



YOUR GUIDE TO TENNIS ELBOW

MUSCULOSKELETAL

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Introduction

Please take note of the following before starting any of the exercises in this guide:

- The information contained in this guide is intended to assist in managing your recovery.
- This guide is based on the latest medical research in the field and contains the best advice available to the best of our knowledge.
- This guide is complimentary to other medical services and is not intended as a substitute for a health care provider's consultation. Never disregard medical advice or delay in seeking advice because of something you have read this guide.

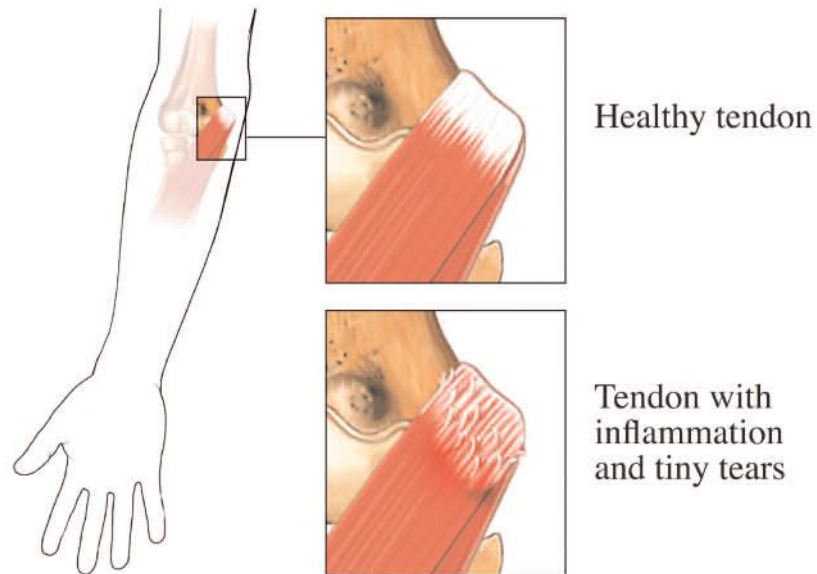
● Many people have found quick and lasting relief from their pain by acting upon the information provided, but everyone decides for themselves what to do with this information. Should you doubt a particular exercise in your situation, please consult your health professional.

When consulting your health professional, it is wise to take this guide with you to show them.

What is Tennis Elbow?

Tennis elbow is the common name for an injury to the muscles and tendons on the outside (lateral aspect) of the elbow that results from overuse or repetitive stress. The narrowing of the muscle bellies of the forearm as they merge into the tendon creates highly focussed stress where the tendons insert into the bone of the elbow. Tendon damage can occur (to the common extensor tendon) after a single incident, such as lifting something very heavy, causing a tear in the tendon (this is generally referred to as epicondylitis which

results in pain and inflammation). The most common cause however is repeated stress on the arm which causes tiny tears (called micro tears) in the tendon. The tendon gradually gets thicker, weaker and more painful (generally referred to as epicondylitis and also resulting in pain). You will make this worse if you continue doing the activity that triggered the pain and if you don't rest your arm from aggravating movements. Continued aggravation of this tendon can result in further damage and in some cases rupture of the tendon.



What causes Tennis Elbow?

Most people who develop **tennis elbow** are not tennis players. Excessive or repeated use of the muscles that straighten the wrist and bring it closer to the back of the forearm can cause injury to the tendons, leading to tennis elbow. A range of different activities that involve repeated hand, wrist and forearm movements can be the cause. These include:

- Using a computer mouse (especially if you have poor shoulder and neck posture)
- Using scissors or shears
- Gardening
- Manual occupations that involve repetitive twisting of the wrist and heavy lifting – e.g. plumbing, bricklaying, wringing clothes and use of a screwdriver
- Playing musical instruments such as the violin

Tennis elbow happens most commonly when you suddenly use your forearm muscles a lot without having used them much before. Even if you are used to this type of work, you can still overdo it. In some cases the condition develops for no apparent reason without any prior overuse or injury to the arm. One large study reported that in about half of cases the symptoms were either gone, or much improved, within four weeks. And within one year, symptoms were gone or much improved in more than 8 in 10 cases.

