

Back Care

For families and carers of children with disabilities



novita
children's services

Introduction

Caring for another person can be a challenging job emotionally and physically. For those who care for a child with a disability, a great deal of carrying and lifting may be required. This can increase the risk of injury to backs, necks and shoulders. These risks can be reduced if families/carers understand how to lift correctly. This package will outline the important aspects of caring for your back.

Everybody's situation is different and therefore **we can only provide you with a generalised overview of back care.** In some cases you may need to seek further assistance for a specific problem. Please refer to the "contacts" page at the end of this package if further assistance is required.

Always try a problem solving approach as there is not always a right or wrong way to do things. This pamphlet will provide you with information on how to reduce the risk of injury while positioning, lifting, carrying and moving your child, which are collectively termed 'transfer techniques'.

It is important that you consult your Novita physiotherapist for more information, support and training around how to care for your back, and how to safely lift, carry and move your child, as this will differ according to your situation and your child's needs.

The following topics are covered in this package:

- The importance of a healthy back
- Maintaining your health and fitness
- Principles for transfers
- How to perform the transfers
- Further information

** Please note:* the word 'transfer' refers to any movement, which requires you to lift move or carry your child.

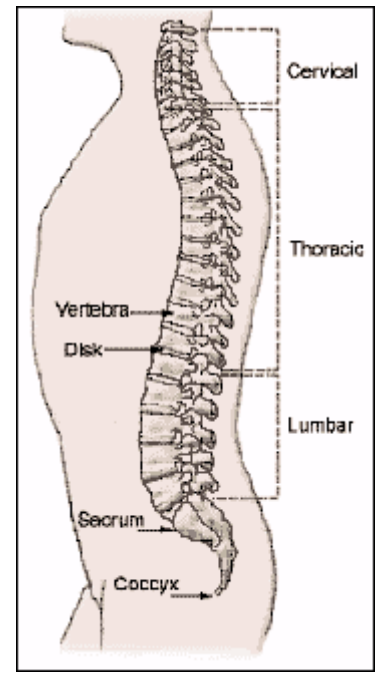


The Importance of a Healthy Back

To assist you to take care of your back, a basic understanding of the structures of your spine is important. The spine is comprised of bones, muscles, nerves, discs and ligaments.

If the spine is used correctly it should be pain free. It is important to remember that the cause of back injuries is often mis-use of the back over previous months or years, when it is likely no symptoms were noticed. We need to develop habits which look after our back, even on the days when it feels fantastic, as the cumulative effects of long term wear and tear are very damaging and likely to result in acute injury and pain.

Having a healthy spine is essential to be able to carry out our daily activities, work and leisure.



Muscle sprain and spasm

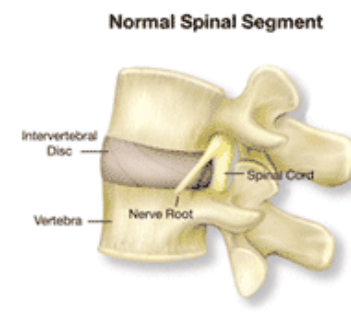
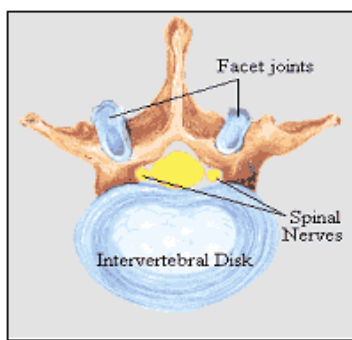
If the back muscles are not strong, muscle sprains and strains can occur. A sudden twisting, jarring or over exertion of these weak muscles can result in injury. The injured muscles will then tighten into what is known as a spasm, which causes more pain to be experienced (Muscular development fitness unit, Weller 2005).

