

P H Y S I O K I N E T I X



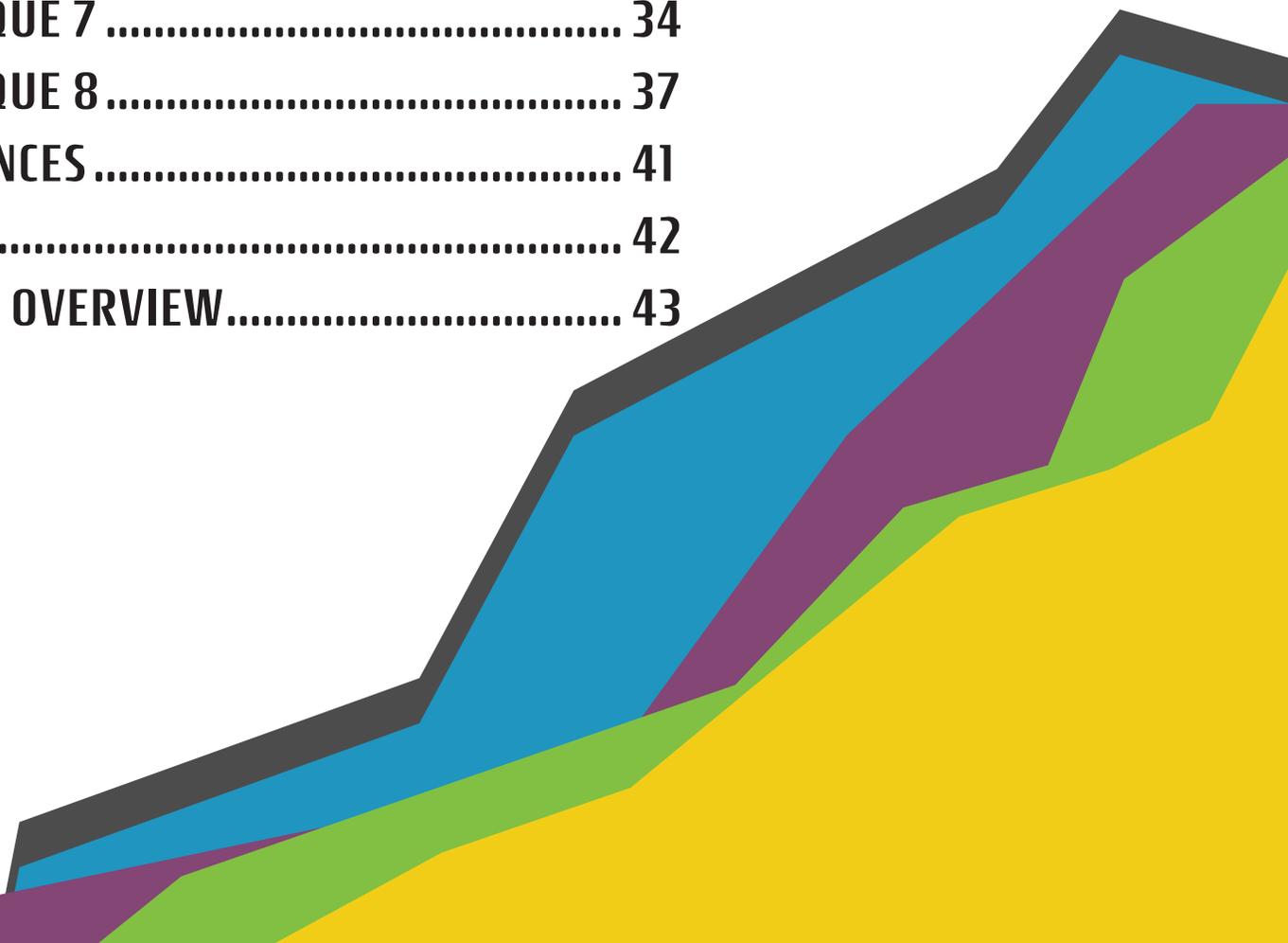
L E V E L 4 : P E R F O R M A N C E

NEUROLOGIC
FINE-TUNING
FOR
INJURY PREVENTION
AND
GENETIC POTENTIAL

PRESENTED BY PAUL KELLY, BS | CPT | LMT | MMT

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FOREWORD

Some of us dedicate our entire lives to reach the highest pinnacle of success in a single modality, such as manual therapy. Only a select few are able to attain the same level of excellence in more than one discipline. Such is the case with Paul Kelly. I first met Paul in Nashville almost two decades ago at one of my Myoskeletal Alignment Techniques (MAT)® workshops. He was a young exercise physiology graduate from the University of Tennessee and already a sought-after athletic trainer. However, even at this early age, Paul saw the need to broaden his skill set by integrating manual therapy and corrective exercise training together into one system, and thus began his own journey towards effective pain management by starting The Temple Human Performance Center in Knoxville, Tennessee in 1996.

His quest to develop a multi-modality healing system had led him to the prestigious Core Institute of Structural Integration, where he completed an advanced bodywork degree. Paul was still in the initial stages of his manual therapy career when we met in Nashville, but you certainly couldn't tell by watching him work. Soon, a dialog and friendship began that resulted in an invitation to join me on the road as a teaching assistant.

In my 2011 "Dynamic Body" textbook, Paul and I introduced the idea of combining manual and movement-based therapy into one subject matter. I asked Paul to develop some functional training routines to complement the Myoskeletal hands-on work we had been showcasing across the country. The positive response from practitioners led to the production of two home-study courses that blended both manual and movement-based therapy together as one. In "Motion is Lotion" and "Art of MAT," Paul and I assessed, treated and trained clients with pain, injury and sports performance issues. I believe this was the first time anyone had "married" the two modalities, and the end result was a big success.

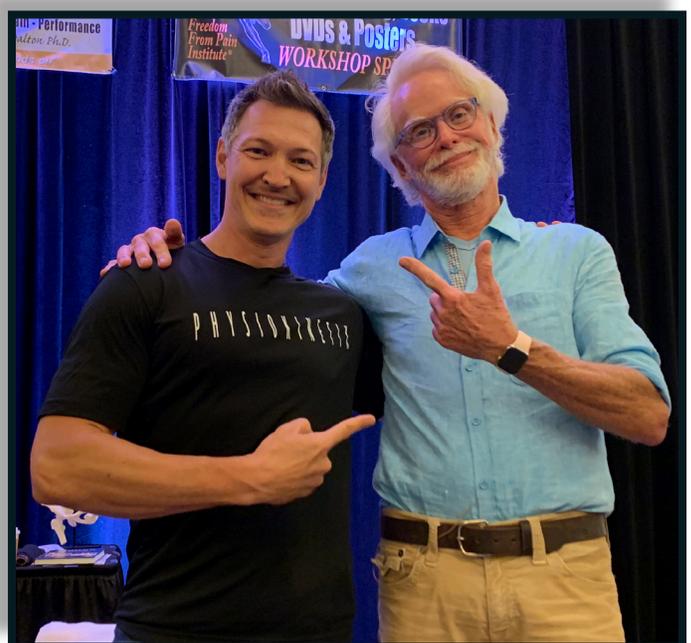
For the past 12 years, Paul has conducted MAT seminars for my Freedom From Pain Institute, and during these events, he includes home self-care exercises to enhance the MAT hands-on work. The popularity of this multi-modality approach has finally culminated in the creation of Paul's completely new exercise and conditioning program, called PhysioKinetix Training (PKT). The role of PKT is primarily to get people moving in order to get them stronger, healthier and more in touch with their bodies.

Whether the goal is to lose weight, gain muscle, prepare for a sport or move without pain, Paul's innovative combination of preventive and corrective exercises provides an accessible path to success. As a client-specific exercise program, PKT assists people of all ages in setting and achieving realistic fitness goals via a uniquely structured set of progressions. It's also a brain-based program that focuses on key factors such as movement assessments, genetic predispositions, bio-mechanics, injury history, neurological status and pain provocation.

Learning to perform PKT movement assessments alone will give practitioners a step up in the game, as the identification of compensation patterns ultimately leads to the development of better treatment strategies. PKT is designed to complement and enhance the hands-on work you're currently doing. By combining manual and movement-based therapy, massage therapists, personal trainers, physical therapists and chiropractors are better able to align, balance and neurologically re-educate the neuromyoskeletal system to create long-lasting, life-changing effects.

Erik Dalton, Ph.D.

Founder of the Freedom From Pain Institute, creator of Myoskeletal Alignment Techniques and author of "Dynamic Body: Exploring Form, Expanding Function"



LETTER OF SUCCESS

When I first started going to Temple Human Performance about 14 months ago, I was a mess. I was attempting to recover from surgery-caused neuropathy due to tourniquet use during my Achilles tendon repair in 2016. The repair left me with nerve damage from my lower thigh to my toes. In 2017, I had a left hip replacement. Despite 1 1/2 years of physical therapy, I had not been able to recover much or even begin to rehab my Achilles and calf. My daughter was very concerned about my overall physical status and because she was working at Temple, she encouraged me to go.

I'd also had a cervical fusion in 2004, and due to my significant use of crutches and frequent forward bending and poor posture, I developed 3 herniated cervical discs and a brachial plexus neuropathy. I'd had low back problems for years and all of these aforementioned difficulties led to significant time sitting or reclining, when I'd always been highly active. This was all depressing and scary.

In my first few months at Temple I could not stand on my left foot for more than a few seconds, I had significant pain in my back that radiated to my buttocks and down both legs, and it took me over an hour of morning movement alongside Tylenol and Ibuprofen to be able to start my day. I could barely get out of my car, and I avoided attending UT football and basketball games because I had great difficulty getting up and down the stairs and feared falling. In addition, my work efficiency suffered greatly.

I have been seeing Paul Kelly on nearly a weekly basis, as well as 2-3 additional sessions per week with his trainers. About 6-8 months ago the pains in my back, buttocks and legs ceased. My balance has improved tremendously and I can easily get out of my car. I can go up and down football and basketball arena stairs confidently. I play golf, walk, sneak in some basketball, and body surf. I've lost 18 pounds, gained significant muscle and core strength, can kick my 17-year-old son's butt (jk!) and my daughter is no longer worried about me being able to walk her down the aisle in several years. My son started attending Temple after a severe ankle sprain and works out there regularly with the trainers and has made tremendous gains. My stubborn, self-starting, exercising daughter has begun workouts there as well and is learning new and useful information each session.

The wealth of knowledge that Paul Kelly has and his approach of treating the whole body has educated and assisted me to an astonishing degree. I've treated with orthopedists, physical therapists, massage therapists, had nerve stimulation treatments, stem cell injections and nothing has come close to benefiting me like Paul and his staff have. I learn new facts about anatomy, physiology, nutrition and inflammation every time I'm there and no other professional or group of professionals I've treated with over the years can hold a candle to him!

J. Sidney Alexander, MD
Board Certified Psychiatrist
Medicolegal and Forensic Expert



INTRODUCTION

Paul Kelly's PhysioKinetix Training (PKT) is a series of restorative, functional techniques aimed at making your mind and body better able to align, balance, and re-educate the neuromuscular system to create long lasting, life changing effects. It is a "Treatment & Training" approach created to complement and prolong the effects of Erik Dalton's Myoskeletal Alignment Therapy and other therapies in the industry.

Over the past 25 years, Paul has seen that there has been no true progressive, neuromuscular education system that includes all the needed equipment, is 100% portable, is easy to use, and provides multiple freedoms of movement with resistance. Other routines have not focused on creating structural fixes for any injury, at any age. Paul began to understand that therapy and exercise were not enough separated. A body needs a program that is fast, efficient, and productive; a program that begins with primal forms of movement and progressively brings you to performance. There are many types of routines out there (ex. Pilates, Yoga, movement therapy, circuit training, and weight loss exercises) but none that encompass the most important parts of each. Many people don't want to do all of these programs because of difficulty, costs, and the potential to hurt oneself.

As the owner of a manual therapy clinic for over two decades and Erik Dalton's Senior Master Myoskeletal Alignment Therapist, Paul has seen countless clients come in with injuries due to some of these other exercise programs. These programs were not progressive and did not start with personalized assessments. Paul began to develop a system that could help his clients fix the problems caused by these other programs or from any stress on the body such as work and sports. He began assessing his clients and in turn addressed the four levels where problems occurred: Mobility, Stability, Power, and Performance. Using his personal experiences with other programs and the damage seen with clients coming from these programs, Paul began to fine-tune his system so that any of his clients, no matter age or health, could begin to reverse the effects of any injury or stress on the neuromuscular system.

