



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

**MAiC** Motor Accident  
Insurance Commission

# Whiplash injury recovery

a self-help guide

3rd edition

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# 1 What is whiplash?

Whiplash describes the acceleration-deceleration forces placed on the neck which may occur in rear-end or side-impact motor vehicle collisions.

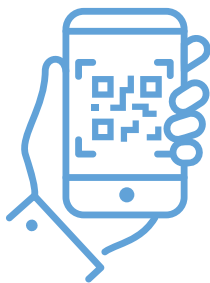
These forces may result in painful injuries to the muscles, ligaments and joints of the neck and other spinal areas. However, sometimes they result in no injury or pain at all.

The joints and ligaments of the neck are covered by muscles, so the injury cannot be seen from the surface. This can be frustrating when your neck is painful.

Imagine a sprained ankle. Immediately following a sprain, the ankle becomes bruised, swollen and painful to move.

A similar reaction can be expected from an injury to the small joints of the neck, however unlike a sprained ankle there are no visible signs.

## Watch exercises online



This booklet contains a program of exercises to help reduce neck pain and aid recovery from a whiplash injury.

You can watch a video on how best to perform these exercises by accessing the QR code displayed next to the exercise.

Most smart phones are able to automatically read a QR code through their camera. If your phone cannot read the code, you can download a QR code reader app.

All videos featured in this booklet are available on the MAIC website: [maic.qld.gov.au/whiplash](https://maic.qld.gov.au/whiplash)

# Whiplash-associated disorders

Whiplash is an injury from which many individuals recover well. Studies have shown that people who are positive about recovery and resume their normal daily activities, as tolerated, may recover faster than those who markedly alter or markedly reduce their activity level for a period.

The main symptoms of a whiplash-associated disorder are neck pain and stiffness. Other symptoms can also occur, such as headaches, aching arms or lightheadedness.

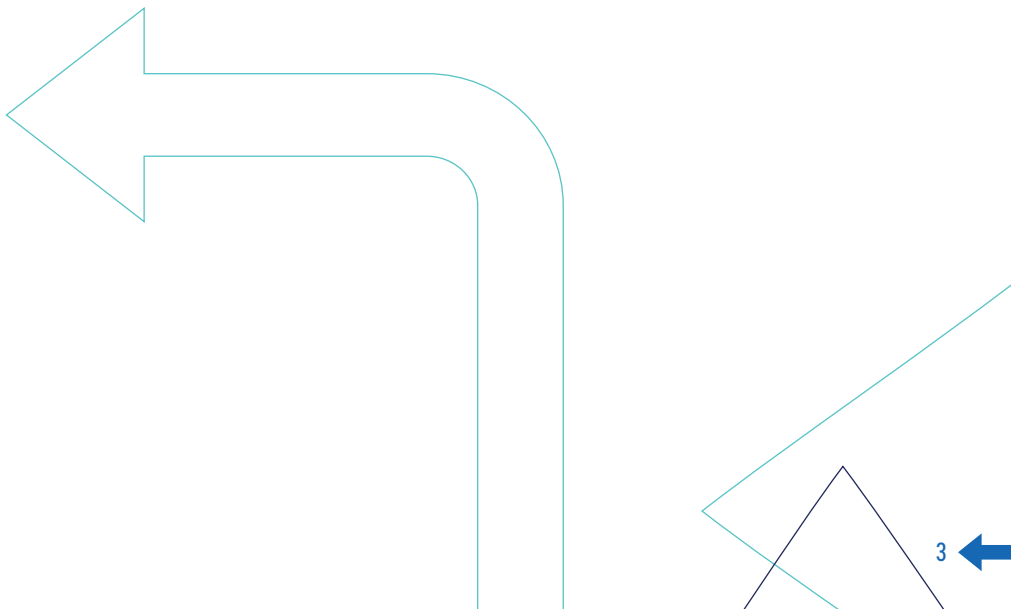
It is also understandable that some people may feel distressed after the motor vehicle collision and these feelings usually settle with time and recovery.

Symptoms may appear immediately after the incident or have a delayed onset of a few hours or days.

The nature of the injury and the number and severity of symptoms vary between different people. This is quite usual and happens with all injuries.

Compare to a sprained ankle. Some people can resume walking immediately after going over on their ankle while others cannot put the full weight on their foot for several days.

Neck x-rays may be taken to rule out injuries such as bone fractures or dislocations. X-ray reports often state that no abnormality has been found because they do not reveal injuries to the soft tissues of the neck (non-bony parts of joints, ligaments, muscles). X-rays do not provide information about pain levels, they only provide assurance that there are no major bone injuries and this in itself is good.



# 1 What is whiplash?

## Recovery

Many people recover from a whiplash injury, although at different rates. No injury is the same as another. Some people who have a whiplash injury may develop long-term neck pain. Research is being conducted worldwide to understand why there are different recovery rates between different people. Some reasons have been identified, such as age and initial severity of the pain or injury. However, there is still more to be learnt.

Following a whiplash injury, you may have a few questions.

### How long will it take to get better?

Many people recover within a few days or weeks. For others, it may take several months to experience a substantial improvement in symptoms. Ongoing symptoms may vary in their intensity during the recovery period. This is quite common.

### What can I do to help my recovery?

Research has shown that it is better to try to keep doing normal daily activities as much as possible to aid recovery.

Having a whiplash injury can for some, be a stressful event. Research has shown that managing stress levels can assist with recovery.

You need to take care of your neck and not expose it to unnecessary strain during the healing phase. It's also important to regularly exercise your neck muscles. This booklet offers advice on how to care for your neck and suggests some specific exercises for your neck to help recovery.

### Can I do the same activities as before? Are there any limitations?

In the early stages of recovery, you may need to adapt some activities to care for your neck. However, you should gradually resume normal activities as your neck improves (work, recreational and social activities).

It may be necessary to limit some of your usual work and recreational activities in the early to middle stages of recovery. Be adaptable - find new ways to do tasks to avoid unnecessary strain on your neck.

An injury will cause pain. However, the pain that occurs in the recovery period does not automatically mean that there is further injury. It is best to stay active and gently exercise to recover.

This guide provides information about care of yourself and care of your neck. This includes advice, strategies and exercises to assist you in your recovery.

## Helping yourself

You are your own best resource in the recovery process. Managing yourself is a key part to controlling the discomfort that you are experiencing. This includes managing both the physical and emotional aspects.

