Identifying, Healing and Preventing Pressure Ulcers: It Takes a Village

Massachusetts Department of Developmental Services
September 2017

Speaker Introduction

- Wound Care Manager for Nizhoni Health Somerville, MA
- Over 30 years nursing and wound management experience
- Presented at national conferences and the National Pressure Ulcer Advisory Panel (NPUAP)
- Published articles for *Today's Wound Clinic Ostomy Wound Management*

Today's Objectives

- Identify what pressure ulcers are and what causes them.
- Identify those most at risk for a pressure ulcer.
- Recognizing pressure ulcers, especially in different skin tones.
- How to prevent and treat pressure ulcers.
- Case Studies and Resources

A Word of Warning…

- Today’s presentation is not meant to be clinical.
- This webinar is primarily for direct support professionals and others who work directly with people with disabilities.
- We will show some clinical images today of pressure ulcers in different stages.
- We’ve limited the images to early stages, but they can be a little graphic.

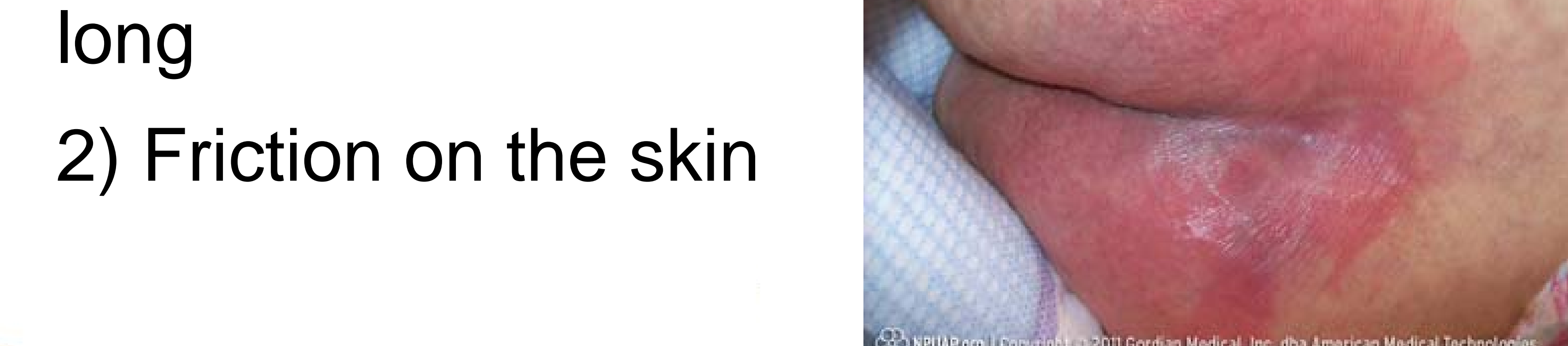
What is a Pressure Ulcer??

- Sometimes called “decubitus ulcers” or “bed sores.”
- An injury to the skin and underlying tissue.
- Two Main causes:

  1) Pressure on one spot of the body for too long

  2) Friction on the skin

Stage 1 pressure ulcer, buttocks

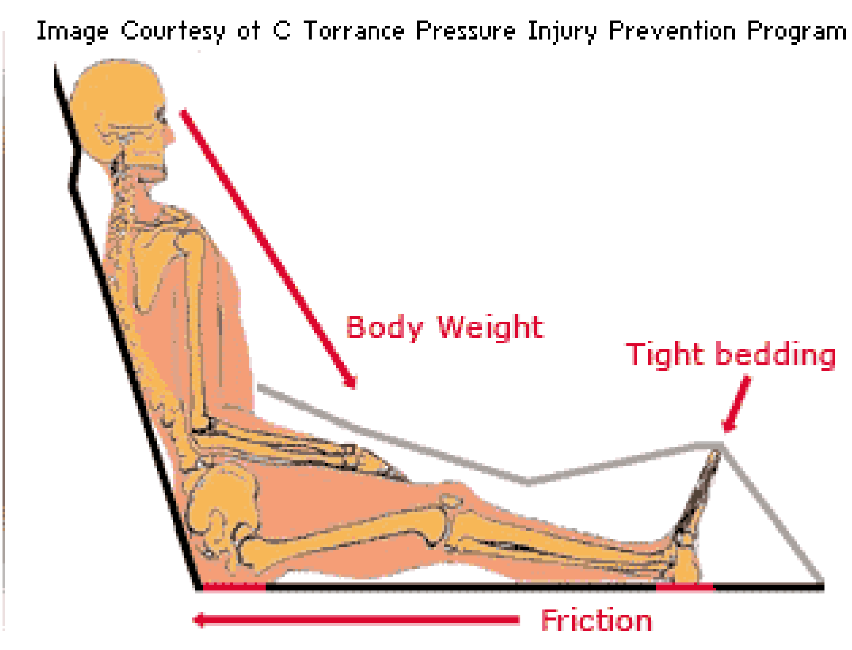


Pressure

- Occurs when someone is lying or sitting in one position for too long.
- Pressure of the body against a surface (like a chair seat) reduces blood flow to the skin and nearby tissue. This stops the flow of oxygen.
- Pressure can cause damage to the skin and tissue.