Although Paul had put his program into motion to help his clients, he knew he wouldn't get the rest of the picture without more research and education. PhysioKinetix was truly born after Paul started attending neuroscience congresses for five years and seeing the cognitive, neurological implications to pain and its relationship to movement. After this, he knew he needed to add more brain and movement based learning into his manual therapy practice to solidify the outcomes. By incorporating PhysioKinetix, his clients started to neuromuscularly re-educate themselves to the point that Paul could see their pain decrease and self-efficacy increase.

The entire PhysioKinetix Training system has been developed with one major idea in mind; accessibility to anyone, anywhere. PhysioKinetix isn't just a video series, a group of products, or manuals; it is a network of clients and clinicians, across the world, who aim to make individuals better through the combination of manual therapy and movement science. This is why PhysioKinetix offers workshops, one-on-one or group mentorships, advanced certifications, and all of the materials necessary to accomplish personalized goals. It is the hope of Paul to reverse the stresses on our bodies from everyday life and get everyone to "Move For Life".

**"A SELF-CARE,
PAIN MANAGEMENT,
PERFORMANCE SYSTEM
WITH A
RESTORATIVE, FUNCTIONAL
APPROACH"**

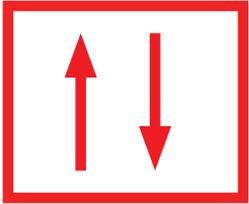
WHAT IS OUR PERFORMANCE LEVEL?

PRO-PERFORMANCE IS A LEVEL BUILT FOR PROFESSIONAL ATHLETES, WEEKEND WARRIORS, AND WORKOUT JUNKIES THAT WORKS ON YOUR INHIBITORY REFLEXES AND MOTOR AND BALANCE WEAKNESSES. IT WILL FINE TUNE YOUR NEUROLOGICALLY WEAK CROSS PATTERNS AND STRENGTHEN THE HEAD AND NECK IN ALL PLANES OF MOTION. OVER OUR LIFETIME OF MOVEMENT, WE HAVE DEVELOPED NEUROLOGIC STRENGTHS AND WEAKNESS NOT ONLY IN OUR MOTOR CORTEX BUT IN OUR NEUROMUSCULAR SYSTEM. WHEN YOU RESTORE THESE INHIBITED MOVEMENT PATTERNS YOU WILL SEE MORE STRENGTH AND CONTROL, WITH MORE MOVEMENT CONFIDENCE AND RANGE OF MOTION. THIS RESTORATIVE, FUNCTIONAL APPROACH WILL GENERALLY LEAD TO A LONGER, ACTIVE CAREER AND HELP YOU PREVENT REPETITIVE STRAIN PATTERN INJURIES. ONCE MASTERED, YOU CAN MIX AND MATCH THESE TECHNIQUES WITH LEVEL 3 TO CREATE THE PERFECT SET OF TECHNIQUES TO CONTINUE BUILDING YOUR ENDURANCE, STRENGTH, AND PERFORMANCE. NOW IS THE TIME TO TAKE YOUR BRAIN AND BODY TO THE NEXT LEVEL.

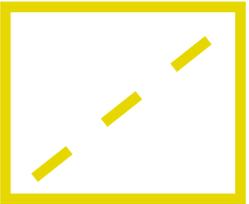
WORKOUT KEY



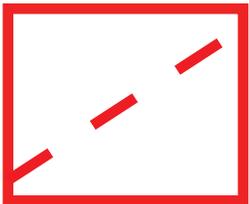
Symmetry Lines - Show ideal lines of symmetry that should be shown in the body during an exercise.



Force Arrows - Show what parts of your body you should be pushing and pulling with during an exercise.



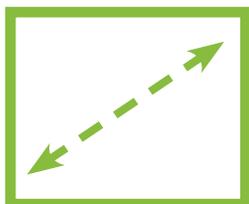
Lengthening Lines - Show what parts of your body you should be feeling lengthened during an exercise.



Strengthening Lines - Show what parts of your body you should be feeling strengthened during an exercise.



Nerve Glide Arrow - Show what parts of your body will receive a nerve glide during an exercise.



Movement Arrows - Show where certain parts of your body should move during an exercise.

LEVEL 4: PERFORMANCE

Exercise 1: Band Romanian Deadls

Materials Needed:

One or 2 bands, Door Anchor, Mobility Strap, PKT handle (Optional), Wall Anchor (Optional)

Goal:

To create global neuromuscular strength and endurance, while stabilizing the spine, SI joints, and hips. This technique also targets the hamstrings, gluts, hip complex, spinal erectors/stabilizers, rotator cuff/shoulder stabilizers and core. Another great benefit of this technique is that while you globally strengthen your body, you create length in the facial front line and anterior hips, improving ROM and posture.

Assessment:

This technique assess your ability to create extension in the anterior hip complex while maintaining control of the thoracic spine and shoulder girdle. Also will show weakness, due to orthopedic degeneration, or neurologic dysfunction in the stabilizers of the ankles/hips/CORE/shoulders.

Technique:

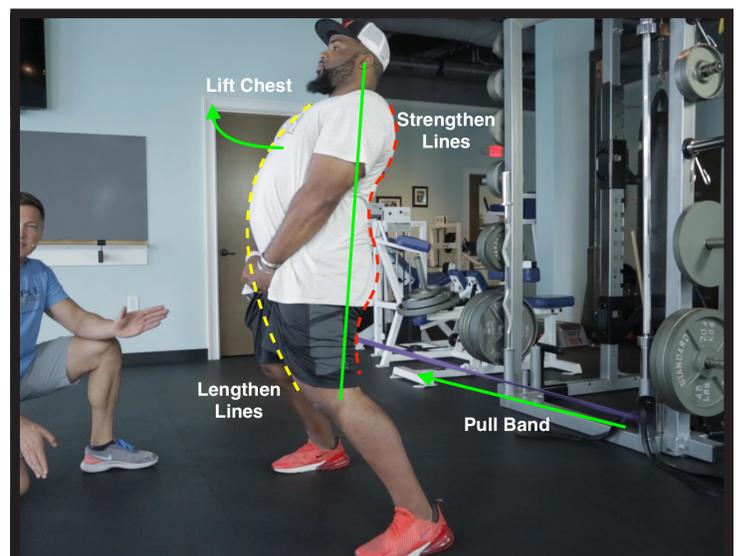
Image A: Secure band to something close to the ground, or bottom of a tree using your PKT Mobility Strap or Door Anchor. Step over band, as you reach through your legs, grab inside of the band with palms facing out. Create a controllable amount of tension in the band before you flex at hips and sit back into a semi-squat. Make sure to rest your forearms against your thighs, palms out, pinkies up.

Image B: Before the motion breathe in and engage the floor by pushing your feet out, squeezing your gluts as you lift your chest. Allow your shoulders to roll back into a neutral position. Be sure to forcefully exhale at the end of each repetition. **Repeat 2-3 sets 8-12 x's**

Image A (Start)



Image B (Technique)



Movement:

Action: Bar Assisted Sumo Squat

Image C: Between sets hold onto something secure and lean back, squatting as comfortable as possible. In a wide stance push your knees apart, and allow your hips to comfortably drop down towards the floor. Making sure to keep your weight back into your heels with your chest up. Rock back and forth heel to toe creating a neuromuscular re-balancing, and also a great hip/ankle/t-spine mobilizer.

Neuro-Modifier:

Action: Standing Sumo Band Dead-lift

Image D: Loop your feet in the band and reach down and grab your band with an overhand grip, or alternate grip.

Image E: As you engage your feet into the floor by pressing out and through the heels laterally. Shift your weight into your heels as you lift your chest and stand up into a controlled extension. Squeeze gluts at top of extension and give a forceful exhalation, allowing your shoulders to roll back into the neutral position. **2 -3 sets x 8-15 reps.**

Notes:

Image C (Movement)

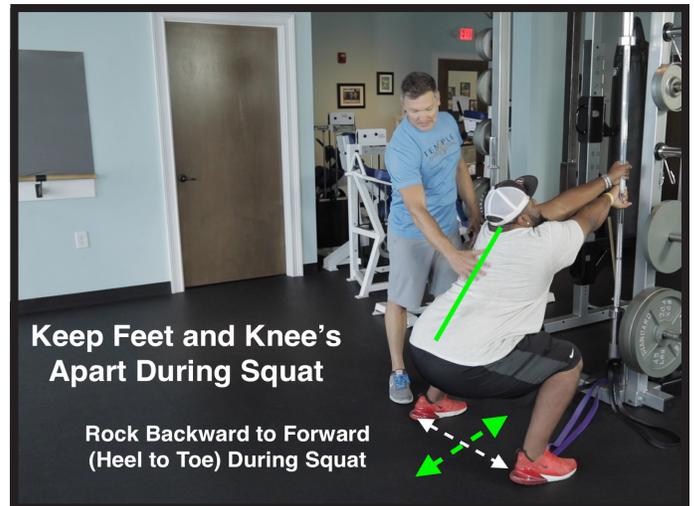


Image D (Neuro-Modifier)



Image E (Neuro-Modifier)



Exercise 2: Knee Side Planks with Band Row

Materials Needed:

PKT handle, PKT band, PKT Proprioceptive pad

Goal:

To train the neuromuscular system to stabilize the trunk during dynamic movement. This builds neuromuscular endurance as it strengthens the lateral hip, spinal stabilizers, and contralateral shoulder girdle and stabilizers. This will also create length in an anterior cross pattern Left to Right focusing on shoulder, trunk, and hip mobility and strength. (This technique should be used for Scoliosis on the convex sides of the spine.)

Assessment:

This movement will show your weakness and mobility problems in the shoulder girdle, hip, and ribcage. Look for Left to Right imbalances and make a note. If there is instability or shaking, lack of ability to abduct or extend the legs, or endurance to stabilize during the rowing movement; then your not ready to add this exercise.

Technique:

Image A: Lying on your left side plank position flex your hips and knee's keeping your feet, hips, and shoulders in a straight line. Secure your band about 2-4 feet off the ground far enough away to create some tension in the band. With your left elbow under your stabilized shoulder, take your right hand and hold the band, arm straight in front with tension in band.

Image B: Row the band, pulling with your elbow parallel to your side as you lift your hips and abduct your bent right knee, pressing your heel posteriorly, while bringing them into an extension in line with the knees, shoulders, and head. Make sure to lift right leg up during hip hinge. Now, Squeeze your gluts and exhale forcefully on the contraction. Sit back and lower yourself to the floor and repeat. (Work on the weakness for an extra set) **Try these for 2 to 3 sets 8-12 reps**

Image A (Start)

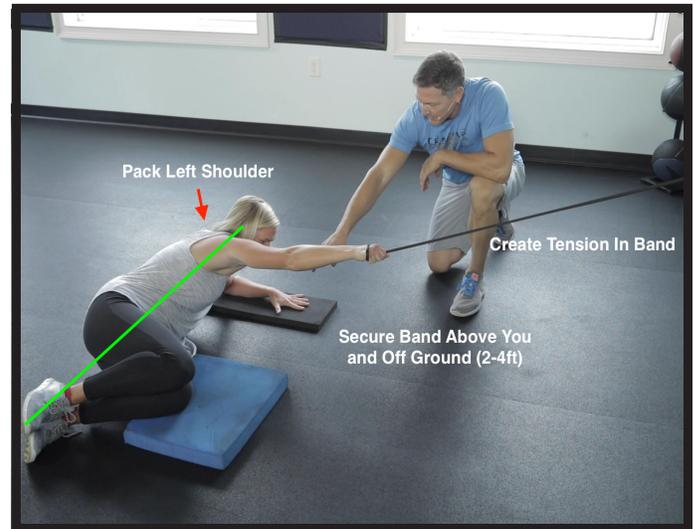
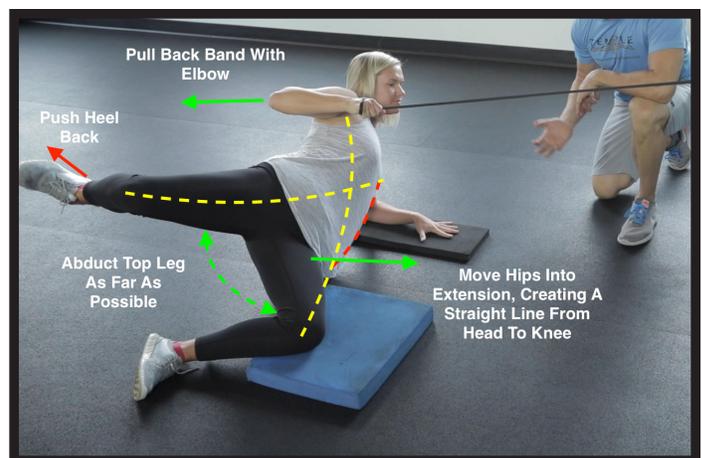


Image B (Technique)



Movement:

Action: Airplane pigeons with Lateral Reach Backs

Image C: Start this graded exposure movement by getting into a Double 9 Position, (90 degrees at both knees). Set your spinal angle so that you are not side-bending in your spine. Place your left hand on the floor under your shoulder and use the contralateral arm as an airplane wing.

