

EXERCISE LIBRARY

Exercise Technique

Dynamic Flexibility

Static Warm Up Stretches

Cardiovascular Machines

Free Weight Exercise

Resistance Machines

Bodyweight Exercise

Static Cool Down Stretches

EXERCISE TECHNIQUES

HAND GRIPS

There are three main grips you take when handling or completing resistance and free weight exercises, below are images of these grips and examples of when you may use them.



PRONATED GRIP

Front Raise
Lateral Raise
Seated Row
Shoulder Press
Triceps Pushdown
Upright Row



SUPINATED GRIP

Biceps Curl
Chest Flyes
Chin Up



REVERSE GRIP

Deadlift
Spotting

STANCE

There are two main stances you take when completing free weight exercises, below are images of these stances and example of when you may use them



NEUTRAL STANCE

Biceps Curl
Deadlift
Frontal Raise
Lateral Raise
Lunge
Prone Flyes
Shoulder Press
Squat
Triceps Extension (single arm)



SPLIT STANCE

Biceps Curl
Frontal Raises
Lateral Raises
Shoulder Press
Triceps Extension (single arm)

SAFE LIFTING

When moving and handling any weights it is important to use a safe lifting technique to minimise the risk of injury (manual handling) for both barbells and dumbbells



- Both techniques start with the deadlift
- Bending at the knees and hips
- Ensuring the back is neutral
- Keeping the chin the off chest

- Select grip dependant on exercise
- Lift up through the legs, weight into the heels
- Keeping the bar or dumbbells close to the body

CLEAN AND PRESS

The clean and press is the safe way of lifting and returning the bar bell onto the 'fleshy' part of the upper back to perform exercises such as squats and lunges



- With barbell resting on the floor, place feet under the bar so shins are lightly touching
- Bend at hips and flex the knees, grasp bar with a pronated grip slightly wider than shoulders. Chest out, head neutral, and maintain a neutral spine
- Lift bar from floor by raising the hips and shoulders
- As bar passes the knees drive the hips forward to stand up straight, keep the shoulders back throughout
- When the bar is at the top of the thighs, keeping the bar close to the body, complete a wide upright row, to bring the bar to the top of the sternum
- As the bar reaches the top of the sternum, roll the wrists on the bar so knuckles now face the ceiling (palms facing forward)
- Bend knees slightly and drive the bar up and over the head, not locking out the elbows
- Bring the bar down to rest on the 'fleshy' part of the upper back (not on the neck), ensuring soft knees to receive the bar

DYNAMIC FLEXIBILITY

SQUAT TO OVERHEAD ARM SWING

MUSCLES WORKED:

- Quadriceps
- Gluteus Maximus
- Latissimus Dorsi
- Soleus

TEACHING POINTS:

- Squat down by bending the ankles, knees, and hips
- Swing the arms down and back as descending into the squat position
- Keep chest lifted throughout
- Return to standing position with the arms stretched overhead
- Repeat



LUNGE WITH ROTATION

MUSCLES WORKED:

- Quadriceps
- Gluteus Maximus
- Obliques
- Iliopsoas

TEACHING POINTS:

- Stand in an upright position with the feet hip width apart
- Lunge forward while simultaneously rotating the torso towards the lunging side leg
- Push back strongly off the lead foot and return to the starting position
- Note: during the lunge ensure that the lead foot remains on the floor



STANDING PECTORAL AND TRAPEZIUS

MUSCLES WORKED:

- Pectoralis Major
- Rhomboids
- Mid Trapezius

TEACHING POINTS:

- Stand upright with the feet hip width apart
- Pull the arms back into a press up position
- Push the arms forward while allowing the thoracic spine to round slightly
- Repeat the above varying the angle of re-traction



GLUTE AND HAMSTRING KICK THROUGH

MUSCLES WORKED:

- Quadriceps
- Gluteus Maximus
- Hamstrings

TEACHING POINTS:

- Stand upright with the feet hip width apart, use a wall to balance if required
- Flex at the knee to bring the heel of the foot to the Glutes
- Kick through as high as comfortable extending the knee
- Repeat



GUIDELINES FOR DYNAMIC STRETCHES

Dynamic stretches should only be used during the warm up

- Stretches selected should cover the whole of the body, or in the case of split routines, the stretches should target the specific areas that will be worked during the workout
- The stretches that are selected should replicate the movement patterns that will be used during the workout
- No more than 8-10 repetitions of each dynamic stretch are required, any more than this may prematurely fatigue the client
- The movement speed should be consistent, controlled and appear fluid movements
- For clients with poor co-ordination and balance, dynamic stretches may need to be broken down into component parts or regressed to use static warm up stretches

STATIC WARM UP STRETCHES

TRAPEZIUS

TEACHING POINTS:

- Keep an upright posture
- Knees soft
- Neutral spine
- Arms flexed at 90 degrees
- Without fingers interlocking, palms facing out
- Push shoulder blades apart
- Hold stretch for an appropriate duration



CHEST

TEACHING POINTS:

- Keep an upright posture
- Knees soft
- Neutral spine
- Place both hands in the small of the back
- Pushing elbows together to the point of mild discomfort
- Hold stretch for an appropriate duration



DELTOID

TEACHING POINTS:

- Keep an upright posture
- Maintain a neutral spine
- Bring the arm across the body
- Hold onto the fleshy part of the arm
- Hold stretch for an appropriate duration
- Repeat on the other side



TRICEPS

TEACHING POINTS:

- Stand with an upright posture
- Place one arm overhead, flex the elbow
- With the other hand apply pressure to the elbow to feel the stretch
- Hold the stretch for an appropriate duration
- Repeat on the other side



LATISSIMUS DORSI

TEACHING POINTS:

- Stand with an upright posture
- Place arms overhead hands clasped together
- Reach towards the ceiling to feel the stretch
- Hold the stretch for an appropriate duration



HIP FLEXORS

TEACHING POINTS:

- Adopt a stride stance
- Place hands on the supporting thigh
- Keep chin off chest, and neutral upright spine
- Tilt pelvis forward to stretch hip flexors of the rear leg
- Hold the stretch for an appropriate duration
- Repeat on the other side



QUADRICEPS

TEACHING POINTS:

- Stand upright
- Flex the knee
- Same side holds the foot, bringing it closer to the buttock
- Point the involved knee down to the floor
- Keep body upright and eyes fixed forward
- Repeat on the other side



HAMSTRINGS

TEACHING POINTS:

- Adopt a stride stance with the back leg bent and stretching side leg straight
- Flex forward at the hips, whilst maintaining a neutral spine
- Push hips back and up for added intensity
- Hold the stretch for an appropriate duration
- Repeat on the other side



ADDUCTOR

TEACHING POINTS:

- Stand tall facing forward
- Neutral spine
- Leg to be stretched should be abducted to the side with feet inline with the knee
- Hold the stretch for an appropriate duration
- Repeat on the other side



GLUTES

TEACHING POINTS:

- Pick up the right leg and cross it over the left leg (above the knee)
- Sink the weight through the buttocks by pressing the hips back
- Rest the arms on the lower back, keep the chest lifted and eyes looking forwards
- Hold the stretch for an appropriate duration
- Repeat on the other side



GASTROCNEMIUS

TEACHING POINTS:

- Adopt a stride stance in front of a wall
- Hands contact the wall at shoulder height
- Keep head upright and look forward
- Ensure toes are facing forward
- Keep feet flat on the floor, pushing weight down through the rear heel
- Repeat on the other side
- Hold the stretch for an appropriate duration



GUIDELINES FOR STATIC STRETCHES

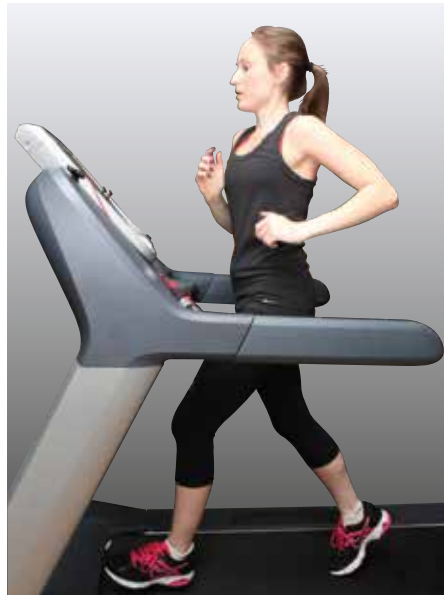
- Stretches selected should cover the whole of the body, or in the case of split routines, the stretches should target the specific areas that will be worked during the workout
- Hold each static warm up stretch for no more than 8-10 seconds
- The stretch should be held at the point of mild discomfort, and do not apply excess pressure to joints when stretching

CARDIOVASCULAR MACHINE

TREADMILL

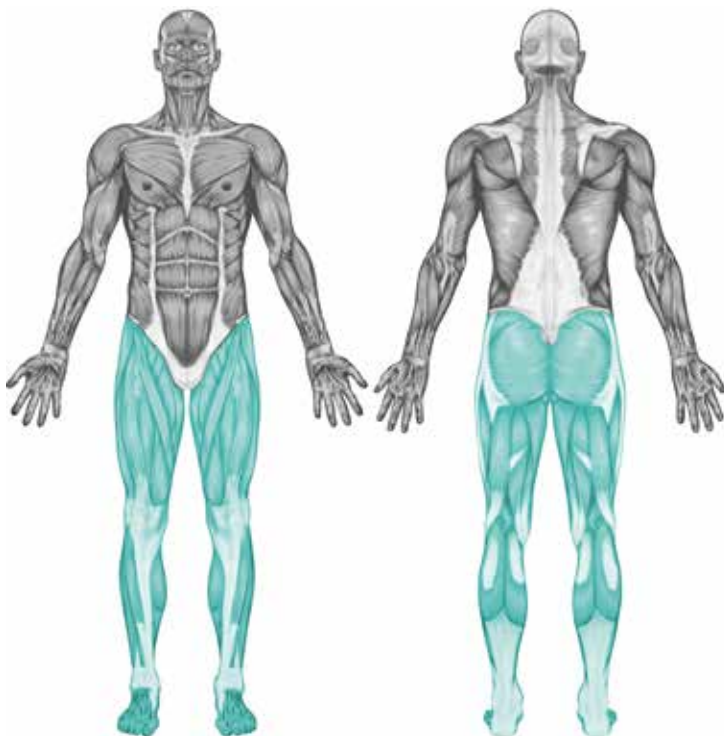
TEACHING POINTS:

- Maintain a position in the centre of the belt
- Take a good stride
- Look forward, standing tall
- Strike the belt with a heel-to-toe action
- Swing the arms
- Keep the knees soft throughout



PRIMARY MUSCLES WORKED:

Quadriceps, Hamstrings, Glutes and Gastrocnemius



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Able to do exercise, but need to monitor/reduce intensity, increase rest period. Could use cross trainer to reduce impact on bones/joints – reducing risk of growth plate fractures.

Older Adults:

Cross trainer – less impact to bones and joints, but still weight bearing and working heart/lungs (CV system).

Pre/Post Natal Clients:

Upright bike – seated so more stable, requiring less balance/coordination. Also, recumbent bike, supporting lower spine. Both options still giving CV workout.

Disability Client – Wheelchair User

Hand bike/ergo – working arms rather than legs and still giving CV workout to the client.

ALTERNATIVE

Cross trainer.

UPRIGHT BIKE

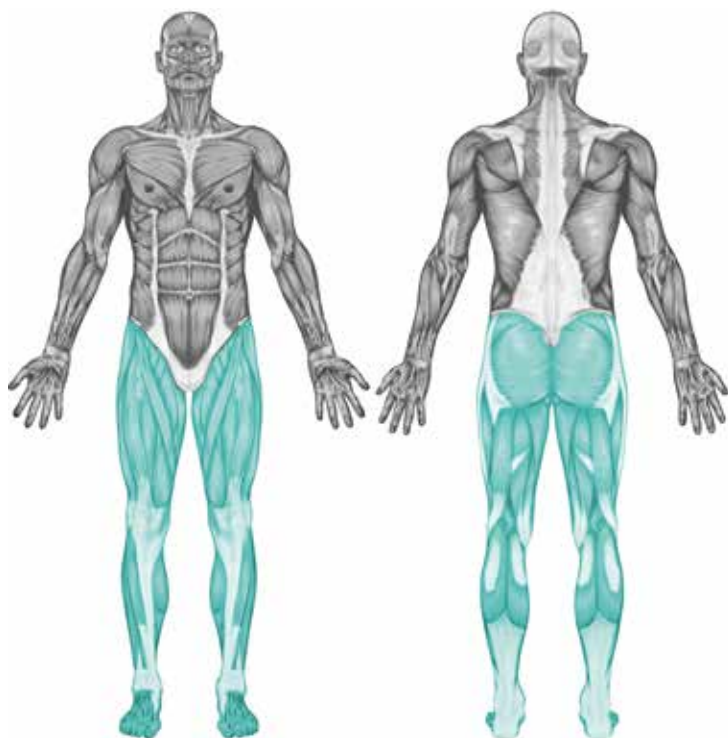
TEACHING POINTS:

- Sit tall, facing forward, abdominals supporting the back
- Pedal without rocking from one side to the other
- Keep hips, knees and ankles in line



PRIMARY MUSCLES WORKED:

Quadriceps, Hamstrings, Glutes and Gastrocnemius



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Able to do exercise, but need to monitor/reduce intensity, increase rest period.

Older Adults:

A recumbent bike could be used as it reduces impact to bones and joints, and is more stable and supportive.

Pre/Post Natal Clients:

A recumbent bike could be used to support the lower spine, and also provides stability.

Disability Client – Wheelchair User

Use of a hand bike/ergo could be used to work arms rather than legs and still give a CV workout.

ALTERNATIVE

Cross trainer or rower.