SYMPTOMS

- Pain on gripping the hand, picking up objects, opening jars and/or doors etc. This pain may be felt locally over the elbow, further down the forearm or less commonly midway down the back of the upper arm
- Weakness of grip, with the feeling that you could drop whatever you're holding onto
- Pins and needles and numbness in the forearm or hand and fingers can also arise
- Pain and stiffness with bending and straightening the elbow

What Treatment can I receive?

To make a full recovery, you need to change the way you use your arm so that your tendon is rested and has time to heal. Exactly how you do this depends on how you came to have tennis elbow in the first place, and how severe it is. Treatment for tennis elbow includes the following

- **Reduce pain and inflammation**

If your injury is the result of a sudden traumatic onset and inflammation is present, then your GP may be able to prescribe anti-inflammatory medication to reduce this. Non-steroidal anti-inflammatory medications such as ibuprofen are also available without a script from your chemist. Try taking for one week (as directed on the pack), then as required (provided you have no allergies or gastric irritation from this type of medication)

- **Ice** Apply an ice pack to reduce the pain and swelling. Apply the ice pack (a bag of peas will do) for approx 10-20 minutes to the affected area. Ensure that you do not apply ice directly to the skin as this could result in an ice burn. Place the pack in a cloth and then place on your skin. Apply a couple of times a day until pain and swelling has decreased and ensure that you allow your arm to warm up between applications.

- **Physiotherapy:** This may include:

- Gentle joint mobilisation to free the affected joints
- Massage and stretching to relieve the strain on nerve structures
- Stretching and strengthening to restore the muscle balance
- Acupuncture and electrotherapy to help with the pain and encourage healing
- Advice on changes of technique for your sport or work processes
- Strengthening of postural holding muscles so that you improve your alignment and general strength

The main aim of physiotherapy is therefore to decrease pain and inflammation and keep you as strong and active as possible to try and prevent you from having to take time off work and sport.

- **Steroid Injection** An injection of a steroid into the painful area of the elbow often eases the pain. For some people, the pain never returns, but for others, the relief from pain is only for a short time i.e. a few weeks. Also it is worth considering the long term outlook before deciding on trying a steroid injection. A large research study looked at this long term outlook. It compared those who had a steroid injection with those who did not, and showed that although a steroid injection may give good pain relief in the short term (9 in 10 were pain free

in the short term), it may increase the risk slightly of developing long term elbow pain (7 in 10 were pain free in the long term) compared to doing nothing and waiting for the pain to go on its own (8 in 10 were pain free in the long term)

- **Activity modification** Your physiotherapist can advise you on how to improve your posture, or improve your technique at sports and other activities to help prevent further injuries. Correcting postural position, changing grip size and improving technique can all play a vital role in relieving current injury and preventing future problems. This may also involve having a work place assessment.

- **Rehabilitation** This involves strengthening exercises, such as a structured loading programme of the tendon as well as stretching. Please see the exercises included in this information pack and discuss them with your physiotherapist to ensure they are appropriate for your condition, and to check your technique

- **Arm brace or tape** This can alter where the tendon works from and allow the damaged area to repair. Your physiotherapist will be able to advise you on how to use it and when to wear it.

- **Surgery** Surgery may be an option if the tendon is severely damaged, or if there has been no improvement after many months of rest and rehabilitation. However very few people need surgery.

HOME TREATMENT

You can treat your symptoms yourself if you have mild tennis elbow, by following many of the suggestions above. **The most important part of the treatment is to rest your injured tendon by stopping or changing the activity that is causing the problem.** Most often a slight change in posture and technique can make a big difference to your pain. It is however recommended that you consult with an allied health professional i.e. physiotherapist as early as possible, so that a full assessment can be carried out on your injured elbow and an accurate diagnosis can be given.