Image D: Reaching back and following your hand with your eyes. This will open up your right anterior hip complex, and add internal rotation to your femur while opening the posterior external hip stabilizers.

Image C (Movement)

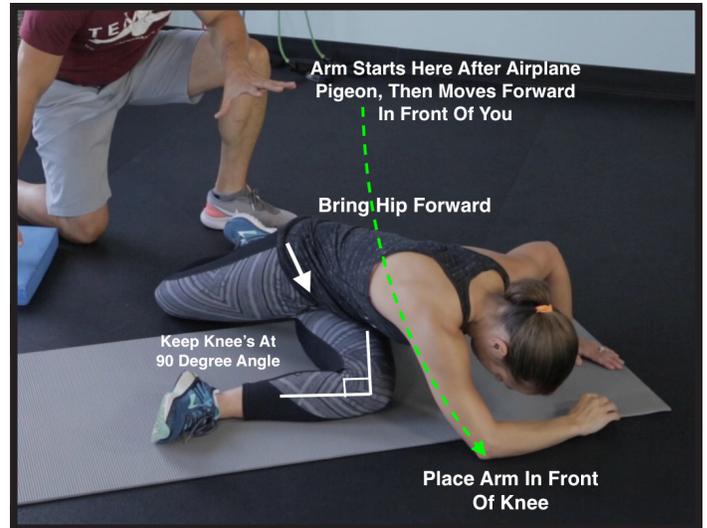
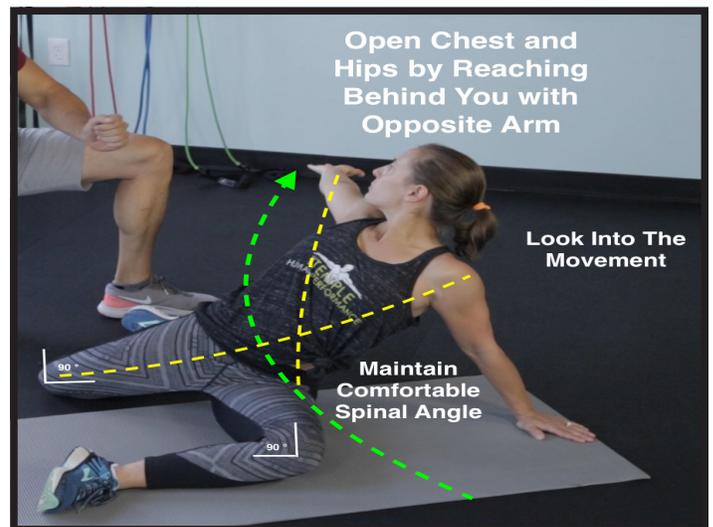


Image D (Movement)



Neuro-Modifier:

Action: Side Plank Wide Row with Leg Abduction

Image D: Start in a Left or Right side plank with adequate tension in the band at start. Keep shoulder away from ear.

Image F : Begin pulling your elbow out away from your side and abducting your leg as you row. Try to remain perpendicular to the ground with your body throughout the entire movement. **8-12 x 2-3 sets**

Notes:

Image E (Neuro-Modifier)

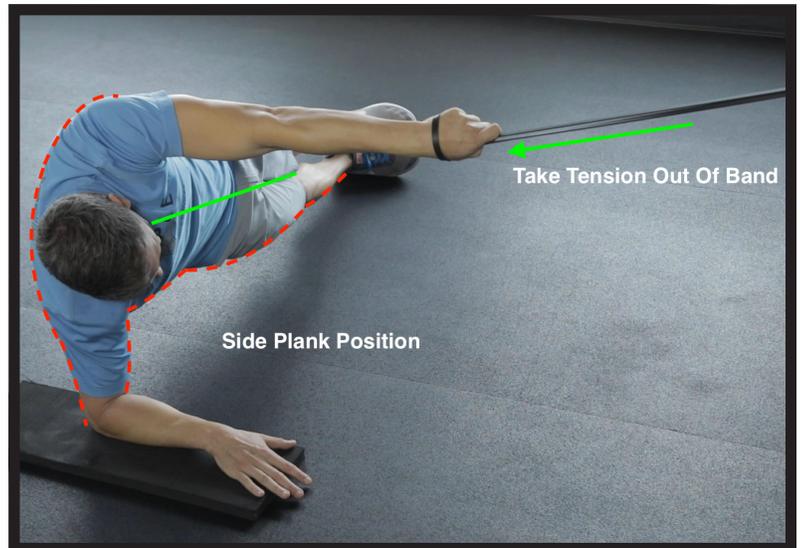
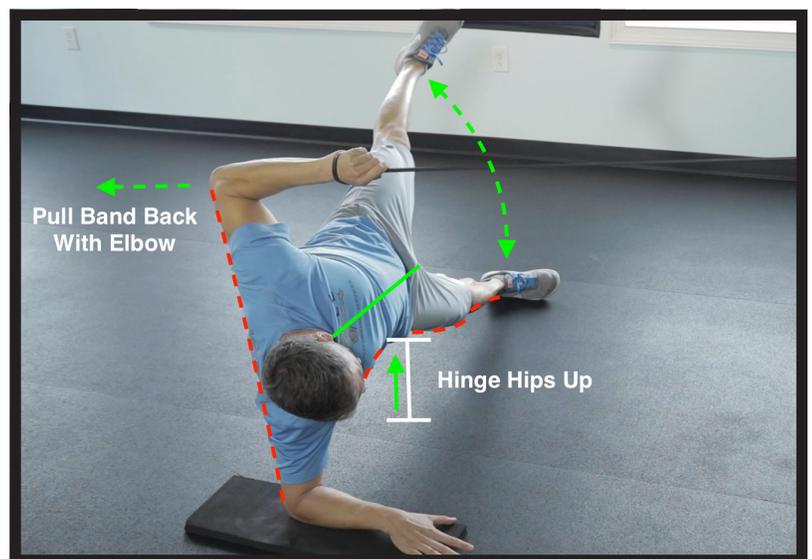


Image F (Neuro-Modifier)



Exercise 3: Pattern Push Ups Front/Back

Materials Needed:

PKT Yoga Mat

Goal:

This Neuromuscular and vestibular trainer will strengthen the anterior and posterior neuro-fascial system from Right to Left in cross patterns. This will help you train your control and stability while retraining mobility and endurance.

Assessment:

In this movement look for lack of strength, balance and coordination. This is a good time to look for cross pattern differences in, endurance, and mobility. You are trying to create a balance of at least 60/40 so work on the weak pattern side.

Technique:

Image A: Start in “X” push up position.

Image B: Press up off the ground into a push up.

Image A (Start)

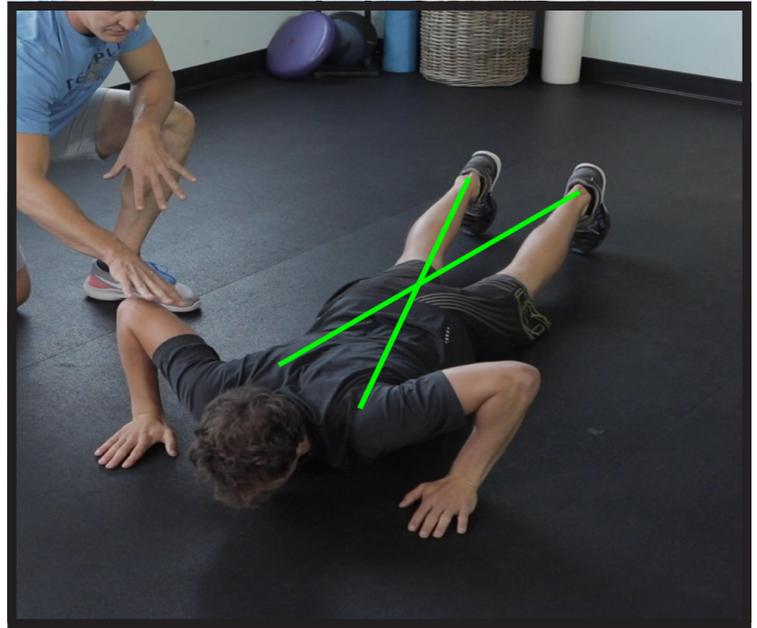


Image B (Technique)



Image C (Technique)

Image C: Lift opposite arm and leg, pulling your knee under your body as you look up and reach your opposite arm toward the sky.

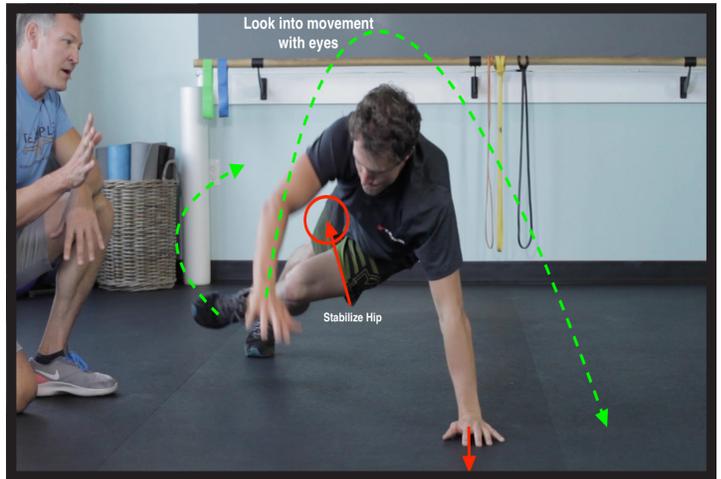


Image D (Technique)

Image D: Rotate all the way into a reverse plank position. (This is working the R to L cross-pattern)

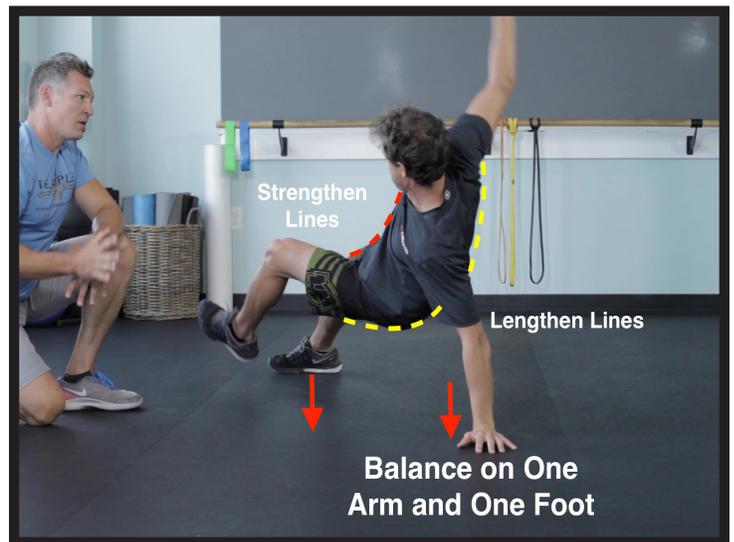


Image E (Technique)

Image E: Bring opposite arm and leg you were balancing on during transition to the ground and finish in reverse plank.

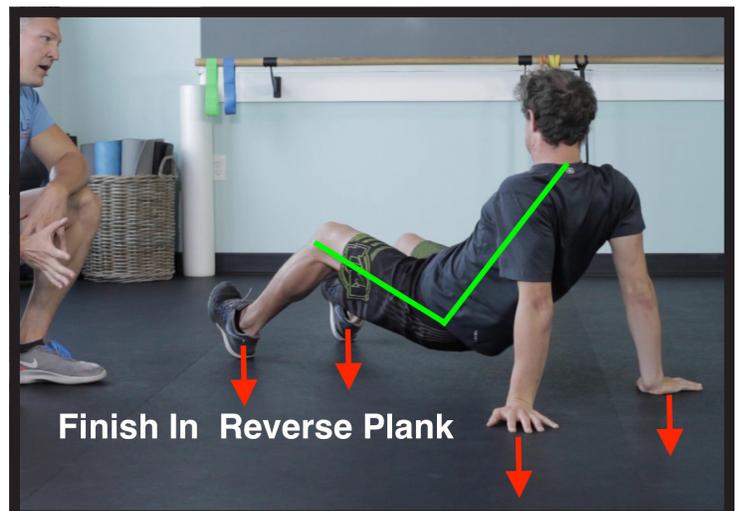


Image F (Technique)

Image F: Now, use other opposite arm and leg to begin rotation again. Right knee comes under body and left arm reaches towards the sky as you look up.

