**VIDEOS**

**INFLAMMATION**

1. Flexese patch
* Monitor for redness
* Take off it itchy or burning
* Take off once all the heat escapes
* Do not sleep with patch on (the increases pressure on skin will cause a burn and blisters)
* Strap corners on with tape or band aids
* Apply on dry skin
* Not waterproof (take off before shower and reapply)
* Give skin 12-24 hours break between patches
* Do not put heat pack over the top of patch
* Can use indefinitely
1. K tape
* Colour of tape does not matter
* Rock tape and k tape same
* Map your target area with pen
* Must get someone to apply
* Peel 1cm of tape away from backing, apply on skin, run finger down tape, stretch extra 20% and anchor down
* Put on dry skin, no moisture, Flexsall, or sweat
* Leave on for 1-5 days, monitor itchiness or redness
* Do not use if allergies to band aides
* Give skin 12-24 hours break before reapplying
* Approximate $2 metre is good price
* Use indefinitely
* Waterproof
* No crimples
1. Flexsall
* First fingertip
* Wash hands after use
* Test on back of hand first
* 3 x day for first week, 2 x day for second week and 1 x day for third week
* Must stop after this point and seek professional medical advice from doctor if pain persists
* Read instructions carefully
* Do not rub hard, but do rub completely in, wait until sticky, then put clothes on over it
* Should be cooling effect
* Don’t apply over k tape
1. GCM
* Refer to GCM word document
1. Fish oil
* Refer to fish oil word document
1. Antioxidants
* Refer to antioxidant word document
1. Hydro in upright position
* 32 degrees Celsius
* Use noodle around arms to raise upper body out of the water
* Do not touch floor of pool
* 30-45 minutes every day if you can
* Don’t drive more than 20 minutes to pool. You will undo all the good work
* Very boring, but effective
1. Hydro in supine position
* Same as hydro in upright position
* Use noodles on spine and legs to only leave mouth above water
1. How to reduce inflammation
* Ice 20 minutes on, 2 hours off, repeat if swelling, bruising, tenderness exists
* If swelling, bruising or tenderness does not exist only use ice if pain relief is noted
* Do not put ice on nerve injuries or fractures
* Heat 20 minutes on, infinite if no swelling, bruising or tenderness
* Flexese patches
* Avoid aggravation tasks
* Continue with NSAIDS for 1 week (nurofin, voltaren, advil, brufen, ibuprofen) as per prescribed, take with food. If problems persist please see a doctor
* Pain killers (tramadol, targin, endone, lyrica, naproxyn). Need to tell doctor if meds working, if not they will increase the dosage or change the meds weekly. A good sign you have the right meds is decreased morning stiffness.
* Topical creams (flexsall, voltaren, tiger balm) 3 times a day for 7 days, 2 times a day for days 8-14 and 1 times a day for days 15-21. Do not continue using topical creams after this. You must seek professional advice from doctor
* 4 forward and 2 backwards
* Antioxidants
* Hydro
* Neutral positions
* Rest
* Compression (sleeves, tubigrip, coban)
* Elevate
* Neoprene and silicone
* Braces
* Deloading exercises
1. How to use crutches
* The handle on the crutch should be the same height as the lateral hip bone
* If using a single crutch, the crutch is a representation of your affected leg. For example, if your left leg is sore, then when the left leg is moving forward then the crutch also moves forward and they both strike the ground at the same time.
* If using double crutches, firstly, the crutches hit the ground in front of you at the same time, then the good leg supports all the body weight equally with the other 2 crutches and the affected leg swings through in a non-weight bearing pattern
* Make sure you have a rubber stopper on the bottom of your crutches for better grip
* The butterfly wing nuts should be facing backwards
* Put some padded towels on the crutches to alleviate pressure building up under your arm pits
1. RICE
* Rest 1-2 weeks
* Ice if pain relief is achieved
* Ice for 20 minutes with a barrier between ice and skin (tea towel or wet dish cloth to avoid burning skin)
* Compression (SKINS, under armour, 2XU), braces, tubigrip, strapping tape
* You must continue compressing affected area until 1cm of swelling remains (simply measure the difference between the 2 sides)
* The more severe injuries have 0.5cm of swelling which remains for many months, and wearing compression will not have any affect
* If the affected area starts aching after a while, then remove for 30 minutes then reapply.
* You can wear to bed
* Skins are most effective at night time when you are sleeping (aid in healing)
* Elevation only applies to peripheral limbs like ankles, elbows, knees and wrists (the affected limb must be above your heart)
1. Tubigrip
* You must continue compressing affected area until 1cm of swelling remains (simply measure the difference between the 2 sides)
* The more severe injuries have 0.5cm of swelling which remains for many months, and wearing compression will not have any affect
* If the affected area starts aching after a while, then remove for 30 minutes then reapply.
* You can wear to bed
* Start with a single fold, then progress to double fold
* You must not be able to pinch any of the tubigrip, it should be firm
* The tubigrip does not have an inside, outside, upside or down side
* Do not put in washing machine, just hand wash gently
* E and F are the most commonly used sizes
1. Manual Handling (MH) Training
* Easier to watch video
* The key to manual handling is your feet position. “Keep feet wide, close to target and in the same direction as your hands”
* If the particular task at work or home won’t allow you to include all 4 MH techniques then this task is very stressful to the body and must be minimised and you may require help.
* You must imagine that everything you lift is very heavy and lift accordingly.
* Every lift you do incorrectly is doing your spine damage. You will eventually have to pay the piper. Lift correctly now, so you don’t pay for it later in life.
* Use the broomstick and back pack technique around the house to practise the MH techniques. Refer to broomstick and backpack technique.
1. ASO ankle brace fitting
* Indicated If allergic to strapping tape
* Can be used instantly after ankle injury
* After weaning off moon boot you can progress to wearing the ASO
* Can wear ASO during sport
* Keep sand and grass away from the velcro straps for longevity of the ASO
* Wear a sock under the ASO to avoid the brace rubbing on skin
* Do not make the brace too tight, there should be no red marks or sustained indentations on skin after removing the ASO
* After you have applied the ASO correctly, the rear foot should have very minimal inversion
* $55 is a good price for this item
* You must wear ASO indefinitely after injury has healed on the condition you must continue the proprioception exercises for 3-6 months
1. Moon Boot
* You should just see the tips of your toes
* The moon boot height is determined by comfort factor
* The moon boot should immediately give pain relief if fitted successfully
* You must wear moon to bed if able for first 2 weeks (minimise further stretching of damaged structures during sleep)
* After 2 weeks look to wean off boot and progress to ASO ankle brace
* If walking without moon boot is too painful still, continue for another week and reassess at end of week
* Do not use moon boot for more than 6 weeks straight (the muscle wasting is very severe and the rehab to strengthen the affected side is quite lengthy and sometimes too painful)
* There is no left or right moon boot
* The moon boot can be bigger than your actual foot size but not smaller
* Never throw out the moon boot, you never know when you will need it again or someone else
* Keep sand and grass away from the velcro straps for longevity of the moon boot
* Use the extra padding that comes with the moon boot, to make moon boot more comfortable and better fitting
* $35 is a good price for this item
1. Grip strength test with Dynometer
* Indicated if you have elbow pain
* You must have a grip Dynometer to perform this test. Your physio or doctor should have one.
* You must squeeze as hard as you can on the non-affected side and only to the onset of pain on the affected side
* Alternate arms when testing
* The affected side will be a bit sore after the testing

|  |  |  |  |
| --- | --- | --- | --- |
|  | LEFT (affected side) | RIGHT (non-affected side) | Percentage difference (%) |
| 0 degrees (arm straight down) | 11 | 30 | (11/30) = 37 |
| 90 degrees elbow bend | 14 | 32 | (14/ 32) = 44 |
| Arm straight out in front of you | 10 | 33 | (10/33) = 30 |
| Arm above head | 18 | 36 | (18/36) = 50 |

* Always go off the lowest percentage difference. (e.g. 30%). The elbow should improve 5-10 percent per week if you strongly adhere to tennis elbow protocol. Therefore, 7-14 weeks is the approximate healing timeframe for this tennis elbow injury
* Additionally, you must avoid the tasks that replicate your weakest and most painful position. (e.g. arm straight out in front of you).
* Repeat the test fortnightly to make sure you are on track in your recovery
* If all the percentage difference scores are under 50% than your elbow is still in the inflammation phase, and you must be doing everything to try and reduce the swelling and inflammation. Once all the percentage difference scores are above 80%, you can commence the strengthening program
* Make sure you are monitoring the non-affected side for any decreases in grip strength, this may indicate you are over exerting this side and may increase your risk of developing a strain on this side