How can I prevent this in the future?

Although **tennis elbow** is an overuse injury and should therefore be able to be prevented, you can often not avoid a sudden overuse of the arm which causes tennis elbow. It is therefore essential to be aware of your general posture and technique, especially when performing repetitive tasks. It is also important to ensure that you keep the muscles of your forearm strong, especially if you are involved in manual tasks or sporting activities which require the repetitive use of these muscles. A few sensible precautions include:

- **Warm up for activity** (work or sport) with five minutes of gentle movements. This allows your muscles to adjust to the extra stresses and strains.
- **Try not to do the same activity** for long periods of time - take regular breaks and be sure to stretch regularly
- **Seek advice early** from your doctor or physiotherapist if you notice a problem. Physiotherapy and rehabilitation can be very effective in the acute (early) stages of the injury

What exercises can I do?

As discussed before **tennis elbow** can be the result of an acute injury (epicondylitis - pain and inflammation for less than 3 weeks) or a chronic (repetitive/overuse) injury (epicondylitis - pain for more than 3 weeks). An acute injury can also become chronic if it is not cared for properly. For this reason, it must be

stressed that **it is essential to start the rehabilitation process early**, and **the rehabilitation process should not be progressed until you experience little or no pain at the level you are performing**. Regaining full strength and flexibility is critical before returning to your previous level of sports activity.

Exercises phase 1

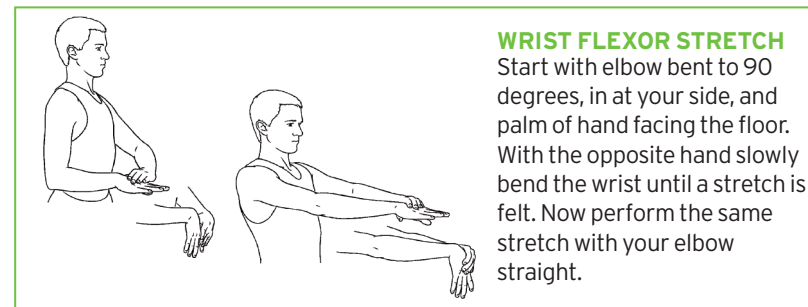
The goal of this phase is to decrease pain and inflammation, to promote tissue healing and reduce muscle wasting. During the acute stage of your injury (i.e. in the first day or so after the incident), always follow the **RICE** principle.

- **Rest**: this means avoiding further overuse, not absence of activity. You should maintain as high an activity level as possible while avoiding activities that aggravate the injury. Absolute rest should be avoided as it encourages muscle atrophy, de-conditions tissue, and decreases blood supply to the area, all of which are detrimental to the healing process. Pain is the best guide to determine the appropriate type and level of activity.

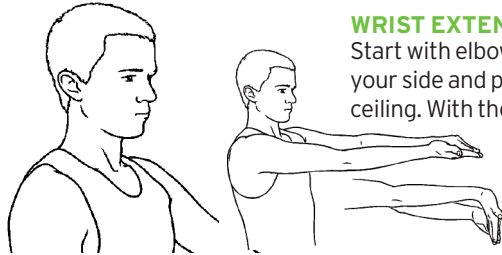
- **Ice**: this is recommended as long as there is inflammation present. This may mean throughout the entire rehabilitation process and return to sports. In some cases however inflammation is not present, but ice can still be used to reduce pain. Ice decreases the inflammatory process, and helps relieve pain and muscle spasm
- **Compress and Elevate**: if appropriate to assist blood flow and minimize swelling. Arm braces and strapping can also be used to take the pressure off the injured tendon and relieve pain.
- **Exercises** - at this stage it is important to work within your pain free range of movement with the focus being on flexibility and range of movement.