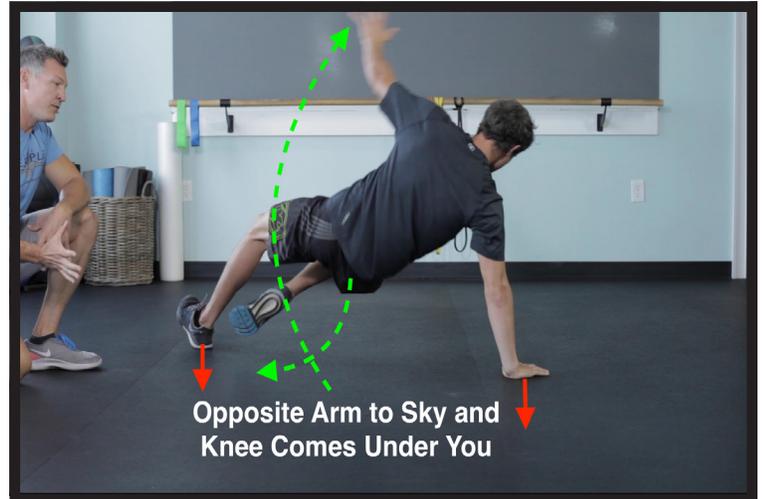


Image G (Technique)

Image G: Place both left hand and right leg on the ground after 180 degree rotation and get back into push up position.

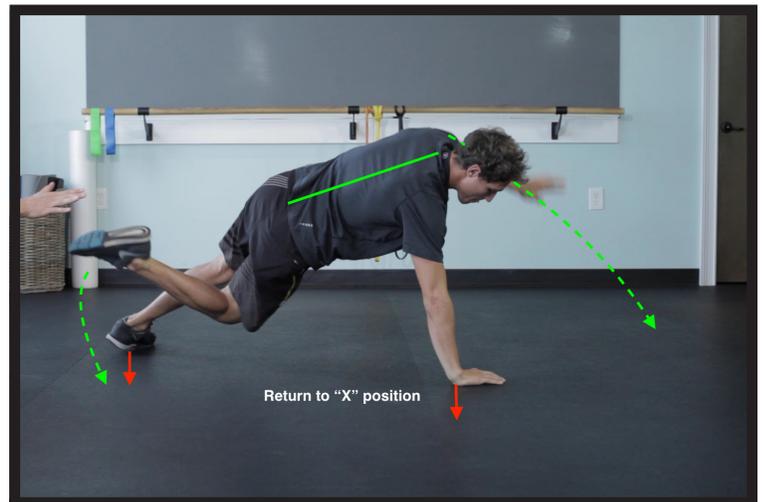
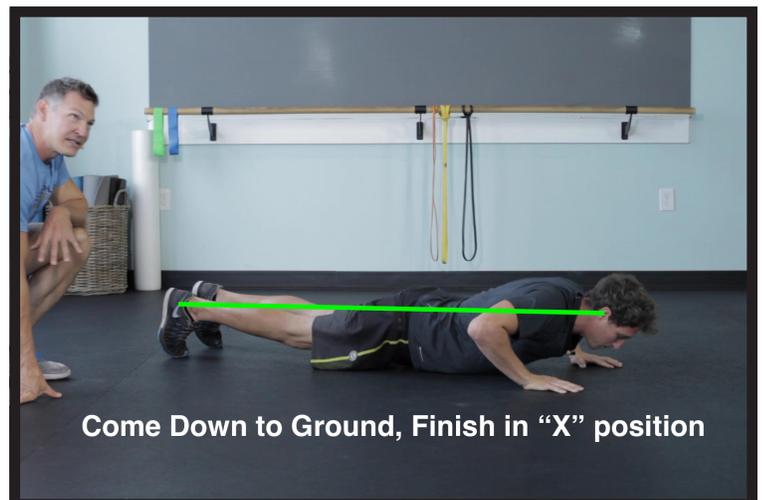


Image H (Technique)

Image H: Come back down to the floor back to "X" position. **Repeat exercise 8-15 repetitions, 2-3 sets.**



Movement:

Action: Lateral Sims Cross pattern reaches

Image I: Lying face down draw your knees up to one side while arms out in a T.

Image I (Movement)

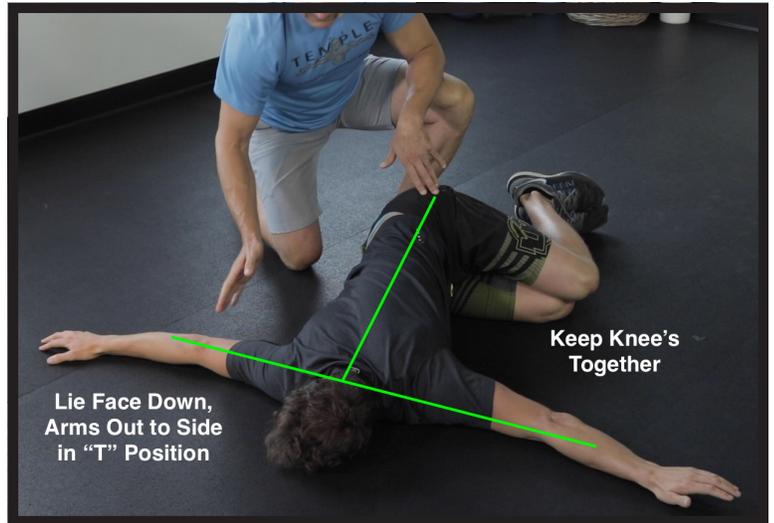


Image J (Movement)

Image J: Lift hand to the ceiling, pointing fingers towards sky.

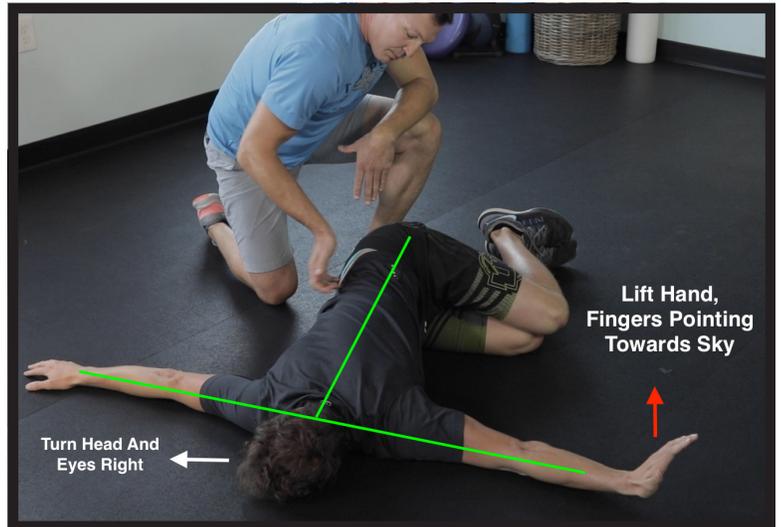
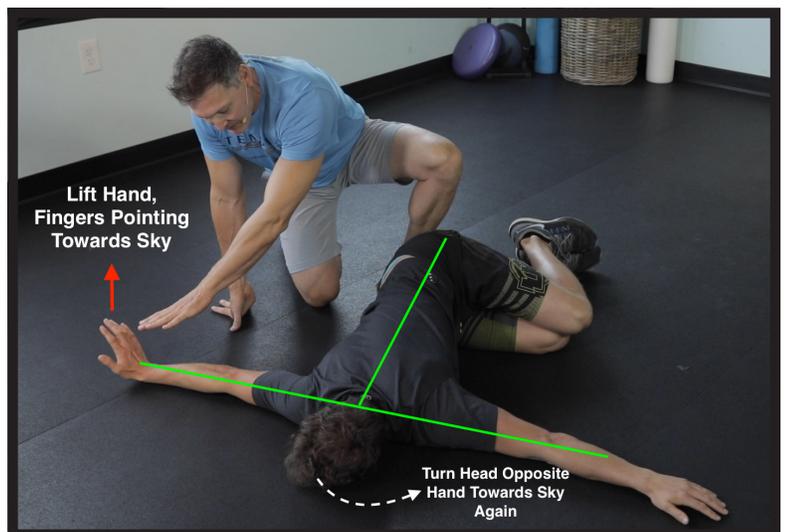


Image K (Movement)

Image K: Now, reverse the lateral sims position and lift other hand, making sure to point fingers to the sky.



Neuro-Modifier:

Action: Swift roll push up

Image L: Begin again in “x” push up position, elbows out at 90 degrees to your sides.

Image M: Press off the ground, look into the direction of your rotation and do a 180 degree half body rotation into reverse plank position.

Image N: Now, turn another 180 degrees, looking towards your rotation, getting back into “x” push up position.

Image O: Lastly, lower yourself back to the floor from the “x” push up position and repeat the neuro-modifier exercise.

Notes:

Image L (Neuro-Modifier)

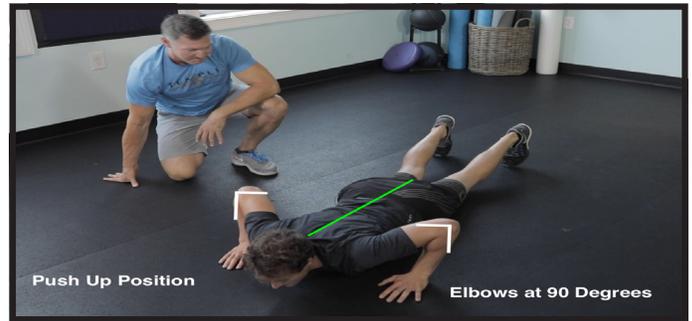


Image M (Neuro-Modifier)

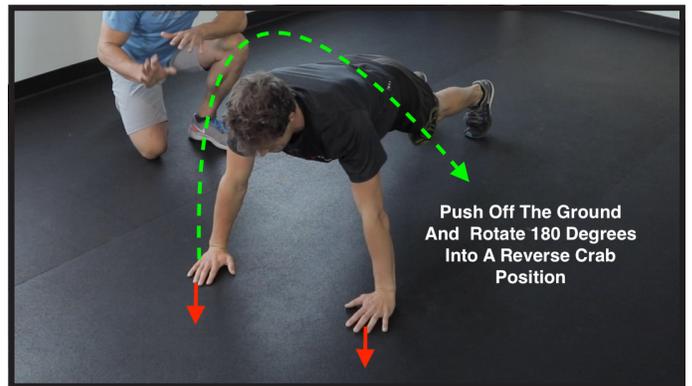


Image N (Neuro-Modifier)

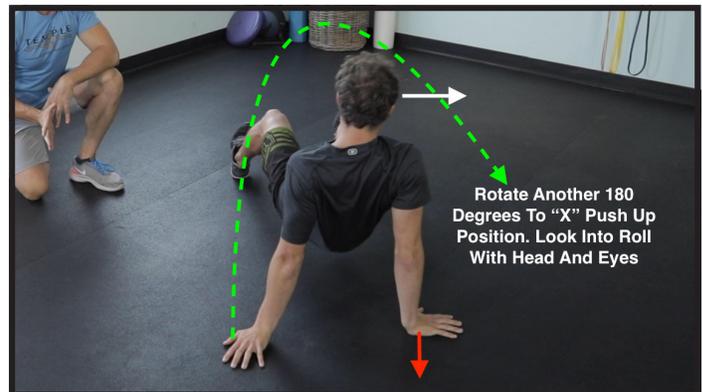


Image O (Neuro-Modifier)



Exercise 4: Band Cross Pattern Step-Backs

Materials Needed:

2 PKT bands, 2 PKT handles, PKT Balance Pad

Goal:

This neuromuscular technique works on the right and left motor cortex as it builds strength, endurance, and mobility in the anterior and posterior cross patterns. This movement provides strength and function for walking, running, sprinting, club and racket sports as it creates lateral symmetry. This exercise can be used for treating scoliosis and neurological weaknesses in the Right and Left motor cortex and brainstem.

Assessment:

Take note of the shoulder girdle and leg/hip/ankle that has the most restrictions during the pulling and step back motion. Work on your weak reverse cross patterning.

Technique:

Image A: Secure your band about chest height. Step back with your bands until there is slight tension. With arms extended in front, (sleep walker stance), palms together.