Tearing ligaments and tendons

This type of injury often occurs in association with muscle sprain and spasm. It often results following a jolting, jarring or twisting force is applied to the spine. Pain is experienced in the back and can last for several weeks while the area heals (Weller 2005)

Bulging and rupturing of Discs

Discs are made up of two parts the outer fibrous layer, which is known as the annulus and the inner nucleus. The nucleus is soft, jelly like and is surrounded by the fibrous outer annulus. The discs act as pressure absorbers by altering their shape and allowing movement of the spine. Injury to the disc can occur if the outer fibrous layer becomes torn. Most of the pain, which is associated with this type of injury, is related to the injured disc pressing on nerves where they pass through the spine. This injury can cause local pain, numbness, tingling pain, or referred pain to your leg(s) (Muscular development fitness unit, Weller 2005).



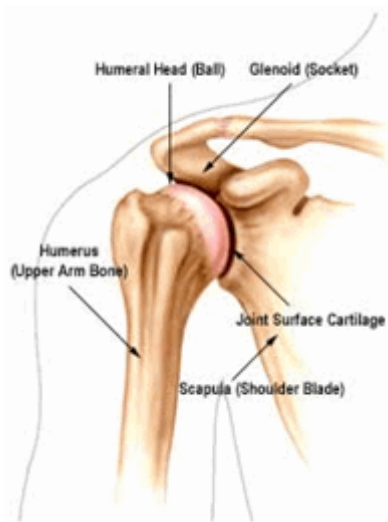
Examples of the load through the discs of your spine:

Compressive loads on lumbar discs	
Activity	Load on Disc (kg/cm ²)
Lying on back	20
Standing	70
Sitting	100
Sitting slumped	180
Walking	85
Coughing, sneezing	110
Laughing	120
Bending forward 20°	120
Lifting 20kg, back straight	210
Lifting 20kg, back bent	340

So to help prevent injury to these structures of your back:

- Maintain a good general level of fitness
- Maintain a good posture at all times- especially the low back curve
- Learn good transfer techniques to make things easier
- Develop and use good 'back habits' at all times.

The Importance of a Healthy Shoulder



Your shoulder joint is the most flexible joint in your body, but it is also the most unstable. Manual handling tasks often place your shoulders at risk.

There are three key points to remember:

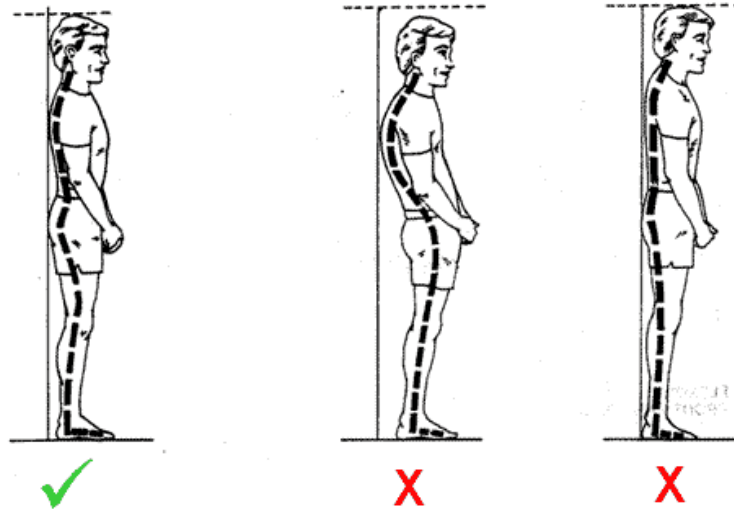
- Good muscle strength around your shoulder protects the joint.
- Good posture ensures that your shoulder works more efficiently, with less chance of sprains or wear and tear.
- Your shoulder is not a strong joint, so when you have strong activities to perform try to generate the power from your legs, not your shoulder (e.g, lifting to a high shelf, pushing a heavy trolley).

Posture

Good posture allows your muscles to work with the least amount of effort to hold the spine in the position of least stress. Having a good posture will reduce muscle fatigue and assist in supporting underlying ligaments, joints and discs.