### Staying active is important

Do as many of your normal activities as possible. Some more vigorous activities that place undue stress on your neck may need to be avoided in the early stages of recovery.

However, better recovery has been found in individuals who continue a healthy active routine after a whiplash injury. This goes for your general and emotional health as well as that of your neck.

Plan gradual increases in activity and exercise levels so that you can successfully return to full participation in your regular activities, hobbies or sports.

### Continue or resume working

Those who continue to work, even in a reduced capacity at first, have been shown to have a better recovery than people who take a long time off work. It may be necessary to change some work routines for a while. This guide will suggest ways to do this.

You may wish to talk to your employer or health care practitioner regarding ways to modify your work tasks and environment if difficulties continue.

Keeping a good relationship with your employer and co-workers is helpful in the recovery process. Talk to your employer openly and frequently.

During times of high workload or busy periods, it is important to let colleagues and supervisors know that you may need extra time or help to meet deadlines. Don't be afraid to ask for help. You may be in a position to return the favour at some time.

# 2 Managing stress

## Relaxation skills

### Relaxed deep breathing exercise



We tend to take short, shallow breaths when we are stressed. Relaxed deep breathing can reduce stress and pain. Try relaxed deep breathing today:

Find a comfortable position to sit or lie down.

Put one hand on your abdomen and one on your upper chest.

Close your eyes and slowly breathe in through your nose to the count of 3.

Try to make the hand on your abdomen rise, and keep the hand on your chest still.

Exhale slowly through your mouth while you count to 3 and push out as much air as you can.

The hand on your abdomen should move in, but the hand on your chest should move very little.

Practise for 5-10 minutes. Alternately, practise 10 deep breaths intermittently during the day.



## Body scan exercise



Body scan is a brief exercise combining relaxed deep breathing and muscle relaxation. Body scans alert you to feelings of tension in your body and encourage muscle relaxation. Body scans can be done in 30 seconds, anywhere at any time:

Slowly breathe in. Exhale slowly and say the word 'relax' to yourself. Focus on sensations of relaxation flowing through your body.

Feel the relaxation spreading into your face and through your jaw.

Allow sensations of heaviness and relaxation to flow down through your shoulders.

- Through your arms and hands...
- Down into your stomach...
- Into your legs and feet...

Enjoy the sensation of relaxation you have created. Now slowly return your awareness to what is going on around you.

Notice how your body can remain relaxed while your mind is alert.

# 2 Managing stress

## Problem solving skills

Stress and pain can make it difficult to work through problems and see practical solutions. Problem solving is a skill to use to help develop a plan to manage problems and help relieve stress. Taking a series of steps can help with difficulties encountered every day or problems that seem overwhelming. Try problem solving today:

### 1. Identify the problem

Identify the problem as precisely as you can. If it is a complex problem, break it down into several smaller problems and deal with them one at a time.

### 2. Explore the problem

Ask yourself: How is this problem affecting me? How is my body responding? What am I thinking or feeling? How am I responding through my behaviour?

### 3. Set goals

What do you want to achieve? Try not to get frustrated and forget to think about what you want to achieve. Your goals might be to improve your health, or complete tasks to the best of your ability.

### 4. Consider alternatives

Brainstorm a list of possible solutions – 'anything goes' at the beginning because the more possibilities you explore, the more likely you will discover an effective solution. Consider talking with others about possible solutions.

### 5. Select a possible solution

From your list of possible solutions, choose the ones that seem most relevant, realistic and manageable. Assess the pros and cons of each, and try to predict which might have the best outcome for you.

### 6. Implement a possible solution

Once you select a possible solution, develop a plan. When and how will you implement it? What rewards will you give yourself once you've implemented it?

### 7. Evaluate

Evaluating your solution is important. Ask yourself (and others): How effective was it? Did it achieve what I wanted? What impact did it have on the situation? If the solution was successful, then you have effectively solved your problem. If you feel dissatisfied with the result, then begin the steps again.

## Coping statements

Stress occurs whenever the perceived demands of a situation exceed the perceived resources we have.

This highlights the importance of our coping skills and our thoughts about our ability to manage the situation.

Some of our thoughts work with us and others work against us. Identifying unhelpful thoughts and replacing these with more helpful 'coping statements' is an important part of managing stress.

Examples of unhelpful thoughts that increase stress are: 'This is too hard'; 'I can't handle this'; 'I give up'. Replace these with helpful thoughts such as: 'I can handle this'; 'This will pass'; 'This is not dangerous'. Increasing our thoughts and feelings of being able to cope will decrease our stress.

## In the real world

Try to bring these skills together to apply them to various real-life situations.

Not all stressful situations are the same, so there is no one 'right' way to cope with the different scenarios that we encounter. Developing a plan is a useful way to identify which skills will be most helpful for you to manage each situation.

Using new skills takes practice and sometimes we will forget to use these skills. Lapses can be triggered by a number of things, like unforeseen difficult events or experiences; significant loss or change; or feeling down or worried for no identifiable reason.

Recognising early warning signs for you and having a plan available is one way to get back on track with using stress management skills.

# 3 Care for your neck

## Set achievable goals

Set progressive goals to achieve during the recovery process.

Remember the example of a sprained ankle. Imagine that you play tennis and your goal is to get back to playing. You can achieve this with progressive activity goals. For example:

- Goal 1:** To restore normal movement of your ankle
- Goal 2:** To walk without a limp
- Goal 3:** To jog, progressively increasing distances
- Goal 4:** To run, progressively increasing distances
- Goal 5:** To run with quick changes in direction and return to tennis.

Use a similar process to set progressive goals to return to usual activities following a whiplash injury.

Reward yourself as you achieve a goal. Remember that each achievement is moving you closer to your usual lifestyle.

Try to continue engaging in social events that you enjoy such as catching up with family and friends, meeting for coffee, going to the movies, the markets or a sporting event.

## Maintain the flexibility and muscle support of your neck

An exercise program that is specific to the neck and upper back will greatly benefit your recovery. The exercise program in this booklet will help you regain normal neck movement and function.

The exercises are also designed to ensure that your neck receives proper support from the muscles. They can also help you to lessen your pain.

## Perform daily activities in a strain-free way

Thinking about how you do your work and recreational activities can avoid unnecessary strain on your neck, reduce pain and assist your recovery.

