MD PHYSIOTHERAPY SERVICES

YOUR GUIDE TO

UPPER BACK PAIN

Contents

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 it because of something you've read in this guide.
- Many people have found quick and lasting relief from their Upper Back 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 Thoracic (Upper Back) Pain?

Pain in the **Thoracic spine** is not a very common disorder due to its design. It has a greater role in stability of the upper body and protection of the vital organs than it does in movement. Therefore there is a reduced risk of injury or degeneration over time. Dysfunction in this area can however cause a lot of pain and discomfort when it does occur, with muscular irritation and joint dysfunction being the major cause of pain. **Posture is often the main cause of dysfunction**.

There can however be other causes of thoracic pain such as an injury to a disc in the upper back. Although these other causes are a lot more rare, it is important that you consult with your GP or a registered health practitioner so that your pain can be correctly diagnosed and the appropriate treatment given.

The thoracic spine is made up of twelve thoracic vertebrae that start from the bump just below the neck, and extend to about 5 inches below the bra strap. Each thoracic vertebrae attaches to a rib which meet in the front of the body at the sternum (breast bone) and this forms a cage which provides essential protection for the vital organs.

When looked at from the side, the thoracic spine is naturally slightly rounded (concave). Because of the great amount of stability and limited motion in this area, anatomical causes for pain are seldom found. X-rays and MRI scans seldom cast much light on any structural problems that can be improved with surgery or explain the pain experienced by the patient.

What causes Thoracic Back Pain?

Common causes for thoracic pain are:

- **Sudden onset** as a result of trauma or injury
- **Gradual onset**, which is normally a result of repetitive strain or poor posture.

The increased use of computers in our modern day society has resulted in a greater increase in the gradual onset of thoracic pain. Thoracic pain often occurs in conjunction with neck and/or shoulder pain. This is due to the large muscles that connect the shoulder blades to the thoracic spine as well as the neck. These muscles can become irritated and fatigued, resulting in pain. **Muscle pain is often a result of deconditioning** (weak muscles), **poor posture, or repetitive strain caused by poor ergonomic techniques.**

Pain resulting from muscular irritation is often very receptive to manual techniques used by allied health professionals (physiotherapist, chiropractors, osteopaths etc), with early consultation important to reduce the time required for rehabilitation.

Dysfunction in any of the joints between each thoracic vertebrae or the joints between the ribs and the thoracic vertebrae, will result in pain. This can at times be excruciating and may also limit your ability to breath pain free due to the link between the thoracic spine and the rib cage with many of the muscles involved in breathing attaching to this area. This type of dysfunction can be corrected with simple manual manipulations performed by a registered therapist. **Joint dysfunction** is often a result of instability, poor muscle strength and posture, and can come on very quickly with a sudden movement or awkward posture, cough etc. It is therefore essential with this type of injury that an exercise programme is continued after your initial treatment to ensure that there is no recurrence of pain.

POSTURE

One of the main causes of thoracic pain, is **poor posture**. Poor posture results in an increase of stress to the joints, muscles and vertebrae which over time causes the degeneration of the joints. A good or optimal posture is therefore the state of muscular and skeletal balance that protects the supporting structures of the body against injury or progressive deformity, whether at work or at rest. This involves the correct positioning of the joints to provide minimal stress on the systems of the body and is known as a neutral posture.

Being in a good posture not only prevents the onset of pain, but also increases the efficiency of movement in both work and exercise. **A good daily posture can therefore help to prevent back pain**, especially if your job requires long periods of time in one position either sitting or standing. Being aware of what a good posture is and continually trying to maintain a good posture in all that you do will help you to maintain stability and prevent back pain.

Good posture in the thoracic spine involves the correct positioning of your shoulder girdle. Therefore hunching forwards needs to be avoided and a neutral position needs to be maintained as much as possible. A neutral thoracic position involves pulling your shoulders down away from your ears, and then bringing the points of your shoulder blades slightly in towards each other. **If sitting for an extended period of time in front of a computer** ensure that your buttocks are right at the back of your chair, the top of your screen is at eye level, your thoracic spine is in a neutral position, and that reaching is avoided as much as possible.

