

A close-up photograph of a person's skin showing a severe pressure injury. The injury is a deep, circular ulcer with a bright red, raw center and a surrounding area of redness and discoloration. The skin texture is visible, and the lighting highlights the depth of the wound.

Pressure Injuries

In people with Intellectual and Developmental Disabilities (IDD)





Introduction

Some people with IDD may have physical or communication differences that make them more susceptible to skin pressure injuries. The information here is presented to help supporters understand, identify, and prevent pressure injuries in people with IDD.



Pressure Injuries

What is it?

A pressure injury (historically known as a pressure ulcer, decubitus ulcer, or bedsore) is localized damage to the skin and underlying soft tissue, usually over a bony prominence or related to using a medical device. The injury can present as intact skin, a blister, or an open ulcer and may be painful. The injury occurs due to intense or prolonged pressure or pressure in combination with shear (National Pressure Injury Advisory Panel - NPIAP).

The muscle and skin tissues are squeezed between one of the body's bones and an outside surface, such as a bed, wheelchair, medical tubing, or even eyeglasses. This pressure reduces or stops the blood flow to the skin and muscles and causes damage from decreased oxygen. This pressure can also cause direct deformation and the death of the cells. Leading causes of pressure injuries are failure to turn and reposition and inappropriate bed or seating surfaces. The time it takes for a pressure injury to develop depends on the person and their medical issues and can be as little as 1 hour. If the pressure is not relieved, damage may spread to deeper layers, such as the muscle, tendon, and bone. A pressure injury can become deeper and difficult to heal in severe cases, resulting in great pain, infection, and even sepsis.

People who have difficulty identifying or communicating changes in their skin or that they are experiencing pain are at particular risk. This includes many people with intellectual and developmental disabilities (IDD). Those who support people with communication challenges should be trained on the risks of pressure injuries, identifying them, and what to do if they are noted.



Who is vulnerable?

People with IDD often experience conditions associated with limited mobility and may lack the capacity to effectively communicate early signs of pressure injury. Those with more severe levels of disability are at an increased risk for pressure injury due to the increased reliance on supporters for physical support and recognition of the person's communication methods. A few examples of conditions that may be associated with IDD where these risk factors may be more prevalent include:

- Cerebral palsy
- Spina bifida
- Spinal cord injury
- Traumatic brain injury
- Some genetic syndromes

Additionally, pressure injury risk is increased for persons who:

- Have chronic medical conditions which may impact wound healing
 - Diabetes mellitus
 - Poor circulation
 - Anemia
 - Immunodeficiency
 - Malnutrition
 - Malignancies
 - Autoimmune diseases
 - End of life
- Have impaired mobility
 - May remain in a chair or bed for long periods of time
 - May be post-surgery or have recently had a mobility-limiting medical procedure
 - May have contractures or spasticity
 - May be taking sedating medications
- Cannot recognize the need to change position
- Are elderly
- Have thin, dry, or fragile skin
- Have a history of a pressure injury
- Are overweight or underweight





- Require assistive devices
 - Mobility aids
 - Wheelchair
 - Orthotics- AFO's, braces, casts, splints
 - Protective devices
 - Helmets worn to prevent injuries from self-abusive behaviors, seizures, and falls
 - Positioning devices
 - Headrests
 - Hand/wrist/finger splints to manage contractures
 - Physical restraints
 - Fencing masks
 - Heavy gloves
 - Mittens
 - Wrist restraints
 - Medical devices
 - Indwelling urinary catheters
 - Feeding tubes
 - NG tubes
 - Nasal cannulas
 - Any medical device that uses securement methods such as ties or a flange, such as a tracheostomy tube or a gastrostomy tube (G-Tube)
 - Masks
 - CPAP
 - BiPAP
 - Oxygen
 - Eyeglasses
- Are incontinent of bowel and/or bladder
- Have difficulty obtaining adequate calories or fluids
- Smoke cigarettes or use other tobacco products
- Have a limited ability to communicate wants, needs, or pain effectively
- Have self-injurious behaviors
 - Skin-picking may worsen existing wounds
 - Self-stimulating behaviors which put pressure on the skin for extended periods of time
 - Sitting on legs or in a cross-legged position
 - Rocking back and forth
 - Rubbing an area of the skin repeatedly
- Take medications that can alter alertness and possibly decrease movement, which can lead to pressure injuries:
 - Anticonvulsants
 - Antidepressants
 - Antiemetics
 - Antihistamines
 - Antipsychotics
 - Anxiolytics
 - Opioid analgesics
 - Skeletal muscle relaxants
- Take medications that can impair wound healing:
 - Antibiotics
 - Anticoagulants
 - Antineoplastics
 - Antiplatelets
 - Anti-rheumatoid arthritis drugs
 - Colchicine
 - Immunosuppressants
 - Nicotine
 - Systemic corticosteroids
 - Nonsteroidal anti-inflammatory drugs
 - Topical corticosteroids
 - Vasoconstrictors

