MD PHYSIOTHERAPY SERVICES

YOUR GUIDE TO

SHOULDER DISLOCATION

Contents

Introduction

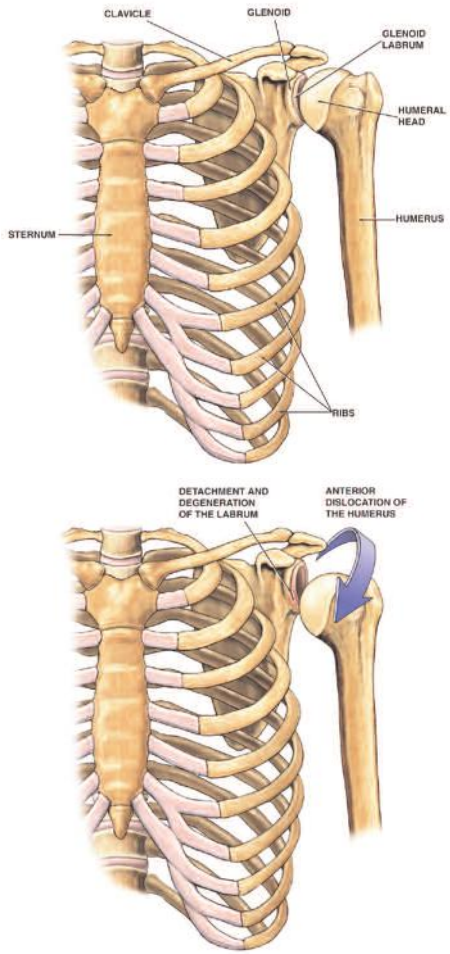
Please take note of the following before starting any of the exercises in this guide:

- 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 advice because of something you have read in this guide.
- Many people have found quick and lasting relief from their injury 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.

Shoulder anatomy

The shoulder joint is a ball and socket joint but whereas the hip is a deep socket, the shoulder is very shallow. This gives the shoulder a much greater range of movement than the hip but in return it is much less stable. The muscles around the shoulder are very important for protecting the joint and adding to stability. Therefore, of all the joints in the body, the shoulder joint is the most prone to dislocation due to the fact that its make up compromises stability for movement. It can dislocate as a result of an accident, whether from involvement in a motor vehicle collision, sporting activity, or from a fall onto an outstretched arm. Recovery from a dislocated shoulder can take months to regain normal function.



The rounded top of the upper arm bone, the humerus, fits into a shallow socket (glenoid fossa) located in the upper part of the shoulder blade. When working properly, this ball-and-socket arrangement allows the arm to move in most directions, including an arc of almost 360°.

N.B. If your shoulder dislocates as a result of an accident, you should go -- as quickly as possible -- to a hospital's emergency department where you will probably be X-rayed to confirm the diagnosis of a dislocated shoulder and to rule out a related fracture. You will probably receive anaesthetic so that one of the emergency staff can relocate your upper arm bone back into its shoulder socket. For some people, the problem is fixed without much problem; for other people it is not always so easy.

What causes the shoulder to dislocate?

Shoulders can dislocate when a strong force, such as a traumatic injury, abnormally stretches the ligaments and tendons around the shoulder, causing the ball-shaped end of the humerus to pop out of its socket. A small minority of people will have shoulders that can sublux (partial dislocation) or even dislocate spontaneously. However, almost 95% of shoulder dislocations result from either a forceful collision or from a sudden wrenching movement as may occur during sport, falling onto an outstretched arm, or motor vehicle collision.

What do I do initially?

Considering what has happened, your natural instinct in the first week may be to rest your arm in a sling -- at least during the daytime. However, your natural instinct will probably be at odds with your doctor who may want you to use your arm as naturally as you did before the accident. (Otherwise, some of your muscles may become weak from disuse.) Once you get over the initial shock, you have to put up with the consequence of your shoulder capsule, ligaments and tendons having been stretched.

Over the next few days, the shoulder will become more painful. This may be due to an increase in inflammation and fluid accumulations from the damaged tissue as the immune system begins to react to the recent damage. Night pain becomes increasingly more noticeable as you are trying to sleep. For several weeks it may be hard to find a comfortable position for your injured arm. You won't feel like sleeping on your sore arm and it may not help much when you sleep on the other one or on your back. You may find that the night pain will be slightly more tolerable if you can sleep half-sitting up. This pain will eventually subside. Your doctor may give you a prescription to help relieve the pain in your unstable shoulder. Alternatively, you may be advised to apply an ice pack to the sore area.