STRETCHING EXERCISES

- **Hold each stretch for 30 seconds and repeat 2-3 times each side and at least two times a day**
- **Do NOT stretch into pain**

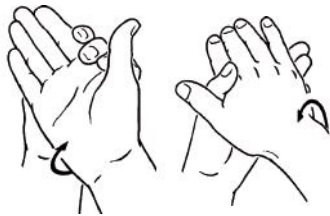


Exercises phase 1 (continued)



WRIST EXTENSOR STRETCH

Start with elbow bent to 90 degrees, in at your side and palm of hand facing the ceiling. With the opposite hand slowly bend the wrist until a stretch is felt. Now perform the same stretch with your elbow straight.



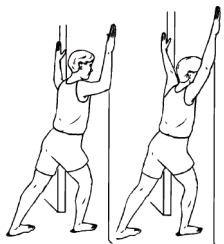
FOREARM SUPINATION/PRONATION STRETCH

With involved hand in a handshake position, grasp and slowly turn it to a palm up position until a stretch is felt. Repeat in the opposite direction.



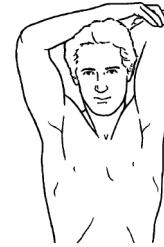
POSTERIOR CUFF

Take one arm across your chest, taking care to keep your shoulders level. Use the other hand to pull your arm across your body.



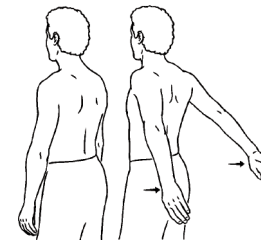
DOOR STRETCH

Stand in a walking position, side on to a doorway or corner. Bend your elbow and support the forearm against the doorframe. Gently rotate your upper trunk away from the arm until the stretching can be felt in the chest muscles.



TRICEP STRETCH

Standing raise injured arm at the shoulder with elbow bent and place the forearm behind the head. Grasp the injured elbow with opposite hand and draw it toward the centre of the body until stretch is felt.



BICEP STRETCH

Stand with arms raised to shoulder height and palms up. Press arms backward until stretch is felt.

RANGE OF MOVEMENT

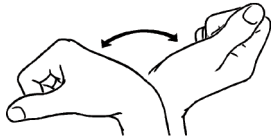
- Perform 2 sets of 10 repetitions of each movement
- Do not go into painful ranges of movements. Work within pain to start with and gradually increase your range as your pain allows



SUPPORTED WRIST FLEXION/EXTENSION

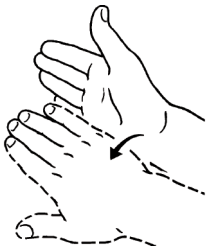
Using other hand, grasp involved hand and slowly bend wrist until a stretch is felt. Relax. Then stretch as far as you can in the opposite direction. Be sure to keep elbow bent.

Exercises phase 1 (continued)



ACTIVE WRIST FLEXION/EXTENSION

Actively bend wrist forward then backward as far as you can.



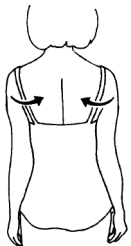
ACTIVE FOREARM PRONATION/SUPINATION

Start with arm in hand-shaking position and slowly rotate palm down until a stretch is felt. Hold 15 seconds. Relax. Then rotate palm up until a stretch is felt.

STRENGTH AND STABILITY

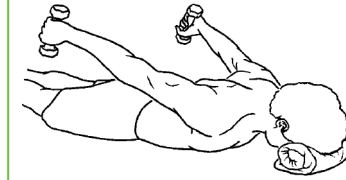
● Hold for 10 seconds and repeat each exercise 5-10 times.

● You can either resist yourself, or use a solid surface to resist the movement e.g. doorway or desk



STABILIZING

Sitting on the edge of a chair or bed, both feet flat on the floor, your shoulders back, your stomach in, your posture good. Keeping your shoulders level and down, slowly bring your shoulder blades down your back and in towards each other and hold this position.