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| --- | --- | --- | --- |
|  | LEFT | RIGHT | Percentage difference |
| 0 degrees (arm straight down) |  |  |  |
| 90 degrees elbow bend |  |  |  |
| Arm straight out in front of you |  |  |  |
| Arm above head |  |  |  |

1. How to apply jumpers knee brace
* Indicated if diagnosis: patella tendonitis, Hoffa’s pad, prepatellar bursitis or Osgood Schlatter
* Experiment with the pressure and location
* The aggravating task should feel better with the brace on compared to off
* No need to wear to bed or sitting tasks, just wear when standing
1. How to apply tennis elbow brace
* Make sure the neoprene is located on the extensor tendon
* Easier to watch video
* You will have to experiment with location and pressure to maximise effectiveness
* If you squeeze an object with moderate intensity and record the pain out of 10, apply the brace and squeeze the object with the same intensity and the pain should be less if you have the right location and pressure
* Only wear the brace when using your hands
* Must wear whilst sleeping, slightly lighter pressure than during the day. When you are asleep you are constantly straightening the elbow and this will inevitably cause irritation to tendon and you will wake up stiff and sore otherwise
* You must not wear for more than 6 weeks in a row, if pain persists see a health professional for further advice
1. Muscle strain self-managing
* Avoid aggravating tasks at all times for the first 3 days
* Move slowly and carefully
* Flexsall immediately 3 x a day
* If ice helps decrease pain continue for 20-minute periods and 2 hours off for first 3 days
* If ice does not help reduce pain, attempt heat for 20 minutes, if this reduces pain then the muscle is tight not strained, continue to heat if this is the case for the next 3 days.
* Essentially, heat will increase blood flow to muscle that is strained and cause more swelling and pain
* K tape immediately over affected area
* Attempt to stretch the affected side after 3 days, if the pain persists see a physio
1. How to apply lower back brace
* Indicated if acute lower back injury, spondylisthesis grade 2, acute flare up of Spondylisthesis grade 1
* Easier to watch video
* Only wear the brace for 2 weeks, no longer
* The brace should feel tight but not effect your breathing
* You can adjust the height the brace sits on your back to make it more comfortable
* You can also adjust the side straps in different directions and tensions to make it more comfortable
* You will have to experiment with the different locations and tensions in different positions (sitting and standing)
1. How to apply shoulder brace
* Easier to watch video
* Indicated if acute shoulder injury
* If the shoulder starts to ache or throb then remove the brace for 30 minutes then reapply
* The brace must be in contact with skin
* If tolerated you can wear to sleep at night
* Must not wear more than 2 weeks
* Hand wash, do not place in washing machine
* If the brace is irritating the skin you can put a thin shirt on, and the brace can be placed over the shirt
* The brace is not designed to stop you from moving the shoulder, however its main objective is to provide improved healing and support
1. T-Rex
* Indicated when the shoulder is acute, inflamed or strained
* If T-Rex can do it, you can do it
* Basically, no reaching away from the body or above shoulder height
* Keep the affected elbow attached to ribs
* Alternately you can put affected arm into your pocket and this will keep the elbow close to the body, support the weight of the arm and minimise the times you will use the affected arm
* You will have to utilise T-rex 100% of the day for 1 full week, any tasks performed away from the body will inflame the shoulder and defeat the purpose.
* After 1 week of utilising T-Rex, you can slowly start reaching further away from the body as pain allows you (you must move slowly and carefully and let pain guide you). “if it hurts don’t do, if it is pain free go for it”
1. How to apply a carpal tunnel brace
* The metal rod should be on the non-hairy part of the wrist
* Do not need to have it tight
* Hand wash if required
* The brace will not last if you are performing rigorous manual tasks with it daily
* The brace should stop you from bending your wrist towards non-hairy side of hand
* You must take your hand out of the brace to perform stretches
* Only use the brace when using the hands
* Sometimes people like to wear the brace to bed. You will have to wear the brace at night time whilst your sleeping if you are waking up in the morning with pins and needles or increased pain in hands and wrist
* You must measure around the wrist first:
* XS < 14 cm
* S 14-16cm
* M 16-19cm
* L 19-21cm
* XL > 21cm
* Wear the brace until you can perform a Tinels test for 60 seconds with no pain and no pins and needles
* Do not wear the brace for more than 6 weeks in a row, due to the severe weakness it creates from not using it properly
* If problems persist after using the brace seek medical attention
1. How to apply Thumb tendonitis brace
* Do not need to have it tight
* Hand wash if required
* The brace will not last if you are performing rigorous manual tasks with it daily
* The brace should stop you from bending your thumb in towards your little finger
* You must take your hand out of the brace to perform stretches
* Only use the brace when using the thumb
* Sometimes people like to wear the brace to bed. You will have to wear the brace at night time whilst your sleeping if you are waking up in the morning with pins and needles or increased pain in thumb
* You must measure around the wrist first:
* S 14-16cm
* M 16-19cm
* L 19-21cm
* Wear the brace until no pain and no pins and needles persists
* Do not wear the brace for more than 6 weeks in a row, due to the severe weakness it creates from not using it properly
* If problems persist after using the brace seek medical attention
1. Ergonomic advice for Elbow
* Minimise elbow straightening and wrist flexion movements
* Keeping your affected hand in your pocket is an easy technique and very effective in resting the elbow. You will minimise the use of the hand and forearm muscles, the elbow is supported and its not hanging down by your side and stressing the joint.
* Minimise use of the middle finger on the affected side. This particular finger is the ECRB and its responsible for approximately 75% of all elbow injuries.
* Use tennis elbow brace throughout the day. If you can’t tolerate tennis elbow brace use a tubigrip to compress the swelling and reduce pain.
* Wear carpal tunnel brace on affected side to avoid wrist flexion movements
* Avoid gripping, driving, accidently hitting the elbow on objects and reaching tasks
* Experiment with ice, heat and ice and heat together.
* Use flexsall as directed
* Use k tape as directed
* You must perform all the above mentioned for 1-2 weeks, if the elbow is slowly improving, you must continue and refer to tennis elbow video for further instructions.
1. How to Assess knee
* Refer to knee Ax word document
1. Elbow assessment
* Refer to elbow assessment work document
1. Heat
* Wheat bags, hot water bottles, warm showers
* 20 minutes on
* As often as possible
* Do not put on swollen joint
* Monitor skin and make sure it isn’t red or pinkish colour. This means the skin is heating up too much and the pores of the skin will not be open enough to allow heat to penetrate deeper into the muscle and relax them.
* The temperature you start with in a bath and shower mustn’t be changed.
* If the heat makes the area worse or more painful, then stop the application of heat
1. Ice
* Pack of peas, ice bricks, ice cubes, gel packs
* 20 minutes on, 2 hours off, and repeat
* Monitor skin and make sure it isn’t red or pinkish colour. This means the skin is cooling down too much and the pores of the skin will not be open enough to allow the ice to penetrate deeper into the muscle and reduce the swelling.
* You should always have a barrier between the ice source and the skin (e.g. tea towel, cloth)
* If the ice makes the area worse or more painful, then stop the application of ice
* Do not apply ice to a nerve injury (pins and needles, numbness or weakness)
* Only apply ice if it reduces pain, ice can actually reduce the healing proteins and enzymes that help repair the damaged tissues.
1. Sleeping pillow height
* Lay on your back with your pillow
* Knees bent up like your about to do a sit up
* Make sure there is a 1 finger gap between pillow and top of shoulders
* Get someone from the side to check chin lines up with forehead. Adjust pillow accordingly until parallel.
* If a side sleeper, assess in side lying
* Middle of chin shoulder match up with middle of forehead, make adjustment if applicable
* ***(POINT 7)*** If you want to rest neck during the day, use the same pillow height in supine throughout the day
1. Lower back assessment
* FF – stand with feet shoulder width apart and square
* No bend in knees, feel burn behind the knees and hamstrings
* Bend forward and try and touch your toes
* Get someone to measure distance from tip of middle finger to ground
* Do not bounce stretch
* Ext – same position as above
* Bend straight back
* Record when the pain starts (either the start, middle or end of the movement)
* Repeat to the left
* Repeat to the right
* LF – Stand up against wall, feet shoulder width and square, heels slightly away from wall
* The head must stay up against wall, it can tilt to the side and the opposite foot must stay on the ground, reach down the leg, record distance from middle finger to ground, repeat other side
* Be perfect
* SLR – Lay on back, one leg bent up like you are about to do a sit up and the other leg completely straight
* Pull toes back towards head, lock the knee (no bend), tense quads
* Raise leg as high as possible “feel the burn”
* Record degrees on each leg 0-90 degrees
* Piriformis – Sit on front edge of chair
* Refer to video
1. Knee deloading exercises
* Indicated if knee pain is present
* Easier to watch video
* 2 finger gap between edge of bench / chair and back of knee
* Foot needs to be in the air, cannot touch the ground
* Can use towel or cushion under hamstring to provide elevation
* Attempt to do this exercise bilaterally
* After a minute slowly straighten the knee and bend back to resting position 3 times, then leave knees in resting position again for another 1 minute
* Repeat as many times a possible
* If you are standing a lot during the day you will have to perform an increased amount of this exercises
* 80% of your body weight is going through your knees whilst standing