CROSS TRAINER

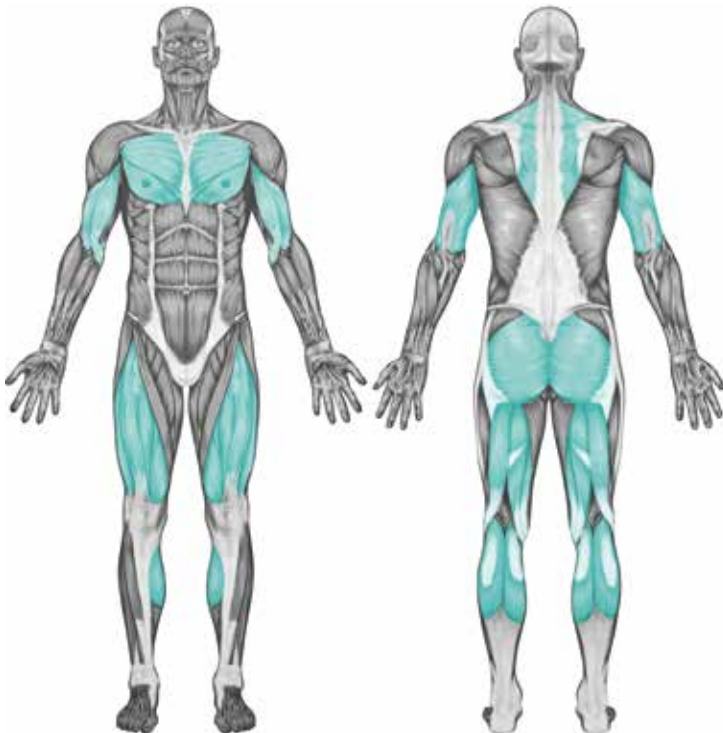
TEACHING POINTS:

- Stand tall, keep looking forward
- Feet flat on the plates
- Hips, knees and ankles in line
- Keep the knees and elbow soft
- Let legs start/drive the movement rather than arms pulling and pushing



PRIMARY MUSCLES WORKED:

Quadriceps, Hamstrings, Glutes, Gastrocnemius, Pectorals, Biceps, Triceps and Trapezius



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Able to do exercise, but need to monitor/reduce intensity, increase rest period.

Older Adults:

An upright bike could be used as it reduces impact to bones and joints, and is stable and supportive.

Pre/Post Natal Clients:

An upright bike could be used as its more stable, requiring less balance and co-ordination. Also, a recumbent bike if more lumbar support is required.

Disability Client – Multiple Sclerosis

Use of a recumbent bike to increase stability and support, therefore less weight bearing. Also important to keep intensity to health related levels.

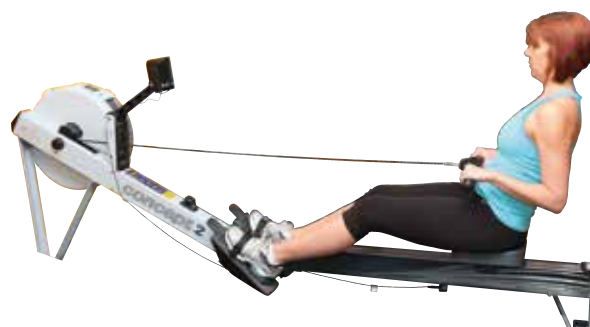
ALTERNATIVE

Treadmill or upright bike.

ROWING MACHINE

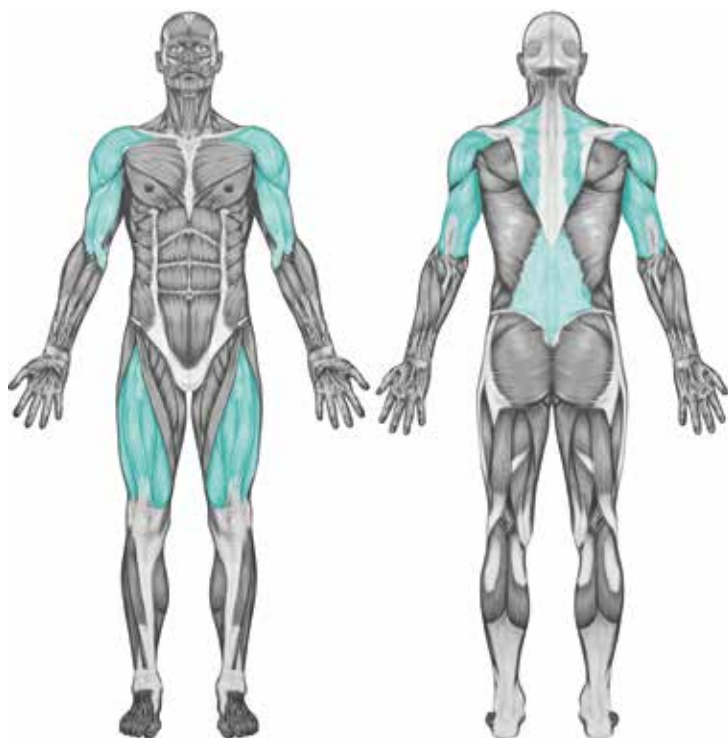
TEACHING POINTS:

- Abdominals tight, back straight
- Wrists in line with forearms
- Follow this sequence of movement
- legs, arms, arms, legs
- Try not to lean too far back
- Keep the chain level with the midline of the body



PRIMARY MUSCLES WORKED:

Quadriceps, Biceps, Triceps, Erector Spinae, Deltoids, Trapezius and Rhomboids



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Able to do exercise, but need to monitor reduce intensity and increase rest periods.

Older Adults:

Cross-trainer, as still gives whole body CV workout, but is easier to get on and off.

Pre/Post Natal Clients:

Can do the exercise, but in later stages of pregnancy may need alternative, due to low unsupported seated position on rower.

Disability Client – Neuromuscular disease

Upright bike could be used as the rower requires lots of co-ordination and balance compared to the supported upright bike.

ALTERNATIVE

Cross trainer or treadmill.

FREE WEIGHTS

DEAD LIFTS

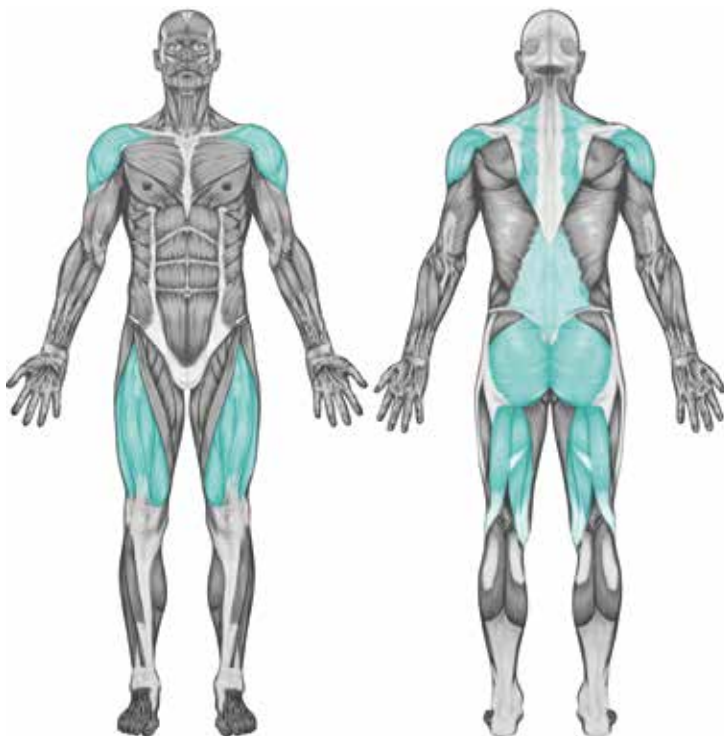
TEACHING POINTS:

- With barbell resting on the floor, place feet under the bar so shins are lightly touching
- Bend at hips and flex the knees, grasp bar with a pronated grip slightly wider than shoulders. Chest out, head up, and maintain a neutral spine
- Lift bar from floor by raising the hips and shoulders
- As bar passes the knees drive the hips forward to stand up straight, keep the shoulders back throughout
- On return to the start position tilt forwards from the hip, thus driving the hips backwards.
- As the bar descends past the knees allow them to flex until reaching the starting position
- Keep chest lifted and maintain a neutral spine throughout



PRIMARY MUSCLES WORKED:

Quadriceps, Hamstrings, Glutes, Erector Spinae, Trapezius and Rhomboids



SPECIAL POPULATION ADAPPTIONS

14-16 Year Olds:

A combination of bodyweight exercises, squats and back extensions.

Older Adults:

Complete the exercise with resistance in endurance levels, increase rest periods and reduce the range of movement as suitable.

Pre/Post Natal Clients:

Due to the nature of the exercise a combination of exercises such as a seated leg press and low row could be completed.

Disability Client - Stroke

Complete the exercise using dumbbells so the weight can be adjusted according to strength of each side of the body, spotting is essential to guide and correct the movement.

ALTERNATIVE

Straight leg deadlift.

BENCH PRESS (BB)

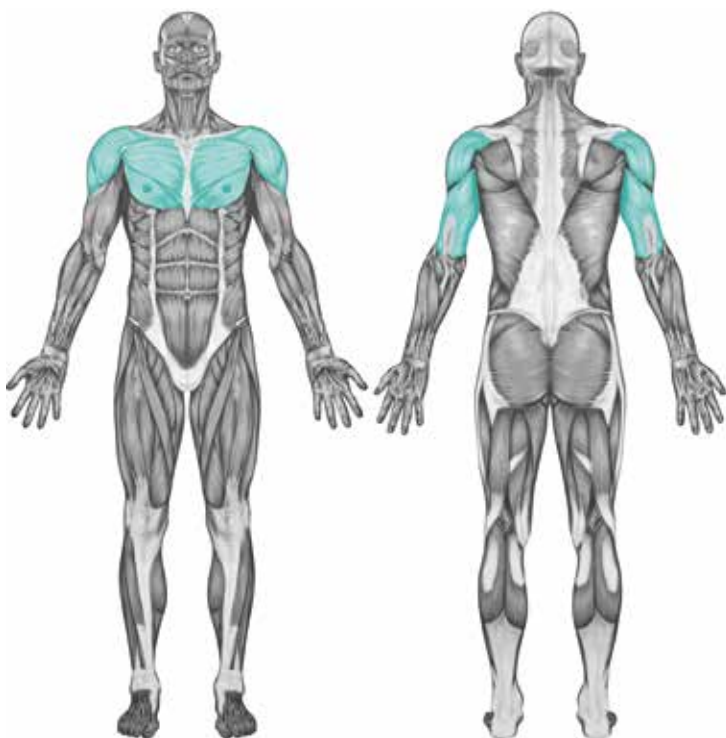
TEACHING POINTS:

- Lie on the bench with upper body and head supported on the bench
- Grip the bar firmly with hands outside shoulder width and keep the wrists straight
- Barbell should be level with the chest
- Extend the arms without locking out and return the bar to mid-chest level without resting on the chest



PRIMARY MUSCLES WORKED:

Pectorals, Deltoids and Triceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use a body weight alternative to reduce workload, press ups.

Older Adults:

Seated chest press could be used to increase exercise stability.

Pre/Post Natal Clients:

To avoid lying supine and to increase exercise stability use the seated chest press or pec dec machine.

Disability Client – Wheelchair user

Use a cable crossover machine to complete a chest press, this will enable the exercise to be completed in the wheel-chair.

ALTERNATIVE

Dumbbell bench press, seated chest press machine, pec dec machine, dumbbell flyes or press ups.

SUPINE TRICEP PRESS (BB)

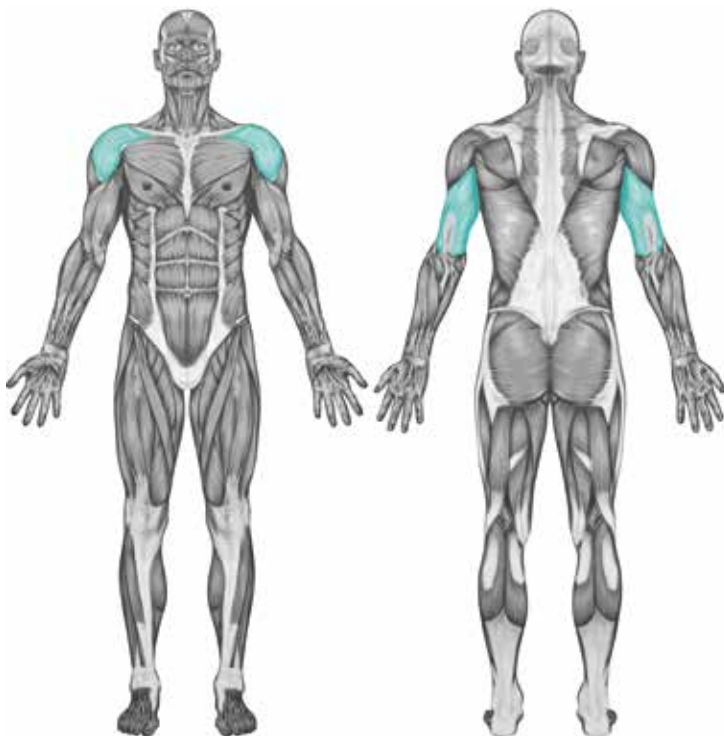
TEACHING POINTS:

- Lie on the bench with upper body and head supported on the bench
- Grip the bar firmly with hands shoulder width and keep the wrists straight
- Barbell should start level with the bottom of the sternum
- Extend the arms without locking out and return the bar to the starting position keeping the elbows close to the torso



PRIMARY MUSCLES WORKED:

Triceps and Anterior Deltoid



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use a body weight alternative to reduce workload, press ups.

Older Adults:

Seated tricep press could be used to increase exercise stability.

Pre/Post Natal Clients:

To avoid lying supine and to increase exercise stability use the seated tricep press or tricep pushdown (high pulley).

Disability Client – Wheelchair user

Use tricep pushdown (high pulley), this will enable to exercise to be completed in the wheelchair.

ALTERNATIVE

Tricep push down (high pulley), single arm tricep extension, body-weight tricep dip or tricep extension machine.