The next problem is that you might not feel much like using your sore arm. This can make your muscles get out of balance and lead to further problems. At this point, a good physiotherapist can help you to retrain your muscles. Strengthening the weakened muscles will help to restore their balance. By now, your muscles may also have developed

"knots" or small spasms which can limit the extent to which you can move your arm. The physiotherapist can treat these and help you regain your normal movement as well as strength. They may be able to advise you on how to prevent scar tissue formation or to break up or stretch any scar tissue that has already formed in your shoulder as a result of the accident, or from subsequent inflammation.

What treatment can I receive?

Now that your ligaments have been stretched, you may wonder if your shoulder will dislocate again. The answer to that partly depends on how well you heal and whether or not you have another injury. However, your tendency to dislocate will be strongly influenced by your age at the time of first dislocation.
If you dislocate again and again, and find that your shoulder problem is interfering with your life style, it may be a good idea to arrange for surgery so you can get your loose and unstable shoulder capsule tightened up and/or repair any torn ligaments/tendons. This may be especially important if you normally enjoy participating in sports.

NON-SURGICAL MANAGEMENT OF THE UNSTABLE SHOULDER

Usually, the surgeon or general practitioner will recommend resting your injured shoulder and applying ice packs 3-4 times daily. A sling may or may not be recommended because experimental trials have shown that there is no difference in re-dislocation rates between patients allowed normal movement and others whose arm was immobilised in a sling or some other device for 3-4 weeks.

Your doctor may suggest you see a physiotherapist to start some gentle exercises to gradually increase the shoulder's range of motion. These start with passive movements where the arm is moved by another person, progressing to active-assisted, and then to active movements made by the patient alone. Rehabilitation is best if based on the principle of progressive resistance and avoidance of aggravating factors. After the pain and swelling are under control, the therapist may give you a programme to strengthen your shoulder. The reported success rates of shoulder strengthening protocols for the management of multidirectional instability (unstable in more than one direction) are better than those reported for unidirectional instability (only unstable in one direction).

REHABILITATION FOR THE UNSTABLE SHOULDER

Rehabilitation of the unstable shoulder, be it with non-operative or post-operative management, should be aimed at optimising the performance of the shoulder muscles. The position where the shoulder is at greatest risk of dislocation, if a large force were to be applied to it, is when the arm is held out 90° at the side with the palm facing upwards. The aim for rehabilitation would be to strengthen the muscles that normally help to prevent inadvertent dislocation.

To achieve this, the physiotherapist must consider all parts of the shoulder – in particular, its muscles and tendons, ligaments, and neuromuscular (relates to nerves and muscles) control.

1. Muscles. The rotator muscles of the shoulder, i.e. the rotator cuff, must work together to keep the shoulder joint stable while moving the arm. Weakness affecting the balance of these muscles needs to be identified and corrected from the outset of rehabilitation. This is achieved by various resistance exercises using a "Theraband" (a tough elastic band). Exercise with a Theraband tied to a doorknob, or some other stable point, is a useful means for strengthening the various muscles of the rotator cuff. This helps the patient return to sport and other normal activities. Instability often occurs when the muscles responsible for stability tire out. Hence, it is not only important to strengthen these muscles but also to improve endurance (the ability to maintain a contraction over a long period of time).

Two muscles at the back of the shoulder, the trapezius and serratus anterior, are involved in positioning the shoulder blade correctly. Exercises that help to strengthen these muscles are push-ups and rowing. However, all muscles around the shoulder blade should be assessed to ensure their optimal function.

2. Tendon and ligament tension: Tendons (the fibrous tissue which joins muscle to bone) of the rotator cuff muscles blend with the capsule (the tough sack which surrounds the shoulder joint) at their point of insertion. Upon contraction, the tendons help tighten the slackened capsule together with its built-in ligaments. This tensioning of the capsule helps hold the humeral head in the socket.

Normalising the range of motion, particularly when the capsule is loose, is an important aspect of rehabilitation. Surgery may be warrented if the extent of capsular damage is a problem that cannot be rectified by rehabilitation alone.

3. Neuromuscular control: This is achieved by exercising the unstable shoulder in positions that maximally challenge the shoulder muscles. Messages relating to joint position awareness (proprioception) are fed back to the brain via receptors contained in the capsule and ligaments of the shoulder. When these receptors detect a situation of potential tissue damage, the brain sends a signal to the muscles to contract and thus reposition the joint to decrease the mechanical stress on the surrounding areas.