**STRETCH**

1. Median nerve stretch
* Always assess first
* Start on most affected side first
* When they are equal, stretch equally
* 2 second hold, 6 reps left (4-10 times a day)
* 2 second hold, 6 reps right (4-10 times a day)
* Either unilaterally or bilaterally
* Start with hands by your side in the penguin stance
* Move arms away from body in line with shoulders
* Stop when burning starts, hold 2 second stretch, release wrist only, hold arm in same position, repeat 6 times, slowly increase arm towards ceiling with each rep
* “feel the burn”
* Stop exercises when full ROM achieved and or no pins and needles anymore
1. Ulnar nerve stretch
* Same rules as median nerve stretch
* Watching video is easier to follow then verbal instructions
* “watching TV”
1. Radial nerve stretch
* Same rules as median nerve stretch
* Watching video is easier to follow then verbal instructions
* “waiters tip”
1. Lower limb assessment

|  |  |  |
| --- | --- | --- |
| MUSCLE | LEFT | RIGHT |
| Gastro |  |  |
| Hip flexors |  |  |
| Hamstring |  |  |
| Glute med |  |  |
| Adductor |  |  |
| Quad |  |  |
| Piriformis |  |  |
| ITB |  |  |
| Quadratus Lumborum |  |  |
| Soleus |  |  |

* Indicated if pain is present in lower limbs or lower back
* Stretch the appropriate muscles on the affected sides for 1 week
* Reassess after a week and continue with muscle that appear to be tight still and stop the muscle that have achieved equal length
* All stretches are 3 x 30 seconds 4 times a day
* The first set should be light intensity, the second set should be moderate intensity and the third set should be moderate to high intensity
* All stretches should never be painful just straining the muscle is sufficient
* Never bounce the stretches, maintain smooth, slow and controlled technique
* Once all muscles are equal, stop stretching for 4 weeks, reassess at the 4-week mark and stretch appropriately
* If the pain starts back up again after stopping the stretches, commence stretching again of the muscles that still remain tight after reassessing them
* Generally, the last muscle that remains tight is the main cause of the pain to affected site. You may need to closely monitor this muscle length regularly to maintain correct length at all times to avoid future injuries and pain
1. Subscapularis stretch
* Indicated if external rotation is reduced on affected side
* 3 different positions (supine, standing with broomstick and standing with wall)
* Heat the shoulder up before stretching
* All stretches are to be 3 x 30 seconds, 4 x a day until equal ROM with non-affected shoulder has been achieved
* Experiment with the different stretches and use the stretch that is most effective (gains ROM) and doesn’t irritate the shoulder
* Easier to watch video
* The first set should be light, second set moderate intensity and third set moderate to high intensity
* When holding the shoulder in the same position whilst stretching, the shoulder should never be increasing in pain, reduce the ROM of the stretch if this is occurring
1. Supraspinatus stretch
* Indicated if internal rotation is reduced on affected side
* Make sure the towel is on the nonaffected shoulder and affected thumb is pointing up the spine
* All stretches are to be 3 x 30 seconds, 4 x a day until equal ROM with non-affected shoulder has been achieved
* Easier to watch video
* Heat the shoulder up before stretching
* The first set should be light, second set moderate intensity and third set moderate to high intensity
* When holding the shoulder in the same position whilst stretching, the shoulder should never be increasing in pain, reduce the ROM of the stretch if this is occurring
1. OA distraction of the thumb
* Confirm OA with an x-ray. This technique will only work on mild, mild – moderate and moderate OA in the thumb. Sometimes works for moderate – severe and severe OA in thumb and sometimes aggravates the thumb even more.
* Easier to watch the video
* Your own placement of the non-affected fingers is key to the amount of traction and weather it will be effective
* Start with a 5 second interval distraction x 5, then progress to a 30 second interval distraction x 10. You will have to experiment with how many you can do, how long you hold it for and how often you perform the technique. Once you find the winning recipe, you must stick with it until pain free and full ROM. After this point you must continue the technique for only half the frequency of the winning recipe.
1. Lx rocks
* Are designed for joints in lower back. If they aggravate the back, please cease immediately
* Lay on back in sit up position
* Glue ankle and knees together
* Move legs equally from side to side, small amplitude for 30 seconds
* Progress to larger amplitude every 30 seconds
* When moving to left side, you are stretching the right joints
* Definitely prefer in AM
* 2-3 times a day, just listen to your back and it will tell you how frequent you should stretch
* Straight after hydro or hot shower as a well
1. Knee to chest exercises
* Are designed for people with spinal stenosis. If they aggravate the back, please cease immediately
* Lay on back in sit up position
* Slowly bring your knees to your chest, the distance you bring the knees towards your chest is dependant on your comfort level
* Hold for 30 seconds, bring the legs back to the starting position
* Repeat immediately
* You will have to experiment with the amount and frequency
* 2 x 30 second 2 x a day, 3 x 30 second 3 x day, 4 x 30 second 4 x day etc
* Most common is 6 x 30 second 6 x day
* The back should either feel better after or gain more ROM pain free
* These exercises must be performed before getting out of bed
* If increased standing or walking is performed, then you will have to increase frequency of exercises
1. Quadratus Lumborum stretches
* The stretches are always 3 x 30 second holds, 4 x day until desired ROM reached
* It takes 1 day to loosen 1cm in the muscle (e.g. if 6cm tight, then stretch for 6 days)
* If you are stretching the right side, therefore move left arm down left leg, bring right arm over the head into a teapot position and slightly lean forward. You should feel stretch in right lower back only. Adjust if necessary.
* Increase frequency of stretches if lifting and sitting a lot during the day.
* The desired measurement for both QL muscles is 43cm
* Reassess in morning when you wake up for a true reflection of the length of the muscle
* Heat the muscles up with heat packs or warm showers first, this will make the muscles easier to stretch
1. Piriformis stretches
* The stretches are always 3 x 30 second holds, 4 x day until desired ROM reached
* These muscles are notoriously stubborn and need to be stretched aggressively, frequently and for at least 2 weeks
* If you are stretching the right side, therefore place right ankle on left knee, sit up very tall and lean forward from the hips, you should feel stretch in right buttock area and possibly into outside hip region.
* The desired measurement is both to be 90 degrees or parallel to ground
* Alternate stretch (easier to watch video)
* Heat the muscles up with heat packs or warm showers first, this will make the muscles easier to stretch
1. Straight leg raise stretches
* The stretches are always 6 x 2 second holds, 4- 10 times a day until desired ROM reached
* The desired measurement is both to be 90 degrees
* The first few days get someone to help you stretch, then after a few days you should be able to perform the exercises yourself
* Easier to watch video
* Sitting stretch
* Standing stretch
* Think of it as a pumping action rather than a stretch
* Constantly reassess during day, if you are losing the ROM quickly, then you will have to increase frequency of stretches
1. Forward and extension stretches
* Quite simply bend forward and try and touch your toes, no pausing, then return to start position and begin bending backwards
* If the exercises are making the back worse, then cease immediately
* Always look for the exercises to get easier and gain ROM and definitely not make your pain worse and lose ROM
* The frequency is generally 10 times a day
1. Mackenzie back extension exercise
* Indicated when you have a disc bulge
* Do this exercise if bending forward hurts, but bending backwards feels good
* Attempt to perform the exercise in prone first, then progress to standing after a few days
* Easier to watch the video
* You will have to experiment with the frequency, reps and hold times
* 5 second hold x 5 reps, 5 x day, 10 second hold x 10 reps, 10 x day and 30 second hold x 5 reps, 5-10 x day are the most common
* If increased lifting and sitting is performed during the day then increase the frequency of the stretches
1. Frozen shoulder stretches
* Indicated when the shoulder feels tight and or sore
* Easier to watch the video and download the pictures
* You must spend 1-2 weeks using Flexsall, heat, rest, not sleeping on affected shoulder and k tape first before attempting these stretches to reduce risk of flaring shoulder up
* Fever, lazy man, stop sign, 12 o’clock, snow angel
* You must only perform the stretches in the morning because the shoulder has healed overnight and the tendons are more susceptible to stretching when they haven’t been loaded up by any lifting yet.
* Heat the shoulder up with warm shower or heat pack first before stretches to help make the tendons easier to stretch
* 3 laps must be performed, on your back and in the same order each time for between 30-60 seconds
* No help from anyone else, however you can use your nonaffected hand to help push the stretches harder if tolerated
* You must continue the stretches until the shoulder has achieved full ROM pain free and it resembles the good side in ROM. Can take weeks to months to achieve this result.
* If the shoulder gets sorer the more you are holding it in the same position, the stretches need to be stopped immediately and you must return to trying to reduce inflammation in the shoulder.
1. Gastro stretches
* Easier to watch videos
* Straight knee, towel, standing
* 3 sets of 30 seconds, 4 times a day
1. Soleus stretches
* Easier to watch videos
* Bent knee, standing, sitting
* 3 sets of 30 seconds, 4 times a day
1. Glute med stretches
* Easier to watch videos
* supine
* 3 sets of 30 seconds, 4 times a day
1. Adductor stretches
* Easier to watch videos
* Supine, standing
* 3 sets of 30 seconds, 4 times a day
1. Hamstring stretches
* Easier to watch videos
* Chair, supine
* 3 sets of 30 seconds, 4 times a day
1. Quad stretches
* Easier to watch videos
* Standing with bench, side lying or prone with assistance
* 3 sets of 30 seconds, 4 times a day
1. ITB release
* Easier to watch video
* Daily is advised
* Someone performing the release is easier
* Always go from hip to knee direction
* Concentrate on sore and tight areas
1. Thoracic rotation stretches with broomstick or up against the wall
* Assess your ability to rotate to the left and right with a broomstick in sitting and standing, watch the video
* Assess your ability to rotate to the left and right up against the wall, watch the video
* Just think of your body as a piece of mouldable putty. It starts cold and stiff and then with increased friction heat from performing the exercises you are able to mould the body to the ROM you require.
* You will need to regularly assess your rotation throughout the day and stretch before the body loses the ROM and not after. Generally, 4 times a day is enough.
* You do not need to continue stretches if you have achieved full ROM on both sides pain free.
* You will need to experiment with how long you hold the stretches for and how many you perform to achieve optimal results. Generally, stretching for 1.5 minutes to one side is enough. Performing 9 reps with 10 second hold stretches is recommended.
* If the stretches are slowly increasing the pain levels then the Thoracic spine is inflamed and stop stretches immediately. You will have to reduce the inflammation before proceeding again next week. Refer to how to reduce inflammation video.