PECTORAL FLYES (DB)

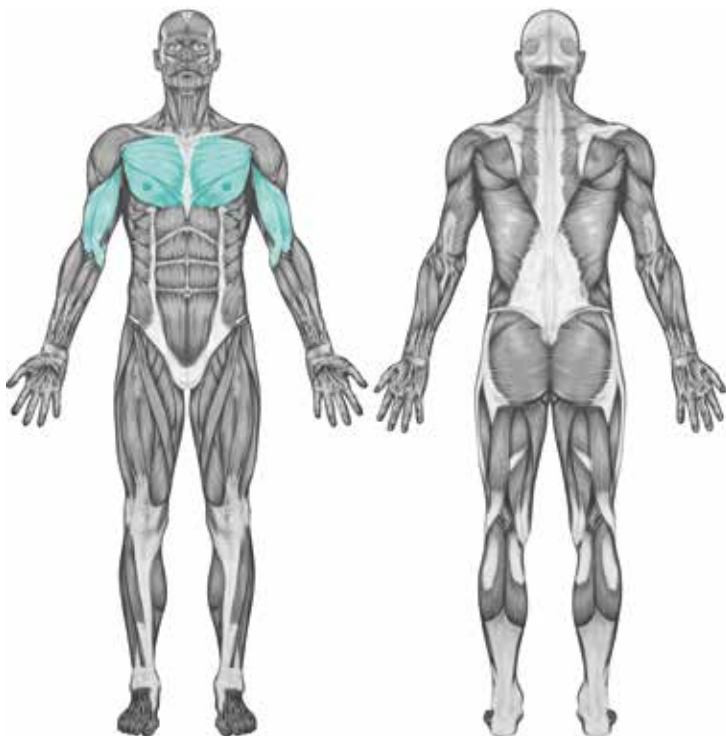
TEACHING POINTS:

- Hold two dumbbells
- Lie with upper body and head fully supported by the bench, support dumbbells above the chest with the elbows and wrists slightly flexed
- Lower the weights directly to the side to about bench level
- Bring dumbbells back together above the chest



PRIMARY MUSCLES WORKED:

Pectorals and Biceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use a body weight alternative to reduce workload, press ups.

Older Adults:

Seated chest press could be used to increase exercise stability.

Pre/Post Natal Clients:

To avoid lying supine and to increase exercise stability use the seated chest press or pec dec machine.

Disability Client - Multiple sclerosis

A pec dec machine could be used to increase the exercise stability and to help coordinate correct movement.

ALTERNATIVE

Bench press, seated chest press machine, pec dec machine or press ups.

SHOULDER PRESS (DB)

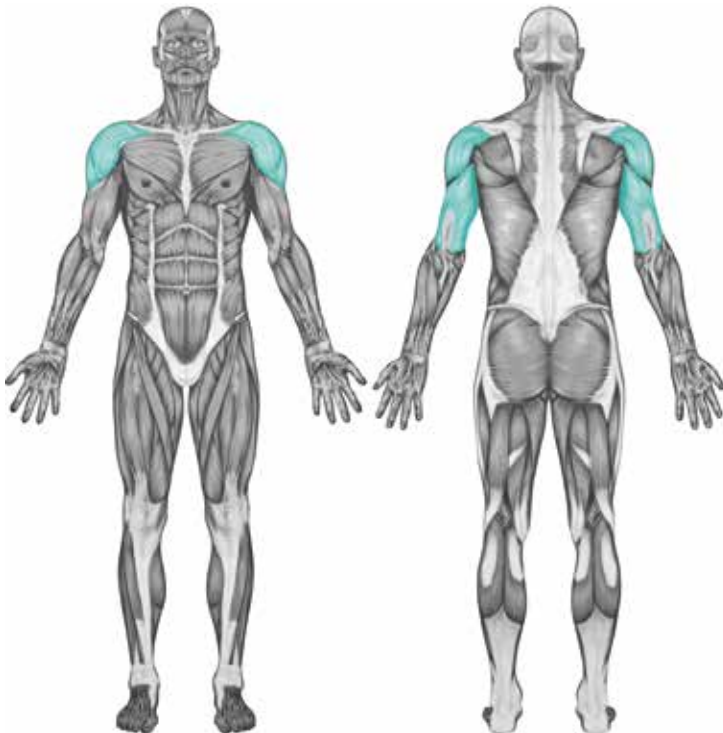
TEACHING POINTS:

- Stand with feet a comfortable distance apart, knees soft and a neutral spine
- Position dumbbells to each side of shoulders with elbows below wrists
- Press dumbbells up until arms are extended overhead but not locked out
- Lower and repeat



PRIMARY MUSCLES WORKED:

Deltoid and Triceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use resistance bands to complete a shoulder press, use endurance repetition ranges.

Older Adults:

Seated shoulder press machine could be used to increase exercise stability.

Pre/Post Natal Clients:

Seated lateral or frontal raises could be used to increase exercise stability and limit blood pressure increase.

Disability Client – Hypertension

Use frontal or lateral raises to ensure arms do not go over head height to limit blood pressure increase.

ALTERNATIVE

Shoulder press machine, front raise or lateral raise.

LATERAL RAISE (DB)

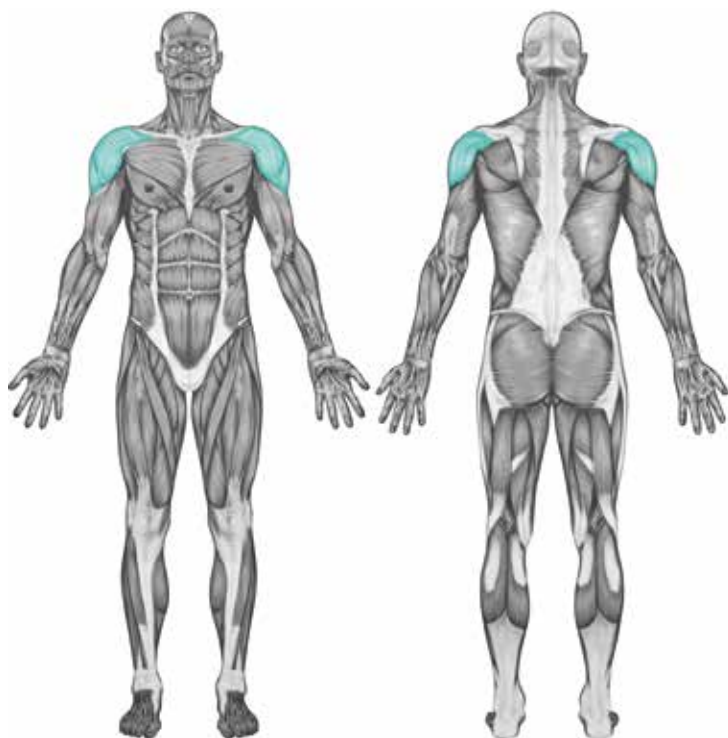
TEACHING POINTS:

- Stand with feet shoulder width apart or slightly wider
- Place the dumbbells on the front or side of the thighs
- Maintain neutral spine and slightly flexed elbows
- Raise the dumbbells to shoulder height
- The dumbbells should be parallel to the floor
- Return to that start position



PRIMARY MUSCLES WORKED:

Deltoid



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Complete a lateral raise exercise using resistance bands to reduce the workload.

Older Adults:

Seated shoulder press machine could be used to increase exercise stability.

Pre/Post Natal Clients:

Seated lateral or frontal raises could be used to increase exercise stability and limit blood pressure increase.

Disability Client - Cerebral palsy

Perform the exercise one side at a time and adjust the weight to the clients strength or weakness for each side of the body.

ALTERNATIVE

Front raise, dumbbell shoulder press or seated shoulder press machine.

UPRIGHT ROW (BB)

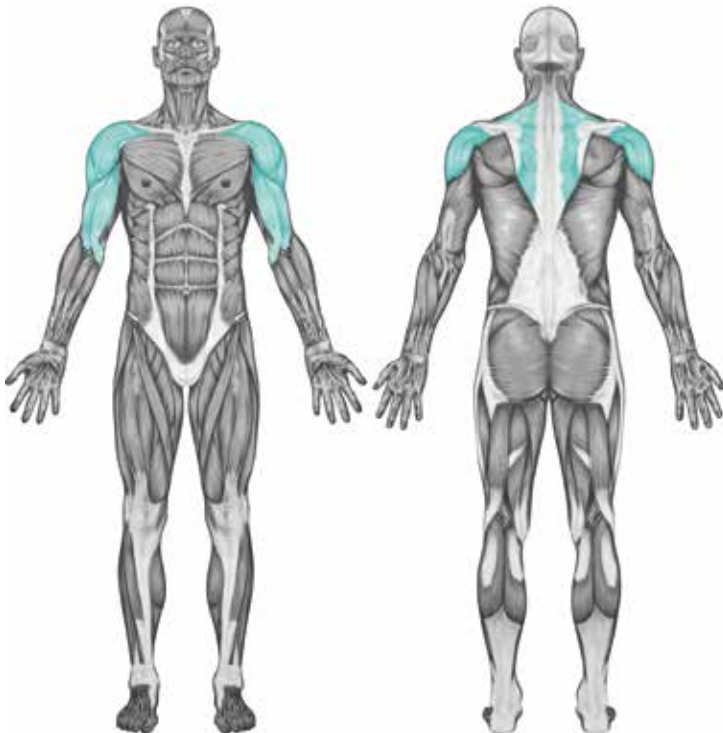
TEACHING POINTS:

- Standing with feet just outside hip width apart
- Lift the barbell with a close overhand grip (maintain two thumb widths apart)
- Keeping the barbell close to the body, lift up towards chest height
- Keep the elbows higher than the barbell
- Lower the barbell to the original position without locking out the elbows



PRIMARY MUSCLES WORKED:

Deltoids, Biceps and Trapezius



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Complete an upright row using resistance bands to reduce the workload.

Older Adults:

Use a combination of exercise such as frontal or lateral raises and shoulder shrugs.

Pre/Post Natal Clients:

As the client could be unable to keep the bar close to the body use a combination of seated lateral and frontal raises with shoulder shrugs.

Disability Client – Muscular dystrophy

Use dumbbells to work muscles on each side of the body independently and adjust the weights accordingly.

ALTERNATIVE

Front raise, lateral raise, dumbbell shoulder press, seated shoulder press machine or shoulder shrugs.

FRONT RAISE (DB)

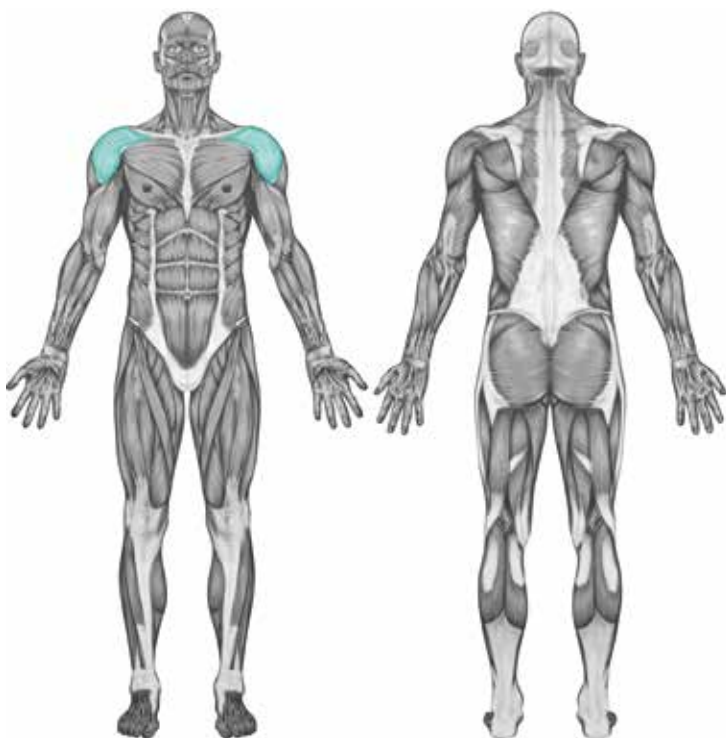
TEACHING POINTS:

- Feet apart and neutral spine
- Hold the dumbbells in both hands to the front of the thighs
- Raise the weights directly in front of the body to shoulder height, keeping the elbows flexed slightly flex



PRIMARY MUSCLES WORKED:

Anterior Deltoid



SPECIAL POPULATION ADAPPTIONS

14-16 Year Olds:

Complete a frontal raise using resistance bands to reduce the workload.

Older Adults:

Seated shoulder press machine could be used to increase exercise stability.

Pre/Post Natal Clients:

Seated lateral or frontal raises could be used to increase exercise stability and limit blood pressure increase.

Disability Client – Lower back pain

Seated front raise or adopt a split stance to reduce pressure on the lumbar spine.

ALTERNATIVE

Lateral raise, dumbbell shoulder press or seated shoulder press machine.

SINGLE ARM ROW (DB)

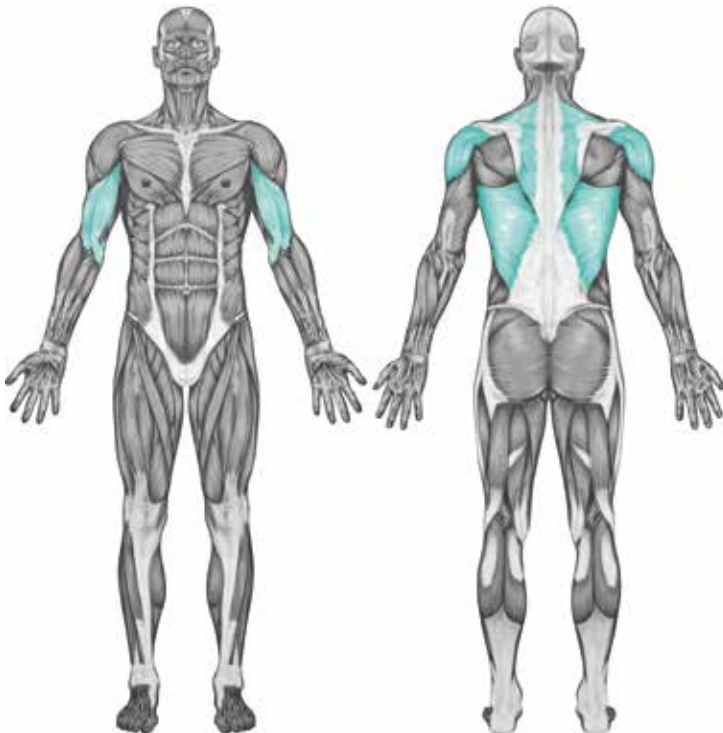
TEACHING POINTS:

- Place the knee and the same side hand on top of a bench, with the hand under the shoulder and the knee beneath the hip
- Maintain a neutral spine and ensure that the hips and shoulders are level
- Place the other leg out to the side to stabilise
- Raise the dumbbell directly up towards the armpit keeping the elbow close to the body
- Lower back down under control ensuring elbows don't lock out
- NB all movement comes from the arm, there should be no twisting of the body



PRIMARY MUSCLES WORKED:

Latissimus Dorsi, Posterior Deltoid, Trapezius and Biceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Resistance band bent over row could be completed to reduce the workload.

