



Health Alert

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MAINTAINING SKIN INTEGRITY AND PREVENTING PRESSURE INJURIES

The skin is the largest organ of the body. Skin protects the body by creating a barrier to the environment, regulates the body's temperature, supports peripheral circulation and helps maintain fluid balance. Skin also is a reservoir for the formation of Vitamin D. The nerves in the skin provide sensations that detect changes in the environment such as heat, cold, touch, and pain. The skin is made of two layers, the epidermis and dermis, which cover the underlying tissues, muscles, and bones. "Skin integrity" refers to the intact, unbroken nature of healthy skin. Open wounds to the skin, such as those that occur with pressure injuries, make an individual more vulnerable to infection, sickness and death.

- **What are pressure injuries?**

- Localized damage to the skin and underlying soft tissue.
- Areas where the bony part of the skeleton is prominent and particularly vulnerable, such as: elbows, heels, toes, base of spine, back of head, shoulders, hips, buttocks, and ears.
- Injury may also result from the use of medical or other devices in contact with the skin.
- Pressure injury results from intense and/or prolonged pressure or pressure in combination with friction and shearing.
- Friction and shearing occur when the skin comes in contact with and slides on items including bedding, wheelchairs, chairs, or incontinence briefs.



- The pressure and shearing prevent blood from providing oxygen to the skin. The lack of blood and the oxygen it contains causes damage to the tissue and the pressure injury occurs.
- Risks for developing a pressure injury include: increased moisture, poor nutrition, poor perfusion or blood flow, other medical illnesses, and the general condition of the skin.
- Pressure injuries are also called bed sores, decubiti, pressure ulcers, and skin breakdown.

- **Why is preventing pressure injuries important?**
 - Pressure injuries disrupt and destroy the skin and anything underneath, including muscle and bone. Bacteria entering the sore can cause infection. In some cases, infection in the tissue can lead to bone infection, also called osteomyelitis. Infections can worsen and result in sepsis (when infection enters the blood), which can lead to shock and even death.
 - Pressure injuries can be very painful which can affect quality of life.

- **Who is at risk for developing a pressure injury?**
 - Individuals who
 - are elderly
 - use medical devices
 - have communication deficits
 - have cognitive and physical impairments
 - have poor blood circulation
 - have diabetes
 - Other contributing factors include:
 - Fragile skin
 - Immobility – sitting or lying in one position for an extended time
 - Incontinence
 - Poor nutrition
 - Inadequate hydration
 - Diminished sensory perception
 - Decreased mental awareness
 - Impaired blood circulation
 - Contractures



- **What are the signs and stages of a pressure injury?**

- Pressure injuries can occur quickly within hours. If the pressure is not relieved and the injury is left untreated, it will progress to damage the skin and the underlying tissue, muscle, and bone.
- The first sign of a pressure injury is localized area of:
 - Redness or purplish color
 - Change in temperature from surrounding skin
 - Change in the texture of the skin such as boggy or induration

These signs do not go away after 15 minutes of relieving pressure from the area.

- The stages of pressure injuries are based on the severity of the wound.
- **IMPORTANT: Notify the health care practitioner (HCP) if there are concerns for a pressure wound. Because pressure injuries can have many different appearances, the HCP should be alerted to any skin changes that are noted, particularly in areas at risk for pressure injury.**

- **What is the treatment for pressure injuries?**

- Relieve pressure on the area
- **Notify the HCP at the first sign of redness that does not resolve within 15 minutes after relieving the pressure**
- Follow treatment plan prescribed by the HCP, wound care clinic, or wound specialist
 - Treatment may be painful; if so, notify health care practitioner
- Provide adequate nutrition and hydration
- Follow bowel and bladder incontinence plan
- Prevent/manage infection

- **How can pressure injuries be prevented?**

- Routine skin check – identify at risk individuals
- Good nutrition
- Maintain adequate hydration
- Incontinence care – with each soiling:
 - change briefs
 - clean area gently with mild soap
 - pat dry, apply barrier cream, ointment, pastes or skin protectants if prescribed
- Keep skin clean and dry
- Follow re-positioning plan – Change position every 2 hours, at least, while in bed and every 15 minutes to 1 hour when in wheelchair or sitting



- Use proper positioning and turn/lift techniques to decrease shearing and friction
- Apply skin moisturizers
- Protection from environment
- Protection from heat or from cold air
- Use of prescribed pressure relieving cushions, mattresses, and devices
- Avoid rubbing skin or massaging bony prominences
- Avoid tight clothing/shoes
- Encourage activity/range of motion

References:

- [Revised National Pressure Ulcer Advisory Panel Pressure Injury Staging System](#)
- [NPUAP Pressure Injury Prevention Points \(April 2016\)](#)

Citations:

- Edsberg LE, Black JM, Goldberg M, McNichol L, Moore L, Sieggreen M. Revised National Pressure Ulcer Advisory Panel Pressure Injury Staging System: Revised Pressure Injury Staging System. *Journal of Wound, Ostomy, and Continence Nursing*. 2016; 43(6):585-597. doi:10.1097/WON.0000000000000281.
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- Mary Zeigler, MS Clinical Nurse Specialist, Rehabilitation Institute of Chicago; video: [Why Are Pressure Sores So Serious?](#)
- Ratcliff, CP, Droste, LR. WOCN Guide for Prevention and Management of Pressure and Management of Pressure Ulcers (Injuries) 2nd Ed. (2016). www.wocn.org
- National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014

Health Care Quality Unit Skin Integrity/Training materials referenced:

- PCHC: Skin Health: Preventing Pressure Wounds
- KEPRO SW HCQU: Skin Care; Pressure Injuries
- Milestone NW HCQU: Pressure Ulcer Prevention
- Advocacy Alliance: Wound Management