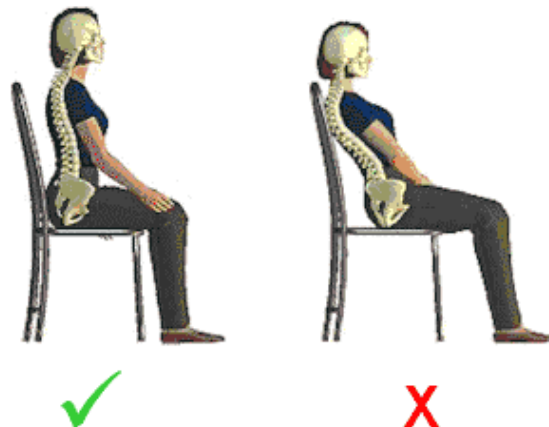
Good standing posture

- Weight is shared evenly over both feet
- Knees are relaxed
- Maintain a normal curve in the lumbar (lower) spine
- Brace your abdominal muscles to assist in supporting your back
- Stand tall
- Lengthen back of neck by tucking your chin in (Muscular development fitness unit)



Good sitting posture

- Weight evenly shared on both buttocks
- Sit back into the chair
- Feet flat on the floor
- Hips and knees at right angles
- Maintain the hollow in your lumbar spine. This can be assisted by placing a supportive pillow in the small of your back to prevent slouching (Muscular development fitness unit)



Maintaining Your Health and Fitness

It is important to care for yourself and part of this care means you need to stay fit and healthy. Exercise can be 'your' time and allow relaxation. If you are strong and healthy your body is more resilient to injury.

How is your fitness level at the moment?

Low

Moderate

High

What do you do to stay fit?

- | | |
|---|--|
| <ul style="list-style-type: none">• Walking• Swimming• Working in house and garden• Tennis | <ul style="list-style-type: none">• Gym• Aqua aerobics• Yoga/Pilates• Other |
|---|--|

Maintaining general fitness through regular participation in activities such as walking, cycling or swimming will further assist you in preventing back injuries. It is recommended that you exercise at least 20 minutes three times a week (Corporate Health Group). We are aware that time is often an important factor limiting these activities. Often it is easier to do these activities if you find something that you enjoy.

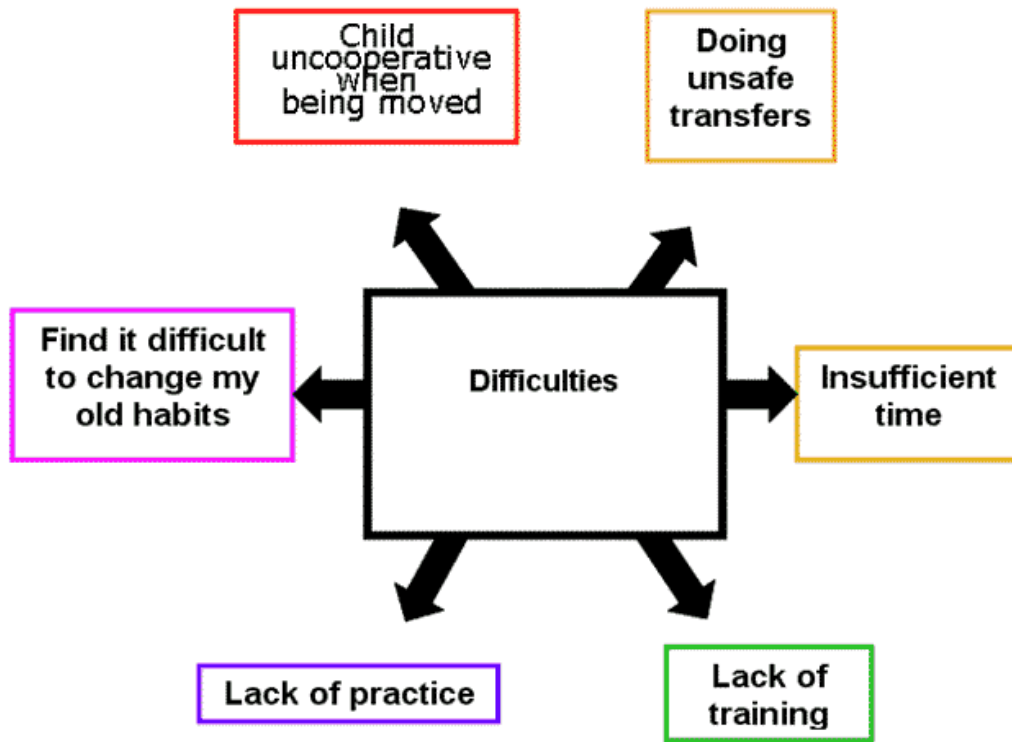
"I often go to aqua aerobics during the week. I find that this is my time where I get look after myself"