Older Adults:

Seated row machine could be used to increase exercise stability.

Pre/Post Natal Clients:

Widen foot stance and increase the angle of the bench to reduce pressure on the lumbar spine.

Disability Client - Wheel chair user

Cable rows could be completed so the client does not need to leave the wheel chair.

ALTERNATIVE

Seated cable row, seated row machine or prone flies.

BENT ARM PULLOVER (DB)

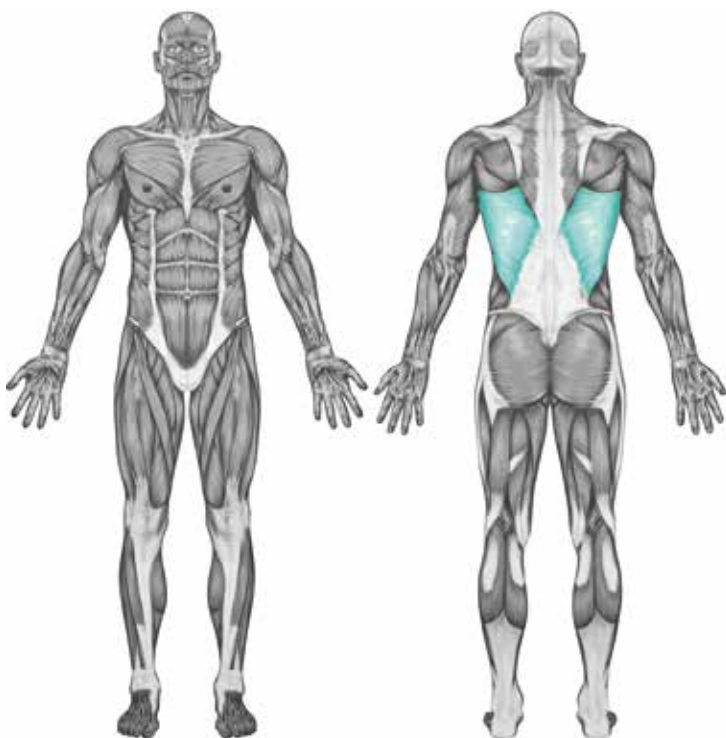
TEACHING POINTS:

- Lie with the upper body and head fully supported by the bench
- Grasp one dumbbell with both hands from behind and position over chest with elbows bent approximately 90° and into the side of the body
- With elbows bent, lower dumbbell over and just behind head until upper arm is approximately parallel to the torso
- Return and repeat



PRIMARY MUSCLES WORKED:

Latissimus Dorsi



SPECIAL POPULATION ADAPPTIONS

14-16 Year Olds:

Assisted pull up machine could be used with suitable endurance repetition range and resistance.

Older Adults:

Use a vertical traction machine to increase the exercise stability.

Pre/Post Natal Clients:

To avoid lying supine change the exercise for a single arm row.

Disability Client - Stroke

Use a single arm row so the weight can be changed to suit weakness on either side of the body.

ALTERNATIVE

Lat pull down, seated row or single arm row.

PRONE FLYES (DB)

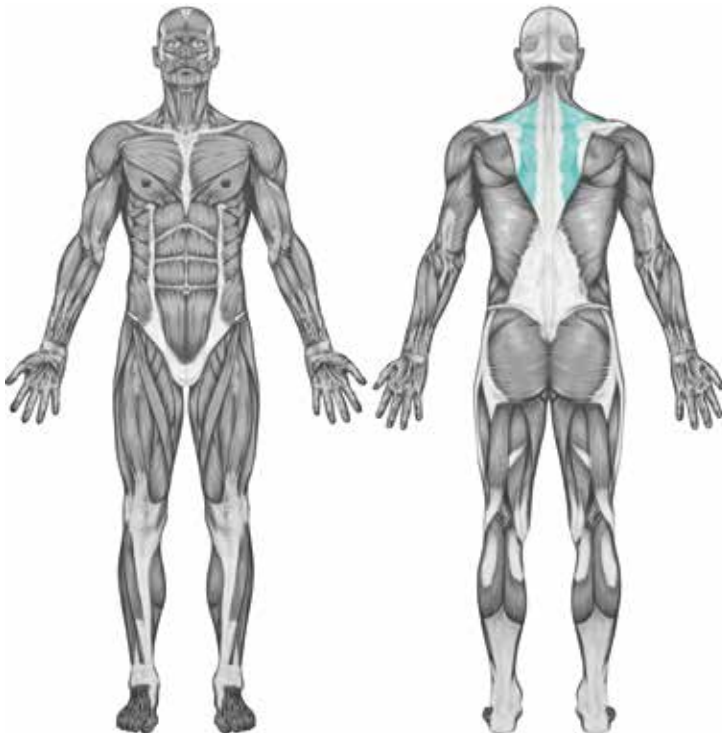
TEACHING POINTS:

- Stand with feet a comfortable distance apart and bend forward at the hips
- Maintain a neutral spine whilst holding the forward position
- Hold the dumbbells in a neutral grip below the body with elbows slightly bent
- Raise the dumbbells directly out to the side until level with the shoulders



PRIMARY MUSCLES WORKED:

Trapezius and Rhomboids



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

A seated resistance band prone fly could be used to reduce the exercise workload.

Older Adults:

Complete the prone fly in a seated position to add stability to the exercise.

Pre/Post Natal Clients:

Complete the exercise with a comfortable lean forward, use endurance repetition range and exercise intensity, complete sitting on a fit ball to increase exercise intensity.

Disability Client – Wheelchair user

Use a upright rear cross over so the client does not need to leave the wheelchair.

ALTERNATIVE

Seated row, or single arm row.

BICEP CURL (DB/BB)

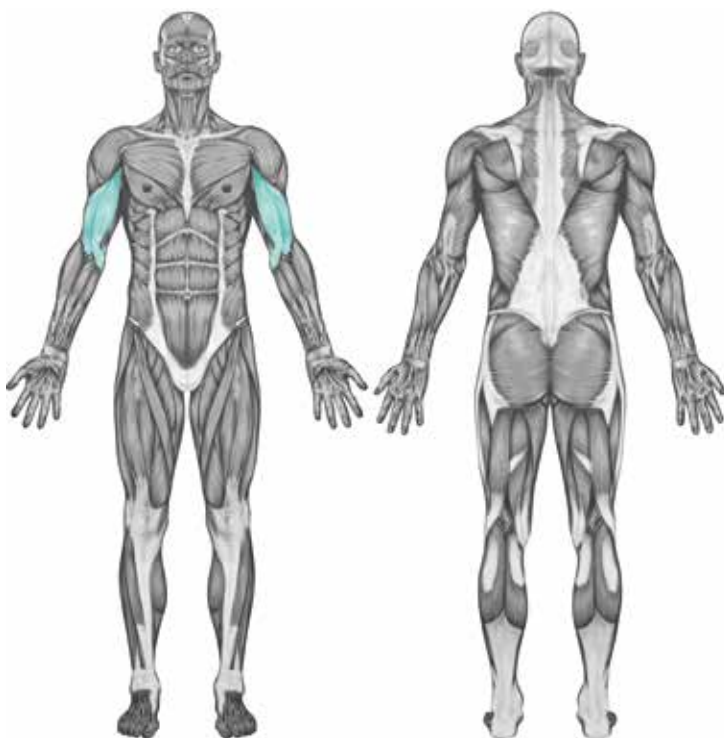
TEACHING POINTS:

- Standing with the feet hip width apart, holding a barbell with an under hand, shoulder width grip at arms length
- With elbows tucked tightly into the sides of the body curl the barbell up towards the chest
- Pause briefly, then slowly lower to the start position without locking out the elbows



PRIMARY MUSCLES WORKED:

Biceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use the assisted pull up machine to complete a bicep pull up or use resistance bands to complete a bicep curl.

Older Adults:

Seated arm flexion/bicep curl machine to increase stability. If they have good stability/coordination may use split stance to increase base.

Pre/Post Natal Clients:

Seated DB bicep curl to increase stability, could also use a swiss/gym ball to also work pelvic floor/core muscles at the same time.

Disability Client - Multiple Sclerosis

Due to nerve deficiency reduce weight/resistance, use DB's to work arms unilaterally and can easily adjust resistance to each arm according to strength.

ALTERNATIVE

Bicep pull up or cable bicep curl (low pulley).

SINGLE ARM TRICEP EXTENSION (DB)

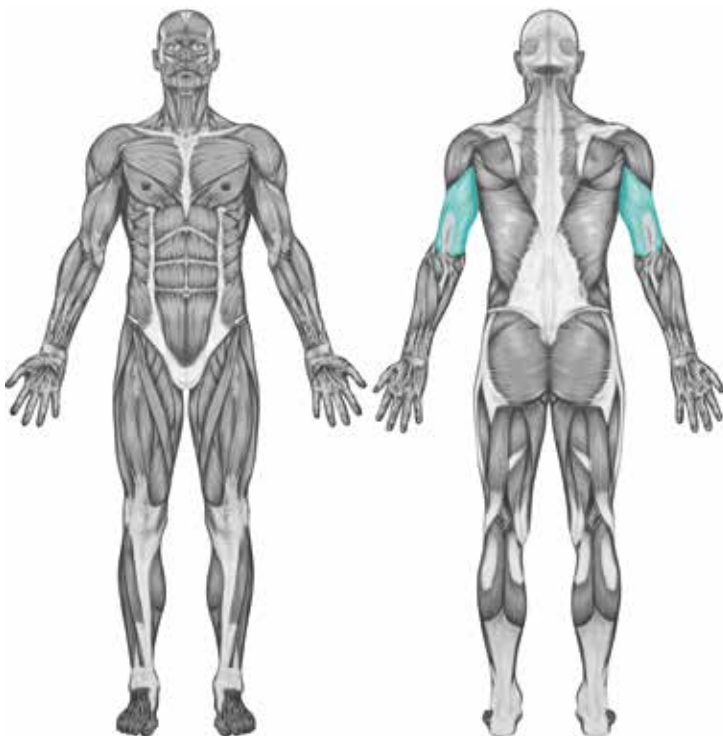
TEACHING POINTS:

- Standing with the feet hip width apart, holding a dumbbell with an overhand grip extended above the head
- Keeping the elbow fixed, flex the elbow bringing the weight behind the head
- Pause briefly, then slowly extend the elbow to the start position without locking out the elbows



PRIMARY MUSCLES WORKED:

Triceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use of tricep dips could be used to reduce the workload.

Older Adults:

Use of a tricep extension machine could be used to add exercise stability.

Pre/Post Natal Clients:

Use of a tricep push down on a high pulley could be given to keep arms below shoulder height to reduce blood pressure increase.

Disability Client – Stroke

Use of a tricep machine could be used to ensure safety as the client may have weakness on one side of body, increasing danger when working above the head.

ALTERNATIVE

Supine tricep press, triceps pushdown (high pulley) and body-weight triceps dip or tricep extension machine.

SQUAT (BB OR DB)

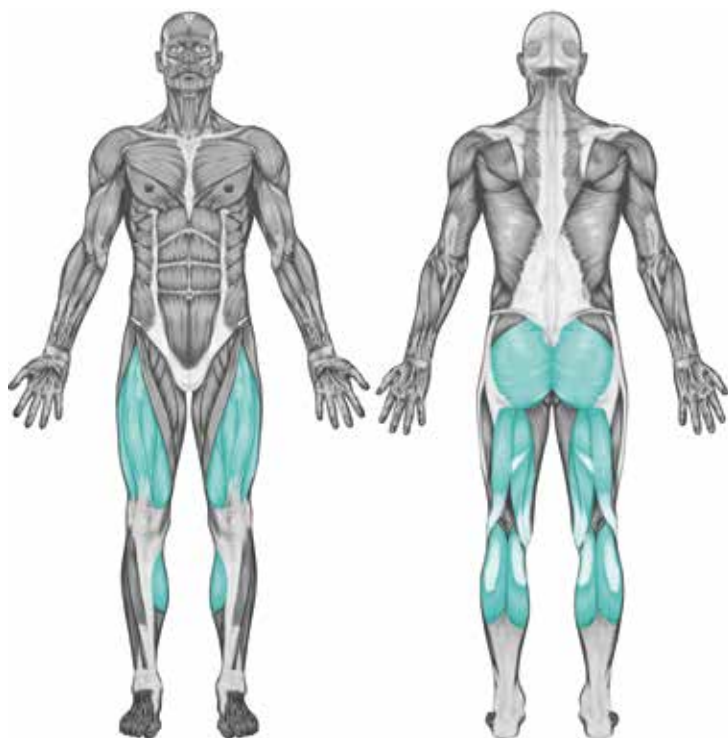
TEACHING POINTS:

- Hold dumbbells by the side of the body
- Feet shoulder width apart
- Brace abdominal and back muscles
- Initiate squat by flexing from the knees and hips
- Lower slowly to a comfortable position
- From the bottom position push the ground away keeping the chest lifted throughout to maintain a neutral spine
- Breathe out through the sticking point
- Keep knees in line with toes and heels down throughout exercise



PRIMARY MUSCLES WORKED:

Quadriceps, Hamstrings, Gastrocnemius and Glutes



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Body weight squats or lunges could be given to reduce the exercise workload.

Older Adults:

Leg press machine could be given to increase the stability of the exercise.

Pre/Post Natal Clients:

Leg extension and hamstring curls could be completed ensure the client is not supine or endangering the abdomen area.

Disability Client - Stroke

Complete a body weight squat using endurance repetition ranges, reduce the range of movement if required.

ALTERNATIVE

Leg press, or a combination of leg extension and hamstring curl and lunge.

