These posterior chain exercises can help improve upper body strength with the goal of improving kyphotic symptoms of discomfort and poor function (6).

1. GORILLA/GARDENERS ROW

The gorilla/gardeners row is a deep hinged horizontal row performed from the floor (with kettlebells) or from a box or bench (with dumbbells) in an alternating manor to develop the posterior chain muscles that includes the latissimus dorsi, rhomboids, trapezius, posterior deltoid, and biceps brachii.

HOW TO PERFORM

To perform, hold two kettlebells, one in each hand, and hinge at the hip with a slight bend in the knees as the client places the weights on the floor. Hold this deep hinged position while pushing down with one arm while rowing the opposite arm up in a full range of motion. The thoracic spine should stay neutral with minimal rotation as the arms alternate rowing and returning from the floor.

KEY CUES

“Soft Knees”

Encourage clients to keep a slight bend in their knees as they hold the deep hinged squat position to place the kettlebells on the floor to perform the row.

“Wash Board Back”

Encourage clients to push their tailbones up and retract their shoulders to a neutral spine position (not rounded over) with their chin tucked in looking straight at the floor prior to performing the row.

“Push Down and Pull Up”

Encourage clients to protect their floor/bracing arm with a slight muscular bend as they push that arm down into the floor. Maintain that tension as their other arm pulls their elbow up with the load.

“Elbow Rubs the Ribs, Touch the Ceiling”

Range of motion is very important for this row; encourage clients to pull their elbow as high as possible and keep the elbow close to the ribs as they row. The core should be tight with no thoracic rotation.

PROGRESSIONS/REGRESSIONS

Proper progression for increased difficulty is to row with heavier load. Proper regression to decrease difficulty is to perform with dumbbells on an elevated box or bench (12 – 16 in. up).

KEEP IN MIND

Lower backs are likely more susceptible to injury if this lift is performed improperly. If a client’s lower back feels stressed with kettlebells on the floor, utilize the regression to the dumbbells on a box or bench until strength and stability can be improved.



FIGURE 1. GORILLA/GARDENERS ROW WITH KB - START



FIGURE 2. GORILLA/GARDENERS ROW WITH KB - END



FIGURE 3. GORILLA/GARDENERS ROW WITH DB - START



FIGURE 4. GORILLA/GARDENERS ROW WITH DB - END

2. PULLEY OR CABLE INERTIA ROW

The pulley or cable inertia row is a horizontal row performed seated on a box or bench that allows for upper body hinged momentum to assist in the pulling process and features an angle of 90 degrees or traditional cable grip handle in each hand. This inertia-assisted row is designed to feature a slow eccentric return to maximize strength gains in the latissimus dorsi, rhomboids, trapezius, posterior deltoids, and biceps brachii.

HOW TO PERFORM

To perform, the client should grab their angle of 90 degrees or traditional cable grip handles, take the tension of the load and sit down on their box or bench in a proper postured position. The load being pulled should be slightly heavier than the traditional, no inertia based, strict row load. Pulling a heavier load will encourage the client to hinge forward up to 45 degrees and counter hinge back up to 45 degrees, creating 90 degrees of hinge mechanic momentum to apply to the pulling phase of the row.

The client should carry the momentum from their hinge into the pulling of the elbows past the ribs and torso, finishing with the knuckles touching the rib and then eccentrically returning the load to full extension and once again hinging forward 45 degrees for repetition number two.

KEY CUES

“Hinge Forward 45 Degrees, Don’t Round”

The hinge mechanic is great for creating a “cheating” type feeling of momentum on the pulling concentric phase; however, the momentum could become detrimental to the body if the upper body does not maintain its proper postured position (i.e., do not round over, simply hinge).

“Chin Down, Elbows Back, Pinkies to Rib”

These techniques keep the neck from potentially straining, the posterior chain pulling, and a full range of motion trained to maximize potential results.