Image B: As you step back into a reverse lunge, separate both arms out in diagonal where if the left arm is superior and parallel to the head, and right arm is inferior, or lower, and diagonal/parallel to your body. Resist the bands as you step back up, pushing through your heel during band pull. Repeat exercise, switching arm angles next time, with the opposite going high and the other low. **Do 10-15 reps x 2-3 sets.**

Image A (Start)

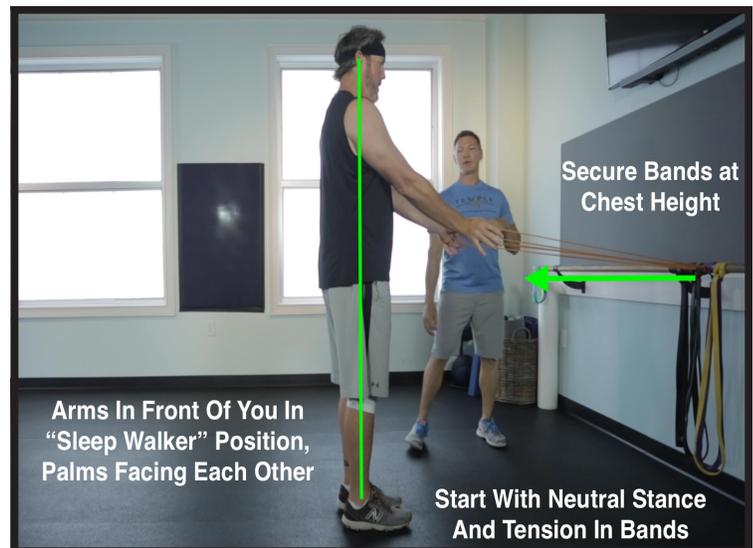
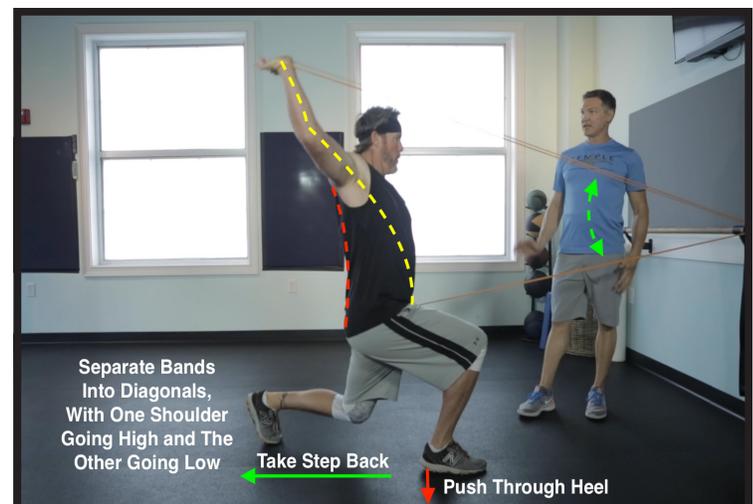


Image B (Technique)



Movement:

Action: Bar Downward Dog

Image C: Hold on to something about chest height. As you maintain the curve of your lower back, flex at the hips while dropping your chest through your arms. Press your hips back over your heels and elongate your spine with an exhale. This motion can be repeated up and down, with an inhale on the way up, and an exhale on the way down.

Image C (Movement)

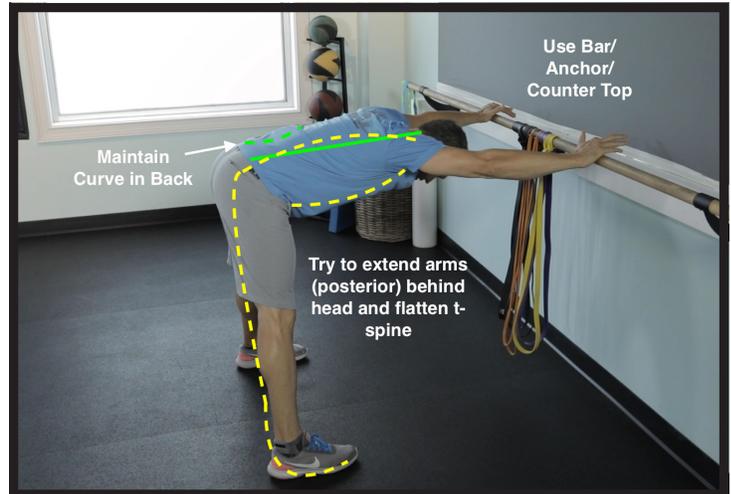


Image D: Now, take one hand off of the bar/countertop, and reach down and across comfortably in a right to left thoracic rotation, allowing gravity to work. Make sure to look into the movement with your eyes, taking full inhales and exhales during rotation. If this movement causes any lower back or nerve radiating pain, you are to far through the movement. This movement can be performed unilaterally as a functional movement, or bilaterally. **3-5 reps**

Image D (Movement)

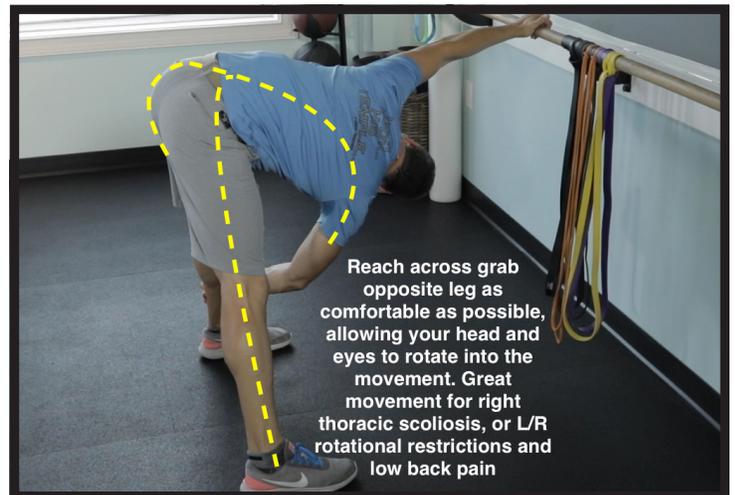
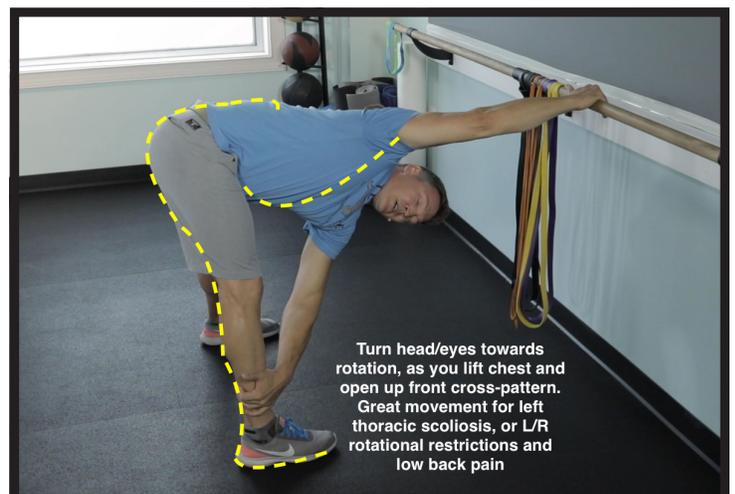


Image E: Take other hand off of the bar/countertop, and reach across to other leg and reach as far as possible, allowing gravity to work through the thoracic and lumbar spine. Again, make sure to look into your rotations with head and eyes and repeat movement **3-5 reps**.

Image E (Movement)



Neuro-Modifier:

Action: One Legged Cross-Pattern Pull

Image F: Add a bench or foot rest behind you. Step back resting your foot on the balance point. This will add more extension and neuro-fascial lengthening to the resting leg while providing more of an emphasis on Balance, Control, Strength and Stability to the working side. Work more on the non-dominant sides during these modifiers.

Image F (Neuro-Modifier)



Image G (Neuro-Modifier)

Image G: As you balance on the other leg, do a diagonal pull step back as taught in Exercise 4 technique. Flex your knee down on the balance point as you complete your diagonal pullbacks with the bands. **Do 10-15 reps x 2-3 sets.**



Notes:

ASSESSMENTS

TECHNIQUE 4: Band Cross Pattern Step-Backs	
Right and Left Cross Pattern Competence	R arm L leg dominance Yes No L arm L leg dominance Yes No
Head, shoulder and Hips arm maintained in the Vertical axis during step back	R arm L leg Yes No L arm L leg Yes No
Note Cross Pattern with more Posterior Restriction in Right arm, and Left leg Posterior Restrictions L arm and Right leg	R arm overhead Pattern Weak 0 1 2 3 Strong L leg step back Pattern Weak 0 1 2 3 Strong L arm overhead Pattern Weak 0 1 2 3 Strong R leg Step Back Pattern Weak 0 1 2 3 Strong
Breathing is Forceful on exhalation on Step Backs	Yes No
Foot stays planted in technique	Right Foot Yes No Left Foot Yes No
Knee over ankle and not over foot	R Yes No L Yes No
Pain / Discomfort During Technique	Yes No

NOTES

Exercise 5: Palloff Swing Lunge

Materials Needed:

PKT Band, Knee Pad, Handles

Goal:

This neuromuscular and proprioceptive movement strengthens the rotational, and lateral stabilizers of the hip and spine in all planes of motion. This dynamic movement works on proprioception in the ankle, as well as vestibular weakness. Also strengthens the cerebellum and motor cortex to help stimulate postural endurance and control.

Assessment:

Watch for shakiness or lack of control during the technique. Look at torso and head position, making sure it remains upright while they attempt to shift forward and back on the stance leg.

Technique:

Image A: Tie the band perpendicular to where you will be standing at chest height. Move away from the band to create some tension as you hold the band at chest level, making sure to stack your hands on top of each other. Rest back knee on PKT balance pad.

Image B: Now, step forward into forward lunge with the resting knee that was placed on the balance pad. Make sure to keep tension in band and hands stacked on top of each other during lunge.

Image A (Start)



Image B (Technique)



Image C: After you have completed the forward lunge, transition now into a backward lunge, using the same swing leg. Moving your forward leg back to the balance pad were the exercise originally started. As you resist the lateral pull of the band. Switch legs to the inside leg with the opposite knee down and repeat. Try not to touch the swing leg during the entire movement. **Do 12 reps at 2-3 sets.**

Movement:

Action: Lateral Rainbow Reaches w/ Bar

Image D: Grab the bar with one hand, step back with outside leg. As you reach up over your head laterally, side bend away from the bar, trying to keep your foot planted. Breath in and out during each reach. Repeat this motion of reaching up and side-bending **3-5 x's with full breaths.**

Image E: Shown on the anterior side, this movement will lengthen the lateral fascia of the body, as well as spinal erectors, also lateral hip stabilizers. Remember to move in and out of this motion and don't move through the restrictive barriers causing pain.

Image C (Technique)

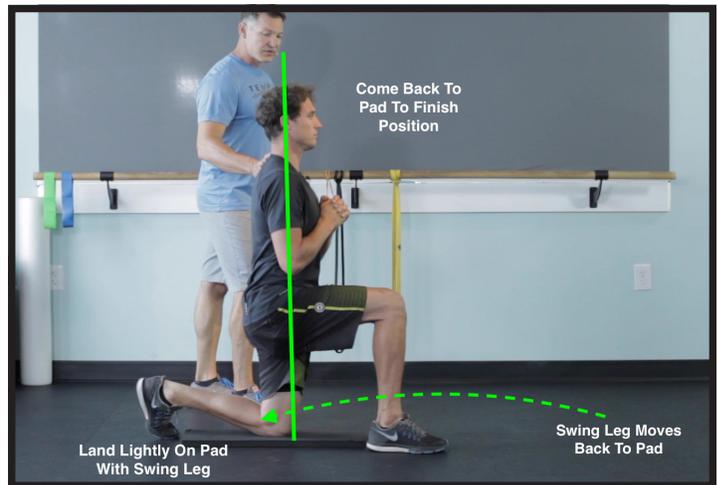


Image D (Movement)

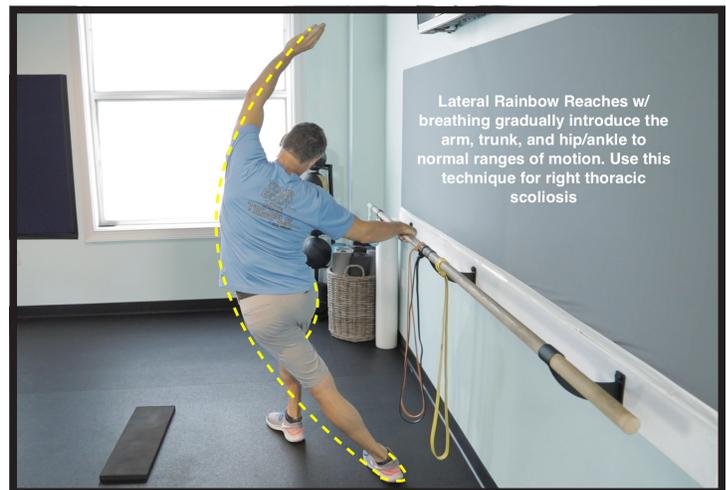
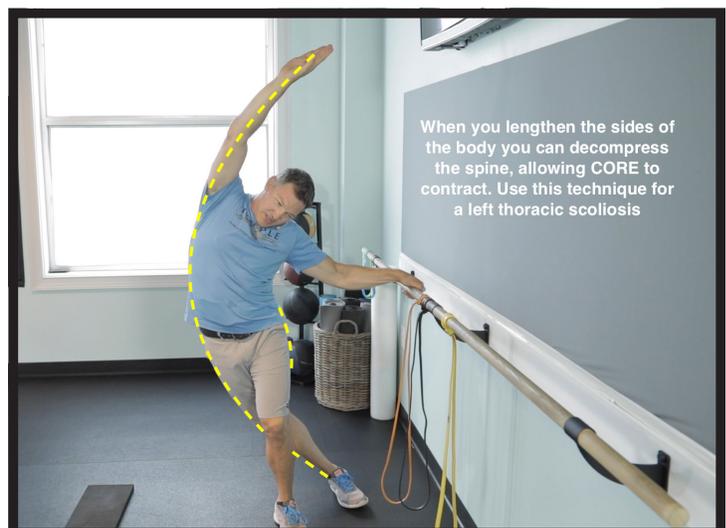


Image E (Movement)



Neuro-Modifier:

Action: Single Arm, Forward/Backward Palfoffs

Image F: Tie Level 2 or 3 band to anchor point (Door, Tree, Bar) at chest level. Stand perpendicular to band and place back knee on balance pad, and front knee in front of you to balance on. Hold band in front of you at chest height with one hand. Now, move back knee/leg forward into lunge, making sure to keep the leg that's moving forward from touching the ground until it plants in front of you.

