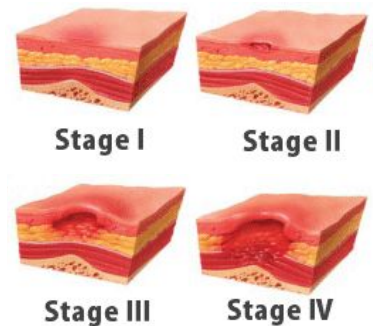


Wound Prevention

What are pressure sores (ulcers) and wounds?

A pressure sore can develop when you stay in one position for a long period of time, leading to skin breakdown. Even 30 minutes in one position can create a pressure sore. These breakdowns usually occur around bony prominences (examples: sit bones, ankles, shoulder blades). There are four stages:

- Stage 1- redness of topmost layer of skin (epidermis)
- Stage 2- red-pink sore/blister that is due to a loss of skin deep into the second layer of skin (dermis)
- Stage 3: skin loss into layer of fat (subcutaneous layer)
- Stage 4: tissue loss to show bone, muscle, tendon (white structure that connects muscle to bone)



If pressure sores are not taken care of in early stages then they can turn into open wounds which can create a pathway for harmful germs to enter the body.

Why does this matter to YOU?

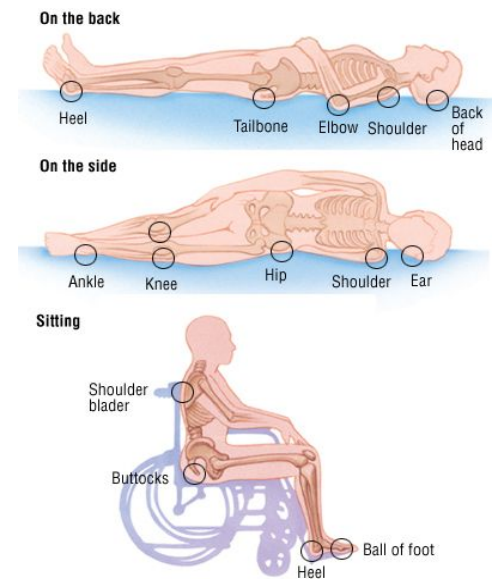
- Since people with SCI stay in chairs or bed for longer periods of time without changing positions they are at higher risk for developing a pressure sore/wound
- Who needs to be even more cautious of this risk?
 - People with a greater level of paralysis
 - People with a complete SCI
 - People who have had this injury for a long period of time
 - People who need help completing daily tasks
 - People who have other health conditions

What are the risk factors for pressure sores?

- Loss of sensation and movement:
 - With a spinal cord injury, sensation and movement may not be the same as it was. Therefore, it is important to check skin regularly and move as much as possible!
- Improper bladder/bowel control:
 - Moisture can put individuals at risk for pressure sore!
 - If this problem affects you, talk to your doctor about a bladder and bowel program that reduces exposure to moisture
- Nutrition and Healthy Lifestyle:
 - This includes: poor nutrition, smoking, and substance (alcohol and other) abuse
 - YOU can make changes, but should also talk to your doctor or a nutritional specialist about how much you should be eating on average for your lifestyle because this is important in the prevention and healing of pressure sores!
- Impulsive Behavior
 - If you are shearing your skin as you transfer, you are putting yourself at a greater risk for skin breakdown and pressure sores. Take the time to perform a proper transfer and reduce your risk!

How can YOU prevent pressure sores?

- Change position: every 30 minutes in a wheelchair and every 2 hours when lying down
- Know the warning signs: redness of the skin, pain, autonomic dysreflexia
- Use proper equipment: wheelchair cushion
- Perform proper transfers: be sure to not drag legs, bottom, etc.
- Assistance: ask for help, use handheld mirrors
- Move: stay active and exercise



How can YOU perform pressure relief?