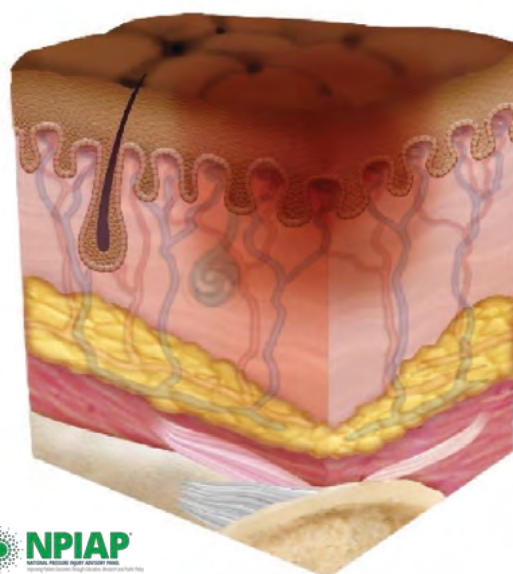
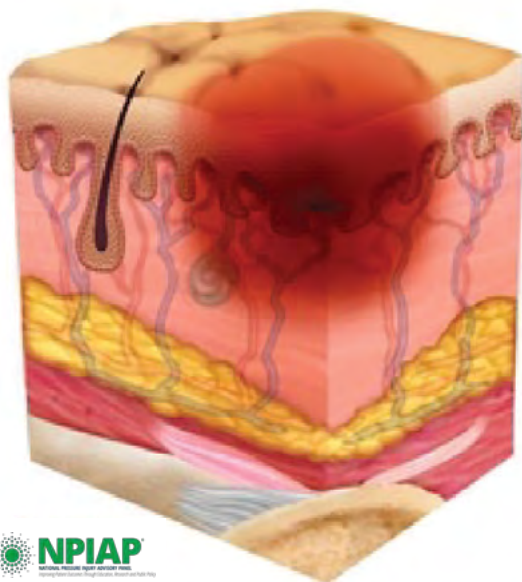


What does it look like?

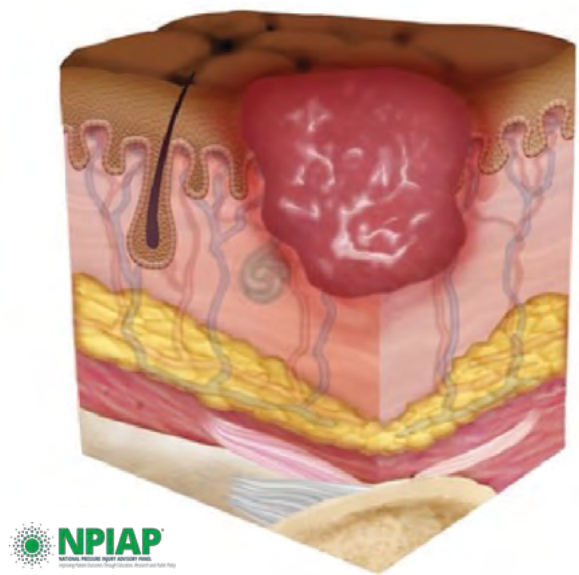
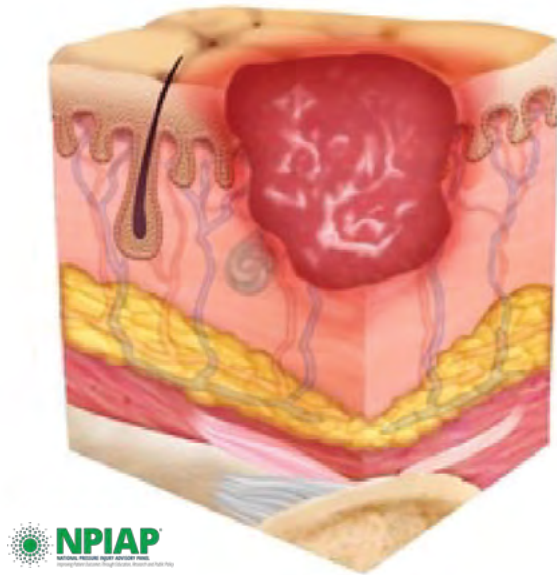
Pressure injuries may present as reddened or purplish areas on the body, which later progress to open skin ulcerations of varying depth and severity. These injuries usually occur over bony parts, including ankles, shoulders, hips, tail bone, heels, spine, and head. A pressure injury is classified based on the depth of skin involvement and exposed tissues in the wound bed. The National Pressure Injury Advisory Panel's updated staging system includes the following definitions:

Images courtesy of the [National Pressure Injury Advisory Panel \(npiap.com\)](http://npiap.com)

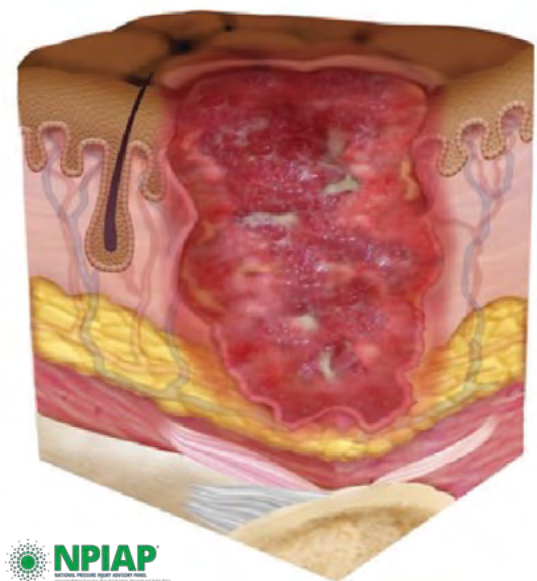
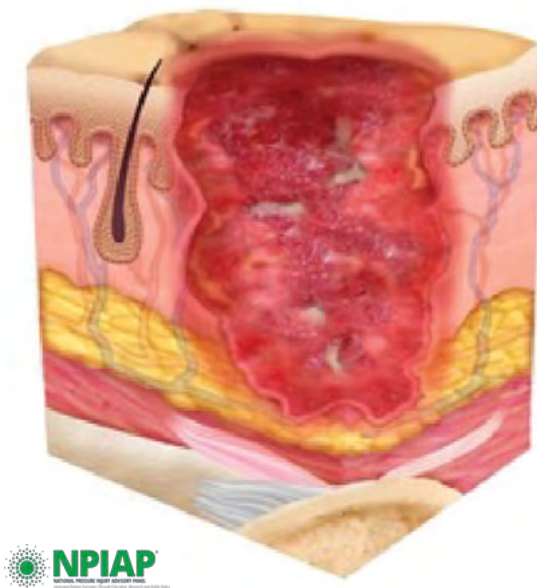
- **Stage 1 Pressure Injury:** The skin is intact with no breaks in the surface. Skin appears red on lightly pigmented skin and does not briefly lighten (blanch) when touched. On those with darkly pigmented skin, the skin may show darker discoloration or feel softer or firm, and it does not blanch when touched. There may be tenderness or pain with this pressure injury.



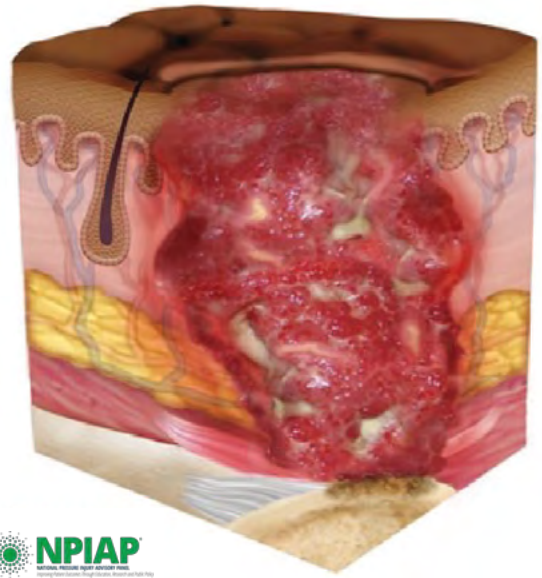
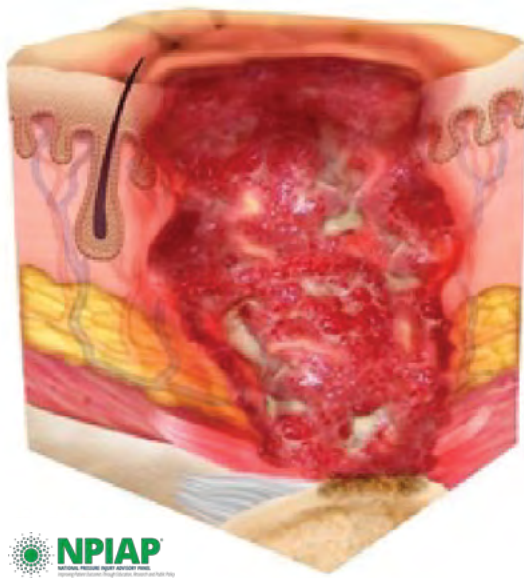
- **Stage 2 Pressure Injury:** The top layer of skin (epidermis) is generally broken, creating a shallow ulcer. The wound appears pink or red, moist but may look like a fluid-filled blister.