Exercises that involve weight bearing through the arm help stimulate proprioception. Plyometric exercises, those that involve rapid changes of direction when the muscle is being stretched one way and then quickly shortened the other way, are good to help with re-educating neuromuscular control. An example of this is vigorously bouncing a ball. This exercise should be commenced by bouncing the ball by your side on the ground and then progressed to overhead against the wall where the shoulder is more challenged.

In summary, shoulder stability for functional activity is dependent upon a balanced interaction between the shoulder muscles, tendons, ligaments, and nerves. Rehabilitation for the unstable shoulder should focus on more than just a "loose" joint. Your therapist will individualise your rehabilitation according to your activity demands and their findings on assessment.

What exercises should I do?

It is important to start these exercises under the guidance of your physiotherapist or allied health professional to ensure that you are performing them correctly and working within your pain free range of motion. Once you are able to do the exercises of Phase 1, comfortably and with control you can move on to Phase 2.

Exercises phase 1

MOBILITY

- Perform each exercise 10 times. Aim to repeat this 4-5 times a day.
- These exercises should not make your pain worse. They should be undertaken within a pain-free range.

PENDULUM FORWARDS AND BACKWARDS

Gently move arm forwards and backwards by rocking your body forwards and backwards. Let arm swing freely.

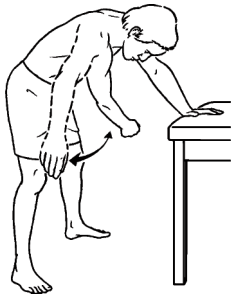
CLOCKWISE / ANTI-CLOCKWISE PENDULUM

Let arm move in a circle clockwise, then anti-clockwise by rocking body weight in a circular pattern.

SAWS

Supporting body weight with hand on table, reach out in front of you. Pull arm back pinching shoulder blades together.

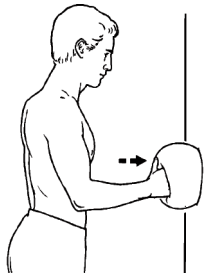
Exercises phase 1 (continued)



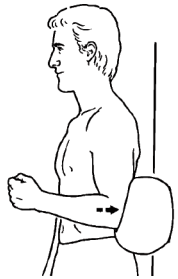
SIDE TO SIDE PENDULUM
Supporting body weight with other hand, gently move arm from side to side by rocking body side to side. Let arm swing freely.

S T R E N G T H E N I N G

- You should be aiming to hold these contractions for 10 seconds. If you can only manage 5 seconds to begin with, that's fine – aim to build it up to 10 slowly.
- Repeat each exercise 10 times, again aiming to do this 4-5 times a day.

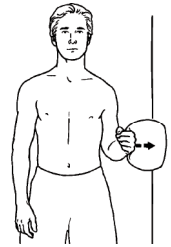


STATIC FLEXION
Using a wall to provide resistance, press fist into wall as shown, using light / moderate resistance.



STATIC EXTENSION
Press back of arm into wall using light / moderate resistance.

STATIC INTERNAL ROTATION
Stand with your arm close to your side, with a pillow placed between your side and your elbow, and your elbow at a right angle. Push the palm of your hand against the other hand inwards.

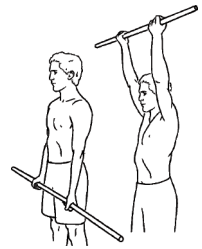


STATIC EXTERNAL ROTATION
Stand with your arm close to your side, with a towel placed between your side and your elbow, and your elbow at a right angle. Push the back of your hand against a wall.

Exercises phase 2

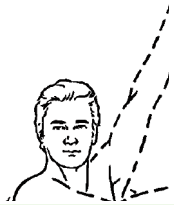
M O B I L I T Y

- Perform each exercise 10 times. Aim to repeat this 4-5 times a day.
- These exercises should not make your pain worse. They should be undertaken within a pain-free range, although you may push into your pain provided it eases when you move your arm back again.



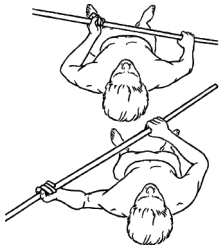
FLEXION WITH STICK
Bring stick directly overhead leading with uninvolved side, until you feel a stretch. Work in a pain free range of movement.