Taking Care of Yourself

To ensure that you are able to continue with your caring role and look after your child, it is important that you look after yourself. Regular exercise is only one part of this. It also involves

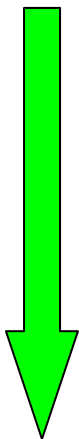
- Having time to yourself during the day
- Maintaining social networks
- Listening to your body
- Pursue your own interest/ hobbies

Do you recognise some of these difficulties with transfers of your child or clients?



Risk Control

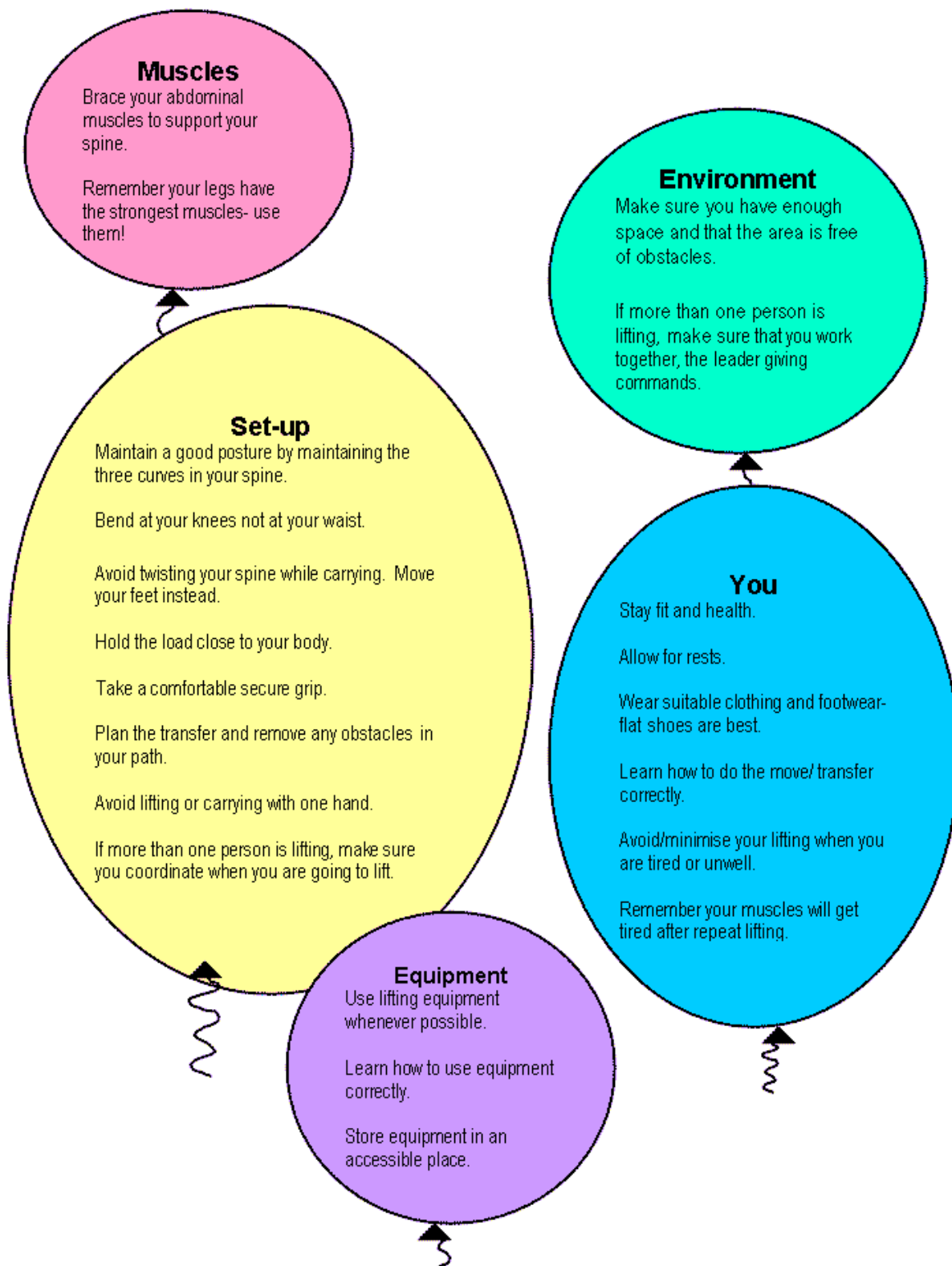
The risk control hierarchy is a very effective framework for managing the risks associated with lifting. Controls at the top of the arrow are always more effective, but not always possible – hence the other strategies need to be used.



