

# *Prevention of Pressure Sores through Skin Care*

Spinal Cord Injury  
InfoSheet



Level - Consumer

Preventing pressure sores is a daily concern for individuals who have a spinal cord injury (SCI). You want to stay healthy and avoid this serious skin problem in order to be free to do whatever life has to offer. This InfoSheet tells you some of the things you need to do to prevent pressure sores and how to care for them. Listed at the end are some excellent resources that give additional information on the prevention and care of pressure sores.

A pressure sore is known by many names, like pressure ulcer, decubitus ulcer, ischemic ulcer, bed sore or skin sore. No matter what it is called, it is a serious problem that can take days, weeks, months or even longer to heal.

A **Pressure Sore** is an area of the skin or underlying tissue that is dead or dying as a result of the loss of blood flow to the area. It can begin in a number of ways. The most common is when you or rest on a bony area for a prolonged period of time. The extended pressure leads to a pressure sore.

## **Risk factors for getting a pressure sore**

Anyone can get a pressure sore, but individuals with spinal cord injury are at high risk. It is estimated that up to 80% of individuals with SCI will have a pressure sore during their lifetime, and 30% will have more than one pressure sore.

There are a number of factors that put you at risk.

- Limited mobility can place extended pressure on an area of your body.
- Moisture from bladder and bowel accidents can further weaken the skin and cause skin to break down more quickly.
- A lack of feeling in specific parts of the body can keep you from sensing that your skin has been damaged. A cut or scratch can quickly develop into a larger problem if not properly treated.
- Spasticity or transfers can shear (rub) the skin and cause damage.

## **Stages of a pressure sore**

The most common sign that a pressure sore is beginning is the appearance of a red area, or red spot

on the skin. Ordinarily, redness should clear within 30 minutes after the pressure is released from the area. If the redness does not clear, a pressure sore has begun. A person with dark skin may also see a change in their skin color. The area may become light, dry, flaky or ashy. Other signs that may indicate the beginning of a pressure sore is an area of skin that is warmer than normal or a change in the skin's texture.

There are four stages of a pressure sore.

Stage 1 - Damage is limited to the top two layers of skin, the epidermal and dermal layers. The skin is not broken and the redness does not turn white when touched.

Stage 2 - Damage extends beyond the top two layers of the skin to the adipose tissue. The skin is slightly broken. The sore appears to be an abrasion, blister or small crater.

Stage 3 - Damage extends through all the superficial layers of the skin, adipose tissue, down to and including the muscle. The ulcer appears as a deep crater and damage to adjacent tissue may be present.

Stage 4 - Damage includes destruction of all soft tissue structures and involves bone or joint structures. Undermining of adjacent tissue and sinus tracts may be associated with these ulcers.

## **Ways to prevent pressure sores**

1. Check your skin completely twice a day, once in the morning and once at night.
  - Carefully look for skin damage or redness, especially on bony areas.
  - If you have a low level of injury you can use a mirror to inspect areas you cannot easily see.

If your injury is at a higher level, have a family member or personal care attendant check your skin.

2. Know the places on your body that are more likely to get a pressure sore (*see picture on the right*). The four most common areas for a pressure sore to develop in individuals with SCI are on the sacrum, or tailbone, the heel of the foot, the ischium, which is at the base of the buttocks and the bony areas of the foot. The trochanter or hip is another area at high risk for individuals who spend a lot of time in bed.
3. Always **use proper equipment** when seated or lying down. Have a doctor or qualified professional recommend what specialized equipment you need to protect your skin.
  - Your **seat cushion** needs to fit your body and your chair. It needs to be properly adjusted to offer the best protection against pressure areas.
  - Your **mattress** needs to provide proper support and protection.
  - Use **pillows** or **sheepskin** to help protect areas of the body that get too much pressure.
4. **Move often.** Sitting or lying in the same position for too long causes the flow of blood to be cut off. The skin or underlying tissue begins to die, and it results in a pressure sore.

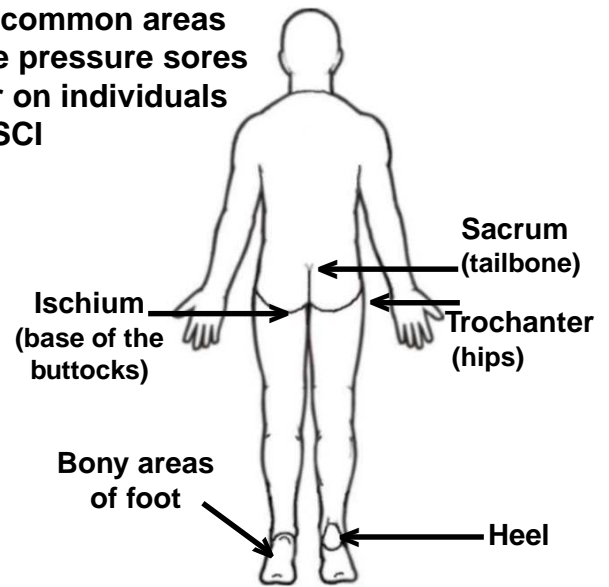
**Do weight shifts** (pressure relief) at least every 15-20 minutes when sitting in your wheelchair.