## Be aware of neck positions and postures at work and home

The positions in which you work and relax each day can impact on your pain. Keeping your neck in one position for too long may increase your pain. Change your posture regularly when you are performing tasks at home and at work.



## Posture

The posture exercise is a key strategy to care for your neck so we will highlight it here as well as within the exercises section.

### Posture correction exercise

Change your posture by gently growing tall from the lower back and pelvic region.

Gently raise your pelvis up out of a slumped position.

Next, reposition your shoulder blades so they draw back and across your ribcage (towards the centre of your spine). This needs only minimal effort.

Gently lengthen the back of your neck. This takes the weight of your head off your neck and stimulates the muscles to work.

Hold the position for at least 10 seconds. Repeat frequently during the day (e.g. 3 or 4 times an hour).

Perform this exercise when sitting, standing or while walking, at work and at home.

A 10-second investment of your time at regular intervals helps the health of your neck.



# 3 Care for your neck

## Sitting

When sitting in a work chair, lounge chair, or in the car, always ensure that you place your bottom fully back in the chair seat so that your pelvis and back are supported by the chair back in a comfortable upright position. This keeps your head in a good position.

Avoid sitting with a slouched back or in chairs without backs. This encourages a rounded back and forces your head forward in an undesirable posture.

### Change your position

Change your position before your neck becomes stiff or sore. Perform the posture exercise regularly. Stand up and move at least every hour.

### Assess how you spend your day at work

Regardless of the work you do, important principles to follow for neck health are to avoid staying in one position for prolonged periods of time and to move regularly.

If your work is sedentary, as in a desk job, there is no one 'correct' way to sit, but it is important that your work station is comfortable for you, to avoid or reduce any fatigue and strain on your neck and limbs. Trial different positions and set-ups to find what works for you.

To aid your comfort when undertaking computer work sitting at a desk, adjust your seatback so that your low back feels well supported. Ensure the seat is high enough for you to comfortably view the middle of your screen without feeling any strain on your neck or shoulder region.

Check that your shoulders are relaxed and you are close enough to the desk for comfortable work on a keyboard. Don't hesitate to experiment with seat height, lumbar support or the angle of your backrest. Try using a footstool if your feet do not comfortably rest on the floor.

If you use two or three screens for your work it is best to have the main screen directly in front. When working on a second screen try turning your chair a little, rather than your neck.

### Prevent strain, prevent pain.

Some office environments allow both sitting and standing. Research has shown that there are some general health benefits with standing, but care needs to be taken. Using standing desks for too long can contribute to musculoskeletal symptoms such as leg or low back pain. Failure to adjust the height of the monitor when transitioning between sitting and standing can cause strain and pain in the neck and arms.

Common sense and moderation are required. Remember the benefits of moving regularly. Change frequently from standing to sitting and sitting to standing. If you wish to use a standing desk, begin with short time periods (e.g. 30 minutes).

Don't wait until your legs, back or neck begin to hurt before you change position. Determine what is a comfortable time for you. If you require help, seek assistance from your supervisor or local occupational health and safety officer.



## Working at benches

Whether working at benches in your job or for household activities, be aware of your posture, particularly of your shoulders and arms.

Ensure the bench height allows you to work with shoulders and arms relaxed. Benches that are too high will raise your shoulders, which places unnecessary strain on the neck.

Have objects close to you to avoid unnecessary reaching.

Prolonged standing can tire your muscles. Do some work sitting, or change the work that you are doing to enable you to change positions to avoid fatigue.

Do the posture exercise every 15 minutes.

## Laptops, mobiles, telephones and other devices

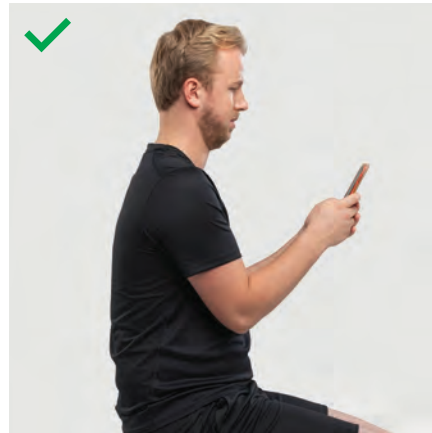
Having your head bent down means that your neck muscles must work 4 to 5 times harder than if your head is in an upright position.

Use a headset if your job involves the use of a telephone or mobile. Avoid cradling the phone between your head and shoulder.

## Mobile phone posture

While using a mobile device, grow tall through your back.

Lift your elbows up or support the device on a table or cushion to bring your head up.



# 3 Care for your neck



## Lifting and carrying

Carry fewer bags of groceries from the car at a time. There will be more trips, but less strain on your neck.

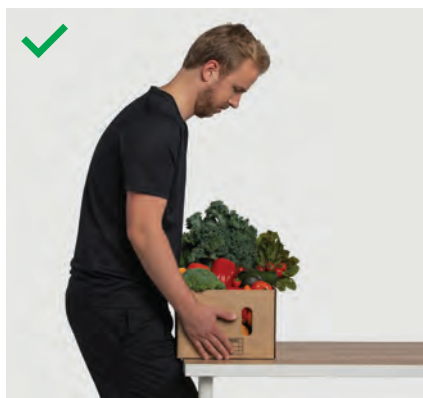
Check the contents of your bags (e.g. handbag or gym bag). Lighten the load to prevent neck strain.

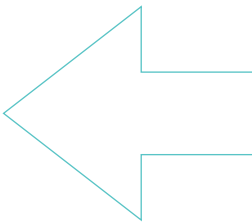
When lifting from the ground level:

- stand close to the object with your feet apart
- bend using your knees and your back (about 50:50)
- keep your chin down during the lift.

When lifting from a raised surface:

- draw the object close to you
- feel its weight before you lift
- keep your chin down during the lift
- carry the object close to your body.





## General activities

Sometimes certain activities can aggravate neck pain. Here are some useful tips, if you are having problems with any of the following activities.

**Driving the car:** Bring the seat forward so when your foot is on the accelerator, your knee is bent to about 30 degrees. Ensure the back of the seat is upright with the lower back supported. Your arms should be relaxed, with bent elbows, as your hands gently grasp the steering wheel. Check the position of the rear-view and side mirrors in your car. Using mirrors effectively can help when changing lanes. When reversing, use the reversing camera in your car or sit slightly forward and turn your trunk and shoulders first and then your head to see behind you.