- ELIMINATE any unnecessary manual handling tasks.
- SUBSTITUTE lighter objects for heavier ones e.g. can be achieved by reducing the number of items in a box,.
- ENGINEER Use mechanical aids wherever possible to assist with manual handling tasks e.g. hoists and sling.
- ADMINISTRATIVE CONTROLS mean spreading the manual handling tasks over a larger number of people or a longer period of time to reduce the load on your body.
- The final step is to COMPLETE THE REQUIRED TASK SAFELY. Use strong postures that protect your back and shoulder and allow you to generate the necessary force with your legs and body weight

Principles for Transfers

Here are some hints to help avoid injury while assisting your child.



The following sources were used in developing this diagram: Muscular development fitness unit; Weller 2005; Veteran Affairs 2002; Gibson & Watson 2000. Note: complete references are listed at the end of this document.

How to Perform the Transfers

Lifting

If performed poorly, lifting places significant strain on many parts of our body. It is important to plan your lift well and execute the movement with excellent body position.

Remember the Basics –

- Feet comfortably apart, around the load if possible.
- Knees bent.
- Keep the spine in its natural curves.
- Position your child as close to the body as possible.
- Brace abdominal muscles.

Refer to further information on safe lifting:

[Appendix 1: Best practice Manual handling](#)

[Appendix 2: Abdominal stabilising](#)

Lifting your child is something which you may have to do several times throughout the day. It is important for the safety of all involved that you know how to lift safely. Novita physiotherapists can provide a Transfer and Positioning Care Plan (TPCP). This is a document written for schools and childcare centres that describes the safest methods of lifting, positioning and handling Novita clients. To view/ download the Transfer and Positioning Care Plan fact sheet, go to the Fact Sheets page at www.novita.org.au/factsheets.

A number of different transfers may be suitable to use with your child/student. The Novita physiotherapist can provide you with a fact sheet or download the Manual handling fact sheets at www.novita.org.au/factsheets.

Novita physiotherapist can provide you with a fact sheet or you can download the Manual handling fact sheets at www.novita.org.au/factsheets - ask for advice and training on these specific transfers.