- **Serious damage to the skin and muscle can occur in as little as 1 hour in a chair and in as little as 2 hours in a bed!**

Friction

- Occurs when skin is dragged across a surface.
- For example: When a person changes position or is moved or repositioned.



- If the skin is moist or wet, the friction is worse and can cause significant skin and tissue damage. This can also worsen existing pressure ulcers.

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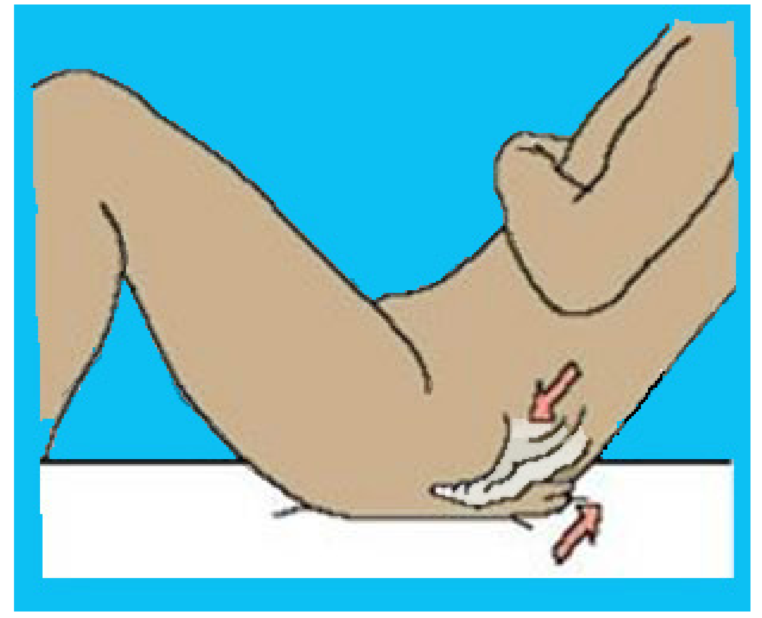
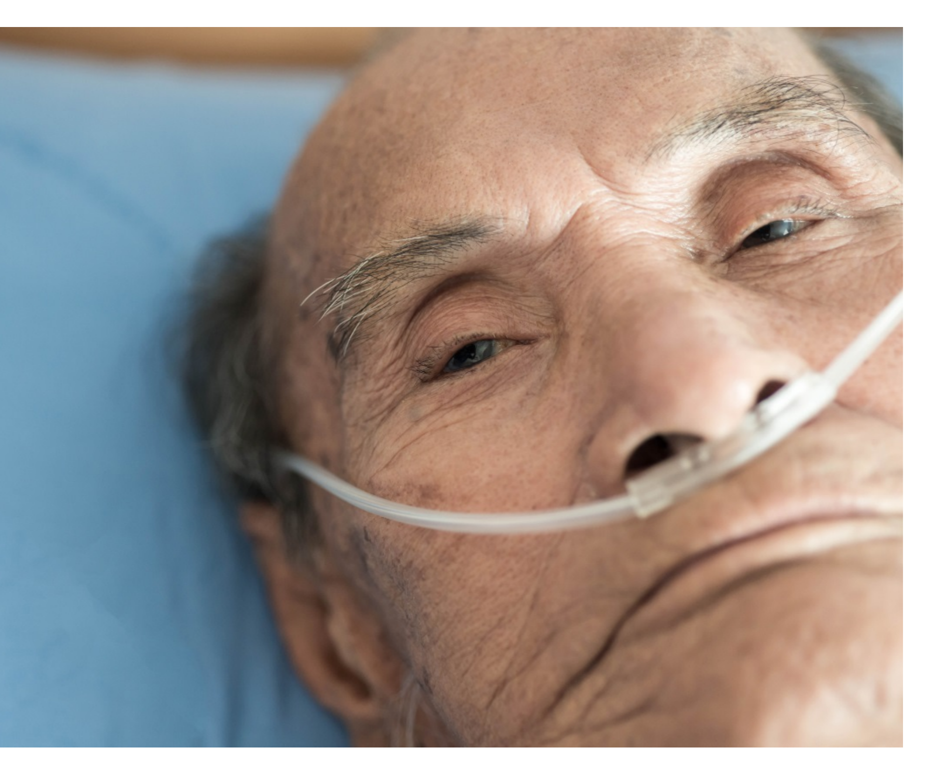
Shearing

