

Your skin

YOUR SKIN

Pressure ulcers are a common concern after spinal cord injury, and can result in skin and underlying tissue ulceration. Having a pressure ulcer can mean periods of bed rest to allow the area to heal. While this may cause disruption to many aspects of your everyday life, including changes to your routine, your job, social activity and physical condition, most pressure ulcers are preventable.

How do pressure ulcers develop?

A pressure ulcer (also called a pressure area or pressure sore) is a result of damage to the skin and the tissue underneath the skin. This can occur from external forces on the skin and the tissue underneath, such as pulling, squashing, rubbing or trauma. The flow of blood to your skin can be interrupted when your body weight and gravity compress the tissue between your skin and your bones. If the blood flow is interrupted for long enough, the oxygen and nutrients that are carried in the blood are unable to reach that part of your body. This results in tissue damage and the beginning of a pressure ulcer.

After a spinal cord injury, you may no longer have the sensation that alerts your body to alter its position. Additionally, you may no longer be physically able to alter your position to relieve the pressure on your skin. If a pressure ulcer is left untreated, it can worsen, leading to infection, serious health complications and, in some cases, death.

What can make me at risk of developing pressure ulcers?

- Altered sensation in areas of your body
- Your injury's effect on blood circulation
- Smoking
- Difficulty in altering your position
- The type of equipment you use

- Poor transfer technique
- A history of skin breakdown
- You are underweight or quite bony
- The type of clothing you wear
- Your age
- Your skin is exposed to excess moisture for prolonged periods of time
- Not looking after your skin properly
- Urinary incontinence
- Bowel accidents

Where am I likely to develop pressure ulcers?

You are more likely to develop pressure ulcers on the bony parts of your body where there is less tissue between the bone and skin to compress.

Pressure ulcers can also develop on the parts of your body where there is a prolonged force or pressure, which compresses or squashes the tissue. The longer you sit or lie on one part of your body without relieving the pressure, the more likely it is an ulcer will develop. If you have scar tissue from previous pressure ulcers, this skin is more likely to breakdown again in the future.

The condition of your skin is also a risk factor for developing pressure ulcers. Having your skin exposed to excess moisture for extended periods of time (such as bladder or bowel accidents) will increase your risk of developing pressure ulcers.

Applying pressure to common skin traumas, such as bruises or scratches, can also lead to a pressure ulcer. Skin trauma can occur while you are transferring, adjusting your clothes or performing other seemingly innocuous tasks. Remember to check your skin regularly.

Everyone is different, and skin tolerances will differ from person to person. Your own skin tolerance can also change if you have experienced any changes in your health, or as

you age. Please refer to the “Ageing” fact sheet for more information about skin changes as you age.

What can I do to minimise the risk of pressure ulcers developing?

The good news is that most pressure ulcers are preventable. The sooner you notice and start treating a pressure ulcer, the quicker it can start to heal.

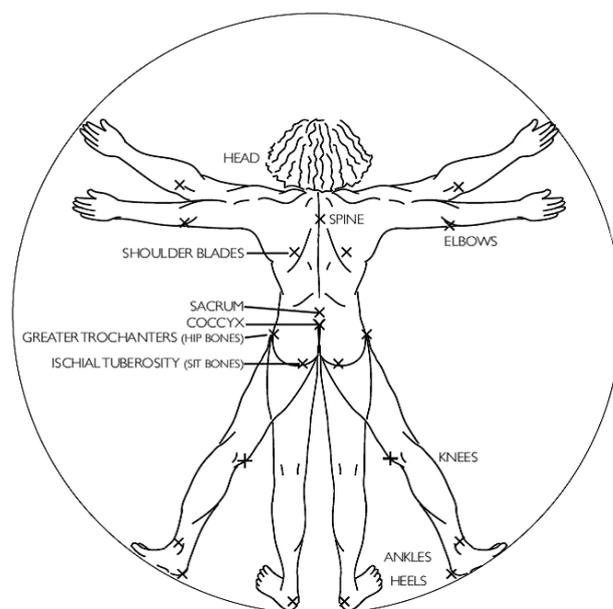
The best way to minimise the risk of developing pressure ulcers is to reduce or remove the pressure altogether if possible:

- If you are able to perform pressure relief leans (side or forward) for two continuous minutes every hour, this will help allow the blood to return.
- If you have a powered wheelchair with tilt function, tilting the seat back as far as you can to alter where gravity is acting against your body can help to redistribute your body weight and allow circulation to return. Most modern wheelchairs now tilt 55 degrees.
- If you are in bed, turning regularly (every four hours) can help distribute pressure along different parts of your body.