- If your injury is at levels C4 and higher you can use a power tilt wheelchair for regular pressure relief.
- With an injury at levels C5 or C6 you can usually lean forward or side-to-side for regular pressure relief.
- If your level of injury is C7 and below you can usually perform a wheelchair push-up for regular pressure relief.

While in bed it is usually recommended that you change position at least every 2 hours.

5. Keep skin clean and dry. Wet skin can become soft, inflamed and is less resistant to damage. Moisture weakens the skin and causes it to

### Most common areas where pressure sores occur on individuals with SCI



- 
- breakdown more quickly.
- Wash and dry skin right away after any bowel or bladder accident.
  - Change clothes when they become wet.
  - Use lotion instead of powder on your skin.
6. Eat a well balanced diet. Foods high in protein, vitamins and minerals help your skin stay healthy and heal more quickly.
  7. Drink the recommended amount of fluids to help your skin stay soft.
    - Drink at least 8 to 10 glasses of water per day.
    - Limit the number of caffeinated drinks like coffee, tea and soft drinks.
  8. Protect your skin from harm.
    - Avoid movement or activities that rub, scratch or cut your skin.
    - Avoid clothes and shoes that are too loose or too tight fitting.
    - Avoid clothes with thick seams, buttons or zippers located in areas where they put pressure on your skin.
    - Take special caution when doing transfers and participating in new activities or sports.
  9. Do not smoke. Smoking decreases oxygen to the skin and can make it more difficult for skin to heal.
  10. Do not abuse drugs or alcohol. Both can damage your skin and can also lead to other health problems.

## Care and treatment of a pressure sore

By the time you realize there is a problem, damage to the skin has already occurred. Once you see signs of a pressure sore, **stay off the area** and contact a doctor immediately for advice on treatment.

The treatment for a pressure sore ranges from extended bed rest to surgery. You must keep weight off the area for it to heal. This means you must take time off work and limit your activities. When you are less active you are also at higher risk for respiratory problems or urinary tract infections. Pressure sores also can lead to infection, surgery or even amputation. Treatment can be very costly in lost wages or additional medical expenses.

Your doctor will determine the best type of treatment needed and instruct you on how to clean and dress the pressure sore. Cleaning helps to remove dead tissue, skin or fluid draining from the sore.

Remember to always wash your hands (or instruct the person who is changing the bandage to wash their hands) before cleaning the sore and changing the bandage.

Watch for signs of infection, such as, redness around the edge of the sore, warm skin, large amounts of greenish drainage from the sore, odor or a fever.

You want to know what caused the sore, if possible, so it does not occur again. Questions to ask yourself are -

- Were my clothing or shoes tight in that area? Did they rub or pinch my skin?
- Do I have any new or changed equipment? Something as simple as a change in how your feet rest on your foot rest can cause the skin to become irritated.
- Did you have any change in your job or activities that caused a change in your routine for doing your pressure reliefs?

The total cost to treat a pressure sore depends on how quickly the sore is treated. It is much quicker and less costly to heal a sore when it is in stage 1, than it is to heal a pressure sore that is in stage 4.

## Conclusion

95% of all pressure sores are preventable. The key to preventing a pressure sore is maintaining healthy skin. For individuals with spinal cord injury, prevention of pressure sores is an ongoing, lifelong process.

It is important to always look for better ways to keep skin healthy and protect skin from damage that may lead to a pressure sore. After all, healthy skin is always the key to staying on the go.

## Additional Resources on Skin Care and Pressure Sores

Additional information on pressure sores can be seen in the multimedia slide presentation -



### **Prevention of Pressure Sores through Skin Care.**

Developed by: Phil Klebine MA, Linda Lindsey MEd and Anne Marie Oberheu MD.

It is available on the Internet at  
[www.spinalcord.uab.edu/show.asp?durki=28921](http://www.spinalcord.uab.edu/show.asp?durki=28921)

For individuals without internet access, this program is available on CD to run from your computer. To order contact Medical RRTC in Secondary Complications in SCI  
UAB Dept Physical Medicine and Rehabilitation  
Research Services, SRC 506  
619 19th St S, Birmingham, AL 35249-7330  
(205) 934-3283 Email: [rtc@uab.edu](mailto:rtc@uab.edu)

### **Audio Visuals**

#### **Partners in Independence: The Personal Care Attendants Role in Pressure Sore Prevention**

**By:** RRTC in SCI at Baylor College of Medicine  
TIRR, 1333 Moursund, Houston, TX 77030-3405  
713-797-5945

**Cost:** \$85 **Consumer price:** \$30 **Video - 12 minutes**

#### **Skin Care: Preventing Pressure Ulcers - 1997**

**By:** Diana Young Barhtye, PhD, RN  
**Order from:** PVA Distribution Center  
PO Box 753, Waldorf, MD 20604-0753  
888-860-7244