PRONE FLIES 1

Lying face down, arms against your sides with your hands turned outwards, i.e. thumbs pointing upwards. Stabilise your shoulder blades by allowing them to glide down your back and slightly in towards each other. Now lift your hands off the floor while maintaining the position of your shoulder blades. Hold this position for 10 seconds and repeat 10 times. Lifting your head in the air at the same time as raising your arms (still looking at the floor) is a progression for this exercise.



STATIC FLEXION

With involved forearm resting palm up on thigh, resist upward movement of hand with opposite hand as shown.



STATIC EXTENSION

With involved forearm resting palm down on thigh, resist upward movement of hand with opposite hand.



STATIC PRONATION

Resist downward rotation of hand with opposite hand, i.e. movement of palm towards the floor



STATIC SUPINATION

Resist upward rotation of palm with opposite hand, i.e. movement of palm towards the ceiling.

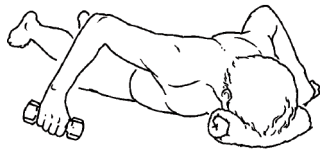
Exercises phase 2

The aim of this phase is to improve flexibility and increase strength and endurance of the arm. It is important through this stage to emphasise the eccentric contractions of the wrist flexors and extensors as well (i.e. the movement with gravity - towards the floor). It is therefore essential that the downward movement is controlled and the weight is not allowed to just

drop towards the floor. Phase 2 exercises can be started when you are able to do all the Stretching and Strengthening exercises in Phase 1 with no adverse effects and good control. If you are experiencing pain with any of the exercises be sure to consult with your physiotherapist before continuing. Continue with the stretching exercises of phase one.

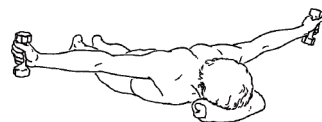
STABILITY EXERCISES

- Hold each position for 10 seconds and repeat 10 times
- Start without weight in hands, and weights can be added as a progression



SCAPULAR PRONE RETRACTION

Lying on your stomach over a plinth/bed with your arms over the side and elbows in line with your shoulder i.e. at 90 degrees. Stabilise your shoulder blades as described in prone flies one, and with your elbows bent and maintaining scapular stability, raise your arms in the air. You may have to do this one arm at a time if you are doing it on the bed.



SCAPULAR STABILIZATION IN PRONE

Lying on your stomach, move your arms out to shoulder height, and stabilise your shoulder blades. Now raise your arms off the floor maintaining a stable scapular position and keeping your elbows straight.

STRENGTHENING EXERCISES

- Repeat two sets of 10-12 repetitions.
- Ensure that you work in a pain free range of movement
- Ensure that both the up and down movements are controlled. Don't just let the band/gravity pull you back down.



WRIST FLEXION

With tubing wrapped around fist and opposite end secured under foot, bend wrist up (palm up) as far as possible. Lower slowly, keeping forearm on thigh.



WRIST EXTENSION

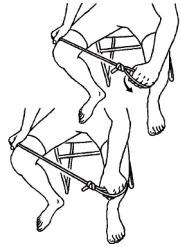
With tubing wrapped around fist and opposite end secured under foot, bend wrist up (palm down) as far as possible. Lower slowly, keeping forearm on thigh.



RADIAL DEVIATION

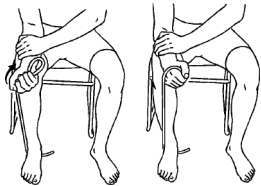
With tubing wrapped around fist and opposite end secured under foot, bend wrist up (thumb side up) as far as possible. Lower slowly, keeping forearm on thigh.

Exercises phase 2 (continued)



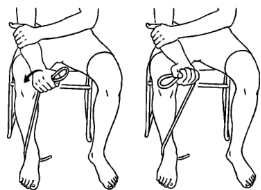
ULNAR DEVIATION

With tubing wrapped around fist and opposite end secured under foot, bend wrist up (thumb side down) as far as possible. Lower slowly, keeping forearm braced on knee.