What treatment can I receive?

If you are suffering from **thoracic pain** it is important to visit your GP or a registered allied health practitioner so that a full examination can be performed and a diagnosis reached as to the cause of your pain. This is necessary to ensure that any potentially serious conditions are ruled out or treated as soon as possible.

CHOICE OF TREATMENT

The type of treatment depends entirely on the diagnosis/ cause of the pain. Both muscular irritation and joint dysfunction both benefit from physical therapy and manual manipulations, provided by allied health professionals, but some people may require drug treatment for the pain, and or supportive postural bracing to encourage correct postural positions.

ANTI-INFLAMMATORY TREATMENT

- **Paracetamol** based pain killers are usually prescribed by doctors to help with pain management.
- **Anti-inflammatory drugs** are usually prescribed by doctors to control the inflammatory process.
- **Ice/heat therapy** is often used by therapists, and can be used as a home therapy to relieve pain, reduce inflammation and reduce muscle spasms.

DIET

It is important that you maintain a healthy balanced diet in order to avoid excessive weight gain. Added weight will put increased strain on your back and breathing, which will have a direct effect on the muscles in the thoracic spine. Excess weight can greatly aggravate your pain and increase your chance of recurring pain.

PHYSICAL THERAPY

Physical therapy is often required to decrease muscle spasm, reduce inflammation, provide mobilisation techniques, massage and other modalities which will all help to decrease the pain, increase the mobility in the joints and get you back to full function as soon as possible. The extent to which these techniques will help is very dependant on your diagnosis and your compliance to the treatment given.

EXERCISE

Exercise can play a significant role in easing your pain and improving your posture by increasing the strength and stability in the shoulder girdle and thoracic spine. The main goals of rehabilitation of individuals with thoracic pain are to maximise strength, stability, flexibility, and mobility in the area. The maintenance of a regular exercise routine is essential for preventing future episodes of pain and in the maintenance of a good posture

ERGONOMIC ASSESSMENT

Since posture is often the main cause of thoracic pain, an ergonomic assessment is essential to ensure that your work area is ergonomically correct. This can often be requested through your companies ergonomic department. It is however essential that you also consciously make an effort to maintain a good daily posture.

What exercises should I do?

The focus of exercise for thoracic back pain is on **strengthening and stabilising the muscles that support the shoulder girdle** and help to maintain a good posture. Stretching and mobility exercises are also important as this area can get very tight and immobile limiting required movements of the trunk and shoulder.

Exercises phase 1

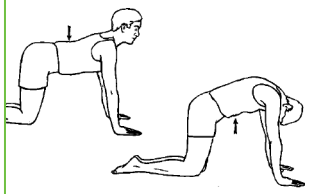
When first starting an exercise program, **start slowly** and only do as much as you are comfortable with. If you have pain, other than slight muscle stiffness after exercise, then you have done too much or are doing the exercises incorrectly, and need to adjust your program or consult your therapist. Adapt your exercise programme when you have 'bad' days or if you have done something to cause a flare up. For example: only do the stretches and stability exercises, as in phase one. If this happens when you have progressed to phase 2, don't be scared to regress for a day or two until you feel better and are able to continue the strengthening exercises

STRETCHING EXERCISES

- **Repeat each of these stretches twice on each side holding for at least 30 seconds.**
- **Hold a steady stretch, do not bounce, do not force into pain.**
- **Breathe normally during all exercises.**

NECK STRETCH

Place one arm behind your back. Bend head to opposite side so that ear goes towards shoulder. A stretch should be felt in the side of the neck. If a further stretch is required, use your opposite hand to gently pull head towards shoulder. Repeat on opposite side.