Image F (Neuro-Modifier)



Image G: Now, again keep tension in the band, take original swing leg and now move back into a backward lunge, returning your leg/knee to original spot on balance pad.

Image G (Neuro-Modifier)

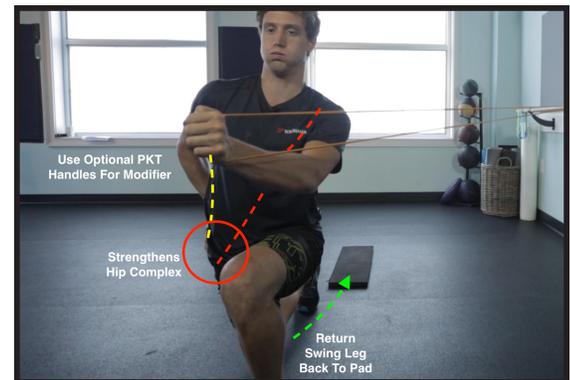


Image H: Switch hands and repeat forward lunge with opposite leg.

Image H (Neuro-Modifier)

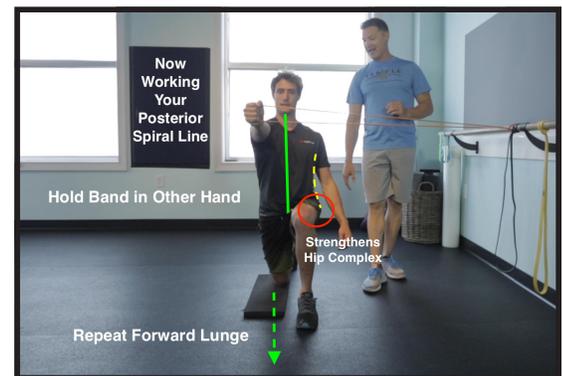
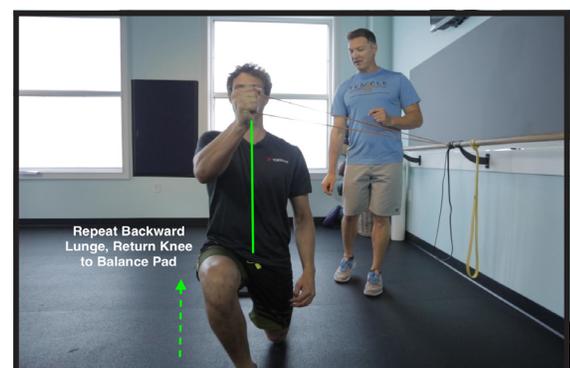


Image I: Take swing leg and do backwards lunge returning back to balance pad. Repeat this exercise 10-12 x's, 2-3 sets.

Notes:

Image I (Neuro-Modifier)



ASSESSMENTS

TECHNIQUE 5: Palloff Swing Lunge	
Motor control: Shakiness or lack of control	Stabilizing R Leg: Yes No Stabilizing L Leg: Yes No
R and Left Shoulder stability during press	R Packed on Press Yes No L Packed on Press Yes No
Ability to maintain head and eyes on Horizon during swing leg transition	Yes No
Ability to Dynamically Stabilize trunk and Maintain proper head, shoulder, and Hip alignment	Stance R Control: Weak 0 1 2 3 Strong Stance L Control: Weak 0 1 2 3 Strong
Restriction in Hip, and leg on extension swing through.	R Leg Yes No L Leg Yes No
Ability to control breath on Technique	Yes No
Pain / Discomfort During Technique	Yes No

NOTES

Exercise 6: Band Power Clean Side Steppers

Materials Needed:

Level 3 or 4 Resistance Arms Bands, PKT Yoga Mat, PKT Balance Pad, PKT Handles

Goal:

Strengthen anterior and posterior chain and work on the equilibrium reflex while also strengthening the sagittal plane.

Assessment:

Look for lateral deviation or motor control weakness on one side during squat paying close attention to head, knee, and ankle positions during the movement. The squat is the ultimate full body assessor. The depth of the squat is determined by the mobility of the Ankles, Hips, and Thoracic spine. During the movement the positions of head and torso should be close to vertical.

Technique:

Image A: Find a band that allows you to press completely over your head with some difficulty (Level 3/4 band, or Special Big Orange Band). Step inside the band, placing feet about shoulder width apart with an overhand grip on band.

Image B: Now, keep eyes looking up as you squat down, keeping shoulder width apart during squat.

Image A (Start)

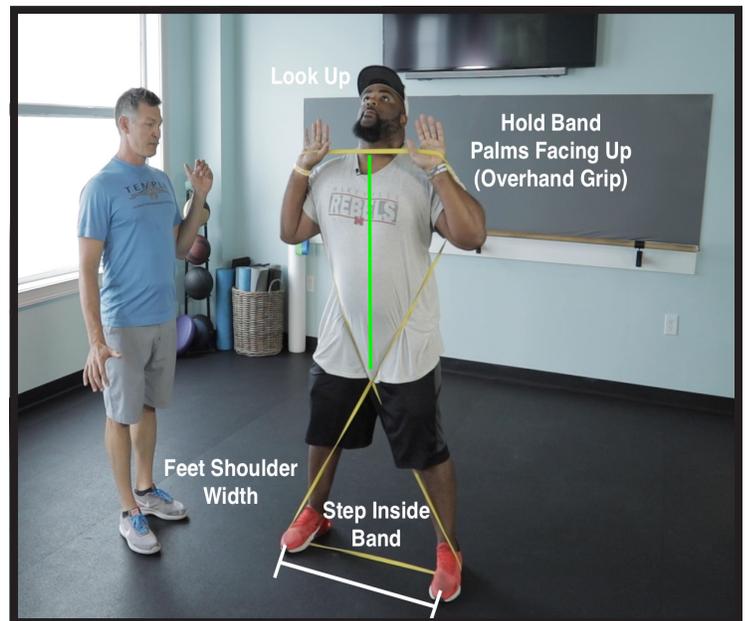


Image B (Technique)

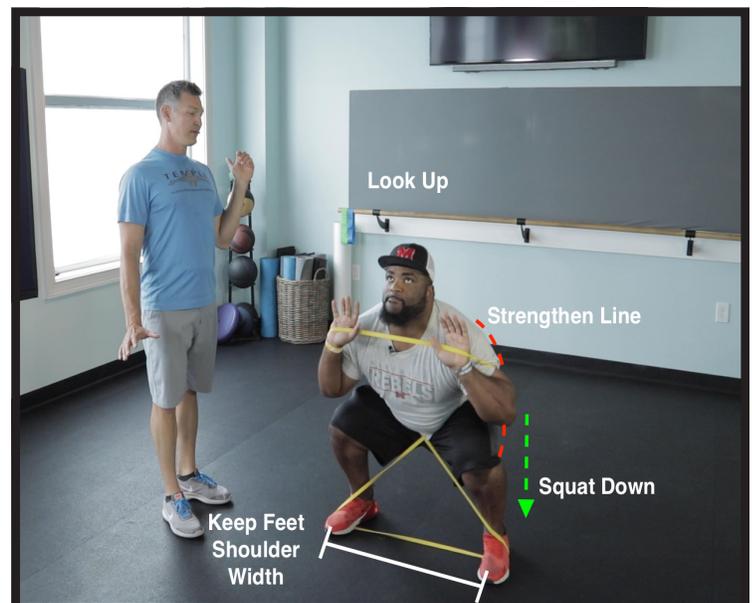


Image C (Technique)

Image C: From squat position, come all the way up into “X” position, upright row the band as you come to the top.

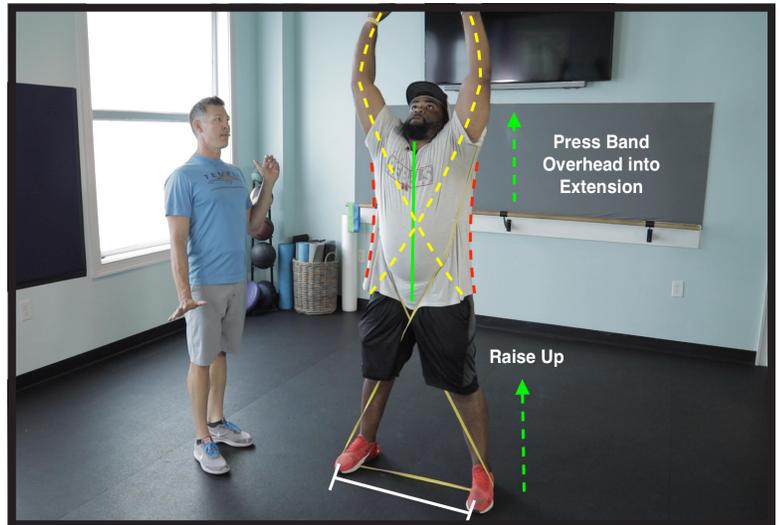


Image D (Technique)

Image D: Now, step laterally right while still inside of the band. Return back to neutral starting position, bringing the band back down to about chest height.

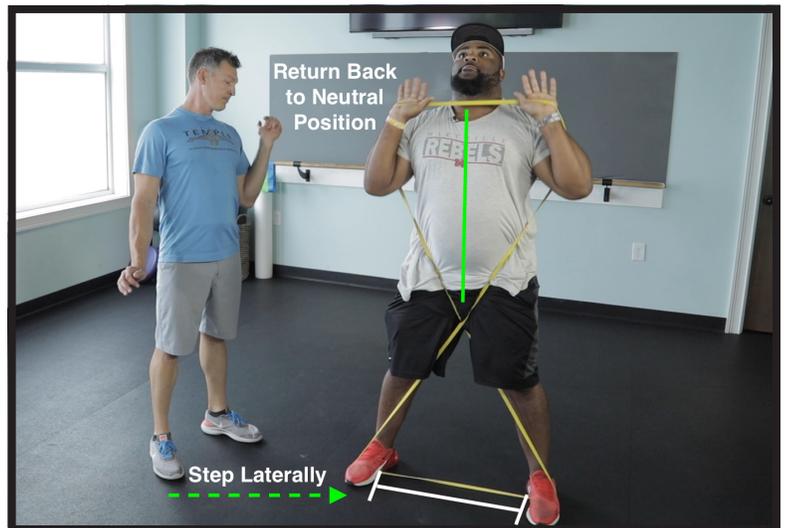


Image E (Technique)

Image E: Again, go down into a full squat. Making sure to keep eyes looking up during squat. Focus on center of gravity for the head, shoulders, t-spine, hips, and feet.