- **Stage 3 Pressure Injury:** The top two layers of skin (epidermis and dermis) are damaged down into the subcutaneous fat tissue. The bottom of the wound may have some yellowish dead tissue called slough. There is usually no pain at this stage due to nerve damage.



- **Stage 4 Pressure Injury:** The wound appears as a deep crater with exposed muscle, tendon, ligament, cartilage, or bone.



Unstageable Pressure Injury: The wound bed is partially or entirely covered by dead tissue in the form of eschar or slough, which prevents viewing of the underlying skin and tissue damage. Eschar appears as dry, thick, leathery tissue that may be tan, brown, or black. Slough is yellow, tan, green, or brown in color and can be moist and stringy in appearance. A Stage 3 or Stage 4 pressure injury will be revealed if slough or eschar is removed.



Sacral and Ischial Deep Tissue Injury

Deep Tissue Pressure Injury (DTI): The skin may be intact or non-intact with localized areas of non-blanchable maroon or purple discoloration. A dark wound bed or blood-filled blister will be visible if the skin is broken. The area may be painful, firm, mushy, warmer, or cooler than the surrounding skin. Note: Discoloration may appear differently in darkly pigmented skin, making deep tissue pressure injuries more difficult to detect.

Medical Device Related Pressure Injury (MDRPI): These injuries result from the use of devices designed and applied for diagnostic or therapeutic purposes. The wound generally conforms to the pattern or shape of the device. These injuries are staged using the same categories as listed above.



MDRPI: Foley Catheter



MDRPI: Tracheostomy Strap

How can we prevent it?

Risk Assessment

- Use a pressure injury risk assessment tool, such as the Braden scale, to identify people at risk as early as possible
 - The Braden Scale is an evidence-based tool for predicting pressure injury risk
 - There are six categories within the Braden Scale: sensory perception, moisture, activity, mobility, nutrition, and friction or shear
- Repeat the assessment regularly and with any changes in condition
- Establish a plan of care based on the risk assessment
- Note that the Braden Scale does not account for the presence of an actual pressure injury, so it is essential to realize this as a risk factor as well

Skin Care

- Monitor skin thoroughly every day from head to toe, paying particular attention to the feet of people with diabetes mellitus
 - Inspect for areas of redness in lighter skin and warmth or darker discoloration in darker skin, as these are early signs of a possible pressure injury

- Bathe or shower in warm (not hot) water using a mild pH-balanced cleanser or soap
- Dry skin gently to prevent damage from friction/shearing
- Use a pH-balanced moisturizing lotion to reduce dry skin and cracking
- Minimize use of adhesives on skin
- Observe for skin allergies to products used
- Provide incontinence care at least every two hours and as needed
 - Change incontinence pads and briefs routinely to reduce exposure to moisture
 - Cleanse the skin promptly after incontinence episodes with skin cleansers that are pH balanced
 - Note that stool is caustic to the skin
 - Apply barrier cream that may be petroleum or zinc-based to intact skin
- Manage assistive devices
 - Inspect the skin under and around the device at least daily (if not medically contraindicated), especially when a device is new, or a current one is replaced
 - Avoid placement of device(s) over sites of prior or existing pressure injury OR directly under a person
 - Slowly increase wearing time for new devices

- Educate staff on the correct use of devices, including application and removal
- Contact PT/OT to evaluate any device causing injury for proper fit

Nutrition

- Monitor weight and caloric intake regularly
- Encourage healthy, well-balanced meals and adequate hydration
- Recommend an evaluation by a dietician for at-risk people, unplanned weight loss or gain, or inability to obtain adequate calories and/or fluids
- Follow prescribed diets for medical conditions
 - Nutritional supplements and additional fluids may be recommended for people who have difficulty obtaining adequate calories or fluids or who have wounds with significant drainage
 - Vitamin, mineral, and/or protein supplementation may be needed to promote wound healing
 - Blood glucose levels should be well-managed to encourage healing