- Occurs when 2 surfaces move in opposite directions.
- For example: When a person slides down in bed, their tailbone moves down while the skin over their tailbone stays in place. This pulls the skin in the opposite direction from the movement.



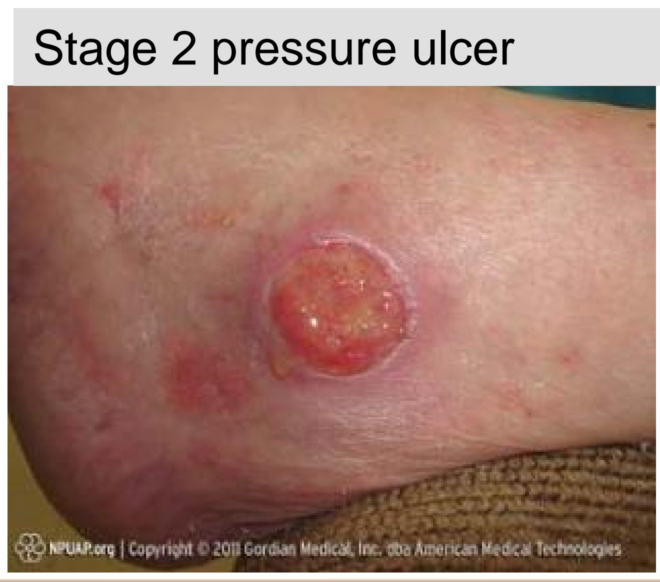
Other Causes of Pressure Sores



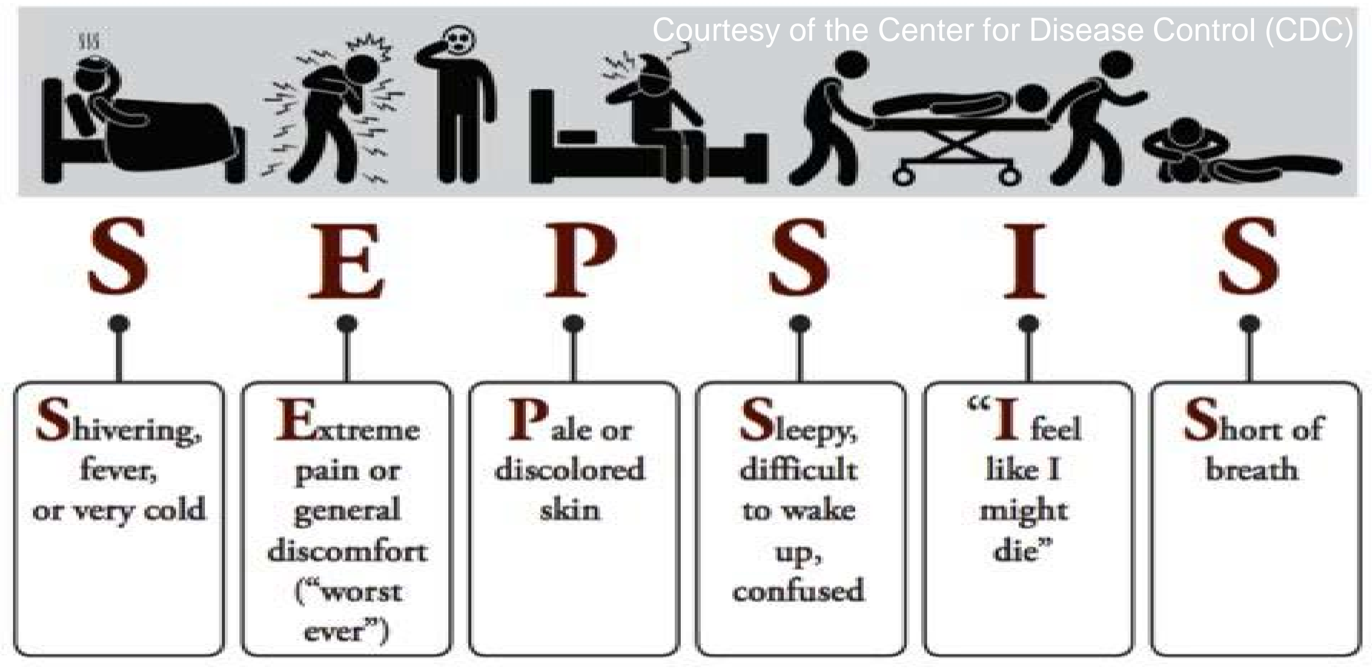
- Any device or object that sits on the body (pressure) or rubs against the body (friction).
- Examples: Splints, rolls, medical tubing, oxygen tubing, CPAP, G-tubes, catheters, socks, clothing, sheets, towels, or draw sheets

The Impact of Pressure Ulcers

- At first, the affected skin reddens.
- Person may complain of pain or itch.
- If left untreated, the skin can open, become larger, deeper and more difficult to heal.
- This causes great pain and can lead to, bone infection and sepsis.
- Can even lead to death.



Stage 2 pressure ulcer


Courtesy of the Center for Disease Control (CDC)
S E P S I S
Shivering, fever, or very cold
Extreme pain or general discomfort ("worst ever")
Pale or discolored skin
Sleepy, difficult to wake up, confused
"I feel like I might die"
Short of breath

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Impact Continued…

- As many as 1/3 of hospitalized patients with pressure ulcers die during their hospitalization.
- More than half of those who develop a pressure ulcer in the hospital will die within the next 12 months.
- About 60,000 patients die as a direct result of a pressure ulcer each year. This translates to 6.85 deaths every hour of every single day.

Who is most at risk for developing a pressure ulcer?

People at Risk:

- Are elderly
- Have lost feeling or sensation in a body part
- Cannot move themselves (are immobile)
- Sit or lie down for extended periods of time
- Have a history of pressure ulcers
- Have bowel or urinary incontinence

People at Risk Often:

- Take 8 or more medications
- Are in poor health and/or have chronic health conditions, especially diabetes and blood circulation problems
- Have poor nutrition or hydration
- Have fragile skin that tears easily, skin tears, or chronic skin problems
- Have excessively dry or moist skin