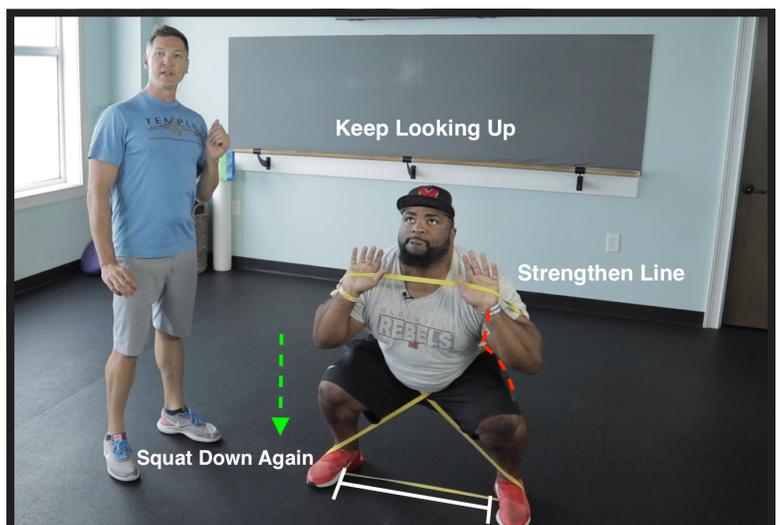


Image F (Technique)

Image F: Raise up, again coming back up into overhead row. Making sure to keep feet shoulder width apart. At the end of the movement step laterally to your left and repeat exercise. **Do 8-15 reps, 2-3 sets.**

Movement:

Action: Spinal Extension and Flexion
Nerve Glides.

(This movement is very therapeutic for those of you who sit daily, or use their arms in a flexed position for long periods of time, (Example, office meetings, drivers, manual therapists, ect).

Image G: Step back into a small lunge as you reach back with your hands using bar or counter-top, make sure to keep palms down with fingers extended. While looking up, push hips forward and extend body. Make sure you can take full breath in and out, repeat on both sides.

Image H: After the spinal extension, now drop your head looking into flexion looking at your chest with your eyes, pulling your forefoot and toes up at same time. This will engage the spinal cord and peripheral nerves on both ends, helping with spinal restrictions.

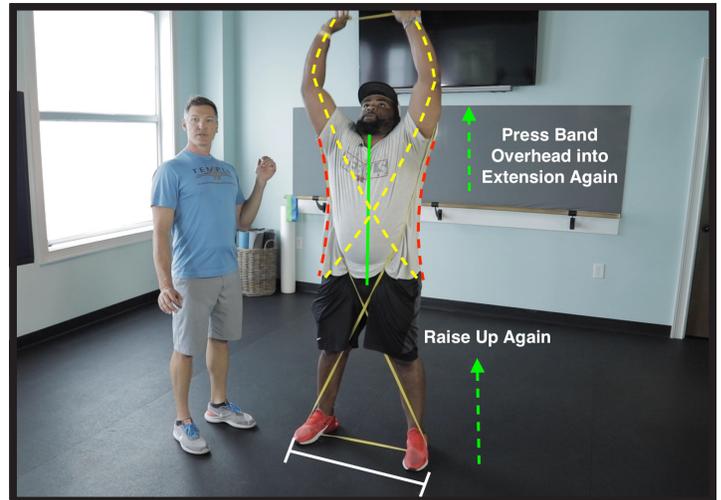


Image G (Movement)

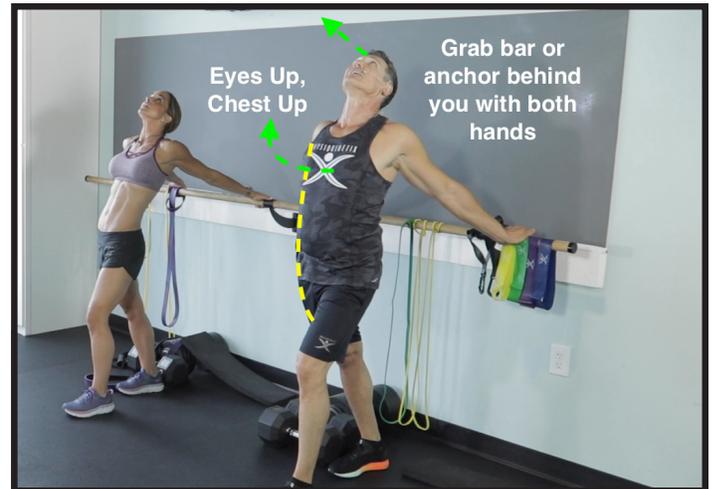


Image H (Movement)



Neuro-Modifier:

Action: Overhead Band Squats, with lateral steps

Image I: Step inside loop band of choice. Band tension should allow at least 8 repetitions. Twist band into an “X” position and hold the band over your head the entire time you do the movement. As you hold the band overhead try to maintain your arms in line with hips.

Image J: Step laterally, keeping the band pressed above your head. Squat down after moving laterally, still keeping band above you.

Image K: Now, step back laterally to your original starting position, returning to “X” position with band overhead. Repeat this strength modifier **8-15 reps, 2-3 sets.**

Notes:

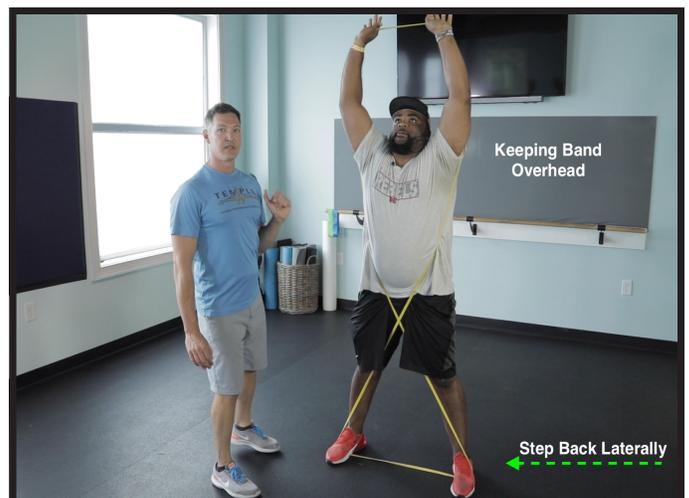
Image I (Neuro-Modifier)



Image J (Neuro-Modifier)



Image K (Neuro-Modifier)



ASSESSMENTS

TECHNIQUE 6: Band Power Clean Side Steppers	
• Optimum Squat distance is established	Yes No
• Lateral deviation R or L during technique	R or L deviation on Squat: Yes No Restriction?
• Motor control and endurance in squat	Weak 0 1 2 3 Strong
• Lateral Hip strength in side step	R Leg: Weak 0 1 2 3 Strong L Leg: Weak 0 1 2 3 Strong
• Mobility of ankles, Feet flat during squat	R foot Yes No L foot Yes No
Excessive lordosis or flattening of Lumbars during squat	> Lordosis Yes No < Lordosis Yes No
• Ability to Squat Parallel or below	< Parallel Yes No > Parallel Yes No
• Knees maintained over ankles and feet during squat	Yes No
• T-Spine mobility: Ability to maintain chest vertical and T-Spine with head over pelvis	Yes No
• Proper Breathing Maintained during Movement	Yes No
• Ability to Press Arms directly overhead with band maintaining T-spine, and pelvic alignment.	Yes No
Pain / Discomfort During Technique	Yes No

NOTES

Exercise 7: Single Arm Rowing Airplanes with Bands

Materials Needed:

Level 3 or 4 Resistance Arms Bands, PKT Yoga Mat, PKT Balance Pad, PKT Handles

Goal:

This neuromuscular strengthening movement trains unilateral cross patterns on the vestibular and motor sensory cortex's weak sides. This movement will help postural endurance, coordination, and strength while training our reflexes. This movement is great for all activities or sport training.

Assessment:

During this motion it is important to train the vestibular/ stance and motor weaknesses. Look for instability, in the ankle, hip, trunk and shoulder girdle. This movement will show lateral posterior and anterior spiral spring system weaknesses.

Technique:

Image A: Start with the band in your right hand. Step back until there is tension. While standing on your left leg, go into a plank while you are holding the band.

Image B: Hold this position parallel with the floor as you row with your right hand.

Image C: Stand up, pivoting through your hips keeping your arm in line with your head into a 1 arm goal post position. Repeat, and switch legs. **Do 8-15 reps x 2-3 sets.**

Image A (Start)



Image B (Technique)

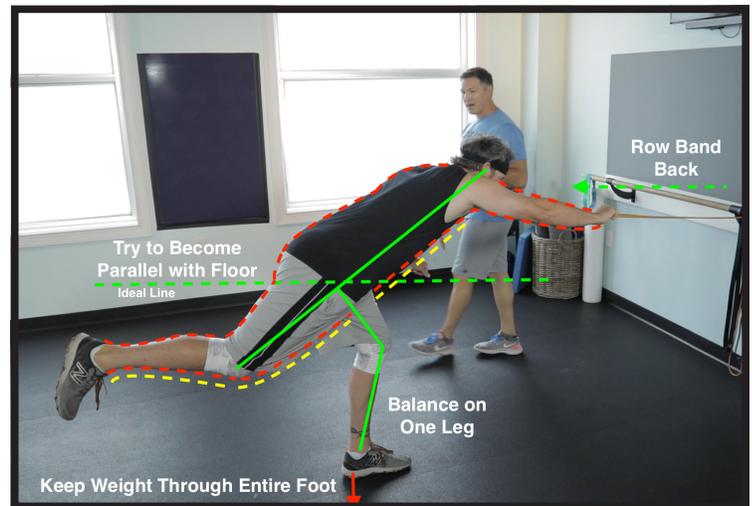
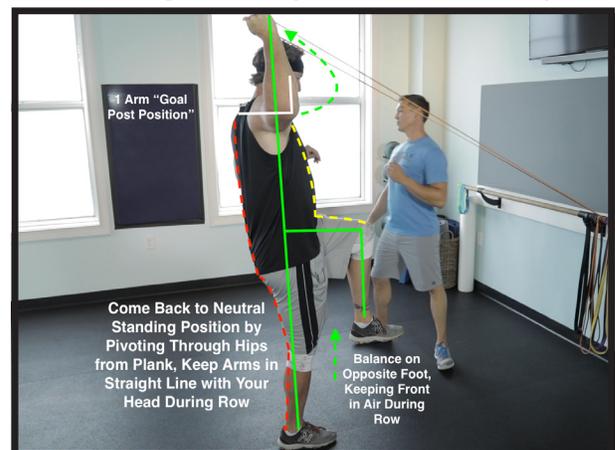


Image C (Technique)



Movement:

Action: Posterior Rainbow Reaches with Hip Front Line Graded Exposure.

Image D: Hold on to something about chest height. As you maintain the curve of your lower back, flex at the hips while dropping your chest through your arms. Press your hips back over your heels and elongate your spine with an exhale. This motion can be repeated up and down, with an inhale on the way up, and an exhale on the way down.

Image E: Now, take one hand off of the bar/ countertop, and reach down and across comfortably in a right to left thoracic rotation, allowing gravity to work. Make sure to look into the movement with your eyes, taking full inhales and exhales during rotation. If this movement causes any lower back or nerve radiating pain, you are to far through the movement. This movement can be performed unilaterally as a functional movement, or bilaterally. **3-5 reps**

Image F: Take other hand off of the bar/countertop, and reach across to other leg and reach as far as possible, allowing gravity to work through the thoracic and lumbar spine. Again, make sure to look into your rotations with head and eyes and repeat movement **3-5 reps**.