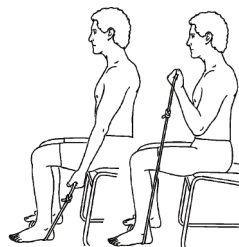
FOREARM PRONATION

With palm up, stabilize forearm on thigh with opposite hand. Keep tubing to outside of hand and roll palm down as far as possible.



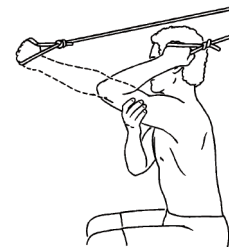
FOREARM SUPINATION

With palm down, stabilize forearm on thigh with opposite hand. Keep tubing to the inside of hand and roll palm up as far as possible.



ELBOW FLEXION

With tubing wrapped around fist and opposite end secured under foot, curl arm up as far as possible. Lower slowly.



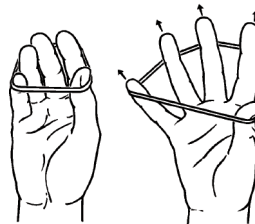
ELBOW EXTENSION

With tubing wrapped around fist and opposite end secured in door jamb, straighten elbow.



TOWEL ROLL SQUEEZE

With forearm resting on surface, gently squeeze towel. Ensure that towel is rolled to the appropriate size to prevent pain and excessive pressure. As your strength improves try and reduce the size of the towel. This can also be performed with a tennis/stress ball.



FINGER EXTENSION

Place a rubber band around all five finger tips. Spread fingers 25 times and repeat 3 times. If resistance is not enough, add a second rubber band or use a rubber band of greater thickness.

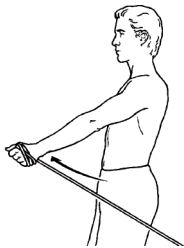
Exercises phase 3

The goals for this stage are to continue to improve muscular strength and endurance, maintain and improve flexibility, and gradually return to prior level of activity. This phase of strengthening will be focused towards shoulder strengthening exercises to ensure return to full functional activity. The muscles around the shoulder provide

stability to the shoulder joint and are therefore essential for functional movements of the arm. Good posture and strong shoulder stabilisers will take the pressure off the other joints during activities of the arm and help to prevent recurring injuries. Gradual return to full function is the end goal of this phase.

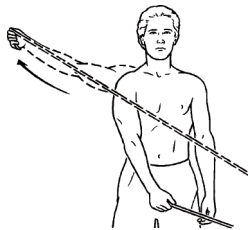
STRENGTHENING AND FUNCTIONAL EXERCISES

- Repeat 2 sets of 10-12 repetitions.
- Ensure that you continue to work pain free, therefore restrict your range of movement if necessary.
- Progress with different coloured bands or increase your weight.



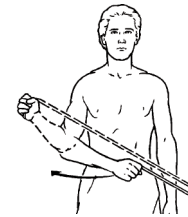
ARM FLEXION

Using tubing, start with arm at side and pull arm outwards and upwards in front of you. Move shoulder through pain free range of motion.



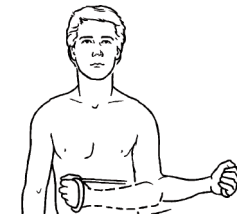
ARM ABDUCTION

Using tubing, start with arm across body and pull away from side. Move through pain free range of motion.



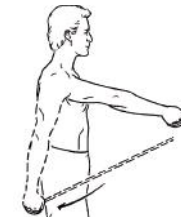
EXTERNAL ROTATION

Using tubing, and keeping elbow in at side, rotate arm outward away from body. Be sure to keep forearm parallel to floor.



