

# BAND & TUBING EXERCISES

pthomegroup



**C.S.ARUNKUMAR**

MPT (ORTHO), (MBA), PGDF, PGDErgo, DYN, MIAP.  
LECTURER - IHS.

# INTRODUCTION

- Resistance bands and tubing are low-cost, portable and versatile. Made of natural rubber latex.
- Two broad categories
  - Elastic bands and elastic tubing.
- Elastic bands are available in an assortment of grades or thicknesses
- Tubing comes in graduated diameters and wall thickness that provide progressive levels of resistance.
- Color-coding denotes the thickness of the product and grades of resistance

# COLOR CODING

Theraband Color	Theraband Thickness	Comparison: pounds of pull needed to stretch a 12" band length to 24"
<b>Yellow</b>	Thin	2.5 lb
<b>Red</b>	Medium	4.5 lb
<b>Green</b>	Heavy	5.0 lb
<b>Blue</b>	Extra Heavy	7.5 lb
Black	Special Heavy	9.0 lb
Silver	Super Heavy	15.0 lb

# PROPERTIES

- *Effect of elongation of elastic material.*
- *Determination and quantification of resistance.*
- *Fatigue characteristics.*

# ADVANTAGES

pthomegroup

- Portable and relatively inexpensive
- Allowing exercises to be performed in many combinations of movement patterns in the extremities and trunk and in many positions
- Safe to exercise at moderate to fast velocities with elastic resistance
- They increase coordination
- They're great for all fitness levels

# DISADVANTAGES

- Need to refer to a table of figures for quantitative information
- The patient must use muscular stabilization to ensure that the correct movement pattern occurs.
- Elastic bands and tubing should be replaced on a routine basis to ensure patient safety
- Some elastic products contain latex, thus eliminating use by individuals with an allergy to latex

# APPLICATION OF ELASTIC RESISTANCE

- *Selecting the appropriate grade of material.*
- *Selecting the appropriate length*
- *Securing bands or tubing*
- *Setting up an exercise*
- *Progressing exercises*



# EXERCISE TIPS

- With all exercises, posture and body alignment is critical
- Include proper warm-up and cool-down activities with your elastic resistance training program.
- Perform all exercises in a slow and controlled manner
- Avoid hyperextending or over-flexing joints when exercising

# Cont...

- Breathe evenly while performing these exercises. Exhale during the more difficult phase of the repetition. Don't hold your breath
- Exercise with the color band that was prescribed
- Progress to the next color band when you are able to easily complete the 3 sets of 10 to 15 repetitions.

# PRECAUTIONS

- Protect the resistance band or tubing by keeping it away from sharp objects
- As with any exercise program, muscle soreness may be experienced over the first few days.
- If you experience sharp pain, shortness of breath, dizziness or lightheadedness with any of these exercises, stop immediately
- Do not overstretch bands or tubing by more than 3 times its resting length
- Be sure the resistance band or tubing is securely anchored to a sturdy object or attachment before using.

**Do** nthomegroup

**Don't**

**Warm up the muscle groups before exercising.**

**Don't use body oil with the theraband.**

**Maintain good posture. Keep your wrists straight and in line with your elbows.**

**Don't bend your wrists. If you start to lose your posture, stop and reposition yourself.**

**Breathe normally. Exhale during the most difficult phase and inhale during the easiest.**

**Don't hold your breath.**

**Use controlled movements.**

**Don't continue exercising if anything hurts while you are training.**

**Maintain the natural width of the band to keep it from digging into your hands or sliding up your legs.**

**When you finish your workout, stretch.**

## HEALTH BENEFITS OF RESISTANCE EXERCISE BANDS

- Strengthens the muscular and skeletal system
- Improves bone density (decreases the chance of osteoporosis)
- Increases metabolism
- Improves posture
- Limits atrophy of the muscles
- Aids in hypertension control
- Aids in cholesterol control
- Aids in body fat control
- Increases circulation
- Aids in prevention of adult-onset diabetes
- Improves mood and self-esteem
- Aids in the prevention of heart disease
- Improves quality of life

pthomegroup  
**CARING**

- Simple.
- Just store it out of direct sunlight.
- Don't use it together with body oil.
- Regularly examine it for tears, or punctures that might cause the band to snap
- After use in chlorinated water, rinse the bands or tubing with tap water and dry flat.
- If the bands or tubing becomes sticky, clean with mild soap and water, dry flat, and then dust with talcum powder.