Remember that each procedure for transfer and positioning has four main steps:

1. Plan the move and prepare the environment.
2. Starting position
3. Lifting Effort
4. Completing the move

Special Considerations

Nappy changes

Nappy change tables that allow you to work at waist height, avoids you having to bend and twist your back. However it also means having to lift your child onto the table and supervise them if they are mobile. Alternatively you may wish to change the nappy on the floor, you can avoid bending and twisting your back by kneeling (refer to pictures below). This avoids having to lift your child onto the change table. Care needs to be taken as the child is assisted or lifted from the floor. Ultimately you need to find which of these methods is most comfortable for you (Gibson & Watson 2000).



Child-sized chairs and tables

When working with children who are sitting at child-sized tables and chairs, it is wise to use a low chair or stool yourself, to avoid bending or twisting your back while you are assisting with activities. Some low stools are fitted with castors, which allows ease of movement for the worker (Gibson & Watson 2000).

Working on the floor

To minimise risk to your back use a variety of kneeling and sitting positions rather than leaning over while standing. Frequently getting up and down from the floor can put a strain on your knees and back.

To assist with this you can:

- -Make sure you have everything you need before you sit down with your child.
- -Gather all toys in a basket before you get up to put them away.
- -Sitting on camp or low back chairs can assist with optimal posturing and comfort for you while assisting your child on the floor.
- -Get up from the floor through kneeling then half kneeling, as it is easier on you knees than getting up from squatting. You can assist yourself by pushing up through both legs from half kneel rather than the forward leg only and by placing a hand on your forward knee or a stable support so that your arms assist with the lift (Gibson & Watson 2000). For more information please ask your physiotherapist for a copy of the fact sheet titled 'Working at low levels'.



Appendix 1: Best Practice Manual Handling

Lifting

If performed poorly, lifting places significant strain on many parts of our body. It is important to plan your lift well and execute the movement with excellent body position. Combined movements, such as bending and twisting are the most likely to cause injury - even with light objects. Remember, knowing how to lift is important, but it is still only one part of the risk control process. Eliminating the need to lift, substituting lighter loads for heavier ones, the use of mechanical aids, or using a team lift are all more important than just 'bending the knees and keeping the back straight'.

When we do have to lift, the semi-squat position places our body in its strongest position for lifting. In this position your legs have their greatest strength and your spine is stable and strong.



Practising the Basics will help you generate strength safely!

- Feet comfortably apart, around the load if possible.
- Knees bent.
- Keep the spine in its natural curves.
- Load as close to the body as possible.
- Brace abdominal muscles.

Semi-squat lifting



Deep squat – for light loads.



Golfer's pivot – for light loads when squatting isn't possible.



Stooped lift – **avoid!**

TIP: Good balance helps with good manual handling.

Test your balance: you should be able to balance on one leg for one minute!

See Novita website for specific transfer information e.g. cradle lift and lifting wheelchairs.

Pushing

Whenever you need to push a load, place your legs in a stride stance with your strongest foot back. Place your other foot closer to the load, giving you a stable base of support. Use your body weight to initiate the movement and try to keep your elbows close to your body. In most situations, pushing a trolley is usually more effective than pulling.

Pulling

If you do need to pull an object, face the object, use both arms, place your feet in a stride stance with your stronger foot forward and use your body weight to initiate the movement. Preparation of the work area is even more important as you may need to walk backwards with the load.

Comparison of force: parallel stance vs stride stance.



16 kgs force
push/pull



39 kgs force



36 kgs force

When pushing and pulling use a stride stance to initiate movement - then maintain an upright posture.



Using stride stance to push a lifter.

Appendix 2: Abdominal Stabilisation

Spinal stability can help prevent the occurrence or recurrence of back injury and can help to reduce back pain following injury. Research has shown that the most important abdominal muscles for providing spinal stability are your deep abdominal muscles; the Transverse Abdominals (or 'core' muscles). These muscles form a 'corset-like' band around your lower trunk. They are activated with and support good posture.