“It’s Okay to Cheat, If You Are Going to Make it Harder”

This cue refers to the cheating momentum of the counter hinge forward and back to allow for a heavier than normal amount of load to be rowed. This is an eccentric strength training technique that embraces momentum to overcome the concentric phase of the row and then embodies the hard struggling work performed during the slow burning sensation of the eccentric load.

PROGRESSIONS/REGRESSIONS

Proper progression for increased difficulty is to row with heavier load or to increase the anchor point angle of pull height (e.g., floor, knee, hip, shoulder, or overhead height). Proper regression to decrease difficulty is to decrease load, decrease anchor point angle of pull height (e.g., overhead, shoulder, hip, knee, floor height) or not feature a long slow eccentric return phase of the lift.

KEEP IN MIND

The lower back is likely more susceptible to injury if this lift is performed improperly. For example, if a client rounds their lower back during the hinge mechanics, the potential for injury may be higher. Proper posture should be maintained.



FIGURE 5. INERTIA ROW - START



FIGURE 6. INERTIA ROW - MID-ROW



FIGURE 7. INERTIA ROW - END

3. PULLEY OR CABLE KNEELING OR SEATED PULLDOWN

This vertical pull allows for a large posterior chain upper body (latissimus dorsi, serratus, and pectorals) stretch prior to pulling the elbows down to the ribs in a great full range of motion. This lift can be performed with a band, pulley, or cable attached to some 90-degree angle or traditional cable grips allowing for maximal comfort and ability in the client's hands. This pull features a dynamic concentric pull on the down and is highlighted by a slow eccentric return to maximize strength gains in the latissimus dorsi, rhomboids, trapezius, posterior deltoids, and biceps brachii.

HOW TO PERFORM

To perform, the client should grab their 90-degree angle or traditional cable grip handles, take the tension of the load and sit down on a box or bench or kneeling on a pad on the floor in a proper alignment (the shoulders, hips, and knees should all line up). The client will be fully extended at the elbow and fully flexed at the shoulder to start. They will flex at the elbow and extend at the shoulder touching their elbows to their ribs to complete a repetition. Some hinging momentum mechanics is allowed to assist when the load becomes a struggle; however, the client should allow the eccentric return to be slower when too much momentum is used.

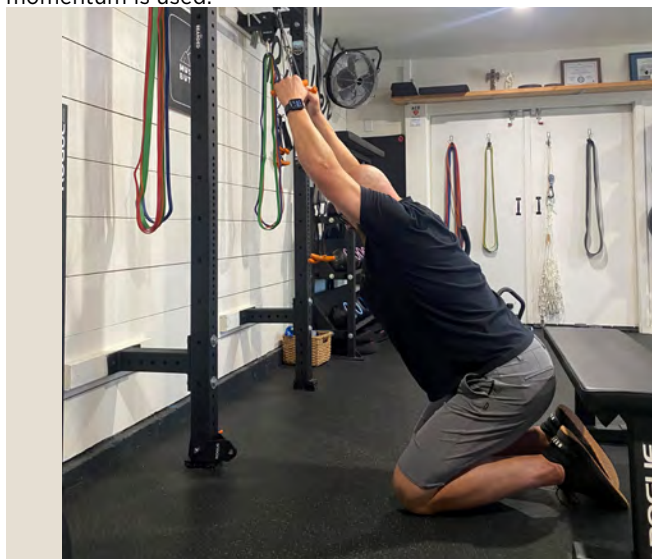


FIGURE 8. KNEELING PULLDOWN - START



FIGURE 9. KNEELING PULLDOWN - END



FIGURE 10. PULLOVER WITH BAND - START



FIGURE 11. PULLOVER WITH BAND - END

KEY CUES

“Pull Elbows to the Ribs (Not Hands to the Chin)”

This technique encourages the latissimus dorsi and rhomboids to do the majority of the work with some assistance from the biceps and not vice versa. Bigger muscles groups can move heavier loads, so the client should be encouraged to use them.