# HANDLING THE BANDS

## Wrap

- **Grip Wrap**
- **Palm Wrap**
- **Euro Wrap**
- **Ankle Wrap**

## Loops

- **Short length loop**
- **Long length loop**

# UPPER BODY

## Bicep Curls

Stand on the band and hold handles with palms facing out. Keeping abs in and knees slightly bent, bend arms and bring palms toward shoulders in a bicep curl. Position feet wider for more tension. Return to start and repeat.



## Triceps Extensions

Hold the band in both hands at shoulder level with right arm bent so that it's in front of the chest, left arm straight out. Keeping the left arm straight to hold tension on the hand, contract the triceps to straighten the right arm. Return to start and repeat before switching sides



## Overhead Press

Place band under ball or stand on band holding handles in both hands. Begin with arms bent in 'goal post', wrists straight and abs in. Contract the shoulders to straighten arms up and lower back down



## Rear Delt Fly

Standing or sitting, hold band in the middle, arms straight out in front of you, hands a few inches apart. Squeeze the shoulder blades together and pull band so that arms are out to the sides like an airplane. Return to start and repeat, keeping tension on the band the entire time



## One-Arm Rear Flies

On hands and knees, hold one side of the band in the right hand and grab the other end with the left hand. Keep the right hand in place as you lift the left arm straight up to shoulder level leading with the elbow and squeezing the back and shoulder. Adjust hand placement to increase or decrease tension.



## Pronation

Tie one end of the band at waist height level. Wrap the other end around the end of a long thin object and hold the other end. Position the upper arm by your side. Pronate the hand (turn it over so that the palm faces down). Return to the starting position



# Chest

## Resisted Pushups

Begin on knees or toes and wrap the band over your back, holding onto the ends with both hands flat on the floor. Loop the band to add tension and bend elbows into pushup.



## One-Arm Chest Fly

Attach the band to a sturdy object at about shoulder height (standing or sitting). Hold the handle in right hand and wrap the loop around hand to increase tension if needed. Keeping arm straight (elbow slightly bent) at shoulder level, contract the chest to bring the arm in towards the mid-chest. Return to start and repeat.



## Alternating Chest Press

Wrap the band around a sturdy object behind you at chest level. Begin with the elbows bent to 90 degrees, forearms parallel to the floor. Keep the right arm stationary and press the left arm out. Bring the left arm back and then press forward with the right arm. Continue alternating arms for a total of 16 reps on each side



## Lat Pulls

Begin with arms straight up overhead, holding the band towards the middle. Adjust hands closer to increase tension. Contract the back and pull the band out while bringing the elbows towards the rib cage. Raise back up and repeat



## INTERNAL ROTATION



## EXTERNAL ROTATION



## Squats

Stand on the band with feet shoulder-width apart, keeping tension on the band by holding a half-bicep curl. Lower into a squat, keeping knees behind toes, and pulling on the band to add tension. Return to start and repeat.



## Lunges

Stand with right leg forward, left leg back and band positioned under right leg. Keeping tension on the band by bending elbows, lower into a lunge until both knees are at 90 degrees, front knee behind the toe. Return to start and repeat



## Side Steps

Tie resistance band around the ankles (make sure you're wearing socks) so that there are a few inches of band when you stand at hip-distance apart. Take 8 steps to the right, contracting the glute and outer thigh. Repeat on the other side



## Butt Blaster

Get on your hands and knees and wrap a resistance band around the right foot. Hold the handles in each hand and begin the move with the right knee bent and flex the foot while extending the right leg straight back, squeezing the glutes



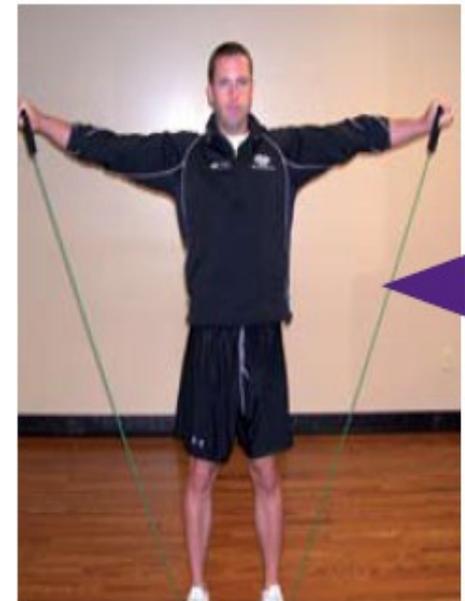
## Seated Row

Wrap the band around a sturdy object in front of you, arms extended and palms face each other. Squeeze the back to pull the elbows in just a bit past the torso, keeping them close to the body. Release and repeat. Medium-Heavy Band.