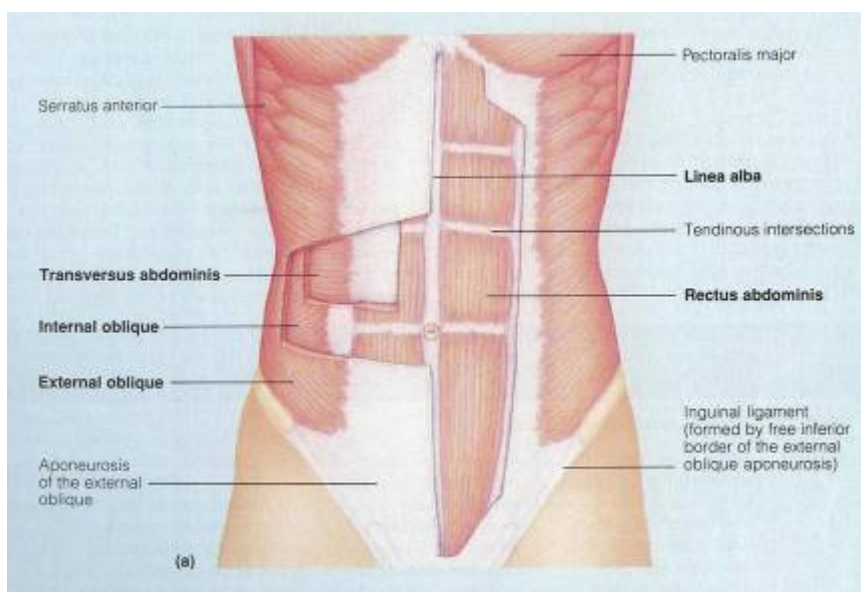
When we do sit-ups we strengthen the superficial muscles. These muscles do not have the endurance required to assist our posture for a whole day.

Use the following steps to activate your deep abdominal muscles - start with good, upright posture:

Step 1: Maintain normal breathing and draw your belly button gently towards your spine. Pull your pelvic floor muscles up at the same time. Just pulling your belly button in slightly will activate these muscles, don't over exert. Remember, you want to be able to hold this contraction for extended periods of time.

Step 2: Once you feel you comfortable with drawing your belly button in while standing still try walking around while holding the contraction.

Step 3: Make the activity functional – hold the contraction while you carry groceries, lift children, push wheelchairs, hang out the washing. You can exercise your deep abdominal muscles sitting at your desk or in your car, or standing in the queue at the supermarket.



Try to remember to activate these 'core muscles' during everyday activities. Even just sitting with good posture strengthens our deep abdominal muscles.

Further Information

Your Novita Physiotherapist
Your Family doctor
Novita Children's Services:	
Early Childhood Services	
Regency Park Office	8243 8311
Paradise Office	8207 8940
Christie Beach Office	8329 5600
Child and Adolescent Service:	
Parafield Gardens Office	8182 1000
Parkside Office	8172 9200

Have a look at the [Transfer and Positioning Care Plan](#) Fact sheet on the Novita website under 'publications'.

The Carers Association of SA Inc	1800 815 549
The Australian Association of occupational therapist (SA)	(08)8331 1506
The Australian Physiotherapy Association	(08)8362 1355
Check out the WorkCover website (http://www.workcover.com)	

Further information regarding manual handling activities in the work situation can be found in booklets on the National Occupational Health and Safety Commission website (<http://www.ascc.gov.au>) called National Code of practise for the prevention of musculo-skeletal disorders from performing manual tasks at work (2007), and National standards for manual tasks (2007).

References

Commonwealth Department of Veteran Affairs 2002, *Back to basics: Handy hints for carers to help prevent back injuries*, Veteran Affairs, Australia

Gibson, S & Watson, C 2000, *Transfer and positioning care plan, Support document for schools, preschool and childcare services*, Novita Children's Services, Adelaide.

Corporate Health Group. *Back care and injury prevention information booklet*. Adelaide 2008.

Weller, S 2005. *The better back book beating back pain the easy way*, Hamlyn, London.

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