Exercises phase 2 (continued)



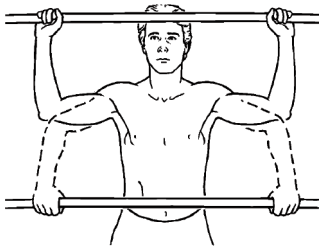
ABDUCTION WITH STICK

Holding stick with uninvolved side palm up, push stick directly out from your side with uninvolved side (palm down) until you feel a stretch. Work in your pain free range of movement.



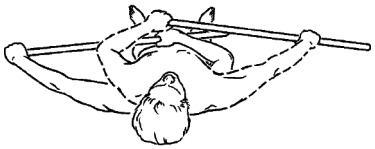
INTERNAL/EXTERNAL ROTATION WITH STICK

Hold stick with involved side palm up, push with uninvolved side (palm down) out from body while keeping elbow at side until you feel a stretch. Then pull back across body leading with uninvolved side. Be sure to keep elbows bent.



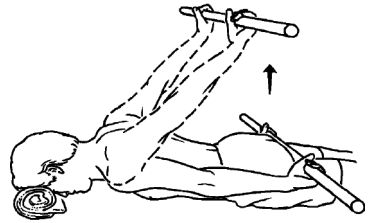
INTERNAL/EXTERNAL ROTATION AT 90° WITH STICK

Lie with your arms out to the side at 90° (or as close as is comfortable) with the elbows bent. Keeping this positions with the upper arms, move stick upward toward head, then down toward waistline. Only move in a pain free range of movement and gradually increase this range as you are able.



HORIZONTAL ABDUCTION/ ADDUCTION WITH STICK

Keeping both palms down, push stick across body with uninvolved side. Then pull back across body, keeping arms parallel to floor. Do not allow your trunk to twist.

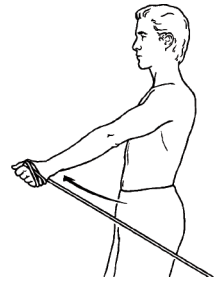


EXTENSION WITH STICK

Lift backward from buttocks until a stretch is felt. This can be performed while lying on your front or in a standing position.

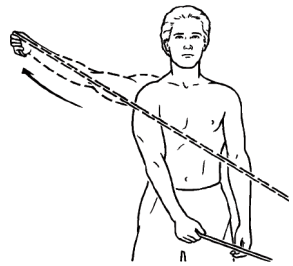
STRENGTHENING

- You should be aiming to perform these exercises slowly, concentrating on controlling the movement. Try counting to 5 as you perform the movement, it should take you this long to do one repetition of one exercise!
- Repeat each exercise 10 times, again aiming to do this 4-5 times a day.



RESISTED FLEXION

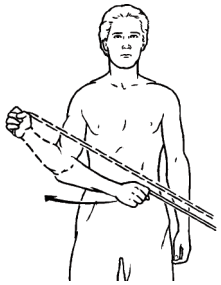
Using elastic tubing / band start with arm at side and pull arm outward and upward. Move shoulder through pain free range of motion.



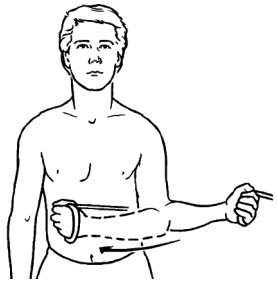
RESISTED ABDUCTION

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

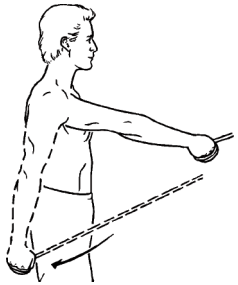
Exercises phase 2 (continued)



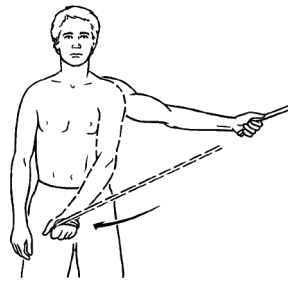
RESISTED EXTERNAL ROTATION
Using elastic tubing / band and keeping elbow in at side, rotate arm outward away from body. Be sure to keep forearm parallel to floor.



RESISTED INTERNAL ROTATION
Using elastic tubing / band and keeping elbow in at side, rotate arm inward across body. Be sure to keep forearm parallel to floor.



RESISTED EXTENSION
Using elastic tubing / band pull arm back. Be sure to keep elbow straight.



RESISTED ADDUCTION
Using elastic tubing / band pull arm in toward buttock. Do not twist or rotate trunk.

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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