FORWARD LUNGE (BB)

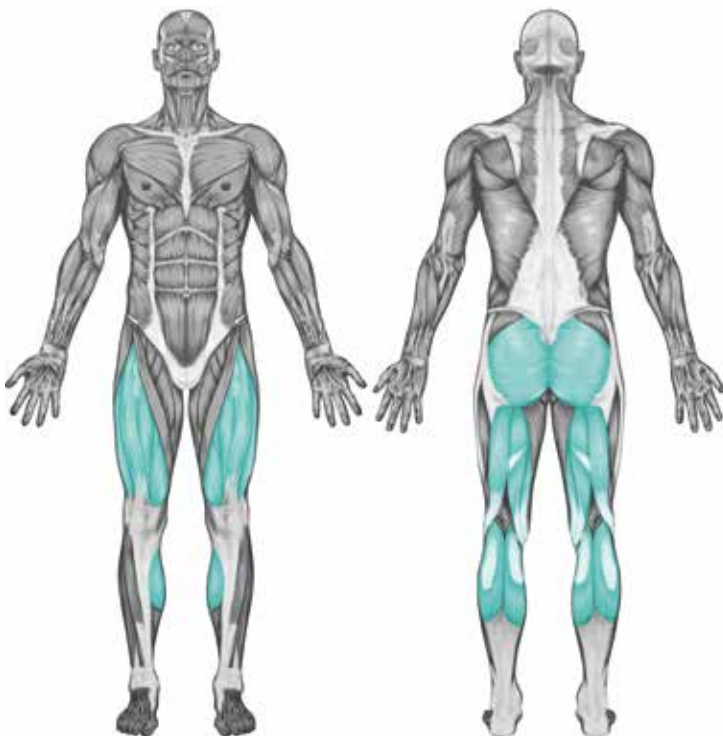
TEACHING POINTS:

- Stand tall with a pole/bar placed across the upper trapezius
- Place the feet greater than a normal stride apart with feet hip width apart and toes facing forward
- Keep chest lifted and brace the abdominals and back muscles
- Lunge forward using alternate legs, flexing the knees until leading leg knee is roughly at a right angle, while the trailing leg knee should avoid contact with the floor
- At the bottom push the ground away keeping the chest lifted to maintain a neutral spine and return to starting position
- Keep knees in line with toes and front heel down throughout exercise



PRIMARY MUSCLES WORKED:

Quadriceps, Hamstrings, Gastrocnemius and Glutes



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Body weight lunges could be given to reduce the exercise workload.

Older Adults:

A seated hamstring curl and leg press machine could be given to increase the stability of the exercise.

Pre/Post Natal Clients:

Body weight lunges or hamstring curls could be completed to reduce the exercise intensity.

Disability Client – Obesity

Used a seated hamstring curl and leg press machine to reduce pressure on the knee joint.

ALTERNATIVE

Squats, dead lift, leg press or a combination of squats and lunges.

RESISTANCE MACHINES

SEATED CHEST PRESS

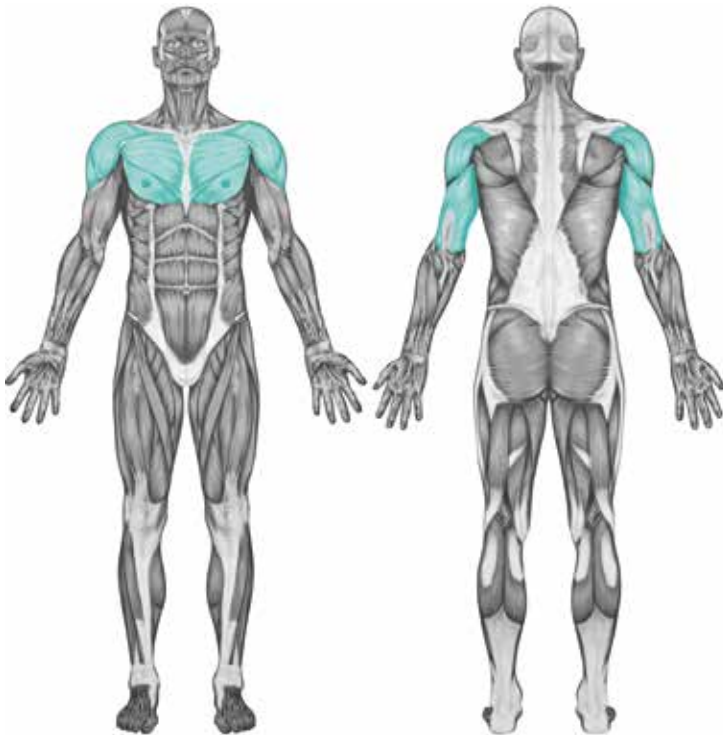
TEACHING POINTS:

- Set the seat height so that the handle is at armpit level
- Maintain neutral spine
- Grip handles firmly and keep the wrists straight
- Push out to extend the arms without locking out the elbows
- Slowly lower the weight, keeping the elbows level with hands
- Return to start position and repeat



PRIMARY MUSCLES WORKED:

Pectorals, Deltoids and Triceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use bodyweight press up variations to reduce the workload on muscle groups.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client – Muscular dystrophy

Due to nerve deficiency reduce weight/resistance, use dumbbell bench press to work arms unilaterally and can easily adjust resistance to each arm according to strength.

ALTERNATIVE

Bench press, pec flies, pec dec machine or press ups.

SEATED PEC DEC

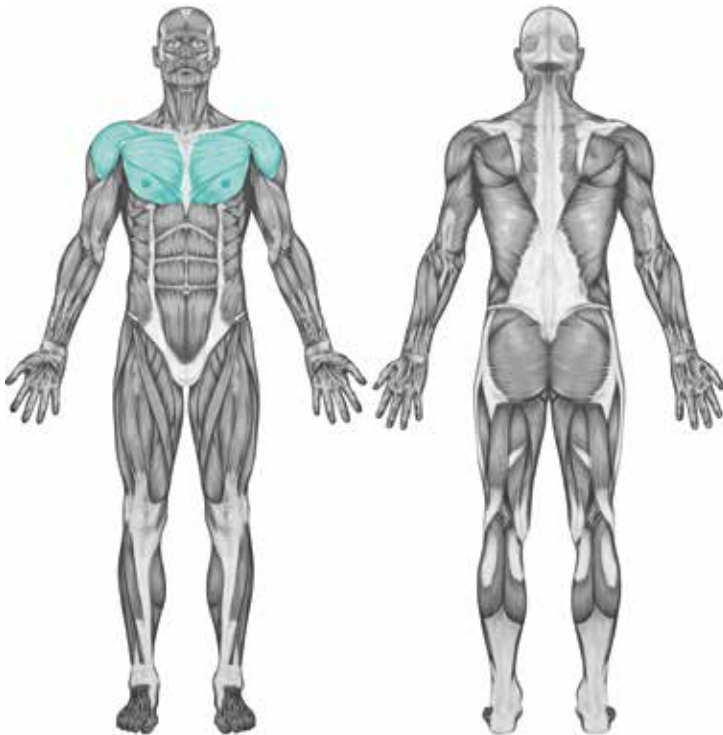
TEACHING POINTS:

- Sit in the machine with back on pad
- Place forearms on padded lever with elbows in line with the chest
- Squeeze elbows together then return to start position
- Maintain a neutral spine throughout



PRIMARY MUSCLES WORKED:

Pectorals and Anterior Deltoids



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use bodyweight press up variations to reduce the workload on muscle groups.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client – Wheelchair user

Use the cable machine to complete chest flyes so the client does not need to leave the wheel chair.

ALTERNATIVE

Seated chest press machine, bench press or pec flyes.

SEATED ROW (PULLEY)

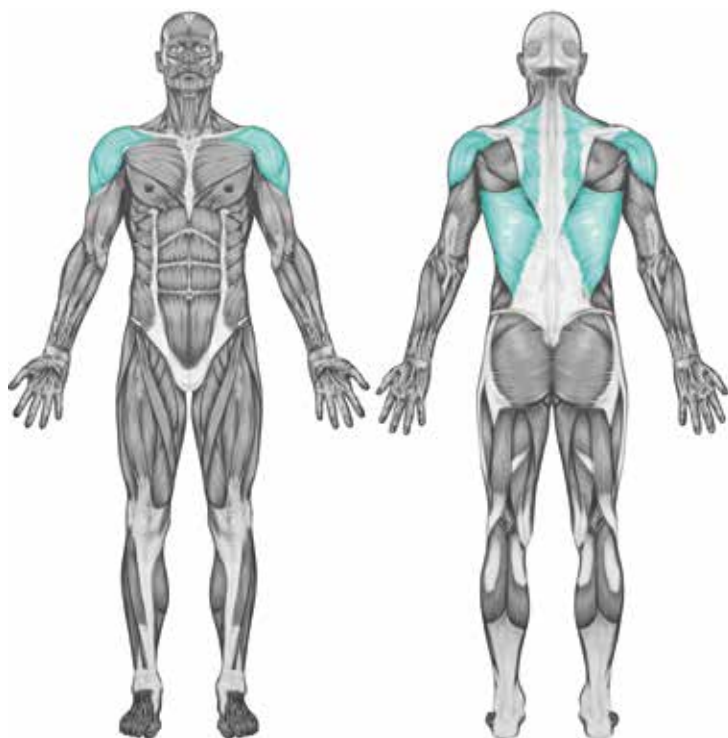
TEACHING POINTS:

- Adjust the seat height so that it allows the chest to rest against the support pad
- Maintain a neutral spine
- Keeping the elbows close to the body and the wrists straight
- Pull the weight towards the abdomen pause briefly, then slowly return the weight to the start position



PRIMARY MUSCLES WORKED:

Latissimus Dorsi, Deltoids and Trapezius



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use resistance bands to complete a bent over row or seated row to reduce the workload.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

A single arm row could be used to reduced risk of abdominal injury.

Disability Client – Wheelchair user

If the seat cannot be moved a cable machine could be used to complete a seated row.

ALTERNATIVE

Prone flies, single arm row or bent over row.

SEATED SHOULDER PRESS

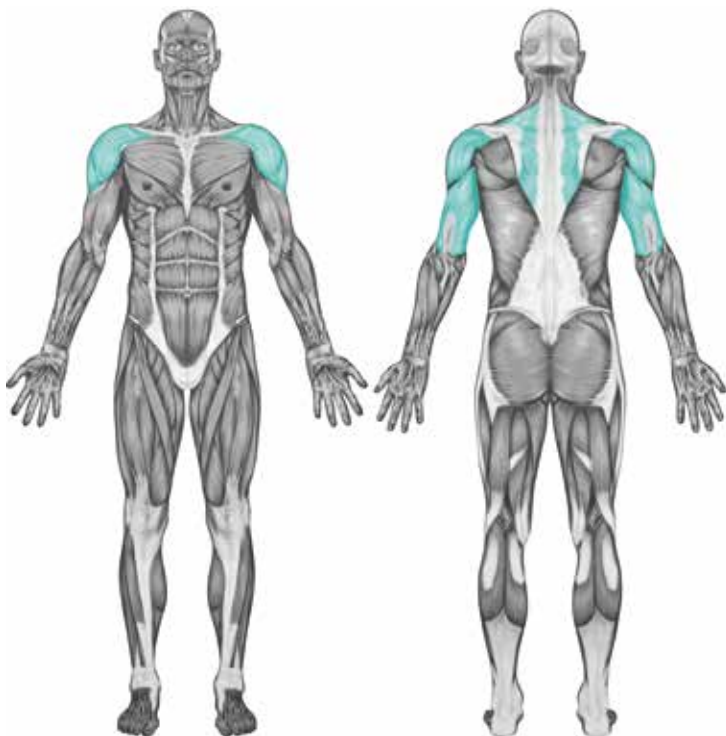
TEACHING POINTS:

- Sit in the machine with a neutral spine and adjust the seat so that the handles are at shoulder height
- Hold the handles and push the weight upwards, keeping the wrists straight and in line with forearm
- Pause briefly at the top, then slowly lower the weight, until the hands are at ear level
- The maintenance of a neutral spine is of particular importance throughout this exercise



PRIMARY MUSCLES WORKED:

Deltoids, Trapezius and Triceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use resistance bands to complete a shoulder press and reduce the workload.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client – Hypertension

Complete a seated frontal or lateral raise to reduce blood pressure increase.

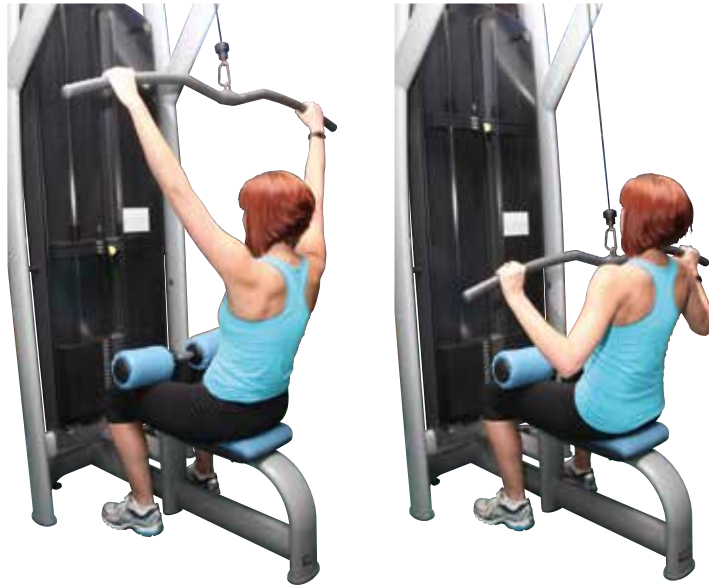
ALTERNATIVE

Frontal raise, lateral raise or dumbbell shoulder press.