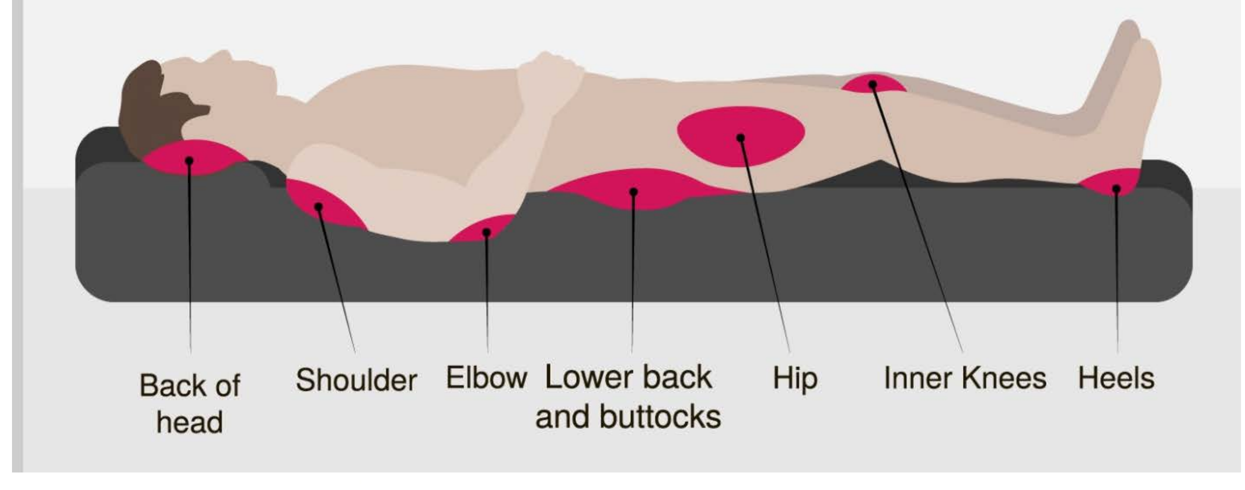
People with a History of Pressure Ulcers:

- Are more than five times as likely to develop another pressure ulcer.
- The strength of the skin goes down 70% after a pressure ulcer.
- Even if the skin and muscle heals, it will never be as strong as it once was.

How to recognize a pressure ulcer

Where do Pressure Ulcers Form?

- These areas on the body are at higher risk of breaking down due to pressure and friction:
  - Back of the head
  - Shoulder
  - Tail bone
  - Elbow
  - Hip
  - Knee
  - Heel
  - Ankles



What do Pressure Ulcers Look Like?

- In the early stages, the skin appears red or inflamed
- The person often complains of pain or an itch in the affected area.
- The skin may be intact, but it is red or spongey.
- Be aware that pressure ulcers can look different on different skin colors.

Stage 1 pressure ulcer, sacrococcygeal

Stage 2 pressure ulcer, buttocks

Finding Ulcers: *Look, Listen, Feel*

Look at the person's skin at close range and at a distance to check for differences in skin tones.

Listen to the person's reports of soreness or pain.

Feel - touch the person's skin and check for warmth, coolness, mushiness, and firmness. Skin temperature is often warmer or cooler in a pressure ulcer. The skin will also probably feel firmer or softer.

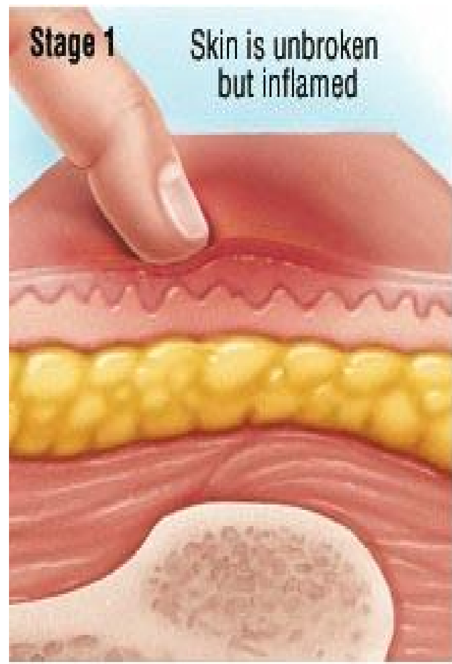
See Something, Say Something

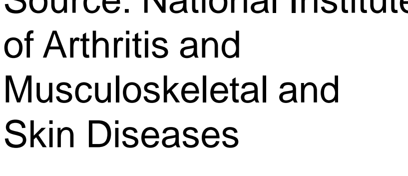
- If you suspect someone is at increased risk for developing a pressure ulcer, say something!
- If something looks different or “off”, report your concerns to a nurse or supervisor.