“Control the Return, Suffer Good”

This cue encourages the client to maximize the eccentric phase of the lift and embrace the idea of a burning stretching sensation upon returning the weight to the starting position. Though this can be a uncomfortable feeling, it is maintaining effort and proper posture through this uncomfortable feeling that creates the desired change of getting stronger.

PROGRESSIONS/REGRESSIONS

Proper progression for increased difficulty is to pull with heavier load or increase angle of pull by slightly leaning forward. Proper regression to decrease difficulty is to decrease load or to decrease angle of pull by slightly leaning back.

KEEP IN MIND

Some clients may tend to “crunch” their torso when struggling to pull their elbows down, especially while fatigued. Cueing them to lift their chest up while pulling down and squeezing their elbows to their ribs as if they are going to “crush grapes in their armpits” will allow them to keep proper technique and not crunch.

4. KETTLEBELL OR DUMBBELL PULLOVER

The pullover is a vertical pull that allows for a large range of motion to be trained and features the latissimus dorsi, serratus, pectorals, and long head of the triceps. This lift can be performed with a band standing (rear-facing) for those who cannot lay down and is most commonly performed with a kettlebell or a dumbbell laying supine on a bench or on the floor. Those who need a controlled range of motion (those who require a range of motion to not exceed 90 degrees) can perform this lift laying supine on the floor. The floor will act as a backstop halting the range of motion to a reasonably safe degree. This pull features a long eccentric stretch reaching the weight with straight arms back overhead followed by a concentric pull returning the load to its starting position just above the forehead (not the shoulders).

HOW TO PERFORM

To perform, the client should grab their kettlebell by the horns or their dumbbell with a pronated “diamond” grip while lying supine on a bench or on the floor. With a slight flex in the elbows (to keep from being locked) the client will extend the load behind their head until the floor is reached, or the desired range of motion is achieved on a bench. Once the range of motion is achieved, the pull from the latissimus dorsi, serratus, and pectorals will return the load to the starting position just over their lifter’s forehead (maintaining eccentric strength engagement) (Figure 12). A common mistake is to return the load to a starting position just over the lifter’s shoulders (Figure 13) which reduces the eccentric strength engagement on the posterior chain.

KEY CUES

“Big Stretch Back, Return Pull to the Face”

This technique encourages the latissimus dorsi and serratus to do the majority of the work with some assistance from the pectorals and the long head of the triceps.

“Relax Your Face and Head, Let the Load Rest on Your Shoulders”

This cue encourages the client to place the pull overload on their shoulders as opposed to pulling their head down into the floor or bench stressing their neck and face. Prior to starting their first pullover, the client should pull their scapula together creating a platform for the arms to pullover upon and ease tension off their neck.

PROGRESSIONS/REGRESSIONS

Proper progression for increasing difficulty is to pull with a heavier load. Proper regression to decrease difficulty is to decrease load or perform standing (rear-facing) with a band from a high anchor.

KEEP IN MIND

This lift is great for developing overhead range of motion that eventually will lead to overhead pressing range of motion for those who do not overhead press well. The pullover is a fan favorite as the eccentric stretch is often well received, increases range of motion, and builds strength all at the same time.



FIGURE 12. PULLOVER - CORRECT STARTING POSITION



FIGURE 13. PULLOVER - INCORRECT STARTING POSITION



FIGURE 14. PULLOVER WITH DB ON BENCH



FIGURE 15. PULLOVER WITH KB ON BENCH



FIGURE 16. PULLOVER WITH DB ON FLOOR



FIGURE 17. PULLOVER WITH KB ON FLOOR

CONCLUSION

Practicing these four lifts, and any variation of the progressions or regressions, will assist the older adult client in increasing their posterior chain strength, increasing overhead range of motion, and improving their overall strength and performance. Clients should feel confident performing these lifts; loads or progressions should not be increased until their abilities to do so are obvious. These pulling motions can assist older adult clients with building the postural strength needed to move freely, comfortably, and confidently so they can fight off diseases like arthritis, osteoporosis, and sarcopenia (4).

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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.