LAT PULL DOWN

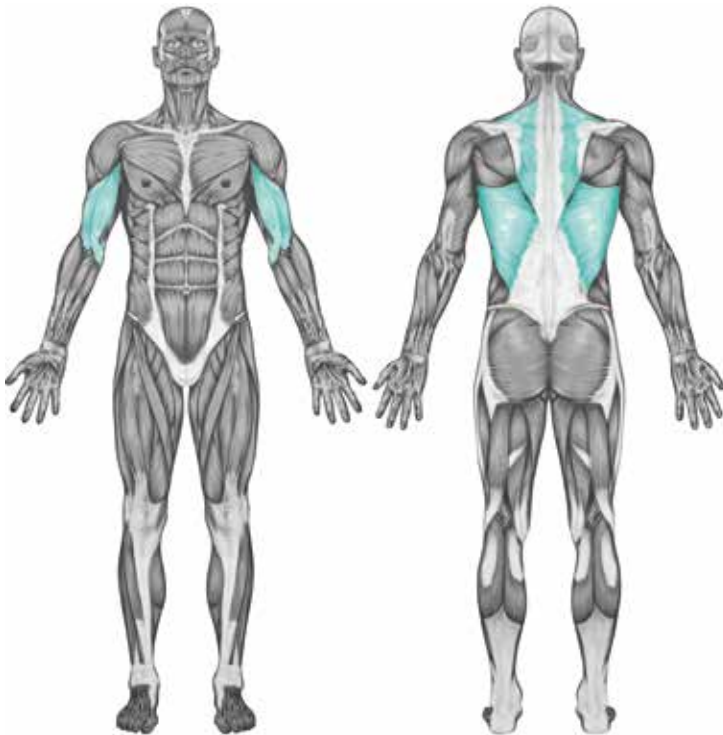
TEACHING POINTS:

- Adopt a natural overhand grip (just wider than shoulder width)
- Sit into the machine directly under the cable pulley and lock the thighs under the pad (if necessary)
- With the arms above the head, lean back slightly, so that the sternum is now directly under the pulley
- Whilst maintaining a neutral spine, pull the bar down towards the sternum keeping the forearms completely vertical
- Pause briefly then return to the start



PRIMARY MUSCLES WORKED:

Latissimus Dorsi, Trapezius and Biceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use assisted pull up machine to complete wide arm pull up to reduce the workload.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client – Stroke

Use dumbbell single arm row so that the weight can be adjusted for the weaker side of the body.

ALTERNATIVE

Single arm row, bent arm pull over, assisted wide arm pull up or vertical traction machine.

ASSISTED PULL UP

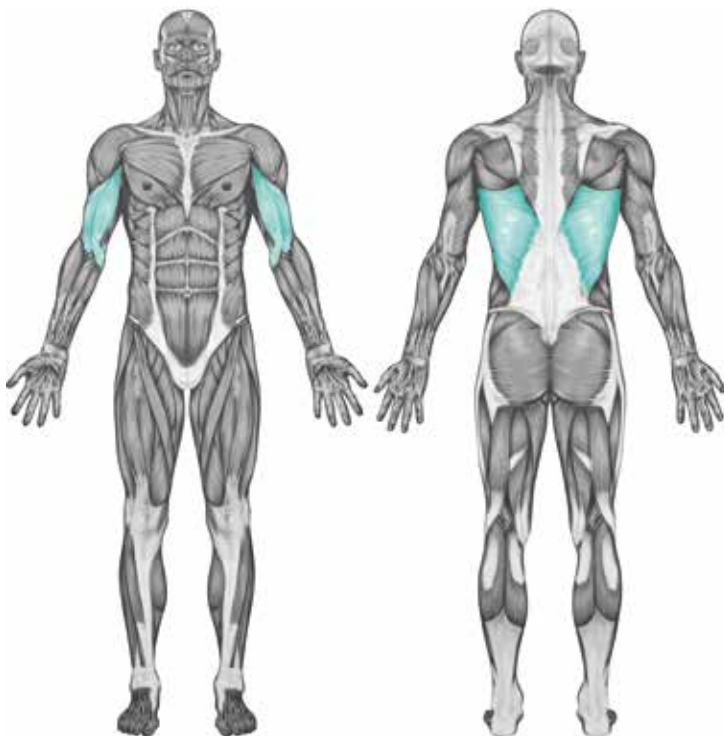
TEACHING POINTS:

- Hold the Chin Up bar with an overhand grip
- Hands wider than shoulder width
- Pull the body up so that the chin is level with the bar



PRIMARY MUSCLES WORKED:

Latissimus Dorsi and Biceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use vertical traction or resistance bands to complete a single arm row if the client prefers.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client – Wheelchair user

Use a cable machine to complete a lat pull down.

ALTERNATIVE

Lat pull down, vertical traction machine, single arm row or bent arm pull over.

TRICEP PUSHDOWN (HIGH PULLEY)

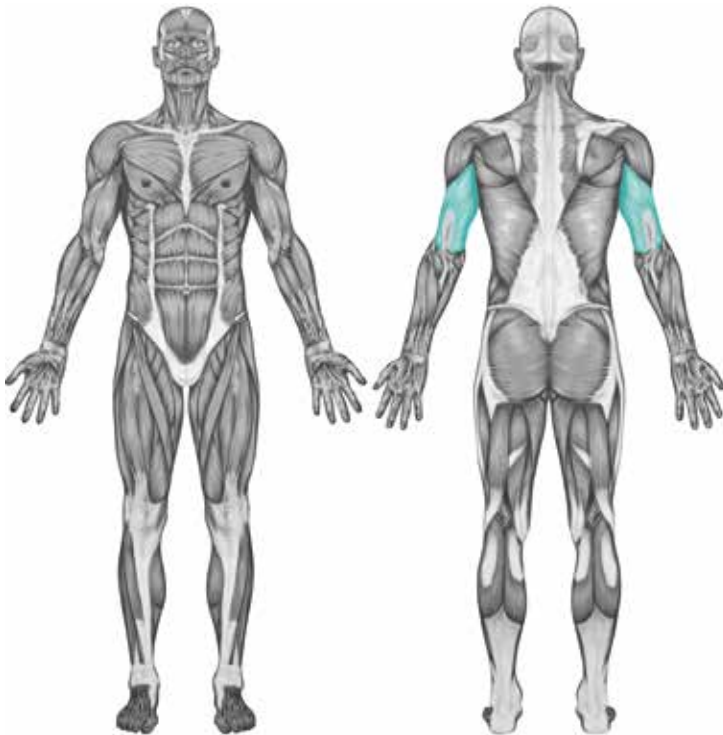
TEACHING POINTS:

- Stand facing a cable column with a hip width stance
- Attach a short bar onto the cable and adopt an over-hand grip
- Keeping a neutral spine
- With the elbows at the side, and arm parallel to the floor, straighten the arms so that the bar rests on the upper thigh
- Moving the elbows, return the bar to the start position



PRIMARY MUSCLES WORKED:

Triceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Complete body weight tricep dips to reduce the work load on the muscles.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client – Lower back pain

Use a seated tricep extension to reduce the pressure on the lower back.

ALTERNATIVE

Tricep pushdown machine, dumbbell tricep extension or tricep dips.

BICEP CURL (LOW PULLEY)

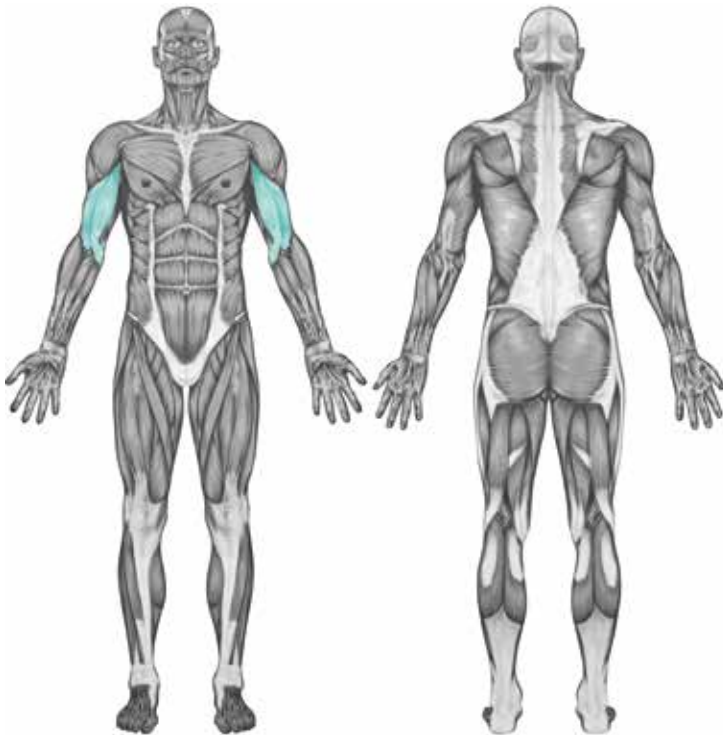
TEACHING POINTS:

- Hold the low pulley cable bar with a shoulder width under hand grip
- Stand close to pulley with elbows to side, raise bar until forearms are vertical
- Lower until the arms are fully extended but not locked out



PRIMARY MUSCLES WORKED:

Biceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use resistance bands to complete a bicep curl or assisted pull up machine to complete a bicep pull up.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client – Osteoarthritis

If the client is unable to grip fully, use the cuff attachment on the fore arm.

ALTERNATIVE

Arm curl machine, assisted bicep pull up or dumbbell/barbell bicep curl.

LEG PRESS

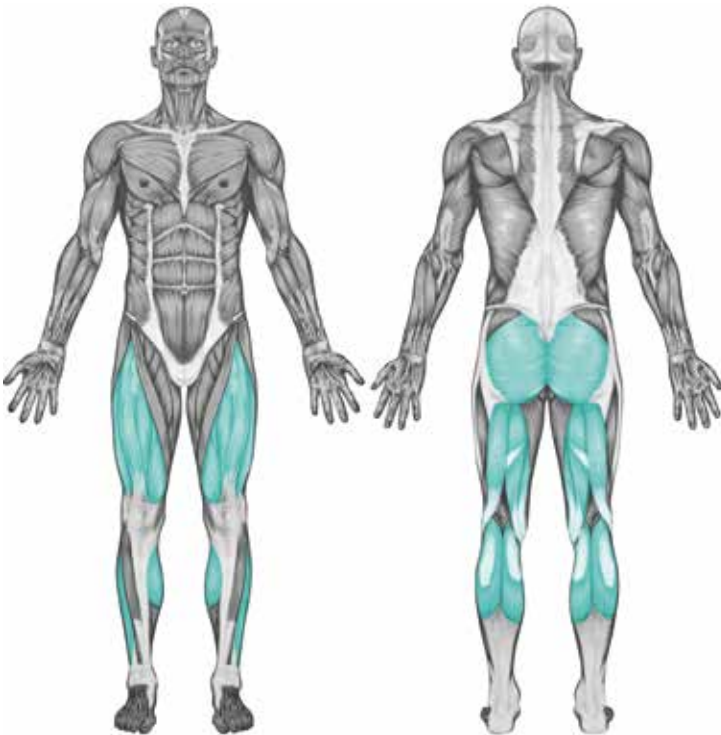
TEACHING POINTS:

- Sit on machine with back on padded support
- Place feet on platform hip width apart, set seat so that knees are at a 90° angle
- Hold the handles at the side
- Push platform away by extending knees and hips without locking out
- Return to start position



PRIMARY MUSCLES WORKED:

Quadriceps, Hamstrings, Gastrocnemius, Soleus and Glutes



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use body weight alternatives such as squats and lunges to reduce the workload on muscles.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client - Lower back pain

Leg/knee extension machine seated working one leg at a time, this way the weight can be adapted for the stronger and weaker sides of the body still working the quadriceps.

ALTERNATIVE

Leg extension combined with hamstring curl machine, squats or lunges.

SEATED KNEE EXTENSION

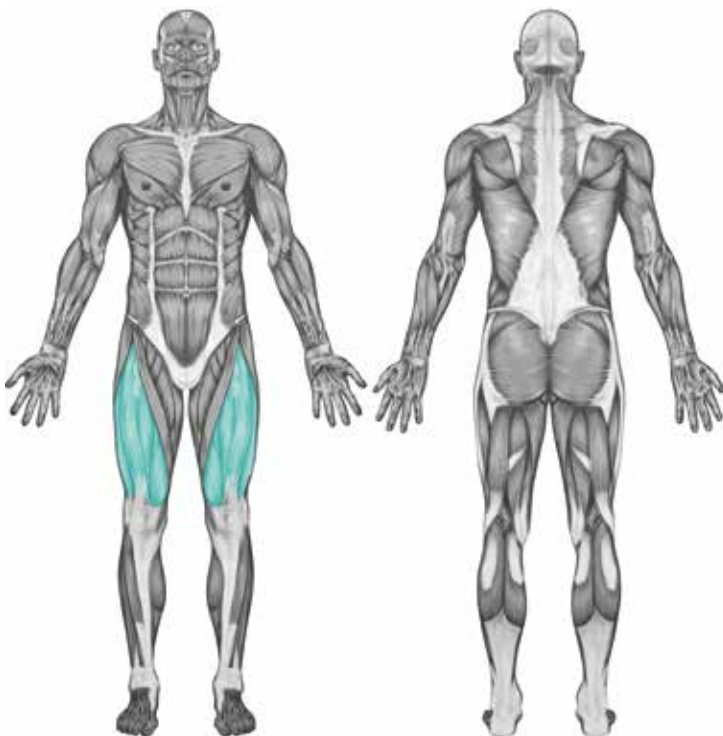
TEACHING POINTS:

- Set the back rest so that the back is supported and the knee is at the pivot point
- Adjust the shin pad so that it is just above the shoe laces
- Sit in the machine, with the back against the rest, lightly gripping the handles
- Lift your toes towards the knees
- Extend the knees under control to full extension keeping the toes to the ceiling
- Pause briefly, then slowly lower to the start position



PRIMARY MUSCLES WORKED:

Quadriceps



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use body weight alternatives such as squats and lunges to reduce the workload on muscles.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client - Wheelchair user

Use resistance bands or ankle weights to add resistance, the client can also complete this in the wheelchair.

ALTERNATIVE

Lunges, squats or seated leg press.