- Change position every 30 minutes in a wheelchair and every 2 hours when lying down
- Wheelchair: lean forward and side to side, and if able press up with arms, to lift bottom off of the wheelchair cushion
- Power wheelchair: recline/tilt back (45 degrees) to transfer the pressure from the bottom to the back

Autonomic Dysreflexia and Pressure Sores

- Autonomic dysreflexia can occur in individuals with a spinal cord injury above T6
- This occurs when the nervous system gets too excited (overstimulation) because the body is experiencing an unpleasant stimulus, such as the start of a pressure sore
- Signs and symptoms:
 - Throbbing headache
 - Heavy sweating
 - Nasal stuffiness
 - Skin redness above the level of the lesion
 - Slowed heart rate
 - Anxiety
 - Cognitive impairment
 - Sudden onset of severe high blood pressure
- **What do you do if this happens to you?** Try moving around to relieve pressure as this may be able to stop the event! **If symptoms do not go away, this IS an EMERGENCY! Please call 9-1-1.** If the symptoms do go away, still contact your doctor as this is a medical crisis.

Don't forget!

While **skin checks** and **pressure relief** are very important, these measures alone are not enough to prevent a pressure sore. **You** are your **#1 health advocate** so taking charge of your **physical activity level, food choices, and general daily activity** are vital to preventing a pressure sore/wound!

Individual Example:

Bill is a 50 year old male who had a T4 spinal cord injury last fall. Yesterday, he started to experience a really bad headache and noticed redness on his bottom. He wasn't sure what was going on, but luckily had this handout to help him navigate his symptoms! He called his physician to explain what had happened. Now, Bill is sure to perform pressure relief multiple times a day to ensure he doesn't get another pressure sore.

What if you begin to notice a pressure sore or wound?

Don't panic! Use the pressure relief techniques above to decrease pressure on the sore or wound. Contact your physician or another medical provider to get appropriate bandages and care.

Who can help you and your family navigate wound care?

- Doctor
- Nurse Practitioner/Physician's Assistant
- Physical Therapist
- Occupational Therapist
- Registered Dietitian
- Assistive Technology Practitioner

Local Resources:

Permobil ROHO Seating and Positioning

Valley Home Health Care

1212 Campbell Ave SE
Roanoke, VA 24013
(540) 343-1738

Carilion Clinic Wound Care Center

101 Elm Ave, 1st Floor
Roanoke, VA 24013
(540) 224-4325

National Seating and Mobility Incorporated

5306 Peters Creek Rd, Suite D
Roanoke, VA 24019
(540) 682-2430

LewisGale Regional Health System

1900 Electric Rd
Salem, VA 24153
(540) 776-400

References:

- Caliri, M. H. L. (2005). Spinal cord injury and pressure ulcers. *Nursing Clinics of North America*, 40(2), 337-347.
- Garber, S. L., Rintala, D. H., Hart, K. A., & Fuhrer, M. J. (2000). Pressure ulcer risk in spinal cord injury: predictors of ulcer status over 3 years. *Archives of physical medicine and rehabilitation*, 81(4), 465-471.
- Khastgir J, Drake MJ, Abrams P. Recognition and effective management of autonomic dysreflexia in spinal cord injuries. *Expert Opinion on Pharmacotherapy*. 2007 May;8(7):945–56.
- Krause, J. S., & Broderick, L. (2004). Patterns of recurrent pressure ulcers after spinal cord injury: identification of risk and protective factors 5 or more years after onset. *Archives of physical medicine and rehabilitation*, 85(8), 1257-1264.
- Langemo, D. K., Melland, H., Hanson, D., Olson, B., & Hunter, S. (2000). The lived experience of having a pressure ulcer: a qualitative analysis. *Advances in Skin & Wound Care*, 13(5), 225.
- Somers, M. F. (2010). *Spinal Cord Injury: Functional Rehabilitation* (3rd ed.). Boston: Prentice Hall.
- Sunn, G. (2014). Spinal cord injury pressure ulcer treatment: an experience-based approach. *Physical medicine and rehabilitation clinics of North America*, 25(3), 671-680.