**MASSAGE, TPR, TAPING AND POSTURE**

1. Bak balls
* Start with soft balls first then progress to harder balls
* Lay down in sit-up position
* Perform on carpet
* Shirt off preferably
* Start just below lump in base of neck
* Get someone to check and make sure balls are level
* Can use elbow to alleviate pressure on balls
* Stay on level for 30-60 seconds
* “If its sore you stay on it until it’s not sore”
* The sorer it is, the longer you stay on it
* Should be sharp pain for first 10 seconds, then drops off to dull ache, then 40-60 second mark slowly decreases in pain
* Don’t move from side to side to get more comfortable
* Lift bum up and push with heels
* Stop when pain increases again
* Good pain, not a bad pain
* Makes you sleepy and drowsy
* When going through Tx, you might hear clicks and cracks, this is normal
* The pain must not increase, they must always stay the same or decrease. Get off the level that is increasing pain the longer you spend on it
* Can use 24 hours a day
* May get DOMS effect after
* Feeling of lightness after
* Heat before and after
1. Achilles Taping
* Easier to watch video
* You have to get someone to help you
* Keep tape on for 3-4 days, if tape becomes itchy, sore or uncomfortable please remove
* Give the skin 1-day rest before retaping and repeat 1 more time if necessary. Should be taped 3 times in 14-day period
1. Ankle taping
* Shave ankle first for better adhesive quality and doesn’t hurt when tape is removed in a few days
* Always easier when someone does it for you
* Easier to watch video
* Give the skin 1-day rest before retaping and repeat 1 more time if necessary. Should be taped 3 times in 14-day period
* Never tape over broken skin
* Once you have finished the taping, the rear ankle should only have very minimal movement into inversion and eversion
1. Soft tissue massage to gastro
* Easier to watch video
* Always go in the same direction and follow the contours
* Always apply dorsiflexion whilst massaging
* Focus on tight and sore areas
* Daily is advised
1. Soft tissue massage to plantar fascia
* Easier to watch video
* Always get someone to help you
* Supine with dorsiflexion
* Toes to heal direction
* Concentrate on inside muscles
* Try to iron out the snapping, popping and crackling
* Daily is advised
* Can progress to thumb pressure after a week of using hand and palm
* Use combination of deep heat, voltaren, flexsall with vitamin E cream
* Preheat the foot with warm shower, heat pack or hot water bottle before massage
1. How to trigger point
* A trigger point is also known as a knot in your muscle
* An inflamed and tight location within the muscle belly
* Trigger points are in the same location in every one and every muscle has different amount of active trigger points
* You can use any device or part of your hand that is most comfortable, the pressure is the key
* Find the area of concern, push lightly on the sore area for 3 seconds, release, apply same pressure again for 3 seconds, repeat as required. The pain should slowly decrease the more reps you perform. You may have to experiment with the time and pressure you exert on the painful area to achieve best results
* You will know you have been effective when either the pain has decreased, ROM has improved or you feel looser and better
* If the area of concern is getting sorer the more you are pushing it, avoid trigger point therapy because the muscle maybe structurally damaged or torn
1. MCL taping
* Easier to watch video
* Apply strapping tape at least 3 times with 2-week period
1. Plantar fascia taping
* Easier to watch video
* Make sure you pull your toes back to about 75% in either prone or supine position
* Always start on the little toe side
* Apply 3 times in a 2-week period if effective
1. Upper trapezius relaxation exercise
* Towels for face
* Beach towels for shoulders
* Stopwatch for 10 minutes
* Heat pack
* Must do for 1 week
* Get someone to check UT floppy
* Broomstick on centre of back to see if straight
* 10 minutes before bed
* Sometimes when you get home from work in afternoon
* Give headache rating out of 10 and location, perform the UT relaxation exercise for 10 minutes, reassess. If 100% of headache is gone, therefore 100% of headache from neck tension. If 50% of headache is gone. Therefore 50% of headache from neck tension and 50% from vasoconstriction of blood vessels (take a Panadol). If no relief from UT relaxation exercise, therefore neck tension is not causing headache, see doctor for other causes.
1. Soft tissue massage to Tibialis Anterior and peroneals
* Indicated if you have shin splints, MTSS, shin pain, lateral lower leg pain
* Easier to watch video
* Must choose the direction and stick with it throughout the massage
* Start with hand pressure and progress to finger and thump pressure when tolerated
* Focus on sore and tight areas
* The more you massage the affected area the easier or less painful it should become, if the area of concern is getting sorer the more you massage than its possibly too inflamed to massage and you should rest for the next 3 days and attempt massage in 3 days again
* Daily is advised
1. Forearm flexor stretch and Soft tissue massage
* Indicated if carpal tunnel, medial epicondylitis of the elbow (golfers elbow), forearm flexor tendonitis and cubital tunnel syndrome
* Easier to watch video
* All stretches are to be 3 x 30 seconds, 4 x a day until equal ROM with non-affected shoulder has been achieved
* Heat the arm up before stretching
* The first set should be light, second set moderate intensity and third set moderate to high intensity
* When holding the wrist in the same position whilst stretching, the wrist or forearm should never be increasing in pain, reduce the ROM of the stretch if this is occurring
* If pins and needles persist, stop the stretching immediately and if the wrist is clicking, cracking or increasing in pain
* You can slowly rotate the wrist to isolate the flexors that are the tightest
* When the Tinels test is negative and or you can place both hands in the prayer position you can stop the stretches (make sure the elbow is level with wrist)
* When massaging the forearm, you must pick one direction and stick with it (generally elbow to fingers is the most common)
* You must keep the fingers flat, elbow straight and the wrist bent always whilst massaging
* Focus the massage on the sore areas and iron them out like using an iron on a crinkled shirt (increased pressure and repeat a few times)
* Once a day for the massage is fine
* Stretching immediately after massage is very important
* Easier when someone else is performing the massage for you
1. Soft tissue massage to forearm extensors
* Indicated if lateral epicondylitis of the elbow (tennis elbow), forearm extensor tendonitis, forearm pain and thumb tendonitis
* Easier to watch video
* Heat the forearm up before massage
* Use a deep heat and vitamin E cream together for massaging
* Start light and progress to harder pushes as time goes on, never put direct pressure on tendon right next to the outside elbow (it will generally be too painful and tender to touch anyway)
* When holding the wrist in the same flexed position whilst massaging, the wrist or forearm should never be increasing in pain, reduce the ROM of the stretch if this is occurring
* If pins and needles persist, stop the massaging immediately
* When massaging the forearm, you must pick one direction and stick with it (generally fingers to elbow is the most common)
* You must keep the fingers flat, elbow straight and the wrist bent always whilst massaging (use a towel under wrist to prop into correct position)
* Focus the massage on the sore areas and iron them out like using an iron on a crinkled shirt (increased pressure and repeat a few times)
* Once a day for the massage is fine
* Stretching immediately after massage is very important
* Easier when someone else is performing the massage for you
1. Trigger point Supraspinatus muscle
* Perform the impingement test first (place affected side hand onto the opposite shoulder and lift the elbow up towards the sky). Note how high you are able get before pain starts. After the trigger point session, you will have to repeat this same test and you should be able to lift the elbow a lot higher if you’ve been successful in loosening the supraspinatus muscle and releasing the trigger points
* Heat supraspinatus for 5-10 minutes before starting
* Easier to watch video for location and technique
* Push on the trigger points for 3-15 seconds, repeat if necessary until sharp pains resolve. Should take about 5-10 minutes.
* Heat the supraspinatus muscle for another 10 minutes and ice the tip of the shoulder at the same time to reduce inflammation in bursa. Laying on the good side is the best position and most comfortable
* Repeat the impingement test again
* It helps maximise the effectiveness of the session if you can minimise the usage of the affected side for the next 6-10 hours
* Repeat once a day.
* Perform the trigger point sessions until the impingement test is negative for 3 days straight without pain
1. Cubital tunnel release
* A simple ultrasound can confirm the presence of cubital tunnel syndrome. Talk to Doctor about getting a referral.
* Signs and symptoms of Cubital tunnel syndrome include: pain is generally on the inside of the elbow, pain on the non-hairy part of the forearm, into the little finger, pins and needles into forearm, weakness in gripping and picking up objects. Also leaning on forearm hurts.
* Cubital tunnel syndrome will not tolerate ice, if the elbow likes the ice then its more likely to be golfer’s elbow (inflammation of the tendons and ligaments in the elbow). Heat is definitely the better modality of temperature.
* Heat the forearm up with a hot shower or wheat bag before massaging then combine some flexsall and vit E cream together, adjust the arm into a comfortable position. Always direct your massage from wrist to elbow direction, start with light pressure and slowly increase the pressure over time. Never touching the medial elbow. If the pain is slowly increasing the more you are massaging then stop immediately and refer to how to reduce inflammation video, before trying again in another week.
* Generally, 10 minutes a day is enough every second day. Always start with wrist bent into flexion and slowly straighten the wrist as the massage goes on.
* You may experience DOMS (achy forearm muscles) after the first 1-3 attempts, this is normal. DOMS is part of the healing and repairing process.
1. Back pack with broomstick
* Strap a broomstick to a school back pack
* Use this around the house to reinforce good posture whilst chores and home life
* Can also use with core exercises
* You must have 3 points of contact (back of head, middle of shoulder blades and tail bone) at all times
* Trial for 10-14 days
* After 10-14 day trial you should feel like its easier to sit with a better posture and sitting with incorrect posture actually hurts and makes the spine ache and feel uncomfortable
1. Upper trapezius TPR from partner
* Either on your back or face down
* Cause of headaches, neck stiffness and pain in shoulders and neck
* Heat the muscles up first with wheat bag or warm shower
* Easier to watch video
* “You want to push on the part of the muscle that hurts, not on the part of the muscle that feels fine”. This area is known as trigger point.
* 2-10 second holds are required. If the particular area is stubborn in decreasing the pain, then you must release the pressure and then repeat again on the same spot 3-4 times until pain decreases. If the pain is slowly increasing the more you are holding it, stop immediately, refer to the video on how to reduce inflammation and commence the technique again in a week as tolerated.
* Can perform this technique as often as possible and for as long as tolerated.
1. Self-trigger point LS and UT
* Location of LS
* Location of UT
* Find the sore spot, push for 5 – 10 seconds, repeat on same spot until pain has resolved
* If the pain increases, get off the trigger point
* Keep searching for painful areas that feel sharp and travel away from the area you are touching
* Repeat infinitely
* Reinforce with opposite hand
* Change position of neck to find additional trigger points
1. Broomstick postural exercise
* Assess in sitting
* Put broomstick up against spine
* Broomstick must be perpendicular
* Tailbone, Tx and back of head touching the broomstick
* Maintain normal curves of Cx and Tx
* Hold for 5 seconds first day, 10 seconds second day, 15 seconds third day, 20 seconds fourth day, 25 seconds fifth day and 30 seconds sixth day to 14th day.
* Never return to old posture
* Repeat as often as you can
* At the end of 2 weeks you should be able to sit in perfect neutral position with ease and no pain, and sitting in old postural position will equal pain and stiffness immediately.
* Can use bucket seats in cars, wall or broomstick in backpack as well.