HAMSTRING CURL

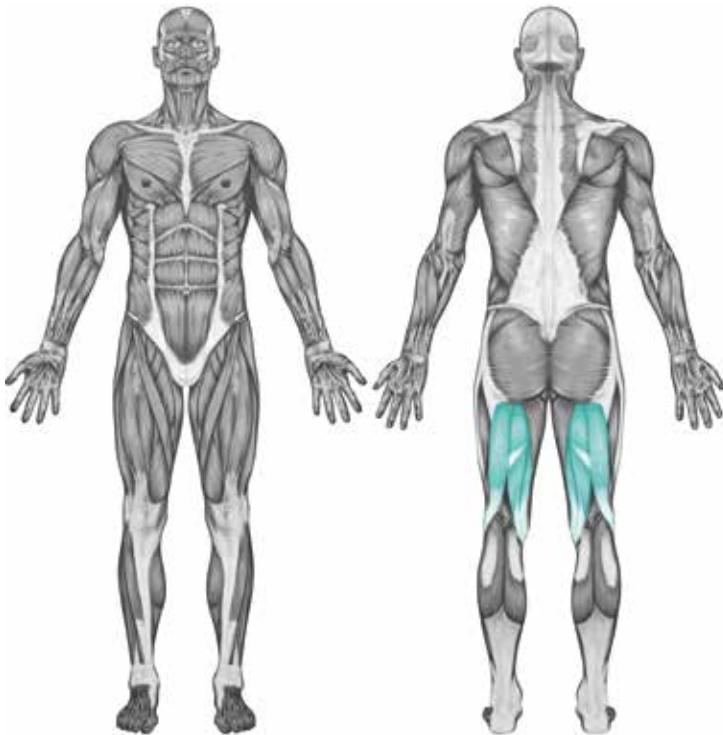
TEACHING POINTS:

- Set the heel pad so that when the knee is at the pivot point the pad is on the Achilles tendon, just above the training shoe
- Maintain neutral spine
- Clasp the handles at the side and with the toes pointing upwards
- Flex at the knee until reaching a 90 degree angle



PRIMARY MUSCLES WORKED:

Hamstrings



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use body weight alternatives such as body weight dead lifts, lunges and fit ball hamstring curl to reduce the workload on muscles.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Disability Client - Osteo arthritis, knee rehabilitation

Reduce the range of movement and resistance to comfortable range ensuring the knees do not lock out.

ALTERNATIVE

Dead lifts, lunges, lying hamstring curl machine or fit ball hamstring curl.

SEATED ADDUCTOR

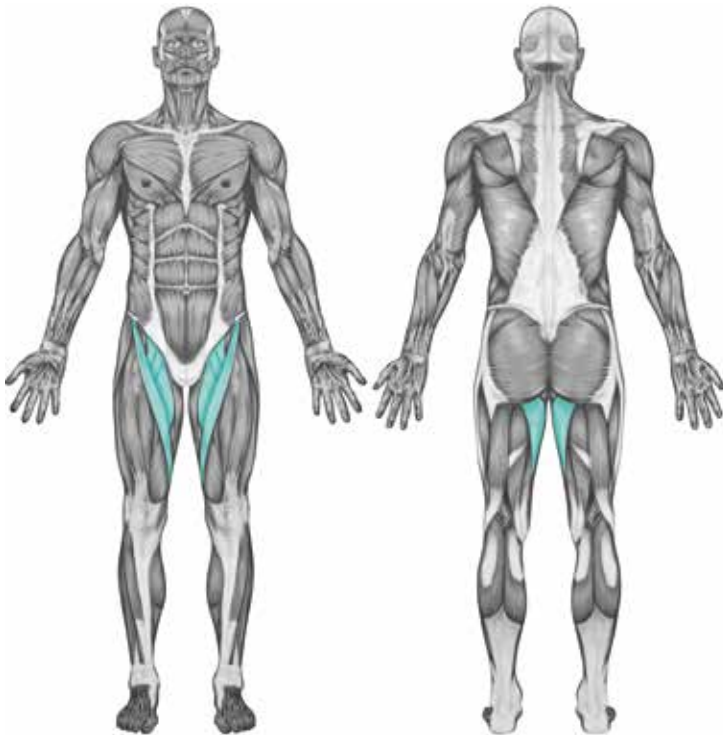
TEACHING POINTS:

- Sit in machine with heels on bars and pads on insides of the knees
- Maintain neutral spine
- Pull on lever to position legs apart
- Release lever into position and grasp bars to sides
- Squeeze knees together by adducting the hips
- Return and repeat



PRIMARY MUSCLES WORKED:

Adductors



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use body weight leg raises or resistance bands to increase the intensity.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required, reduce the range of movement as required.

Pre/Post Natal Clients:

Avoid this exercise and complete pelvic floor exercises.

Disability Client – Stroke

Work one leg at a time, this way the weight can be adapted for the stronger and weaker sides of the body, resistance bands can be used if required.

ALTERNATIVE

Side lying leg raises.

SEATED ABDUCTOR

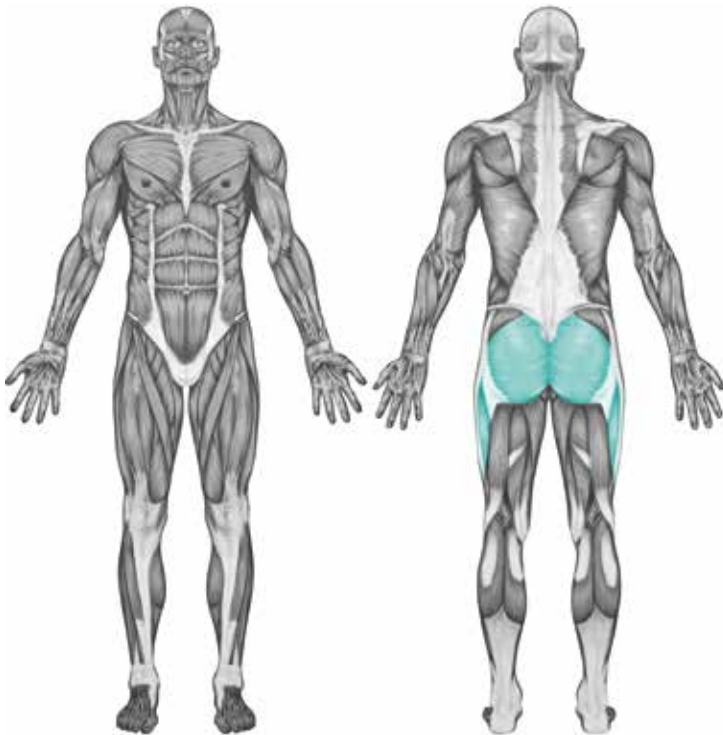
TEACHING POINTS:

- Sit in machine with heels on bars and pads on outsides of the knees
- Maintain neutral spine
- Pull on lever to position legs together
- Release lever into position and grasp bars to sides
- Move legs away from one another by abducting the hips
- Return and repeat



PRIMARY MUSCLES WORKED:

Abductors



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use a resistance band for inside leg swings.

Older Adults:

Keep the repetitions and exercise intensity within the endurance range, increase the rest periods as required.

Pre/Post Natal Clients:

Avoid this exercise and complete pelvic floor exercises.

Disability Client – Wheelchair user

Use resistance and squeeze between the knees, for example a dyno disc, the client can perform this in the wheel chair.

ALTERNATIVE

Inside leg swings with a resistance band.

SEATED ABDOMINAL CRUNCH

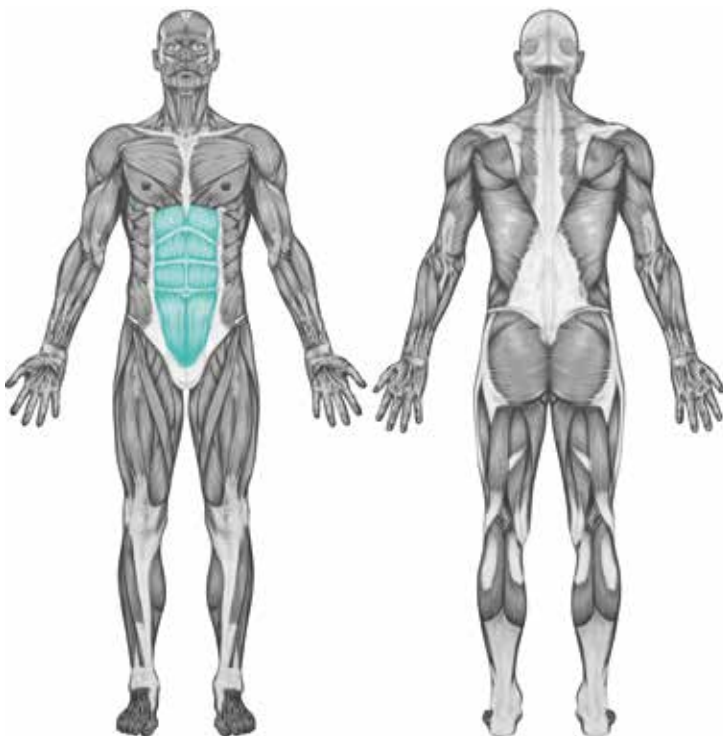
TEACHING POINTS:

- Seated with your back against the back rest
- Fix the feet under the rollers/pads at the bottom
- Pull the top roller back until it is against your chest
- Either hang your arms over the top of the roller or cross them in front of it
- Use your chest (not the arms) to push the roller towards your knees
- Slowly return towards the starting position. Stop just before you get there and repeat the exercise



PRIMARY MUSCLES WORKED:

Rectus Abdominals



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use body weight exercises such as a sit up or if needed use a resistance band for added resistance.

Older Adults:

Use body weight exercises, or reduce the range of movement if required.

Pre/Post Natal Clients:

Avoid this exercise and complete pelvic floor exercises.

Disability Client – Wheelchair user

Use a cable high pulley to replicate the movement so the client does not need to leave the wheelchair.

ALTERNATIVE

Abdominal crunch or sit ups.

LOWER BACK

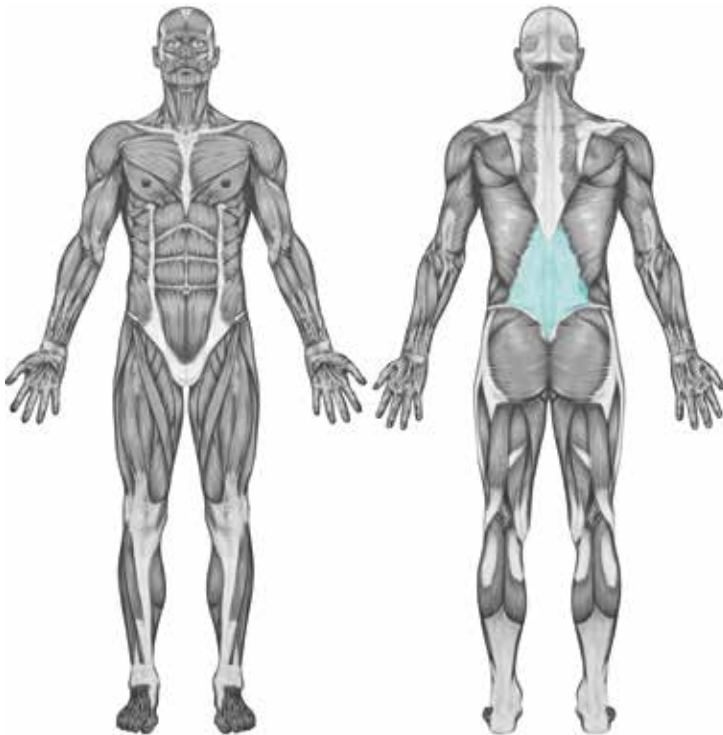
TEACHING POINTS:

- Sit with the buttocks at the back of the seat
- Position the roller so that it is against your shoulder blades
- Maintain a curve in the lower back and keep the shoulders back and chest high throughout the exercise
- Push back from an upright position, to extend the back towards horizontal (stop before you get there)
- Slowly return to an upright position



PRIMARY MUSCLES WORKED:

Erector Spinae



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Use body weight exercises such as a back extension or if needed use a resistance band for added resistance.

Older Adults:

This group can complete the exercise, but you may need to reduce the resistance, range of movement and increase the rest period.

Pre/Post Natal Clients:

Avoid this exercise and complete pelvic floor exercises.

Disability Client – Lower back pain rehabilitation

Use a bodyweight alternative (back extensions) on a fit ball.

ALTERNATIVE

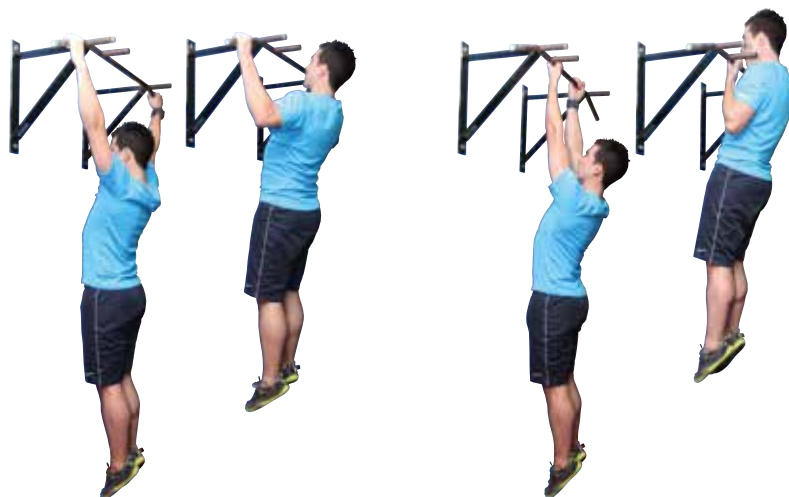
Body weight back extensions.