**Attending a dinner party or work meeting:** Sit where you can view people straight on. Sitting with your head turned to talk for prolonged periods can make your neck stiff.

**Going to the movies:** Sit in the centre of the theatre so that you can view the screen straight on.

**Tablets, mobiles and texting:** Avoid or limit the time your head is bent forward. Raise the device to a comfortable height.

**Reading:** Rest the book or kindle up on a stand so that you do not have to hold your neck bent for long periods of time.

**Travelling on long trips (e.g. in a plane or car):** Take a neck support pillow with you if you intend to sleep. Use a suitcase with wheels for both stored and hand luggage. Consider whether you can reduce the amount of luggage you take, especially shoes and toiletries, which are heavy.

**Watching television:** Practise the posture exercise during advertisements or stand up. If lying down, lie on your side and support your neck with a pillow. Don't lie on your back with your neck bent up on a pillow.

**Going to the hairdresser:** If resting your head back on the basin to have your hair washed is likely to be uncomfortable, stand and face the basin. Bending forward to have your hair washed will be easier for your neck.

**Going to the dentist:** Take a rolled towel or small pillow to the dentist to support your neck.

# 3 Care for your neck

## General activities continued

**Travelling to and from work:** Alternate the side that you carry your briefcase or laptop. If you need to carry extra paperwork take it in a separate bag.

**Grocery shopping:** Use a cart or trolley to carry oversized or multiple items. At the supermarket, choose a trolley that steers easily when you push it.

**Carrying children:** Regularly change sides or use slings, backpacks or strollers.

**Nursing or breastfeeding:** Place the baby on a pillow on your lap to avoid holding the weight of the baby for prolonged periods.

**Lifting or reaching for children:** Encourage children to climb onto your lap or into the car instead of lifting them as soon as they are able. Position their car seat to limit the amount of reaching you need to do to secure the child in the seat.

**Be creative. Adapting how you do things will lessen the strain on your neck and bring you closer to recovery.**

## Household activities

If you are having difficulty with household activities, try some of these tips.

Spread out house cleaning over a few days. You don't have to do all the household tasks at once. Change your routine to reduce the chance of neck strain.

Rotate cleaning tasks to avoid doing the same task all at once.

Alternate lighter tasks with heavier ones. For example, do some dusting, vacuum one room, clean the wash basin, vacuum another room. You do not have to do everything at once – be adaptable.

Adjust the height of your vacuum cleaner so you do not have to bend as far. Try to keep your posture as upright as possible when using brooms or mops. Clean small areas at a time.

In the laundry, lift fewer clothes from the washing machine at once.

Lower the clothesline and place the basket up on a trolley to reduce the strain on your neck and shoulders while hanging out the clothes.

Dry heavy items on a clothes rack if necessary.

When preparing food, be mindful that your shoulders are not creeping upwards. While peeling or chopping vegetables, regularly draw your shoulder blades gently back towards your spine. This keeps your neck relaxed. Lengthen the back of your neck to lessen the load on your neck.

Using sharp knives reduces the force required to chop hard vegetables.

In the kitchen, place items that you use regularly at bench height so that you don't have to do unnecessary bending or reaching.

If using heavy saucepans or pans, draw them close to you first and lift with two hands. To lessen the weight, let them rest on the sink as you drain the contents.

In the garden, vary your activities and positions. Do some weeding then some raking, then some trimming.

Weed the garden kneeling on your hands and knees or in a half-kneeling position with one knee bent up.

Use a wheelbarrow to take weeds to the compost bin.

When trimming high hedges, don't stretch up too high. Use a step ladder to improve your position. Make sure it is positioned safely.

Don't start new projects such as painting a ceiling or projects involving heavy lifting until your neck has recovered. Get help to carry heavy loads or to do heavy tasks.

## Sleeping postures

The best sleeping posture is lying either on your side or on your back. Avoid sleeping on your stomach as it requires you to fully turn your neck all night to breathe.

A question frequently asked is what is the best pillow to use? There is no simple answer. No research points to one type of pillow being the best. What suits one person is not necessarily comfortable for another. You do not necessarily need to change your pillow.

The principle is that your neck should be supported in a neutral position while you sleep. For example, if you sleep on your side, look in a mirror and check the distance between your ear and the tip of your shoulder. Your pillow height should match this distance.

Some individuals like one firm pillow of suitable height. Others prefer two pillows of lesser thickness, with the top pillow being softer and able to be moulded into the neck for comfort and support.

Pillows are personal items. If your pillow is comfortable, it is right for you.

# 4 Recommendations for self-help

## **Resume your usual activities when you can:**

It is normal to experience some discomfort during recovery but don't stress your neck to a painful level. Try to participate in as many of your normal activities as you can. If your normal activities or sports place high strain on your neck, adapt them or build up to them gradually as your neck recovers. Use progressive goals to get to where you want to be.

**Be active:** Perform general exercise and activity to maintain your health and wellbeing. Undertake a specific exercise regime to improve your flexibility and restore muscle control and support to your neck.

**Be adaptable:** It is good for you to undertake your normal physical exercise, but you may have to change how you exercise in the recovery phase. For example:

- **Swimming:** Swim with a snorkel and goggles if turning your head to breathe is difficult.
- **Riding a bike:** Lift the handlebars so you can ride with a better posture for your neck.

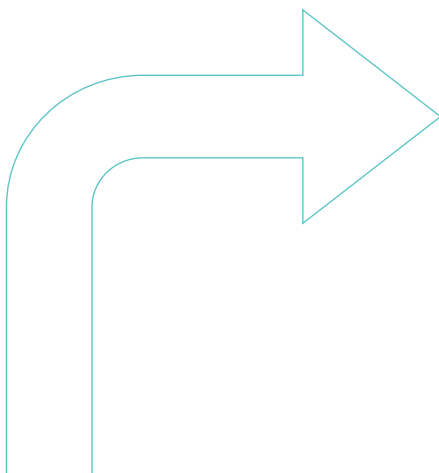
- **Running:** Run on grass at a park rather than on the hard surface of the road. Resume running over a shorter distance at first.
- **At the gym:** Seek advice from your health professional or trainer on how to change your program to prevent strain on your neck.