**STRENGTHENING**

1. VMO
* Easier to watch video
* Need to have the affected leg externally rotated
* You can attempt any of the mentioned positions (long sitting, sitting, coffee table)
* Quality over quantity
* After a week of performing the exercises the ITB and VMO should appear to the naked eye to contract at the same time
1. Eccentric biceps exercise
* Indicated if you have been diagnosed with biceps tendonitis
* Easier to watch video
* 3 sets of 12 reps with 1 minute rest period, once a day for 4 weeks
* You must slowly increase the weight lifted each week
* You must only be lifting the weight away from you and not towards you
* Can perform the exercises in sitting or standing
* Eccentric means lengthening at end of range under load
1. Calf raises
* 3 sets of 12 reps with a 1-minute rest period, once a day for 4 weeks
* First set slightly externally rotated feet, second set neutral feet and third set very slightly internally rotated feet
* Keep the knees straight at all times
* Full ROM at all times
* Add weight if necessary, in a back pack or dumbbells
* Attempt single leg calf raises once double leg calf raises become too easy
* Use a handrail, table or bench to hold onto for safety, assistance and support
1. Rotator cuff exercises in side lying with dumbbell
* Indicated when rotator cuff is weak and you have at least ¾ ROM in all directions pain free
* 3 sets of 12 reps with 1 minute rest period, once a day for 4 weeks
* You must slowly increase the weight lifted each week (start with no weight, after a week progress to 0.5 kg, then 1kg, etc.). Aim for 2.5kg for women and 5kg for men by the 4-week mark.
* You must maintain affected elbow close to ribs and in line with shoulder, the temptation is for the affected elbow to move forwards
* 90 degrees in the elbow must be maintained as well. Straight wrist with no bend also required (use paddle pop sticks and rubber band if required). Light hand grip.
* If the anterior (front) of the shoulder is sore after the exercises, then your technique is going to high and you need to reduce the ROM next time.
* Additionally, if the side of the arm is sore after the exercises, then your elbow has lifted off the ribs and you may need someone to help push your arm down during the exercises
* It should take you 2 seconds to go up, with no pause then 2 seconds on the way down
* Use kitchen scales to measure the weights lifted, even 250 gram increases are helpful each day
1. Rotator cuff exercises in standing with Theraband
* Indicated when rotator cuff is weak and you have at least ¾ ROM in all directions pain free
* 3 sets of 12 reps with 1 minute rest period, once a day for 4 weeks
* You must anchor the Theraband to something that is just above elbow height to just above shoulder height
* You must slowly step away each day from where the Theraband is anchored to, this will increase resistance
* You must maintain affected elbow close to ribs and in line with shoulder, the temptation is for the affected elbow to move forwards
* 90 degrees in the elbow must be maintained as well. Straight wrist with no bend also required (use paddle pop sticks and rubber band if required). Light hand grip.
* If the anterior (front) of the shoulder is sore after the exercises, then your technique is going too far away from your body and you need to reduce the ROM next time.
* Additionally, if the side of the arm is sore after the exercises, then your elbow has lifted off the ribs and you may need someone to help push your arm into your body during the exercises
* It should take you 2 seconds to go out, with no pause then 2 seconds on the way in
* Start with the yellow, progress to red, green and finally blue if tolerated
* Monday, Wednesday and Friday facing north, Tuesday, Thursday, Saturday facing south
* At the 2 week mark you must start to rotate the body 45 degrees away from where the Theraband is anchored. At the 3 week mark you should be 60-70 degrees and by the 4 week mark you should be at 90 degrees. Easier to watch the video.
* No clicking, cracking or crunching during the exercises
1. Re-alignment squats
* Easier to watch video
* Must use magazine, box and chair initially and slowly wean off them by 2-week mark
* Goal is to perform 3 eyes closed perfect squats with no assistance
* 30 times a day (15 in the morning and 15 at night). Do not perform them all at once
* 10 days straight
* Once you have achieved perfect squat technique, then you must maintain this by performing 30 reps a week, spread throughout the week indefinitely
* The key is: making the knees hit the vertical edge at the same time as the bum touches the chair, maintaining the V between the knees, neutral feet position and upper body lean forward to counteract buttock going backwards. The down phase is just as important as the up phase.
* Do not allow the knees to bend too early
* The foot on the weakest side, not necessary the affected side will consistently try to turn outwards and you must keep correcting the foot after each rep
* The depth of the squat is determined by your ability to not let the nose and knees go over the toes
1. Co-contraction exercise
* Always start in long sitting with a towel under knee
* 3 sets of 12 reps with a 1-minute rest period twice a day, every day
* Once the long sitting exercises become easier progress to lying down and remove the towel
* Slowly progress the angle or height you lift the affected leg above the ground
* You must not have lag or pain in the knee at any time
1. Plank (structured 8-week program)
* Easier to watch video of the structure and technique and print off the program