Notes:

Image D (Movement)

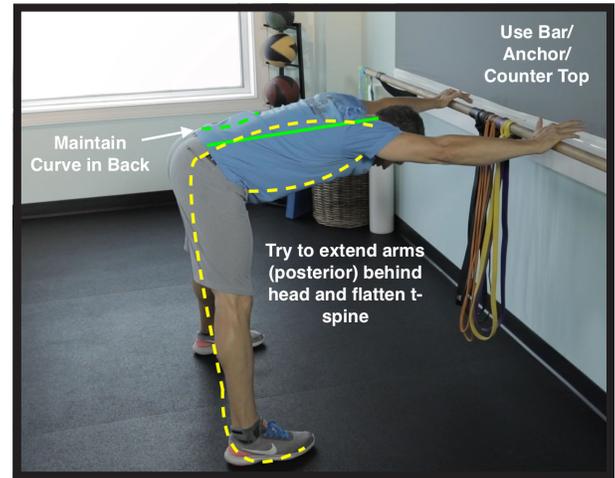


Image E (Movement)

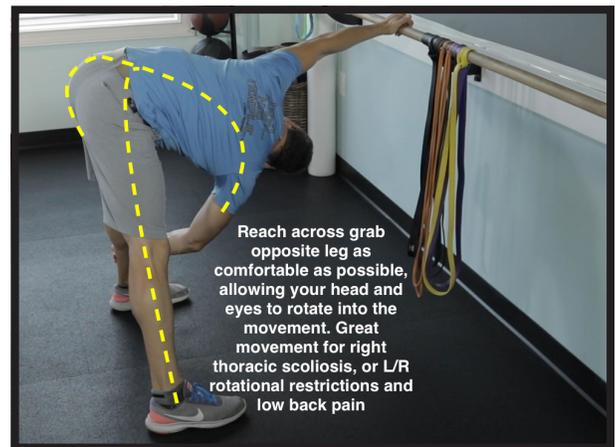
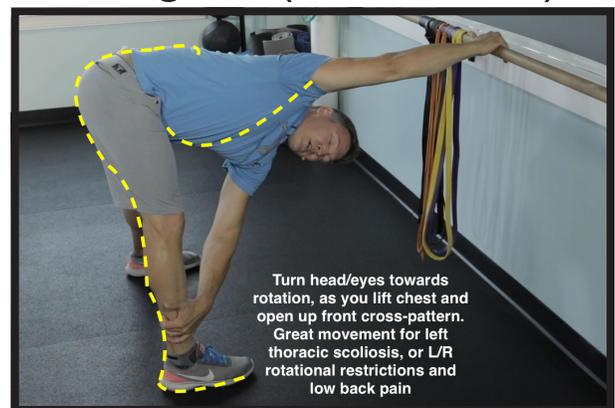


Image F (Movement)



ASSESSMENTS

TECHNIQUE 7: Single Arm Rowing Airplanes w/ Bands	
Vestibular / Stance Dominance	Left Right
Motor Dominance	Left Right
Ability to Cross pattern / motor weakness	L arm R leg Weak 0 1 2 3 Strong R arm L leg Weak 0 1 2 3 Strong
Ankle / foot Stability	L Weak 0 1 2 3 Strong R Weak 0 1 2 3 Strong
Knee stability during technique	L Knee Valgus Varus R Knee Valgus Varus
Hip Stability / Mobility	L Hip Weak 0 1 2 3 Strong R Hip Weak 0 1 2 3 Strong
Trunk / Spine Lateral, posterior, and anterior spinal spring system weakness	Right Leg Left Arm Weak 0 1 2 3 Strong Left Leg Right Arm Weak 0 1 2 3 Strong
shoulder girdle strength and instability	R Shoulder External Rotation Weak 0 1 2 3 Strong L Shoulder External Rotation Weak 0 1 2 3 Strong
Ability to control breath on Technique	Yes No
Pain / Discomfort During Technique	Yes No

NOTES

Exercise 8: PMRF Head Band Squats

Materials Needed:

Level 3 or 4 Resistance Arms Bands, PKT Yoga Mat, PKT Balance Pad, PKT Handles

Goal:

This vestibular and neuromuscular strengthening movement will create stability in the neck in all planes of motion while strengthening the cerebellum, and pons medulla reticular formations in the brain stem. When proper modulation of neural inputs and outputs exits; the overall posture is improved and our equilibrium of head on neck can be re-established. This postural strengthener will need to be performed daily to help with stability and centers of gravity of the head and neck.

Assessment:

Look for forward head posture, internally rotated shoulder, tight pecs, excessive lumbar lordosis. Can you keep your head over the pelvis as you sit back into the squat? Look for your stance/balance weakness and build endurance on that side.

Technique:

Image A: Use level 4 band or special big orange band for this specific exercise. Position the band at chest height and face forwards toward your anchor point (Door, Tree, Bar). Place back of head inside band, if uncomfortable, use a towel to wrap around the band and place head inside band.

Image B: While making sure to keep eyes level, step back to create a slight resistance in the band using your head. Sit back into your heels in a squat position parallel to the floor, hold 30s-60s.

Image A (Start)

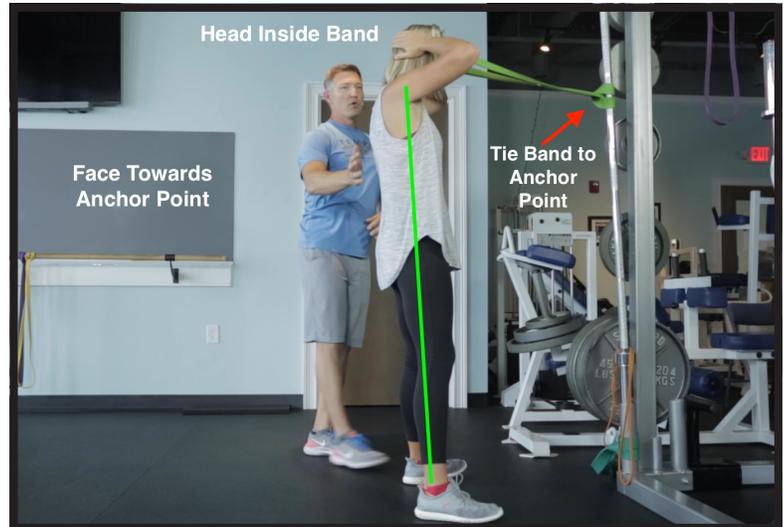


Image B (Technique)

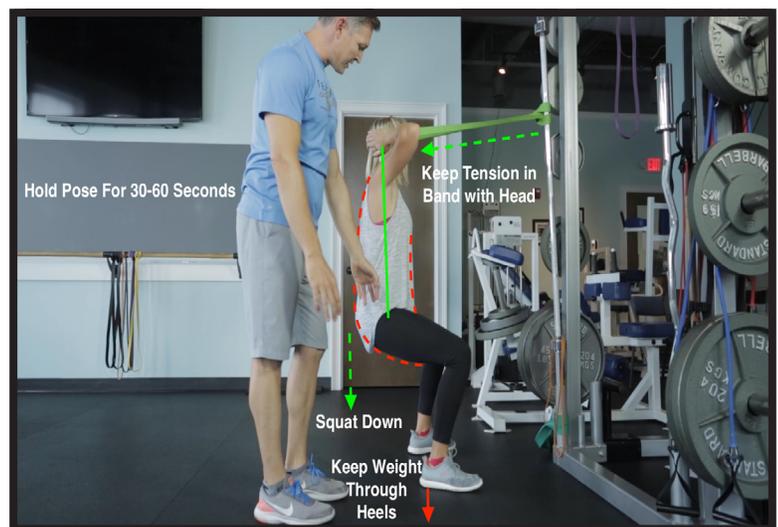


Image C (Technique)

Image C: Next, get inside band, stand perpendicular to the band with it around your side of your head near ear. Balance on your back leg, lifting your front leg as you push against the band to stabilize. Repeat both sides, both legs.

Movement:

Action: Lateral Neck Nerve Glide with Shoulder Girdle Mobilization

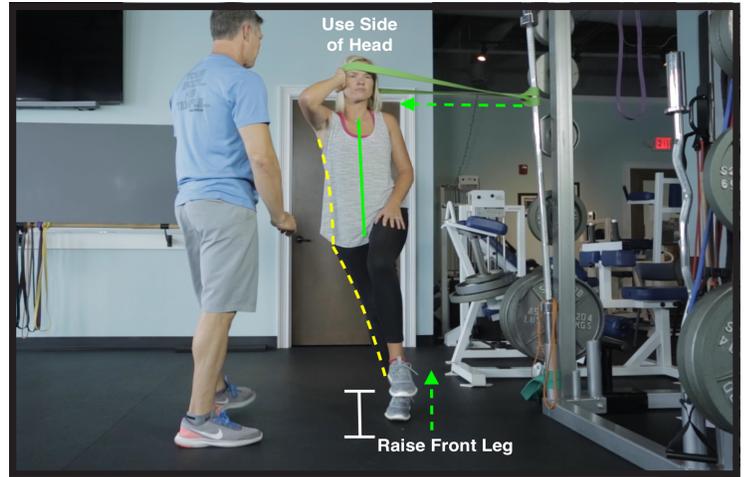


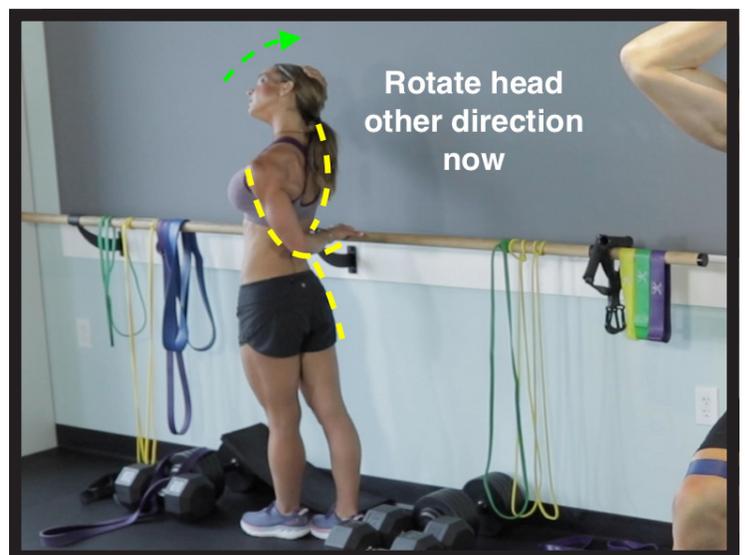
Image D: Put one arm behind your back and grab bar/anchor. With your other arm, grab the top of your head and side-bend to the left, away from the bar, then side-bend right, back towards the bar. Be cautious of sharp pain or radiating pain in arms. Make sure to gradually expose the tissues to lengthen.

Image E: While still holding the bar with an overhand grip, keeping shoulder depressed, move head towards the right. Creating a lengthening of the neck, left shoulder/arm.

Image D (Movement)



Image E (Movement)



Neuro-Modifier:

Action: PMRF Head Band Squats with Band Pull

Image D: Tie level 4 band or big orange band to anchor point about chest height. Begin to squat down while facing the anchor point. Place another band below Level 4 and hold in each hand or use a PKT Handle Set.

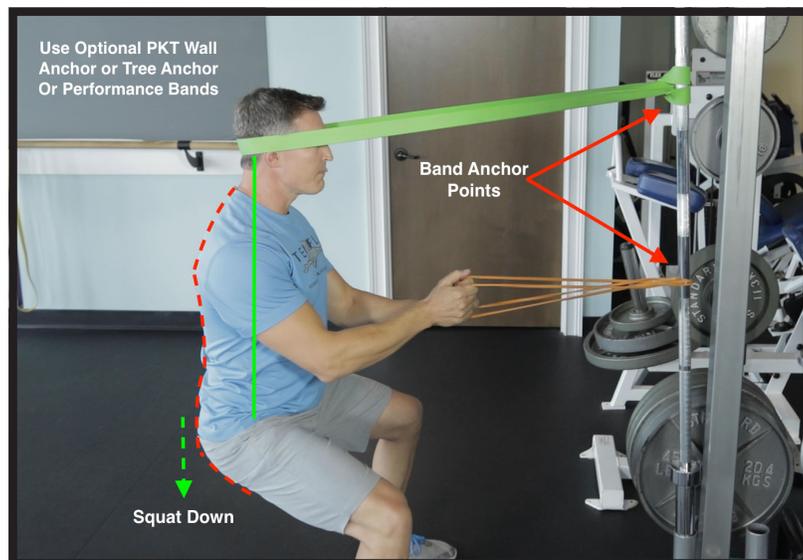
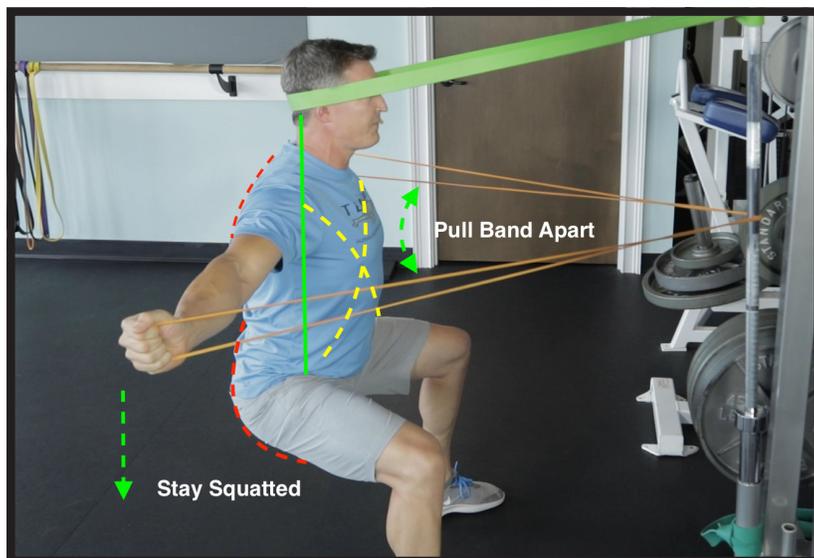


Image E: While still squatted, pull the band apart as far as possible. Try to lock out your arms and externally rotate your shoulders. Depressing the shoulder girdle and isometrically contracting the entire neuromuscular system. Make sure to keep eyes forward during the exercise. **Do this for 30-60 seconds, 2-3 sets.**

Notes:

Image G (Neuro-Modifier)



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