**Cost:** \$5 **Video - 21 minutes**

#### **Skin Management - 1996**

**By:** Craig Hospital, 3425 Clarkson St  
Englewood, CO 80110 303-789-8202  
**Cost:** \$75 **Video - 18 min**

## **National Pressure Ulcer Advisory Panel - Slide Sets**

<http://www.npuap.org>  
11250 Roger Bacon Dr, Suite 8, Reston, VA 20190-5202  
703-46 4-4849

**Set 1 - *Pressure Ulcer Basics*** - 22 slides / \$50

**Set 2 - *Incidence, Prevalence & Risk Assessments***  
27 slides / \$60

**Set 3 - *Strategies for Pressure Ulcer Prevention***  
28 slides / \$60.

**Set 4 - *Assessment of Pressure Ulcers*** - coming soon

## **Publications**

### **Pressure Sores** - January, 1994

**By:** Univ of Kansas, RRTC on Independent Living  
[www.lsi.ukans.edu/rtcil/](http://www.lsi.ukans.edu/rtcil/)  
4089 Dole Center, Lawrence, KS 66045-2930

### **Pressure Ulcer Prevention and Treatment following Spinal Cord Injury: Clinical Practice Guidelines for Health-Care Professionals** - August, 2000

[www.pva.org/pubsandproducts/pvapubs/PressUlcer.htm](http://www.pva.org/pubsandproducts/pvapubs/PressUlcer.htm)

**By:** PVA Consortium for Spinal Cord Medicine  
**Order from:** PVA Distribution Center, P.O. Box 753, Waldorf, MD 20604-0753  
888-860-7244 or Email:info@pva.org

### **Pressure Ulcer Series** - booklets available **free**

US Dept of Health & Human Services, Public Health Service, Agency for Health Care Policy and Research Publications Clearinghouse, PO Box 8547, Silver Spring, MD 20907  
800-358-9295

### **Pressure Ulcers in Adults: Prediction and Prevention**

**Clinical Practice Guideline: Number 3**

<http://text.nlm.nih.gov/ftsr/dbaccess/ulcc>

AHCPR Publication No. 92-0047 - May 1992

### **Pressure Ulcers in Adults: Prediction and Prevention**

**Quick Reference Guide for Clinicians**

<http://text.nlm.nih.gov/ftsr/dbaccess/ulcq>

AHCPR Publication No. 92-0050 - May 1992

### **Preventing Pressure Ulcers: A Patient's Guide**

<http://text.nlm.nih.gov/ftsr/dbaccess/ulcp>

AHCPR Publication No. 92-0048 - May 1992

### **La prevencion de las llagas por contacto: Guia para el paciente**

<http://text.nlm.nih.gov/ftsr/dbaccess/ulcs>

AHCPR Publication #92-0014 - March, 1993

## **Treatment of Pressure Ulcers**

**Clinical Practice Guideline, No. 15**

<http://text.nlm.nih.gov/ftsr/dbaccess/putc>

AHCPR Publication No. 95-0652 - December, 1994

## **Pressure Ulcer Treatment**

**Quick Reference Guide, #15**

<http://text.nlm.nih.gov/ftsr/dbaccess/putq>

AHCPR Publication No. 95-0653 - December, 1994

## **Treating Pressure Sores -**

**Consumer Version of Clinical Practice Guideline #15**

<http://text.nlm.nih.gov/ftsr/dbaccess/putp>

AHCPR Publication No. 95-0654 - December, 1994

## **Tratamiento para las llagas por contacto: Guia para el paciente** Numero #15

<http://text.nlm.nih.gov/ftsr/dbaccess/puts>

AHCPR Publication No. 95-0655 - December, 1994

## **Preventing & Treating Pressure Sores- Second Thoughts Information Sheet** - 1993

<http://www.lsi.ukans.edu/rtcil/psores.htm>

**By:** RTC on Independent Living  
1052 Robert Dole Human Development Center  
Univ of Kansas, Life Span Institute  
Lawrence KS.  
913 - 864 4295

## **Preventing Pressure Sores in Spinal Cord Injury - Fact Sheet #2** - February, 1991

<http://www.state.ar.us/ascc/fact2.html>

**By:** Barbara Booth, RN  
Arkansas Spinal Cord Commission  
1501 N University, Ste 470, Little Rock, AR 72207  
501-296-1788

## **Smoking & Lungs, Skin and Bladder**

[http://www.craig-hospital.org/C\\_Research/c2s\\_smoking.html](http://www.craig-hospital.org/C_Research/c2s_smoking.html)

**By:** RTC on Aging with Spinal Cord Injury  
Craig Hospital, 3425 South Clarkson St  
Englewood, CO 80110.  
303-789-8202

## **Taking Care of Pressure Sores**

<http://depts.washington.edu/rehab/resources/ps.shtml>

**By:** NW Regional SCI System  
Univ of Washington, Dept of Rehab medicine  
Box 356490, Seattle, WA 98195-6490  
206- 543-3600

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619 19th Street South - SRC 529  
Birmingham, AL 35249-7330  
(205) 934-3283 or (205) 934-4642 (TTD only)

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**Developed by:** Linda Lindsey, MEd; Phil Klebine, MA  
Anne Marie Oberheu, MD

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