1st week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 20 second | 1 set | 21 second | 1 set | 22 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 2 set | 17 second | 2 set | 18 second | 2 set | 19 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 3 set | 16 second | 3 set | 17 second | 3 set | 18 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 4 set | 14 second | 4 set | 15 second | 4 set | 16 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 5 set | 13 second | 5 set | 13 second | 5 set | 13 second |
| TOTAL  | 80 seconds |  | 84 seconds |  | 88 seconds |

2nd week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 24 second | 1 set | 25 second | 1 set | 26 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 2 set | 21 second | 2 set | 22 second | 2 set | 23 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 3 set | 20 second | 3 set | 21 second | 3 set | 22 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 4 set | 18 second | 4 set | 19 second | 4 set | 20 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 5 set | 15 second | 5 set | 16 second | 5 set | 16 second |
| TOTAL  | 98 seconds |  | 103 seconds |  | 108 seconds |

3rd week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 28 second | 1 set | 29 second | 1 set | 30 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 2 set | 25 second | 2 set | 26 second | 2 set | 27 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 3 set | 24 second | 3 set | 25 second | 3 set | 26 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 4 set | 22 second | 4 set | 23 second | 4 set | 24 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 5 set | 18 second | 5 set | 20 second | 5 set | 22 second |
| TOTAL  | 117 seconds |  | 103 seconds |  | 129 seconds |

4th week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 30 second | 1 set | 30 second | 1 set | 30 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 2 set | 29 second | 2 set | 30 second | 2 set | 30 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 3 set | 28 second | 3 set | 30 second | 3 set | 30 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 4 set | 26 second | 4 set | 27 second | 4 set | 30 second |
| 60 second rest |  | 60 second rest |  | 60 second rest |  |
| 5 set | 24 second | 5 set | 27 second | 5 set | 30 second |
| TOTAL  | 137 seconds |  | 144 seconds |  | 150 seconds |

5th week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 35 seconds | 1 set | 37 seconds | 1 set | 39 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 2 set | 33 seconds | 2 set | 35 seconds | 2 set | 37 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 3 set | 31 seconds | 3 set | 33 seconds | 3 set | 35 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 4 set | 29 seconds | 4 set | 31 seconds | 4 set | 33 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 5 set | 27 seconds | 5 set | 28 seconds | 5 set | 29 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 6 set | 26 seconds | 6 set | 27 seconds | 6 set | 28 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 7 set | 25 seconds | 7 set | 26 seconds | 7 set | 27 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 8 set | 25 seconds | 8 set | 26 seconds | 8 set | 27seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 9 set | 25 seconds | 9 set | 26 seconds | 9 set | 27 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 10 set | 24 seconds | 10 set | 25 seconds | 10 set | 26 seconds |
| TOTAL | 280 seconds |  | 294 seconds |  | 308 seconds |

6th week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 42 seconds | 1 set | 44 seconds | 1 set | 46 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 2 set | 40 seconds | 2 set | 42 seconds | 2 set | 44 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 3 set | 38 seconds | 3 set | 40 seconds | 3 set | 42 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 4 set | 36 seconds | 4 set | 38 seconds | 4 set | 40 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 5 set | 32 seconds | 5 set | 34 seconds | 5 set | 36 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 6 set | 31 seconds | 6 set | 33 seconds | 6 set | 35 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 7 set | 30 seconds | 7 set | 32 seconds | 7 set | 34 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 8 set | 30 seconds | 8 set | 31 seconds | 8 set | 32 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 9 set | 29 seconds | 9 set | 30 seconds | 9 set | 31 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 10 set | 28 seconds | 10 set | 29 seconds | 10 set | 30 seconds |
| TOTAL | 336 seconds |  | 353 seconds |  | 370 seconds |

7th week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 49 seconds | 1 set | 51 seconds | 1 set | 53 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 2 set | 47 seconds | 2 set | 49 seconds | 2 set | 51 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 3 set | 45 seconds | 3 set | 47 seconds | 3 set | 49 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 4 set | 43 seconds | 4 set | 45 seconds | 4 set | 47 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 5 set | 39 seconds | 5 set | 41 seconds | 5 set | 43 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 6 set | 38 seconds | 6 set | 40 seconds | 6 set | 42 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 7 set | 37 seconds | 7 set | 39 seconds | 7 set | 41 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 8 set | 35 seconds | 8 set | 37 seconds | 8 set | 39 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 9 set | 34 seconds | 9 set | 36 seconds | 9 set | 38 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 10 set | 33 seconds | 10 set | 35 seconds | 10 set | 37 seconds |
| TOTAL | 400 seconds |  | 420 seconds |  | 440 seconds |

8th week

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Monday |  | Wednesday |  | Friday |  |
| 1 set | 57 seconds | 1 set | 60 seconds | 1 set | 63 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 2 set | 55 seconds | 2 set | 58 seconds | 2 set | 61 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 3 set | 53 seconds | 3 set | 56 seconds | 3 set | 59 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 4 set | 51 seconds | 4 set | 54 seconds | 4 set | 57 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 5 set | 47 seconds | 5 set | 49 seconds | 5 set | 51 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 6 set | 46 seconds | 6 set | 48 seconds | 6 set | 50 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 7 set | 45 seconds | 7 set | 47 seconds | 7 set | 49 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 8 set | 43 seconds | 8 set | 45 seconds | 8 set | 47 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 9 set | 42 seconds | 9 set | 44 seconds | 9 set | 46 seconds |
| 30 second rest |  | 30 second rest |  | 30 second rest |  |
| 10 set | 41 seconds | 10 set | 43 seconds | 10 set | 45 seconds |
| TOTAL | 480 seconds |  | 504 seconds |  | 528 seconds |