## Side Shoulder Raise

Put the band underneath both feet. Arms straight down at your sides. Exhale while slowly lifting arms. Raise arms straight out until parallel to the floor.



## Upright Row

Stand with resistance band underneath both feet. Have the band criss-crossed in front of you. Raise your elbows up high, bringing your hands to the chin. Exhale as you come up.



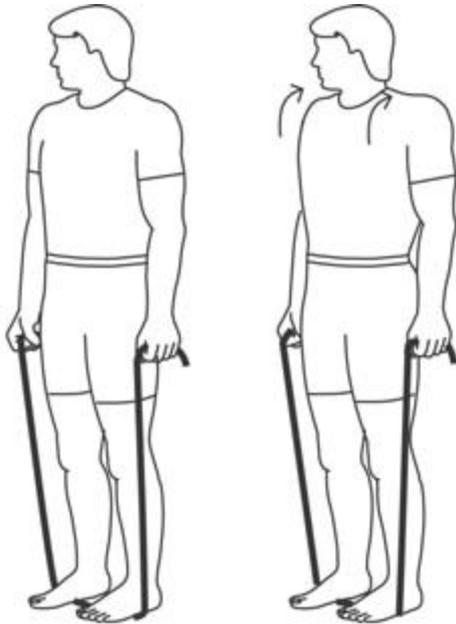
## Tricep Kickback

Stand with resistance band underneath both feet. Bend over at the waist so that your upper body is parallel to the floor. Keep your arm from shoulder to elbow parallel to the floor. Extend forearm back until the entire arm is straight. Exhale as the arms come up.



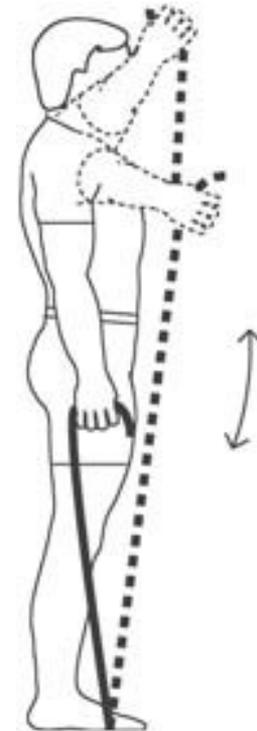
## Shrug

Stand, arms at sides. Stand on elastic as shown, holding elastic in hands. Raise shoulders upward towards ears, and roll backwards. Keep elbows straight. Slowly return to start position.



## Scaption

Stand on elastic. Begin with arm at side, elbow straight, holding elastic, thumb up. Raise arm in a position halfway between the front and side, over head. Slowly return to starting position.



## Criss-Cross Outer Thigh

Lying on the floor, take legs straight up with band wrapped around feet. Criss-cross the bands and hold either side in the opposite hand. Squeeze the glutes to open the legs out to the sides as far as you can. Medium-Heavy Band



## Oblique Twist

Start with both hands extended out at shoulder height. With a slight bend in the elbow, twist entire body to the opposite side, using your obliques to turn, and keeping your hips square.



## Supination

Tie one end of the band at waist height. Wrap the other end around the end of a long thin object and hold the other end. Supinate the hand (turn it over so that the palm faces up). Slowly return to the starting position.



## Pec fly

Attach the centre of the band to a stationary object behind you at chest height. Hold an end in each hand and start with your arms out to the side, just below shoulder height. Keep a small bend in the elbows as you bring your arms forwards so that your hands meet in front of your chest. Slowly return to the starting position.