The times indicated above are a guide and each person’s skin tolerance varies, so the frequency of pressure relief required may also vary.

Other factors to consider include:

- If your wheelchair and cushion are not set up correctly, or do not meet your needs, this can also contribute to increased pressure on your bony prominences. Have your equipment reviewed regularly. Ill-fitting or inappropriate equipment can place you at risk of developing pressure ulcers.
- Try and keep your skin in good condition.
- Maintaining a healthy diet and lifestyle will help your skin to remain healthy and help reduce the risk of developing pressure ulcers.
- Refrain from smoking. Smoking places you at risk of pressure ulcers and prolongs healing time because of its impact on your blood circulation.
- Do not use a towel, sheepskin, pillowcase or t-shirt in place of a cushion cover. This negates the pressure-reducing properties of the cushion.
- Consider all surfaces that you use during the day and night, including your mattress, shower chair, car seat etc.
- Take notice of the clothes you are wearing, as tight clothing or clothing with thick seams or studs (such as jeans) can increase the risk of developing pressure ulcers. Sitting on bunched up or folded clothes can also increase your risk of pressure ulcers.



It is important to note that a comprehensive approach is the key to reducing the risk of developing pressure ulcers. Pressure reducing equipment may help reduce the pressure acting on parts of your body. But, it is equally important to make sure that your equipment meets your needs and that you are keeping your skin healthy. Once your skin has broken down it is more likely to break down again in the same area, especially if scar tissue is present.

Remember, check your skin regularly. Ideally, you should check your skin twice a day, once in the morning and once in the evening. If you notice some redness or trauma to your skin, act straight away. The sooner you address the redness or trauma, the sooner you’ll be mobile again.

How do I check my skin for red areas or changes?

- While lying on your side you can use a long handled mirror to check if there are any red areas on your body
- Use a digital camera or web cam to monitor changes to your skin
- If you have personal care workers, they can help you check your skin

What do I do if I notice a red area?

It is essential to stay off the area until the skin has healed. This may mean total bed rest. Do not continue to sit on a red, broken, hard or swollen area. Continued pressure will prevent the area from healing and will



most likely make your area worse.

You may need to speak to your doctor or nurse for advice on the most appropriate wound dressing. Not all dressings are the same. The characteristics of your wound will determine the type of dressing most suitable.

Try to determine the cause of your pressure ulcer as soon as possible. This way you are able to work out ways to stop it happening again. You may need to involve an occupational therapist or seating service to help you to check if your equipment is the cause of your pressure ulcer.

If you are having trouble looking after your skin using these ideas, talk to your health professional about why this is and what sort of support might be available to help you.

Remember, if you are going on complete bed rest, you will need to set up your environment and organise some extra help to assist you to manage your personal care. It is important to maintain range of motion in your joints and maintain strength in your upper limbs as much as possible. A physiotherapist can help set you up with a bed program. After the area has healed, it is important to slowly reintroduce pressure to that area. Talk to your health professional about re-introducing pressure slowly when the time is right.

You may need to review your equipment or seating if this has been a contributing factor to your pressure ulcer.

References and Further Resources

ParaQuad NSW

www.paraquad.org.au (02) 8741 5600

ParaQuad's Community Support and Wellbeing Service
(02) 8741 5674

NSW State Spinal Cord Injury Spinal Pressure
Care Services

POWH (02) 9382 2222 or (02) 9382 8338

RNSH (02) 9926 7111 or (02) 9926 7973

BrightSky Australia for product and clinical services
www.brightsky.com.au 1300 886 601

Your local community nurse

Queensland SPOT fact sheets

www.health.qld.gov.au/qscis/info_skin_care.asp

Coggrave, MJ, & Rose LS (2003). A specialist seating assessment clinic: Changing pressure relief practice 41(12), 692-695

Henderson, JL, Price, SH, Brandstater, ME & Mandac, BR (1994) Efficacy of three measures to relieve pressure in seated persons with spinal cord injury. Archives of Physical Medicine and Rehabilitation, 75, pp. 535-539

Pellow, TR (1999) A comparison of interface pressure readings to wheelchair cushions and positioning: A pilot study. Canadian Journal of Occupational Therapy, 66, pp. 140-149

Rural Spinal Cord Injury Project (2005) An Overview of Skin and Pressure Area Management

Paralyzed Veterans of America. Pressure Ulcers: What You Should Know

Gelis, A et al Pressure ulcer risk factors in persons with a SCI Parts 1 & 2 Spinal Cord, 47, 99-107 & 651-661