1. Side plank
* Easier to watch video
* Modified plank with bent knee
* Straight back
* Lower abdominal target muscle
* Upper arm can go wherever is comfortable
* Work up to getting 30 second holds in 1 month and 60 second hold in 3 months
* Ad exercises
1. Bike exercises
* Easier to watch video
* Posterior tilt to flatten lower back into floor
* Should feel the abs lover than belly button working harder and tightening up
* Look at positioning your head in comfortable position
* Should be able to achieve 60 seconds within the month
* Ad exercises
1. Push ups
* Indicated when scapula winging is observed
* Definitely easier watching video
* 30 perfect reps a day for 10 days in a row
* Once you can achieve eyes closed wall push ups with perfect technique, move onto modified push up
* Always go backwards before going forward, master the activation pattern then increase the muscle growth after this
* The push ups are not designed to go to fatigue, you must only practise perfect technique (even 5 reps at a time is good enough)
* When performing modified push ups, use broomstick for neutral spine
* 10cm off the ground
* Cat stretch
1. FMS Squat
* Easier to watch video
1. FMS Lunge
* Easier to watch video
1. FMS Step Over
* Easier to watch video
1. FMS Superman
* Easier to watch video
1. Proprioception exercises on land
* Easier to watch video
* Buy a wobble board, air cushion or BOSU
* All eyes open exercises aim for 30 seconds and eyes closed exercises 15 seconds
* Feet shoulder width eyes open
* Feet narrow but not touching each other eyes open
* Tandem stance on tightrope with right foot forward eyes open
* Tandem stance on tightrope with left foot forward eyes open
* Single leg right eyes open
* Single leg left eyes open
* Feet shoulder width eyes closed
* Feet narrow but not touching each other eyes closed
* Tandem stance on tightrope with right foot forward eyes closed
* Tandem stance on tightrope with left foot forward eyes closed
* Single leg right eyes closed
* Single leg left eyes closed
* ¼ squats, eyes open, feet shoulder width apart
* ½ squats, eyes open, feet shoulder width apart
* ¾ squats, eyes open, feet shoulder width apart
* ¼ squats, eyes closed, feet shoulder width apart
* ½ squats, eyes closed, feet shoulder width apart
* ¾ squats, eyes closed, feet shoulder width apart
* ¼ squats, eyes open, right foot
* ¼ squats, eyes open, left foot
* ½ squats, eyes open, right foot
* ½ squats, eyes open, left foot
* ¾ squats, eyes open, right foot
* ¾ squats, eyes open, left foot
* GOAL = single leg, eyes closed, full squat x 3
1. Bridges
* 3 sets of 12 reps with 1-minute rest period, once a day for 4 weeks
* Watching video is easier
* Put the feet in a comfortable position, but equal and symmetrical
* Use the arms for support and assistance initially and then wean off them (put them across chest eventually)
* Make sure the V is maintained between the knees at all times
* Even pressure under the heels and very little pressure under toes
* 2 seconds to go up, nil pause and 2 seconds on the way down
* Progress to single leg bridges when able
* After the 4-week period, reduce the frequency to 3 times a week but maintain reps, sets and rest period for indefinite period of time
* Goal is to perform single leg bridge on both sides with equal strength 6 times
1. Walking program

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Day 1 | 5 minutes (medium and slow intervals) | Day 9 | 9 minutes (medium and slow intervals) | Day 17 | 14 minutes (medium and fast intervals) | Day 25 | 20 minutes (medium and fast intervals) |
| Day 2 | rest | Day 10 | rest | Day 18 | 15 minutes (medium and fast intervals) | Day 26 | 21 minutes (medium and fast intervals) |
| Day 3 | 6 minutes (medium and slow intervals) | Day 11 | 10 minutes (medium and slow intervals) | Day 19 | 16 minutes (medium and fast intervals) | Day 27 | rest |
| Day 4 | rest | Day 12 | rest | Day 20 | rest | Day 28 | rest |
| Day 5 | 7 minutes (medium and slow intervals) | Day 13 | 11 minutes (medium and slow intervals) | Day 21 | rest | Day 29 | 22 minutes (medium and fast intervals) |
| Day 6 | rest | Day 14 | Rest | Day 22 | 17 minutes (medium and fast intervals) | Day 30 | 23 minutes (medium and fast intervals) |
| Day 7 | 8 minutes (medium and slow intervals) | Day 15 | 12 minutes (medium and fast intervals) | Day 23 | 18 minutes (medium and fast intervals) | Day 31 | 24 minutes (medium and fast intervals) |
| Day 8 | rest | Day 16 | 13 minutes (medium and fast intervals) | Day 24 | 19 minutes (medium and fast intervals) | Day 32 | 25 minutes (medium and fast intervals) |

* Continue 3-5 times a week 20-30 minutes
* Interval walking (all intervals are 30 seconds)
* Can be performed on a treadmill as well
1. Upper limb dumbbell exercises in all planes
* Always start with no weights for the first week
* Focusing on technique, form and speed (2,0,2)
* Progress to 0.5kg after first week and 1kg after second week etc.
* If you are more advanced, start at a low weight and progress weights 10% per week (e.g. 20kg starting weight and progress to 22kg by the end of the week)
* Push weight away from body (bench press). Target muscle: pec major
* Pull weight towards you (seated row). Target muscle: serratus anterior
* Push weight above shoulder (shoulder press).
* Pull weight down towards you (lat pull down). Target muscle: latissimus dorsi
* Biceps curl. Target muscle: biceps
* Triceps extension. Target muscle: triceps
* Push weight away from body (lateral raise). Target muscle: deltoids
* Pull weight towards your body (cable x over).
* You can use exrx.net site to find equivalent exercises that might suit you better
1. Transverse Abdominus and Pelvic Floor
* Easier to watch video
* Hold the core exercises for first 2 days = 10 seconds, days 3 and 4 = 15 seconds, days 5 and 6 = 20 seconds, days 7 and 8 = 25 seconds, days 9 to 14 = 30 seconds
* Never allow for than 10 days without some activation of these muscle to maintain strength throughout entire life
* Low and slow
1. Bike program set up

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Day 1 | RPM 50Time 2 minutesSlow to medium intervals | Day 8 | rest | **Day 15** | RPM 70Time 5 minutes Medium to fast intervals | **Day 22** | **rest** |
| **Day 2** | **rest** | **Day 9** | RPM 55Time 5 minutesSlow to medium intervals | **Day 16** | **rest** | **Day 23** | RPM 75Time 8 minutesmedium to fast intervals |
| **Day 3** | RPM 50Time 3 minutesSlow to medium intervals | **Day 10** | **rest** | **Day 17** | RPM 70Time 6 minutesMedium to fast intervals | **Day 24** | **rest** |
| **Day 4** | **rest** | **Day 11** | RPM 60Time 5 minutesSlow to medium intervals | **Day 18** | **rest** | **Day 25** | RPM 75Time 9 minutesmedium to fast intervals |
| **Day 5** | RPM 50Time 4 minutesSlow to medium intervals | **Day 12** | **rest** | **Day 19** | RPM 70Time 7 minutesMedium to fast intervals | **Day 26** | **rest** |
| **Day 6** | **rest** | **Day 13** | RPM 65Time 5 minutesSlow to medium intervals | **Day 20** | **rest** | **Day 27** | RPM 75Time 10 minutesmedium to fast intervals |
| **Day 7** | RPM 50Time 5 minutesSlow to medium intervals | **Day 14** | **rest** | **Day 21** | RPM 70Time 8 minutesMedium to fast intervals | **Day 28** | **rest** |

* All intervals are 30 seconds in length
* Only change 1 variable at a time (either time or RPM)
1. Step up exercises
* Very cheap and effective way of improving fitness levels, losing weight and improving balance and strength in lower limbs
* Start with a 5cm block or step and then slowly progress to 40cm as tolerated over the coming weeks and months
* Download a free metronome app or purchase a metronome that can be adjusted to different speeds
* Top to bottom and left to right

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 5cm, 60bpm, 2 minutes | 5cm, 70bpm, 3 minutes | 10cm, 70bpm, 3 minutes | 10cm, 80bpm, 3 minutes | 15cm, 80bpm, 3 minutes | 15cm, 90bpm, 3 minutes |
| 5cm, 60bpm, 2.5 minutes | 5cm, 70bpm, 3.5 minutes | 10cm, 70bpm, 3.5 minutes | 10cm, 80bpm, 3.5 minutes | 15cm, 80bpm, 3.5 minutes | 15cm, 90bpm, 3.5 minutes |
| 5cm, 60bpm, 3 minutes | 5cm, 70bpm, 4 minutes | 10cm, 70bpm, 4 minutes | 10cm, 80bpm, 4 minutes | 15cm, 80bpm, 4 minutes | 15cm, 90bpm, 4 minutes |
| 5cm, 60bpm, 3.5 minutes | 5cm, 70bpm, 4.5 minutes | 10cm, 70bpm, 4.5 minutes | 10cm, 80bpm, 4.5 minutes | 15cm, 80bpm, 4.5 minutes | 15cm, 90bpm, 4.5 minutes |
| 5cm, 60bpm, 4 minutes | 5cm, 70bpm, 5 minutes | 10cm, 70bpm, 5 minutes | 10cm, 80bpm, 5 minutes | 15cm, 80bpm, 5 minutes | 15cm, 90bpm, 5 minutes |
| 5cm, 60bpm, 4.5 minutes | 5cm, 70bpm, 5.5 minutes | 10cm, 70bpm, 5.5 minutes | 10cm, 80bpm, 5.5 minutes | 15cm, 80bpm, 5.5 minutes | 15cm, 90bpm, 5.5 minutes |
| 5cm, 60bpm, 5 minutes | 5cm, 70bpm, 6 minutes | 10cm, 70bpm, 6 minutes | 10cm, 80bpm, 6 minutes | 15cm, 80bpm, 6 minutes | 15cm, 90bpm, 6 minutes |

* Every one has a different fitness goal and abilities, therefore progress as slow as you feel comfortable
* Never skip a level. The key to reducing injuries is slowly progressing the intensity and time spent exercising over a 6-week period and having a rest period of 24 hours between exercise sessions.
* There might be a level that really tests your fitness level and you might think you can’t progress to next level in 24 hours. You can practise that level for a few days in a row and then progress to next level when you feel comfortable.
* The most important factor is progression and always improving your level and not being satisfied with stationary training.
* Your overall goal if your fitness levels will enable you is 40cm block, 140BPM and 6 minutes
1. Falls prevention exercises
* Perform a Timed Up and Go (TUG) test (refer to TUG PDF file)
* Safety first. Always make sure the bed is behind you, a chair is front of you and someone is spotting you on your weakest side.
* 30 squats a day (10 morning, 10 lunch, 10 dinner)
* Easier to watch the squats video and balance video
* Always focus on the exercise you feel is the hardest and weakest. You will never improve and reduce risk of falling if you focus on your strengths.
* Overall goal is to comfortably perform a squat without a chair and assistance 3 times in a row without losing balance, and stand on right and left leg for 30 seconds comfortably.