BODYWEIGHT

CHIN UP/ PULL UP

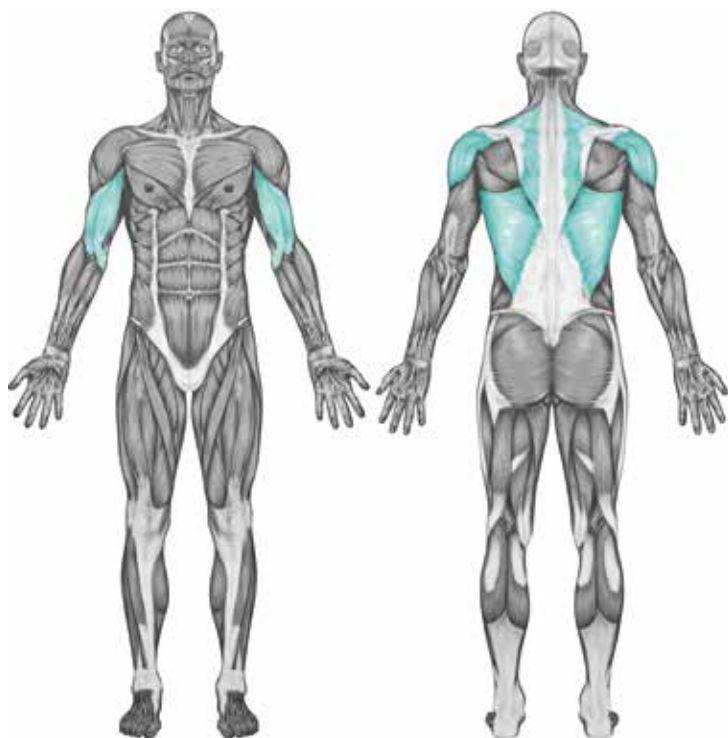
TEACHING POINTS:

- Grasp handles using a either pronated or supinated grip
- Cross feet
- Brace abdominals and back muscles to maintain a neutral spine
- Breathe in and pull body towards bar (resist the use of momentum)
- Pause briefly (chin inline with bar), then slowly breathe out and lower to start position



PRIMARY MUSCLES WORKED:

Latissimus Dorsi, Posterior Deltoid, Trapezius, Rhomboid and Biceps



SPECIAL POPULATION ADAPPTIONS

14-16 Year Olds:

Use assisted pull up machine to reduce the work load on the muscles.

Older Adults:

Use vertical traction, lat pull down or bicep pull down could be used to reduce the exercise intensity.

Pre/Post Natal Clients:

Use vertical traction, lat pull down or bicep pull down could be used to reduce the exercise intensity.

Disability Client – Obesity

Use assisted pull up machine, lat pull down or vertical traction machine to reduce elbow and shoulder pressure.

ALTERNATIVE

Lat pull down, vertical traction machine, single arm pull over, seated row or single arm row.

PRESS UP

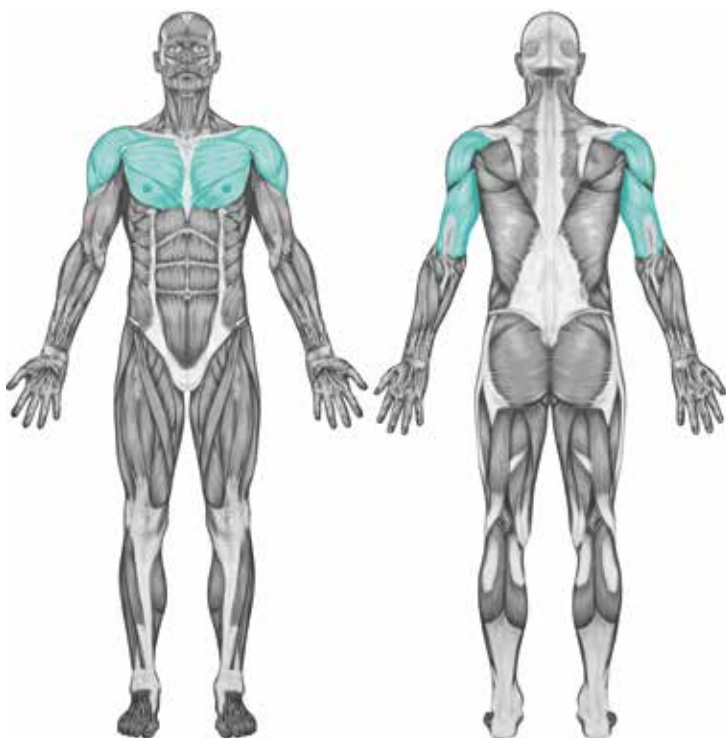
TEACHING POINTS:

- Start in a prone position with arms extended. Ankles, knees, hips, shoulders and the head should be kept in good alignment
- Brace the abdominals and lower chest towards the floor by flexing at the elbow joints
- Pause briefly and reverse the movement by extending at the arms and returning to the start position



PRIMARY MUSCLES WORKED:

Pectorals, Deltoids and Triceps



SPECIAL POPULATION ADAPPTIONS

14-16 Year Olds:

Regress to a box or 3/4 press up as required.

Older Adults:

Regress to a box, 3/4 press up or a seated chest press machine to reduce the pressure through the wrists.

Pre/Post Natal Clients:

Use a seated chest press machine to reduce the risk of injury to the abdominal region.

Disability Client – Lower back pain

Use a seated chest press machine to reduce the pressure on the lumbar spine.

ALTERNATIVE

Bench press, pec flies, seated chest press machine or pec dec machine.

BACK EXTENSIONS

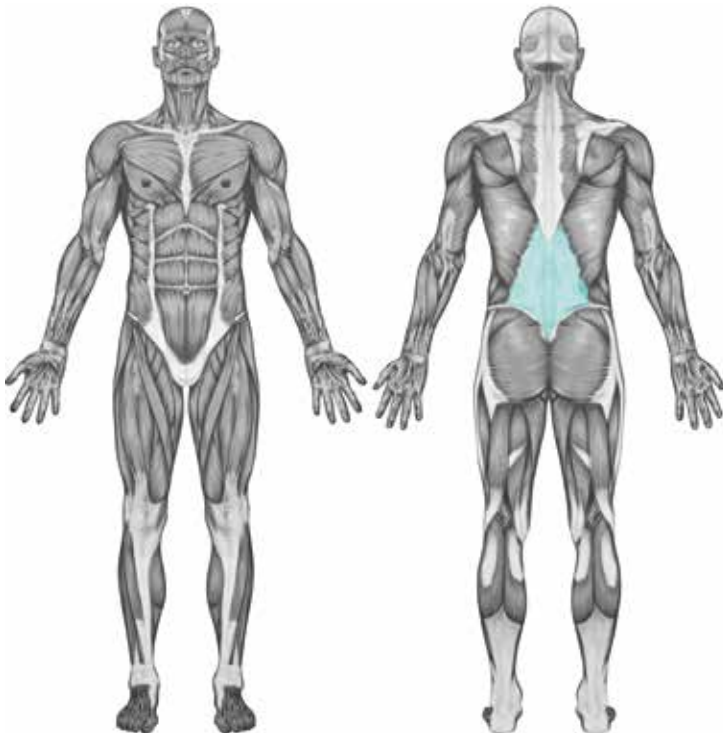
TEACHING POINTS:

- Start in a prone position on the floor with feet in contact with the ground and fingers on the temples
- Keeping feet in contact with the floor, raise the chest off of the floor keeping head in neutral alignment
- Return to start position



PRIMARY MUSCLES WORKED:

Erector Spinae



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Exercise can be completed, but ensure a safe range of movement.

Older Adults:

Use a back extension machine to avoid getting your client up and down from the floor.

Pre/Post Natal Clients:

Avoid as this can risk abdominal injury, complete pelvic floor exercises.

Disability Client -lower back pain

Back extension on a fit ball for increased support, limit range of movement to a comfortable range.

ALTERNATIVE

Back extension machine or deadlift.

ABDOMINAL CRUNCH

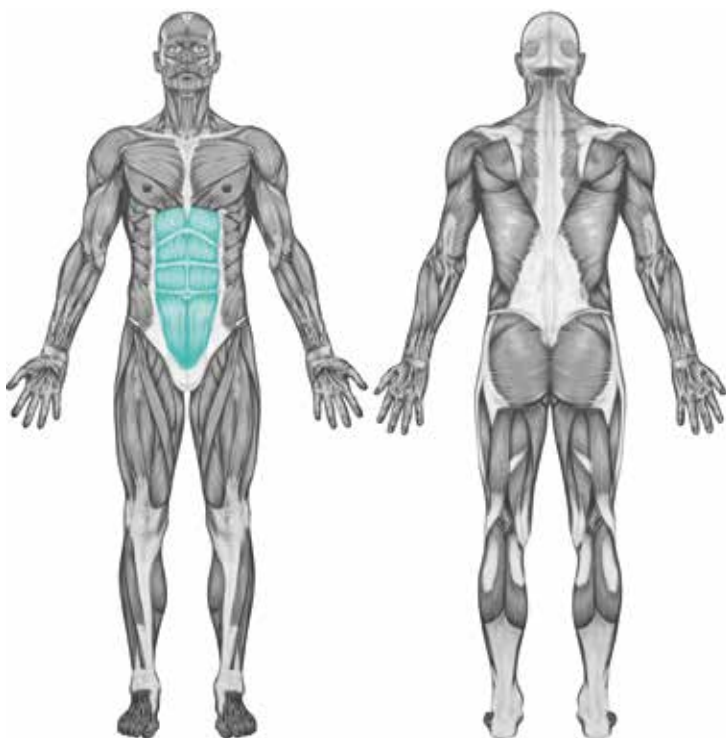
TEACHING POINTS:

- Start in a supine position on the floor with fingers on the temples, knees bent and feet flat on the floor
- Maintaining contact between the lower back and floor, raise shoulders off the floor by flexing at the trunk
- Keep head in neutral alignment and pause briefly
- Lower back down to the start position



PRIMARY MUSCLES WORKED:

Rectus Abdominis



SPECIAL POPULATION ADAPTIONS

14-16 Year Olds:

Complete the exercise with endurance repetitions, refrain from adding weight.

Older Adults:

Complete the exercise with endurance repetitions on a machine to reduce the amount of floor.

Pre/Post Natal Clients:

Avoid this exercise and complete pelvic floor exercises.

Disability Client - Obesity

Use the abdominal machine in the endurance repetition and intensity range if a crunch cannot be completed.

ALTERNATIVE

Sit up or abdominal crunch machine.

STATIC COOL DOWN STRETCHES

SEATED TRAPEZIUS

TEACHING POINTS:

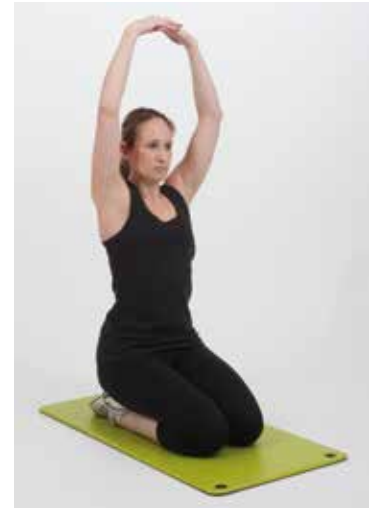
- Seated upright
- Neutral spine
- Arms flexed at 90 degrees
- Without fingers interlocking, palms facing out
- Push shoulder blades apart
- Hold the stretch for an appropriate duration



SEATED LATISSIMUS DORSI

TEACHING POINTS:

- Seated upright
- Place arms overhead hands clasped together
- Reach towards the ceiling to feel the stretch
- Hold the stretch for an appropriate duration



SEATED CHEST

TEACHING POINTS:

- Sit upright
- Neutral spine
- Place both hands in the small of the back
- Pushing elbows together to the point of mild discomfort
- Hold the stretch for an appropriate duration



SEATED DELTOID

TEACHING POINTS:

- Seated upright
- Maintain a neutral spine
- Bring the arm across the body
- Hold onto the fleshy part of the arm
- Hold the stretch for an appropriate duration



SEATED TRICEP

TEACHING POINTS:

- Seated upright
- Place one arm overhead, flex the elbow
- With the other hand apply pressure to the elbow to feel the stretch
- Hold the stretch for an appropriate duration
- Repeat on the other side



LYING HAMSTRING

TEACHING POINTS:

- Lay face up on the exercise mat
- Flex the hip and keep the opposite leg slightly flexed (so that the foot is fixed to the floor)
- Place the hands around the thigh and lever the leg into a stretch
- Hold the stretch for an appropriate duration
- Repeat on the other side



LYING QUADRICEP

TEACHING POINTS:

- Lay face down on an exercise mat
- Flex the knee
- Same side hand holds onto the distal end of the lower limb
- Hold the stretch for an appropriate duration
- Repeat on the other side



SEATED GLUTES

TEACHING POINTS:

- Lay face up on an exercise mat, cross the right leg over the left leg (above the knee)
- Lift the bottom leg off the floor, supporting it with both hands (on the thigh)
- Ease the legs towards the body
- Hold the stretch for an appropriate duration
- Repeat on the other side



SEATED ADDUCTOR

TEACHING POINTS:

- Seated upright
- Draw the soles of the feet together
- Gently apply pressure to the inside of the knees using the hands or elbows
- Hold the stretch for an appropriate duration



KNEELING HIP FLEXOR

TEACHING POINTS:

- Kneel with one knee on the floor and the other in front with the knee bent
- Place hands on the supporting thigh
- Keep chin off chest, and neutral upright spine
- Tilt pelvis forward to stretch hip flexors of the rear leg
- Hold the stretch for an appropriate duration
- Repeat on the other side



KNEELING GASTROCNEMIUS

TEACHING POINTS:

- Adopt a press up position
- Bend one knee up so that it rests on the mat with the opposite leg straight
- Maintain neutral spine, head facing down
- Try and push rear heel into the floor
- Hold the stretch for an appropriate duration
- Repeat on the other side



LYING ABDOMINALS (SPHINX)

TEACHING POINTS:

- Lay face down on an exercise mat
- Raise the trunk up off the floor
- Keep palms prone on the floor with the elbows underneath the shoulders
- Hold the stretch for an appropriate duration



GUIDELINES FOR STATIC COOL DOWN STRETCHES

- Cool Down stretches should ideally be completed on the floor, either seated, kneeling or lying
- There are 2 static cool down stretch options in maintenance or developmental:
 - stretches should be held at a point of mild discomfort for 15 seconds
 - development stretches should be held at a point of mild discomfort for 15 seconds, then the client takes a deep breath in, increases the stretch and hold this for a further 15 seconds
- Stretches selected should cover the whole of the body, or in the case of split routines, the stretches should target muscles worked. It is also a good time to focus on muscles which have been identified as tight or need flexibility development
- They should be the final component of your programme before ending the session

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