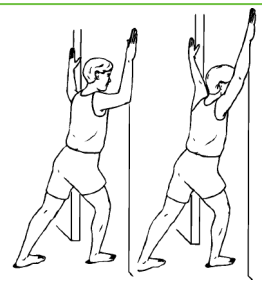


CAT CURLS

On all fours, with hands under shoulders and knees under hips. Start in a table position with hip bones facing the floor. Breathe in as you let the spine curve inwards i.e. move your belly towards the floor, pull your shoulder blades together and lift head up. Breathe out as you tuck your chin in and curve your back upwards towards the ceiling. Don't hold each position and make sure you go slowly up and down your spine one vertebrae at a time.

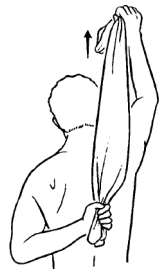
SHOULDER STRETCH

Gently pull on elbow with opposite hand until a stretch is felt at the back of the shoulder. Repeat on the opposite side



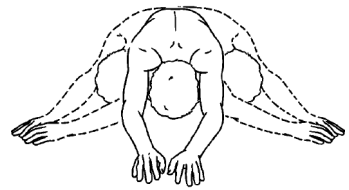
DOOR STRETCH

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



MEDIAL/LATERAL ROT STRETCH

Holding a towel, take one hand over your head and one hand behind your back, firstly pull down with the bottom hand and hold, and then pull up with the top hand and hold. Now swap hands.



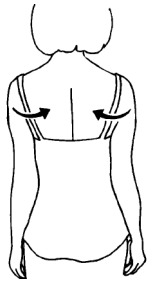
MID BACK ROTATION

Kneeling down on both knees, sit back on your heels and stretch your arms out straight on the floor ahead of you. Stretch out as far as you can. Now move your arms to the side and hold and then walk them to the opposite side and hold.

Exercises phase 1 (continued)

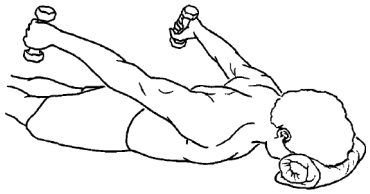
STABILITY EXERCISES

- **Hold each exercise for 10 seconds and repeat 5-10 times**
- **Ensure all movements are slow and controlled and a neutral scapular is maintained.**



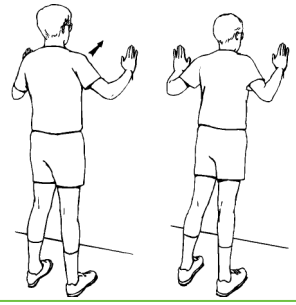
STABILISING

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, retract them, by bringing the points of your shoulder blades towards each other.



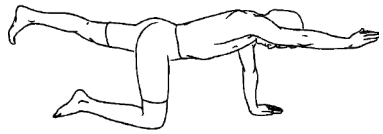
PRONE FLYES 1

Lying face down, arms against your sides with your hands turned outwards, i.e. thumbs pointing upwards. Move your shoulder blades down and in towards each other and at the same time lift your hands off the floor. Look down at the floor while doing the exercise.



PUSH-UP PLUS RETRACTION

Stand facing a wall, place both hands against it at about shoulder level. Find neutral and now slowly and controlled, perform a push-up against the wall maintaining control of your shoulder blades (i.e. keep them in a neutral position. Now push up through your palms.

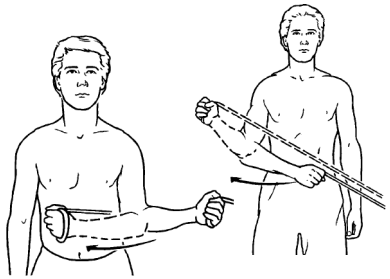


ALTERNATIVE ARM AND LEG EXTENSION ON ALL-FOURS

On all fours with hands under your shoulders and knees under your hips, raise your opposite arm and leg without moving hips and keeping spine in a neutral position. Do not arch neck. Also try this over the ball as a progression. Repeat x10each side.