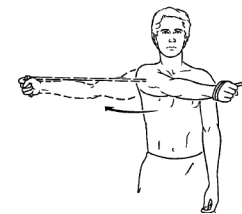
INTERNAL ROTATION

Using tubing and keeping elbow in at side, rotate arm inward across body. Be sure to keep forearm parallel to floor.



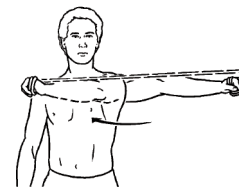
ARM EXTENSION

Using tubing, starting with your arm straight out in front of you, pull arm back towards side. Be sure to keep elbow straight.



HORIZONTAL ABDUCTION

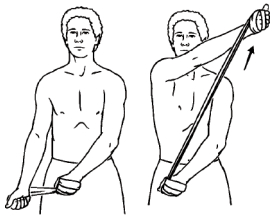
Using tubing, start with arm elevated in front of you, parallel to the floor. Pull arm away from your midline (i.e. away from body) through a pain free range of motion.



HORIZONTAL ADDUCTION

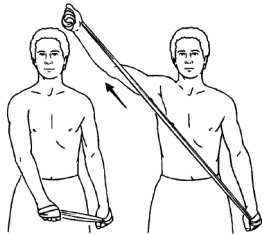
Using tubing, start with arm elevated to the side, parallel to the floor. Pull arm towards midline (i.e. across body) through a pain free range of motion.

Exercises phase 3 (continued)



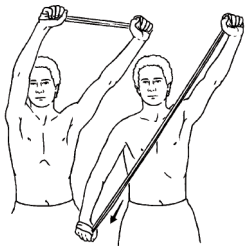
DIAGONAL FLEXION 1

Using tubing, start with arm out from side, palm down. Pull arm up, out and across body, rotating arm as you move so thumb continues to point back.



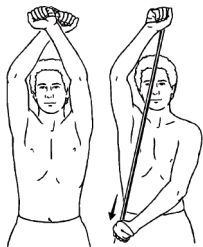
DIAGONAL FLEXION 2

Using tubing, start with palm facing behind you. Pull arm out, up and across body rotating arm as you move so palm continues to face behind you.



DIAGONAL EXTENSION 1

Grasp tubing with arm reaching above shoulder and across body. Gently pull downward and away from your body. Return slowly to starting position.

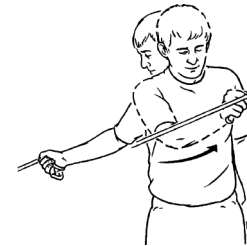


DIAGONAL EXTENSION 2

Grasp tubing with arm above and behind you. Bring arm downward and across body. Return slowly to starting position.

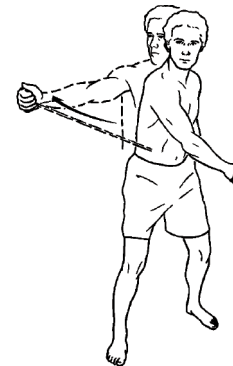
Functional movements that you use in the activity that you are going back to can be part of your rehabilitation programme. An

example of this is below for returning to tennis. These can be adjusted with the band depending on your required result.



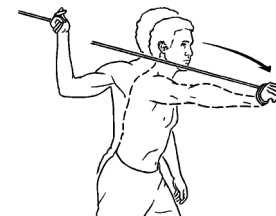
TENNIS FOREHAND

Using tubing, pull hand across body while pushing out with arm. This motion is identical to tennis forehand.



TENNIS BACKHAND

With feet perpendicular to tubing and arm across body toward tubing attachment, pull across body.



OVERHEAD THROW

With tubing behind, pull across body as though serving in tennis or throwing a ball.

Contact us

This guide is designed to assist you in the self-management of your injury/condition.

We are here to assist your recovery in the shortest but safest possible time. If you have any uncertainties or queries regarding the information, please do not hesitate to contact us on:

Phone 017890400999 / 07870166861
www.mdphysiotherapy.co.uk