**Be aware:** Make a conscious effort to maintain good posture during your daily activities. Practise the posture exercise when sitting. Maintain good posture when standing and walking.

Undertake the neck rehabilitation exercises. Research has shown that the exercises in this booklet are helpful in the recovery from your neck injury.

These exercises were chosen specifically to assist you to regain your neck flexibility and to help restore the muscle control necessary to support your neck during normal activities.

Exercise to reduce your pain.



# 5 Exercise instructions and guidelines

## Instructions for exercises

As with any injury (remember the sprained ankle), movements will become stiff and, importantly, the muscles react. Some muscles stop working properly, others become too active and even become sore themselves.

**Exercise is vital for your recovery to restore the movement and the support and control that is provided by the neck muscles.**

Take a minute to practise relaxation before you undertake the exercises. Perform a body scan. Breathe in slowly and deeply and as you breathe out, let any tension go from your muscles.

Exercise in a good posture.

Perform all exercises in a steady and controlled manner. Avoid quick or jerky movements.

During the movement exercises, if one side is stiffer, try to gently work into the stiffness to regain your movement.

Try to complete the repetitions for each exercise as they are prescribed.

During the exercises you may experience some discomfort. This is quite normal, though pain is not. Go to the point where pain is just felt and then return to the starting position. Exercises should not increase your pain or any other symptoms.

### How often should I exercise?

Perform exercises at least twice a day. Include exercise in your daily routines. You can exercise while you work.

The exercise program will take no longer than 10 minutes to perform. Perform once in the morning before you start your daily routine. Perform once at night before retiring to sleep.

If you want to do the exercises more often, 1 or 2 additional sessions a day would be helpful.

### Perform the posture exercise regularly

Keeping a good posture in everyday activities will help relieve your pain.

It is not possible to sit in an upright posture all day because it becomes tiring. Instead, make sure that your chair and working area help you to keep a good supported posture.

At regular times during the day, perform the posture exercise. To straighten your spine out of any slumped position, gently bring your shoulder blades back and across towards the centre of your spine and gently lengthen the back of your neck. Hold the position for 10 seconds.

The posture exercise takes load off your neck and stimulates the muscles to work. It reduces the tension or stress in the neck and shoulder muscles.

# 5 Exercise instructions and guidelines



## Instructions for exercises continued

### Posture correction exercise

This is an essential exercise. Visit page 11 for directions and perform the exercise at least 2-3 times per hour (or more if you wish to). Just hold for 10 seconds.

After a few days of practice, continue your work while you hold the position; it activates important neck muscles and eases the strain on the top of your shoulders.

This exercise is an important one, it's easy to do and takes no time. The challenge is remembering to do it!

Find cues to remind you to perform the posture exercise repeatedly throughout the day.

For example, think 'do my posture exercise':

- before answering the phone
- before answering each new email
- each time I send a text
- at every red traffic light
- during every ad on television
- for each new customer I see in a shop
- anytime I drink or eat.

Choose events that happen regularly throughout the day. Use these as your cues to remind you to perform the posture exercise.



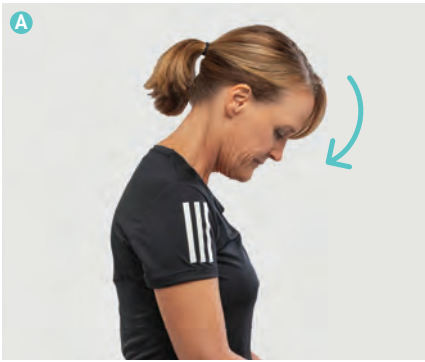
# 6 Exercises



## Exercises for range of motion (ROM)

### ROM – Forward and backward bending exercise

Assume an upright posture. For each of the following exercises each movement should be done slowly and purposefully taking about 2-4 seconds to perform. Repeat each exercise 5-10 times.



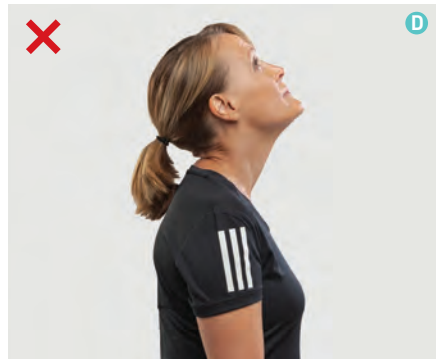
- A** Look down and gently bring your chin down towards your chest. Lift your chin up and return to the starting position of upright posture.



- B** Slowly roll your head and neck backwards to look up at the ceiling as far as is comfortable.



- C** Come back up by tucking your chin down and bringing your head back to the upright position.



- D** Avoid letting your chin poke out.

# 6 Exercises



## Exercises for range of motion (ROM) continued

### ROM – Rotation exercise



- A** Gently turn your head to the left, looking where you are going to see over your shoulder as much as possible.

You may find it easier to have a target on the wall to focus on.

With each repetition, try to go a little further in that direction. Perform the same exercise to the right side.

### ROM – Side bending exercise



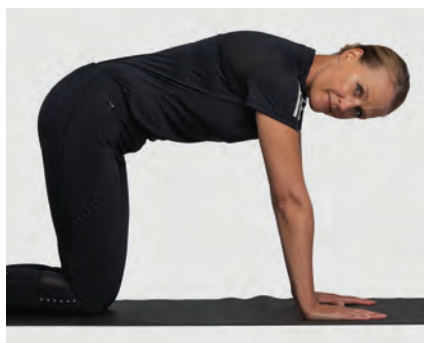
- B** Start with your head centred and gently bring your left ear down towards your left shoulder. You may feel a normal stretch of the muscles on the side of your neck. The exercise should be pain-free. Perform each exercise 5 times on each side.

### ROM – Rotation exercise alternate position



Sometimes it is easier to perform this exercise while kneeling on your hands and knees, especially in the early days after injury. Push

through your hands so your back is not slumped. Practise turning your head and looking to each side.





## ROM – Archery exercise

Pretend you are using a bow and arrow.

Hold the bow in your outstretched arm, keep your eyes fixed on an imaginary target straight in front of you.

Draw the bow string back concentrating on feeling the stretch across your upper back. Go as far as possible and hold for a second or two.

Now hold the bow in the opposite hand and repeat the exercise.

Do the exercise alternating between sides for 5-10 repetitions.