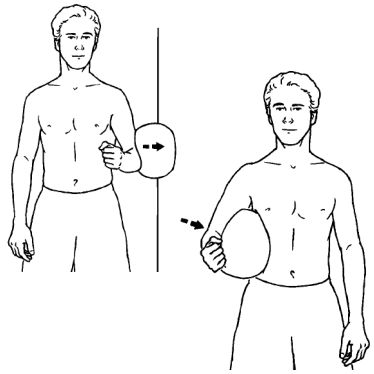
STRENGTHENING EXERCISES

- **Repeat 10 times in each position**
- **Ensure that the movement is controlled and slow.**
- **Only move small distances**



INTERNAL AND EXTERNAL ROTATION

Stand with your arm close to side, and elbow at a right angle. Fasten one end of a rubber band to a door handle. Holding the other end, pull the band inward towards your stomach. Ensure that the movement is slow, controlled and small. Now face the opposite way and pull the band away from your body.



ISOMETRIC ABDUCTION AND ADDUCTION

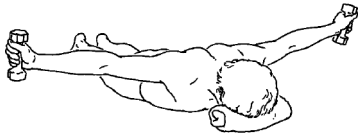
Stand with your elbow bent to 90° and in at your side. Using a wall to provide resistance, place a pillow between your elbow and the wall, and press against the pillow, using light, moderate and maximal resistance. Hold for 10 seconds and repeat 10.
Now place the pillow between your elbow and your side. Press your elbow in against the pillow again with light, moderate and maximal resistance. Hold for 10 seconds and repeat 10 times

Exercises phase 2

Phase 2 should be started once you are able to perform the exercises in phase 1 **pain free and with control** (especially in the stability/mobility exercises). This will probably be after a week or two of starting with this programme. If you progress to phase 2 but are unable to do some exercises, don't be afraid to use some exercises from each phase at the same time and **progress yourself slowly**. Continue with the stretching programme from phase 1 at the beginning and end of each session, and continue with the rotator cuff strengthening exercise but change colour of band.

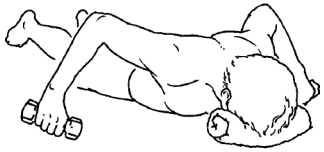
STABILITY EXERCISES

- **Hold each exercise for 10 seconds and repeat 5-10 times**
- **Try and maintain a good position throughout**



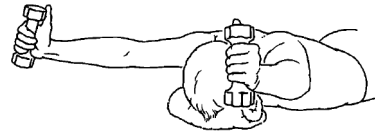
PRONE FLYES 2

Lying face down, arms out at your sides in a T-position with your hands turned outwards, i.e. thumbs pointing upwards. Stabilise your shoulder blades and lift your hands off the floor pulling your shoulder blades together. Look down at the floor while doing the exercise. Progress this by lifting your trunk at the same time as raising your arms



SCAPULAR PRONE RETRACTION

Keep arms out from sides and elbows bent as you pinch shoulder blades together, and raise arms in the air. You may find this easier to do over a bed, and can use the band to progress it by attaching it under the bed and hold the end as you raise your arm in the air.

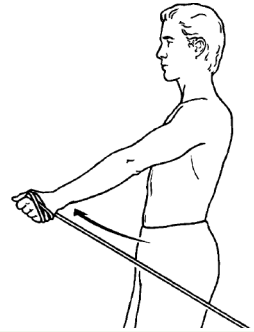


SUPERMAN EXERCISE

Lying face down with your arms above your head and in line with your body, with your hands turned outwards, i.e. thumbs pointing upwards. Lift your arms and upper trunk off the floor. Breathe in during the exercise.

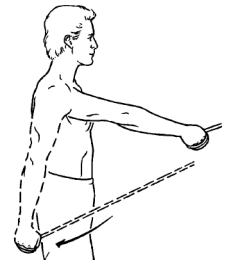
STRENGTHENING EXERCISES

- **Repeat two sets of 10-12 repetitions of each exercise**
- **Make sure that all movements are controlled and that a neutral scapula position is maintained at all times**
- **All strengthening can be progressed by changing the colour of the band.**



STANDING SHOULDER FLEXION

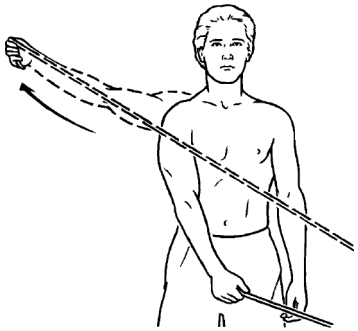
Stand in the neutral position with feet shoulder-width apart. Stand on the one end of the band with your right foot. Grasp the other end of your band with your right hand. Straighten your right arm, raising it to shoulder height. Keep your abdominals tight. Do not round your shoulders.