**MISCELLANEOUS**

1. Cortisone injection into joint
* CT guided
* Referral from doctor into sorest joint and the most damaged on CT scan
* If complete relief, then 100% of pain was coming from inflammation around joint. If the pain returns a few days after complete relief. Talk to doctor about anti-inflammatories (short and long term)
* If no relief, then your pain is coming from the bone on bone pinching and you will have to continue self-managing techniques indefinitely until joint settles
* No operation exists for spinal joints
1. Mirror therapy
* You must watch the video
* Always test your affected side before starting the mirror therapy (leg lift, arm lift and record the angle achieved)
* You must always have the affected side covered up with a towel or sheet
* Your eyes must always be looking at the mirror, imagining it’s the affected side (look at the thumb or big toe as a guide)
* If your eyes wander and you catch a glimpse of your good side, cease and return to exercises an hour later
* Can repeat as often as possible
* Repeat the test at the beginning of the mirror therapy and you should see an improvement in ROM
1. Osteoporosis exercises
* A combination of weight-bearing exercises with supervised progressive resistance training and challenging balance and mobility exercises, at least 3 times per week.
* Avoid forward flexion (bending over holding an object, sit ups with straight legs) and twisting of the spine, as this may increase risk of a fracture
* Variety is the key
* Perform the following: Basketball, Netball, Running, Jogging, Tennis, Impact aerobics, Brisk walking, Hill walking, Dancing, Gymnastics, Resistance training, Stair climbing and Jump rope
* Avoid: Leisure walking, swimming, yoga, Pilates, Tai Chi, lawn bowls and cycling
* Squats, lunges, bridges, step overs, bicep curls, shoulder press
1. Whfoods.org navigation
* Type Whfoods.org into google search engine
* Type food list into search engine in top left corner
* Scroll down, look for “essential nutrients” on the right side
* Click on the vitamin or nutrient, it will list the most potent foods.
* If you continue to read on, a more detailed description will improve your knowledge
* Click on “1[00 World's Healthiest Foods](http://whfoods.org/foodstoc.php)”, aim for 80% of your shopping trolley to include these foods
* “300 recipes” is also very helpful when you want to include or exclude certain foods in your diet
* Also, clicking on the individual foods will give you a detailed description of their nutritional value, how to cook them and what benefits they have to the human body
1. Cramps
* Cramps occur due to various reasons (mainly in lower limbs).
* If the cramps are muscular in nature than high dose Magnesium for 2 weeks should reduce the cramps. Can be immediate as well. The muscles are struggling to relax and are constantly contracting and therefore require the magnesium to relax the muscles. If the cramping continues please see a doctor.
* Taking calcium with magnesium helps the absorption process and additionally taking them at night before bed is most effective time of the day.
* Below are the recommended daily values for different ages and gender
* 0-6 months: 30 mg
* 7-12 months: 75 mg
* 1-3 years: 80 mg
* 9-13 years: 240 mg
* 14-18 years, female: 360 mg
* 14-18 years, male: 360 mg
* 19-30 years, female: 310 mg
* 19-30 years, male: 400 mg
* 31+ years, female: 320 mg
* 31+ years, male: 400mg
* Pregnant women, 14-18 years: 400 mg
* Pregnant women, 19-30 years: 350 mg
* Pregnant women, 31-50 years: 360 mg
* Lactating women, 14-18 years: 360 mg
* Lactating women, 19-30 years: 310 mg
* Lactating women, 31-30 years: 320 mg
* Cramping also occurs due to tightness with the particular muscle. Refer to how to assess lower limb muscle length tests and stretch the appropriate muscle for 1-2 weeks. Make sure you are stretching 4 times day and 3 x 30 seconds each time.
* Additionally, cramping occurs due to dehydration. You should be regularly drinking water throughout the day. The amount depends on the person, temperature, environment and physical activity level.
* The best indicator is a slightly yellow tinge to your urine. If your urine is clear, then you are over hydrating and if your urine is bright yellow then you are very dehydrated.
* You need to experiment with the amount of water you drink which maintains the slight tinge of yellow urine all day. Don’t be afraid to look.
* Just remember coffee and tea are diuretics and they draw fluid out of the body and will dehydrate you.
* Try using compression skins throughout the day on the affected area and most importantly at night whilst you sleep. The skins improve blood circulation, remove unwanted by products of muscles and reduce the stress on muscles.
* Try using k tape on the affected area, refer to how to apply k tape video.
1. Physio recommendations for doctors for workcover
* Refer to work document attached
* Give this form to your physio and they can fill it out with in 5 minutes, you can then return this form to your doctor and they can transfer it onto the medical certificate
* The form is filled out on a weekly basis
1. Physiopeadia
* Excellent website for explaining investigations (US, xray, CT scans, MRI)
* Just type in “physiopeadia” into a search engine, then go to the “Articles” section. Find what you are looking for and it will outline the condition and medical management
1. Exrx.net
* Just type exrx.net into search engine
* Exercise libraries gives you alternate exercises for different body parts
* Fitness testing and fitness calculators is also a valuable section of this website
* You will have to visit all the sections over a period of time and educate yourself with furthering your knowledge on exercise, nutrition and biomechanics
1. How to perform your own medical
* Refer to FCE 1, FCE 2 and FCE 3
* Just remember with a medical, the physio is looking for how you are performing the tasks not necessarily what you’re doing.
* Also, the physio is looking for weather there is difference between sides (ROM, strength)
* Additionally, the physio is adjusting his measurement and finding based on gender and age.
* Furthermore, the physio is looking for pre existing injuries you maybe aware of or unaware. They will determine whether this pre-existing injury potential will hinder your current potential employment or not.
* If you can perform a FCE 3 with good form, equal (ROM and strength) on both sides and no pain, you should be right.
1. Momentum of healing
* Every injury has a timeframe for healing
* Eg Minor disc bulge 2-6 weeks recovery
* If from day 1 the medical management is adhered to strictly, then the injury will heal within the timeframe.
* However, if suitable duties, inability to attend physio, psychological issues, unable to follow medial management of the particular injury or any other reason occurs which may hinder the healing process, then the “momentum of healing” will be altered.
* The injury will unlikely heal within the first predicted timeframe
* When the injury is feeling better, the temptation is to stop or slow the medical management applied to the particular injury. However, this will cause momentum to slow and affect healing timeframe again.
* If your injury will take 4 weeks to heal. You will need to be vigilante and compliant for the entire 4 weeks. As a result, you will return to work fully recovered and no increased risk of potentially re-injuring the same body part in the future.
* The definition of insanity is performing the same thing over and over again and expecting a different result. Therefore, if you return to work after recovering from your injury and change nothing, then your chance of reinjury is very high. You must change how you do your work tasks not what you’re doing.
1. Healthy age questionnaire
* Good overall life questionnaire to evaluate what aspects of your life you need to change to live a healthier life and potentially live longer.
* You can’t change your family history
* You can change, diet, blood pressure, smoking, alcohol consumption, stress levels, happiness and exercise.
* Type exrx.net into search engine, fitness calculator, healthy age questionnaire
* Attempt to change your answers one level at a time
1. Nutrition for sporting carnivals
* Refer to word document “nutrition for sporting carnivals”
1. Hormone assessment and diet
* Refer to hormone Ax word document
1. Perfect eating plan to lose weight
* Refer to perfect eating plan word document