This exercise provides a gentle stretch to the neck and upper back regions. You will feel looser.



# 6 Exercises



## Exercises to train the neck muscles

### Neck flexor muscles: head nod and holding exercise

This is an important exercise to retrain the deep neck muscles in the front of your neck.

The training often provides pain relief and it is vital for restoring muscle support and control to your neck.

Lie on your back with knees bent with nothing under your head and neck **A**.

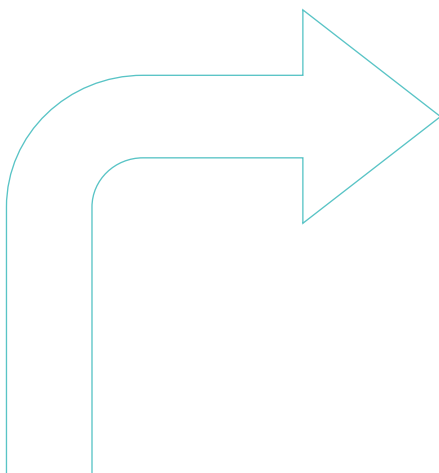
If this is not comfortable, place a small, folded towel under your head for support **B**.

Start by looking up at a point on the ceiling. Then with your eyes, look at a spot on the wall just above your knees. Feel the back of your head slide up the bed as you perform a slow and gentle nod as if you were indicating 'yes'.

You are doing the exercise well if you can feel the back of your head slide against the floor or bed as your chin moves up and down. It is a gentle exercise.

Once you are confident that you are doing the head slide/chin nod well, place your hand gently on the front of the neck to feel the superficial muscles. Make sure they stay soft and relaxed when doing the head nod movement. When looking and nodding down, stop at the point you sense the muscles are beginning to harden, but keep looking down with your eyes.

Hold the position for 10 seconds and then relax. Look up to a point on the ceiling to resume the starting position. Repeat the exercise 10 times.





# 6 Exercises



## Exercises to train the neck muscles continued

### Neck extensor muscles exercise

These are important exercises to retrain the muscles at the back of your neck for pain relief and muscle support and control. There are 3 exercises to perform, which ensures you exercise the upper and lower regions of your neck.

Lie on your stomach, propped up on your elbows. Push through your elbows to prevent your chest from sagging between your shoulder blades.

You can do this exercise on hands and knees if you wish.

In the early stages you may wish to just lean forwards with your elbows on a table.

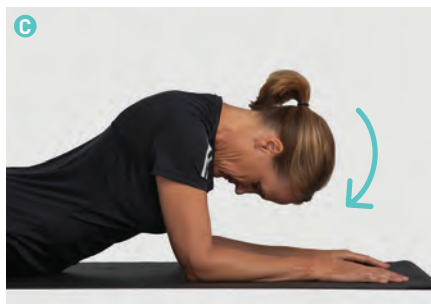
To begin, perform each exercise 5 times as one set. Try to build up to 3 sets (and eventually 3 sets of 10 repetitions each). Remember to keep pushing through your elbows to keep your chest raised for the whole set. Have a rest between sets.



- A** Just concentrate on your chin. Tip it up and down as if saying 'yes'. It is a gentle but important exercise for the small muscles in the upper part of your neck.



- B** This time, gently turn your head from side to side as if you were saying 'no'. In other words, you only need to turn your head about 1/3 of the ways to each side. Again it is a gentle but important exercise for other small muscles in the upper part of your neck.



- C** For the final exercise, first lower your head and neck down to look at your chest. Then raise and curl your neck back up. Pretend you have a book between your forearms.

As you lift your head back, keep reading your book. This helps to keep the upper neck in a neutral position to focus the exercise on the muscles in the lower region of your neck.

# 6 Exercises



## Exercises to train shoulder girdle muscles

### Shoulder blade exercise

Poor muscle control around the shoulder blades can increase pain and strain on the neck. This first exercise relaxes and eases any tension in the muscles on top of your shoulders. It can give you pain relief.

It also makes the muscles at the bottom of your shoulder blade work which helps reduce strain from your neck with arm activities.



**A** Lie on your right side with your arm resting on two pillows.



**B** Roll your left shoulder blade back and across your ribs towards the centre of your back. Hold the position for 10 seconds. Repeat 5 times. Repeat lying on the right side for the left shoulder blade.

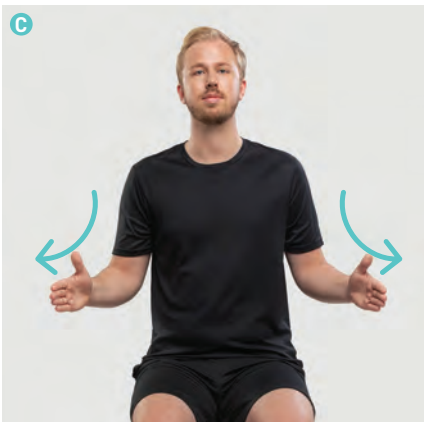


## Shoulder blade exercise with arm movements

This exercise helps you to improve the control of your shoulder blades while mimicking work you may do with your arms. It trains you to ease any tension in the muscles on top of your shoulders while you are using your arms.

Do the posture exercise and draw your shoulder blades back and across your rib cage as you have already practised. Hold the position.

Concentrate on holding your shoulder blade position. Then move your arms:



**A** forwards and backwards; **B** out to the side; and **C** turn your forearms outwards. Do not lift your arms more than 30 degrees (that is, about a quarter of the way up) and perform each exercise (**A**, **B** and **C**) 5 times and repeat this set 3 times. Progress the repetitions until you can perform 3 sets of 10 repetitions.

When you feel confident that you can do the exercise keeping your shoulder blades gently back, hold a 500 g can in each hand as a small weight. Very gradually, progress the weight to a maximum of 2 kg.

# 6 Exercises



## Exercises to train shoulder girdle muscles continued

### Shoulder shrugging exercise

In this exercise, think of curling the tips of your shoulders to your ears. Take your arms out to the side (about 20-30 cm away from your thigh). Gently draw the tip of your shoulder up towards your ear. It is a 'curved' action, not just straight lift. Commence with 5 repetitions and repeat 3 sets.

Gradually build the exercise up to perform 3 sets of 10 repetitions. When this is easy to do, hold a light weight in your hand. You could start with a 500 g can. Very gradually build up progressively to holding a 2 kg weight.