STANDING SHOULDER EXTENSION

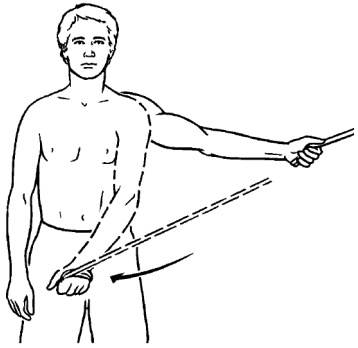
Stand facing a rubber band which is fixed in front of you. Bring the arm straight backward pulling the band.

Exercises phase 2 (continued)



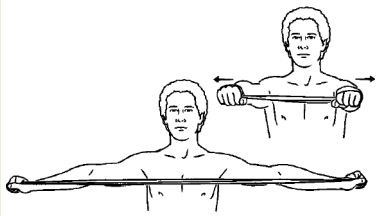
STANDING SHOULDER ABDUCTION

Stand in the neutral position with feet shoulder-width apart. Stand on the one end of the band under your foot. Grasp the other end of your band with your right hand. Straighten your right arm up and out to the side, raising it to shoulder height. Keep your shoulders in a neutral position.



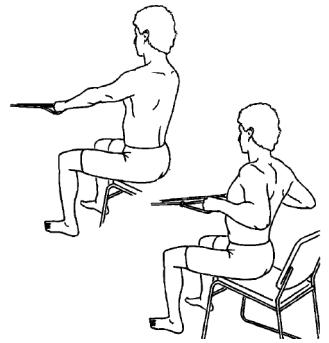
STANDING SHOULDER ADDUCTION

Fasten one end of the band to a door handle. Grasp the other end of your band with your right hand. With your arm up and out to your side and at shoulder height, pull the band down next to your side. Keep your shoulders in neutral.



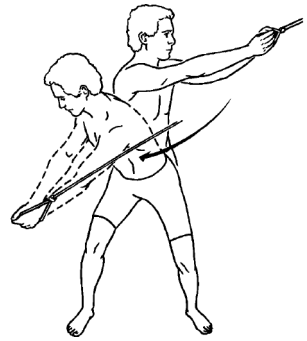
STANDING HORIZONTAL ABDUCTION

Stand in the neutral position. Grasp the ends of your band with both hands. Raise both arms to shoulder height. Move your arms out to the sides of your body. Do not round your shoulders.



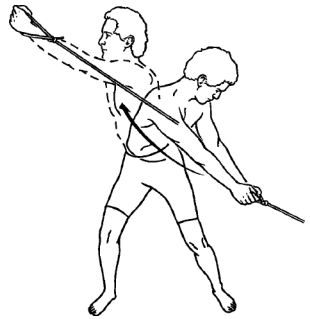
SEATED ROWING

Sit on a chair and wrap the ends of the band around both fists. Make sure that the band is safely secured either to a door or stable surface. Start with your shoulders in a neutral position (shoulder blades slightly down and back). Now pull arms back while bringing shoulder blades together as if rowing a boat. (This exercise can also be done in a long sitting position with the band wrapped around your feet)



RESISTED LUMBAR DIAGONAL ROTATION IN STANDING

Attach a band to the top of a door, and hold on to the opposite end. With feet shoulder width apart pull band with both hands bending and rotating as you do so as demonstrated in the picture.



RESISTED LUMBAR DIAGONAL ROTATION IN STANDING

Attach a band to the bottom of a door, and hold on to the opposite end. With feet shoulder width apart pull band with both hands extending and rotating as you do so as demonstrated in the picture.

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:

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