# LOWER EXTREMITY

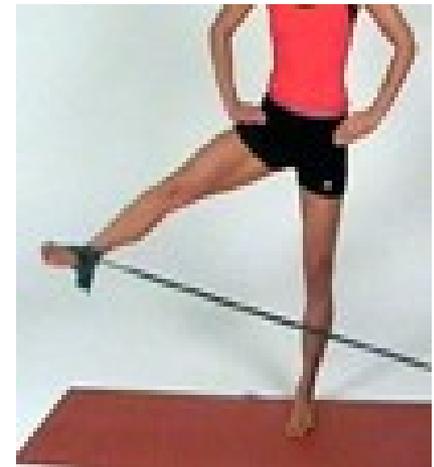
## Seated Hip Flexion

Wrap one end of the band around your ankle and attach the other end to a stationary object close to the floor . Start with your feet shoulder width apart and lift the leg off the floor, bending the knee towards your stomach. Slowly return to the starting position. Try to keep the hips level throughout the exercise



## Standing Abduction

Attach one end of the band to sideways . Wrap the end of the band around the ankle furthest from the attachment point. Start with your legs together and begin by moving the working leg out to the side, as far as possible from the standing leg. Try to keep the hips level throughout the exercise. Slowly return to the starting position.



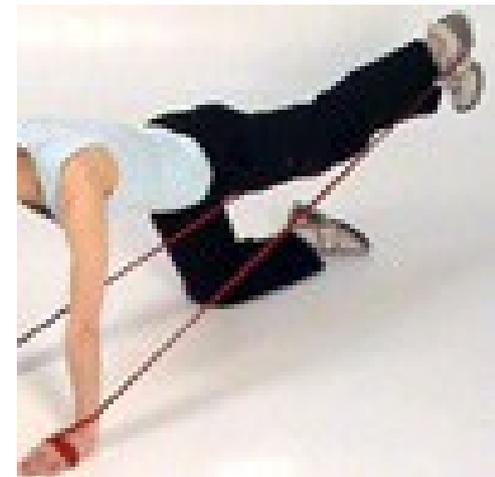
## Laying Hip Abduction

Sit on the floor with your legs together. Wrap the band round one ankle twice and then around the other ankle and back. Lean back on your arms and move your ankles apart against the resistance. Slowly return to the starting position



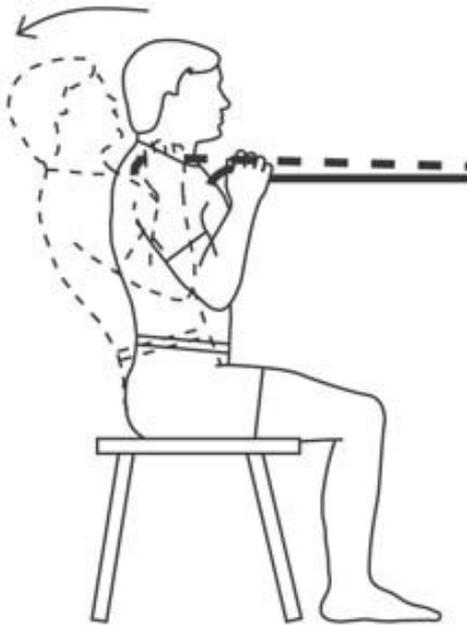
## Hip Extension

Start on all fours with the band wrapped around the sole of one foot. Wrap the ends of the band around your hands. Lift your leg off the floor and straighten it out behind you, lifting it up so that it is level with your spine. Slowly return to the starting position



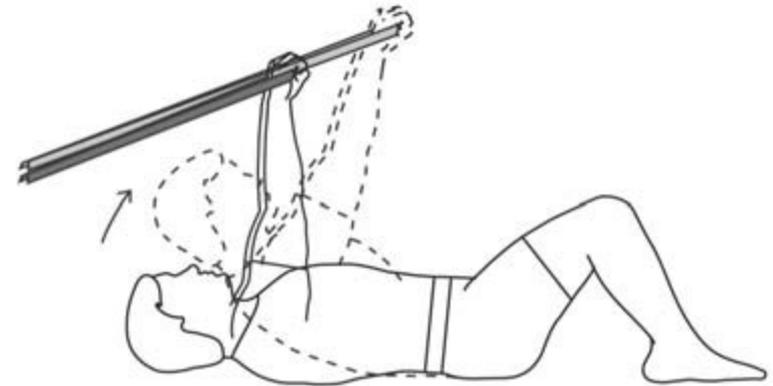
## Back Extension

Attach elastic to secure object at shoulder level while sitting on stool as shown. Grasp elastic in hands and hold to chest. Pull backward, straightening trunk. Slowly return and repeat.