Mobilization, Positioning, and Pressure Relief

- Encourage daily physical activity for those that are able
- Assist with range-of-motion exercises for people with limited mobility
- Ensure people with limited mobility change their position frequently (every 2-4 hours), based on client-specific factors, by providing physical assistance or reminders. Repositioning is recommended every 30 minutes if seated
- Avoid dragging or pulling when moving people to avoid friction and shear; lift them instead
- Float heels off the bed or chair by placing a pillow or pillows under the calves

Recognizing pain/discomfort

- People who do not communicate with words may not receive adequate pain management
- Unresolved pain may impair wound healing or even lead to neuropathic pain
- Monitor for signs of pain, especially during mobility, repositioning, and dressing changes
- Dressing changes are commonly thought to be the most painful and anxiety-provoking aspect of wound care
- Observe facial expressions which indicate pain
 - Grimacing, wincing, crying
- Recognize behaviors which may be communicating pain including:
 - Increase in aggressive behavior
 - Increase in self-abuse, such as hitting one's self in the area causing discomfort
 - Guarding
 - Refusing movement or repositioning
- Listen to verbal communication
 - Look at areas the person identifies as painful

Behavior modification

- Encourage smokers to stop smoking. Smoking reduces the level of oxygen in the blood, increases levels of carbon monoxide, and weakens the immune system
- Try to identify root causes of self-injurious behaviors to reduce incidence of skin damage
- Manage self-stimulation behaviors



How do we respond?

If red or broken skin is noticed, or a person complains or shows signs of pain in an area subject to pressure:

- Promptly report findings to supervisory staff, nurse, or another clinician
- Initiate individualized plans for the management of pressure injuries for any person determined to have a pressure injury or be at risk and educate staff accordingly
- Avoid placing the person in a position that puts further pressure on the area and attempt to turn and reposition to body surfaces away from the injury
- Contact the person's primary healthcare provider for further assessment and/or referrals
 - The management of pressure injuries is interdisciplinary and may involve several different types of professionals
- Many principles of pressure injury management are similar to pressure injury prevention and include:
 - Pressure relief
 - Nutrition
 - Special skincare regimen
 - Topical medications
 - Dressings
 - Pain monitoring
 - Smoking cessation
- Know the signs of worsening pressure injury and notify medical personnel if noted. These include:
 - Increasing redness or skin swelling around the wound
 - Foul odor coming from the wound
 - Pus or other increased drainage coming from wound
- Get medical advice immediately if there is:
 - Cold skin and a fast heartbeat
 - Severe pain
 - Fever



Special Considerations for People with IDD

- People with IDD often take several medications, and many of these medications cause sedating or immobilizing side effects, which may increase the risk for pressure injury. A periodic review of a person's medications by the healthcare team is warranted.
- IDD-related diagnoses and conditions often impact a person's ability to move. Impaired mobility resulting from spasticity, paraplegia, and contractures significantly increases a person's risk for pressure injury. Support should be centered around maintaining skin integrity through proper positioning, management of assistive devices, mobilization as tolerated, and pressure relief.
- It is important for supporters to monitor the person's skin from head to toe daily, as many people with IDD cannot effectively self-report skin changes. Any signs of pressure injury should be reported promptly to a healthcare provider for further assessment.
- Sometimes it can be challenging to identify what might be causing pain or discomfort in people with IDD, as they may use self-injurious, aggressive, or other behaviors to communicate. It is essential to rule out underlying medical causes, including pressure injuries, before initiating medications or behavior modification initiatives.
- The management of pressure injuries in people with IDD relies heavily on community healthcare providers. Primary care physicians, nurses, pharmacists, physical therapists, etc., play a vital role in the treatment of pressure injuries, as well as addressing the underlying causes of skin breakdown. Referrals to specialty providers, such as a wound care clinic, may be integral to the treatment plan.
- People with IDD sometimes rely on their supporters to anticipate their needs, manage ADLs, interpret behaviors, and report concerns to healthcare providers. Education for supporters, including family members and direct care staff, is vital to the early detection and treatment of pressure injuries.

Developed by IntellectAbility ([ReplacingRisk.com](https://replacingrisk.com))
in conjunction with the National Pressure Injury Advisory Panel ([NPIAP.com](https://npiap.com))





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