## Shoulder blade exercise with arm elevation

This exercise is simply raising the arms forward as far up as you can go. Start performing this exercise when the shrugging exercise becomes quite easy.

Make sure that you maintain a good posture of your back and neck, especially concentrating on lifting the base of your skull off the top of your neck. As you raise your arms, keep your thumbs facing upwards. Perform 3 sets of 5 left and right arm raises.

Gradually build the exercise up to perform 3 sets of 10 repetitions. When this is easy to do, hold a light weight in your hands. You could start with a 500 g can.





## Resisted rotation exercise (no movement)

### Neck isometric exercise

This is an exercise you can add as the neck flexion and extension exercises on pages 24-27 become easy to do. It is a very portable exercise which can be done during the day.

First, perform the posture exercise and gently raise the back of your head. Hold the position.

Place your right hand on the right cheek. Without moving your head, turn your eyes to the right and gently push your head into your hand as if to look over your shoulder.

While performing this exercise no movement occurs. Hold the muscle contraction for 5 seconds.

Do the exercise smoothly and gently, use only 10% effort.

Change hand position and perform the same exercise to the left side.

Do 5 repetitions on each side.





## Exercises for coordination and balance

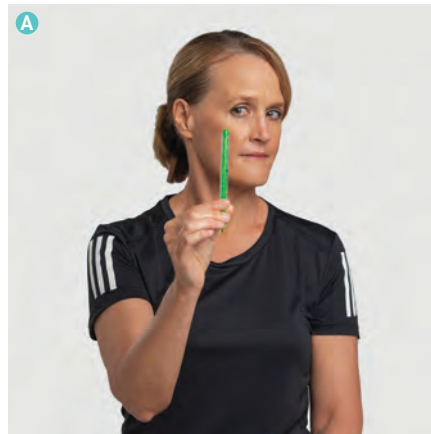
### Who needs to do these exercises?

Some people feel a little light-headed, dizzy or unsteady in association with their neck pain. These symptoms can be helped by exercises which involve coordinating eye and head movement and by practising balance. If you have these symptoms, try the next 3 exercises.

### Eye-head coordination exercises

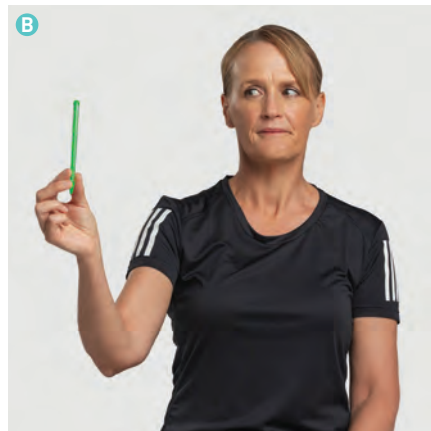
For the eyes still exercise **A**, hold a pen at a comfortable distance in front of your eyes or focus on a spot on the wall.

Keep your gaze fixed on the pen and turn your head gently from side to side. Turn 10 times to each side. Stop if you feel a little dizzy, but try to do one more turn the next time you practise.



For the head still, eyes move exercise **B**, keep your head still and move the pen about 20-25 cm from the midline one side to the other, within your field of vision.

Follow the pen with your eyes, but this time keep your head still. Move the pen 10 times to each side. Stop if you feel a little dizzy, but try to move the pen one more time the next time you practise.



# 6 Exercises



## Balance exercise

Test your balance in the 3 positions listed below. The aim is to keep a steady balance in each position for 30 seconds. If all positions are easy, your balance is good.

If you are unsteady in a position, practise in that position until you can stay there steadily for 30 seconds. Then progress to the next position on the list.

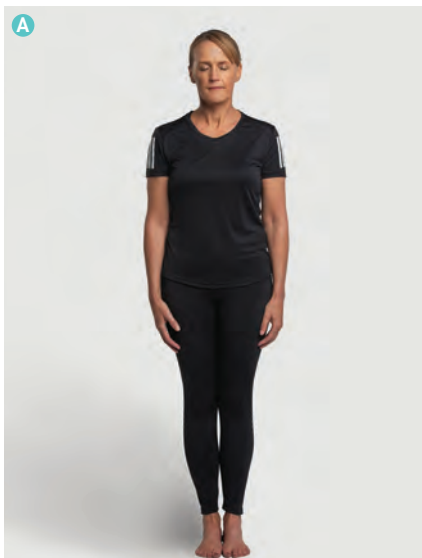
As a safety measure, stand by a wall or table when doing balance exercises but only touch it if necessary.

Stand tall with feet close together, looking straight ahead – eyes open.

Stand tall with feet close together, looking straight ahead – eyes closed **A**.

Stand with one foot in front of another, heel touching toes – eyes open **B**.

Use both the right and left foot as the front foot; one combination will be easier than the other.





## Exercises with more difficulty

### When should I do more difficult exercises?

Once your neck pain has settled sufficiently, the exercises can be progressed to include strengthening exercises.

These exercises should not cause pain. Progress slowly.

### Neck flexor head lift exercise

The weight of your head is enough weight to lift. Start by sitting on a chair close to a wall. Rest your head back on the wall.

Slide the back of your head up the wall to nod your chin and hold it in this position.

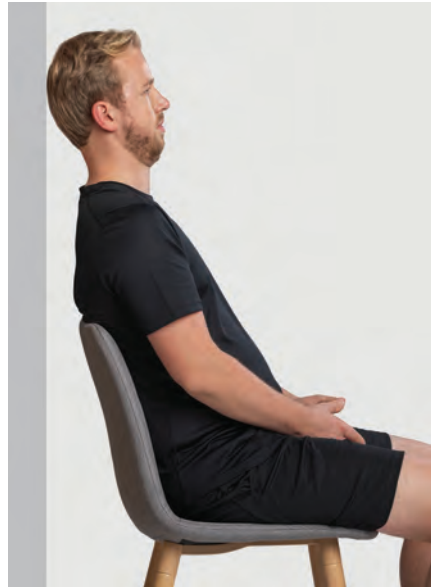
Then just take the weight of your head off the wall (your hair still touches the wall).

Hold for 5 seconds and relax.

Start by doing 3 sets of 2-3 repetitions and gradually build up to 3 sets of 5 repetitions.

Shifting the chair a little further from the wall makes the exercise more difficult.