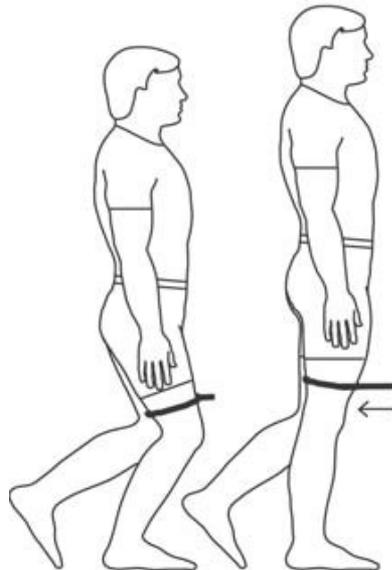
## Trunk Curl-up

Securely attach the ends of band to a stationary object near floor. Lie on back with knees bent, holding ends of bands in hands, arms in front and elbows straight. Keep hands close together and curl trunk upward, lifting shoulder blades from floor. Hold and slowly return.



## Terminal Knee Extension (TKE)

Attach elastic to secure object. Place elastic around thigh, just above involved knee as shown. Stand on involved leg, bent at 45 degrees. Toe touch with other leg using secure object to maintain balance. Straighten leg, keeping heel on floor. Slowly return to start position



## Hip Adduction

Attach one end of the band to a stationary object and the wrap the other end around the ankle. Start with the leg abducted (away from the other leg) and pull it in, across your body, keeping the knee straight. Slowly return to the starting position.



## Knee Flexion

Attach the band to a fixed point, close to the ground, or get a partner to hold the ends close to the floor. Wrap the other end around one ankle and lay on the floor so that band is just taught when the leg is straight. Bend the knee, bringing the foot up towards the buttocks. Slowly return to the starting position



## Knee Extension

Start sitting on a chair or bench with one end of the band wrapped around the ankle and the other end attached to something sturdy, close to the floor, behind you. Alternatively get a friend to hold it. Straighten the knee against the resistance. Slowly return back to the starting position, maintaining full control throughout.



## Eversion

Sit on the floor with one end of the band wrapped around your foot and the other end fixed to something sturdy, close to the ground on the inside of the foot . Start with the band taught and evert your foot (rotate the foot so that the sole faces outwards). Slowly return to the starting position



## Inversion

Sit on the floor with one end of the band wrapped around your foot and the other end fixed to something sturdy, close to the ground to the side of the foot. Alternatively, get a friend to hold the ends for you as shown Start with the band taught and invert your foot (rotate the foot so that the sole faces inwards). Slowly return to the starting position.



## Dorsiflexion

Wrap the band around your mid foot . Either attach the ends to something sturdy at your foot end, or get someone to hold them for you. Start with the band taught when the foot is in plantarflexion (foot pointed away). Pull the foot up towards you as far as you can. Slowly return to the start position and repeat.



## Plantarflexion

Wrap the band around your mid foot. Hold the ends of the band in your hands. Start with the foot pointed upwards and the band taught. Point your foot away from you against the resistance. Slowly return to the starting position and repeat.



# TRUNK

## Crunch

Lay on your back with the centre of the band attached to a fixed point behind your head. Hold the ends of the band and bend the elbows. Use your stomach muscles to pull your head and shoulders off the ground. Keep your arms still. Slowly return to the starting position



## Sitting Twist

Sit on the floor with your legs straight out in front. Loop the band around the soles of your feet and hold both ends together in your hands. Use your stomach muscles to twist round to one side. Go back to the middle and round to the other side



## Standing Twist

Attach one end of the band to a stationary object and stand to the side of it. Hold the end in both hands with the arms straight out in front of you. Start close to the attachment and twist away from it, using your stomach muscles, not your arms! Slowly return to the starting position.



## Wood Chop

Stand with your feet shoulder width apart and knees slightly bent. Attach one end of the band to a stationary object and wrap the other end around both hands. Start with your arms up above the shoulder closest to the attachment. Keeping the elbows straight pull your hands down, across your body to the opposite hip. Concentrate on using your stomach to twist from one side to the other. Slowly return to the starting position.



pthomegroup  
**NECK**

- **Cervical Extension**
- **Cervical Side Bending**
- **Cervical Rotation**

# Than'q