You can progress the exercise by moving the chair away from the wall in 2 cm stages.



# 6 Exercises



## Exercises with more difficulty continued

### Neck flexor head lift progression exercise

Progression: Lie resting your head on 2 pillows. Slide the back of your head up the pillow to nod your chin and hold it in this position.

Then try to lift the weight of your head until it just clears the pillow.

Hold for 5 seconds and relax. Start by doing 3 sets of 2-3 repetitions and gradually build up to 3 sets of 5 repetitions.

The exercise can be progressed by removing 1 pillow and performing the exercise in the same way.

Note in all variations of the exercise: holding the chin nod position (that is keeping a double chin) is a very important aspect of the exercise.





## Neck extensor exercise with a towel

The exercise to strengthen the muscles at the back of the neck can be done either while sitting **A**, kneeling on your hands and knees **B** (page over), or lying on your stomach with your head over the end of the bed. Choose the exercise position that works best for you.

While the weight of your head is sufficient resistance to strengthen the flexor muscles, the muscles at the back of your neck are stronger so some extra resistance is required.

The exercise is an isometric exercise (no movement) which mimics what the neck muscles do during the day, that is hold your head steady while you work.

**A** Hold a towel at the back of your head and push your head back against it. You control the amount of resistance with the work of your arms. Start with a light resistance that you can control easily.

Start with 3 repetitions of 5 second holds. Progress first by increasing the time you hold the contraction (e.g. up to 30 seconds). Then progress by increasing the resistance you provide with your arms.



# 6 Exercises



## Exercises with more difficulty continued

### Neck extensor exercise with a bike helmet

**B** A bicycle helmet or similar head gear can be used to provide light resistance when you choose to do the exercise on your hands and knees or lying on your stomach.

Start by using just the helmet as resistance. Increase the load by taping weights onto the helmet or the head gear you have chosen.

Start with 250 g or similar and progress slowly over a few weeks to eventually hold 2 kg.

Look around the house for suitable weights e.g. paperweights, old-fashioned kitchen scale weights, or fishing sinkers. Tape them securely on the helmet or headband.

To perform the exercise, again pretend that there is a book or pen between your wrists. Keep your eyes on the book/pen and just raise your head above the horizon (about 5 degrees). The closer your head is to the horizon, the more difficult the exercise.

Start with 3 repetitions of 5 second holds. Progress first by increasing the time you hold the contraction (e.g. up to 30 seconds). Then progress by increasing the resistance you provide with the weights.



# 7 Summary

The way that you perform tasks each day can have an impact on your recovery. You can actively help to control your pain by avoiding unnecessary stress on the muscles and joints of your neck.

Change your posture frequently throughout the day.

Assume the upright stress-free posture for short periods regularly throughout the day.

Reduce the weight that you carry, e.g. bags, briefcases and shopping bags. This will help to avoid unnecessary strain.

Vary your work, household and garden activities. Joints and muscles like to be used but not in the same action or in the same position for prolonged periods.

Change from one task to another if you notice that your discomfort is increasing with a particular task.

Simple tasks can sometimes be the most challenging. The changes that can be the most useful are often the simple ones.

Adapt the way you do things to lessen strain and pain.

Gradually increase your activity levels and increase tolerance.

## More information

This booklet is designed to supplement care provided by your health care practitioner. Please speak to your health care practitioner if you have any concerns about the advice contained in this booklet or you require further assistance.

Further information about treatments for whiplash and the research evidence to support their use may be obtained by visiting the website of RECOVER Injury Research Centre at The University of Queensland [recover.centre.uq.edu.au/treatment](http://recover.centre.uq.edu.au/treatment)

To download this publication, or view updates and other resources, visit the Motor Accident Insurance Commission's website at [maic.qld.gov.au](http://maic.qld.gov.au) or the following information website [mywhiplash.com.au](http://mywhiplash.com.au)

This booklet was written and designed by Emeritus Professor Gwendolen Jull, of the Cervical Spine and Whiplash Research Unit, Centre of Clinical Research Excellence on Spinal Pain, Injury and Health, Division of Physiotherapy, School of Health and Rehabilitation Sciences at the University of Queensland and Professor Michele Sterling, Director of the NHMRC Centre of Research Excellence in Recovery Following Road Traffic Injury and a Research Program Lead at Recover Injury Research Centre at The University of Queensland.

## Acknowledgements

We thank Dr Julia Treleaven, Dr Venerina Johnston, Dr Amanda Nielsen and Professor Justin Kenardy for their reviews of progressive editions of this self-help guide.

We also thank the health practitioners and people who have experienced whiplash injury who have provided feedback to ensure the information in this booklet serves the needs of people recovering from whiplash injury.

# 7 About the authors

**Emeritus Professor Gwendolen Jull** is a Professor of Physiotherapy, a Fellow of the Australian College of Physiotherapist and a specialist musculoskeletal physiotherapist. She researches in the field of neck pain and whiplash in the Centre of Clinical Research Excellence on Spinal Pain, Injury and Health, School of Health and Rehabilitation Sciences at The University of Queensland.

**Professor Michele Sterling** is the Director of the National Health and Medical Research Council (NHMRC) Centre of Research Excellence in Recovery Following Road Traffic Injury and a Research Program Lead at RECOVER Injury Research Centre at The University of Queensland. She is a musculoskeletal physiotherapist and a Fellow of the Australian College of Physiotherapists.

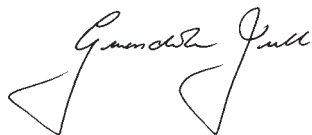
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## A message from the authors

This booklet aims to help people who have a whiplash injury on the road to recovery. It provides information about whiplash associated disorders, an explanation of whiplash, an exercise program which has been proven to help reduce neck pain,

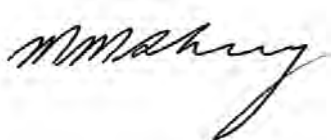
and advice on how to manage your neck to prevent unnecessary strain and to aid recovery.

The booklet is a self-help resource to aid recovery and to supplement any care being provided by a health care practitioner.



### Emeritus Professor Gwendolen Jull

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*The exercise program and self-management advice presented in this booklet are based on the results of clinical trials, research into neck disorders and the authors' extensive clinical experience in the area of whiplash-associated disorders and other neck pain syndromes.*





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