Stages of Pressure Ulcers

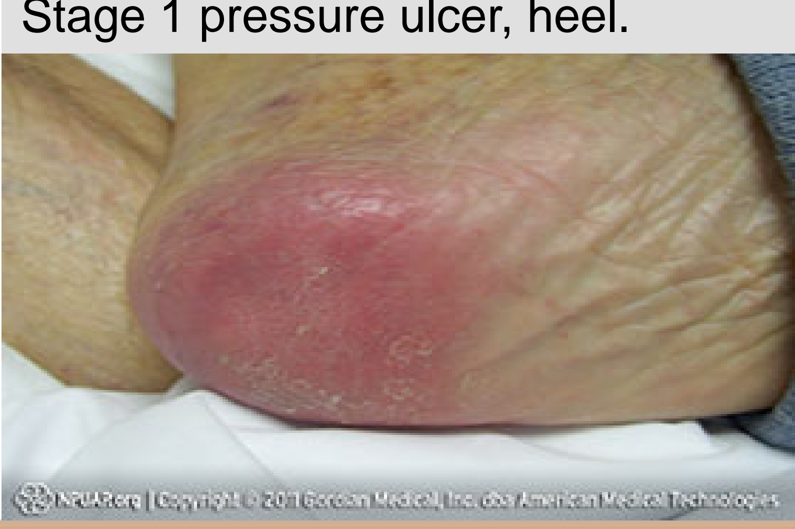
- There are different stages of pressure ulcers, stage 1 being the least serious and stage 4 being the most serious condition.
- Medical professionals use stages as a way to categorize the wound.
- Some pressure ulcers are “unstageable” meaning it cannot be determined.

Stage 1

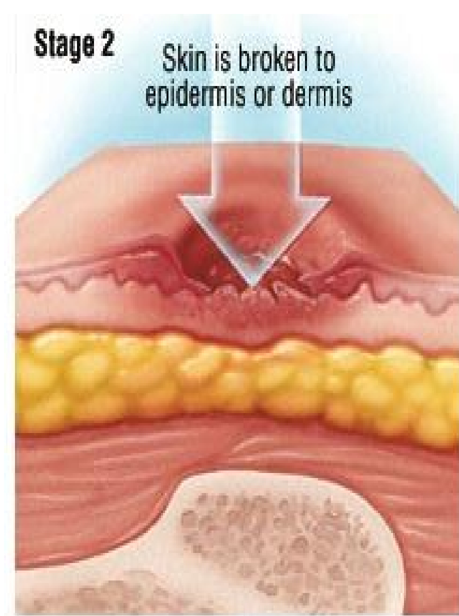



Source: National Institute of Arthritis and Musculoskeletal and Skin Diseases

- The skin is not broken, but is inflamed.
- The area may be red, painful, firm, soft, warmer, or cooler as compared to surrounding skin.


Stage 1 pressure ulcer, heel.

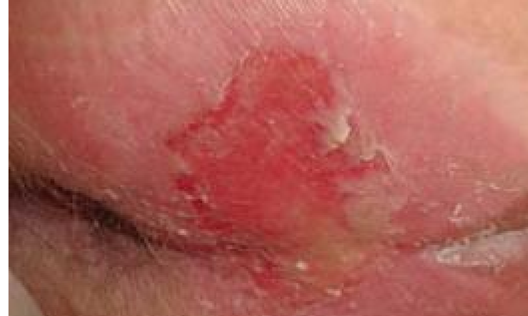
Stage 2



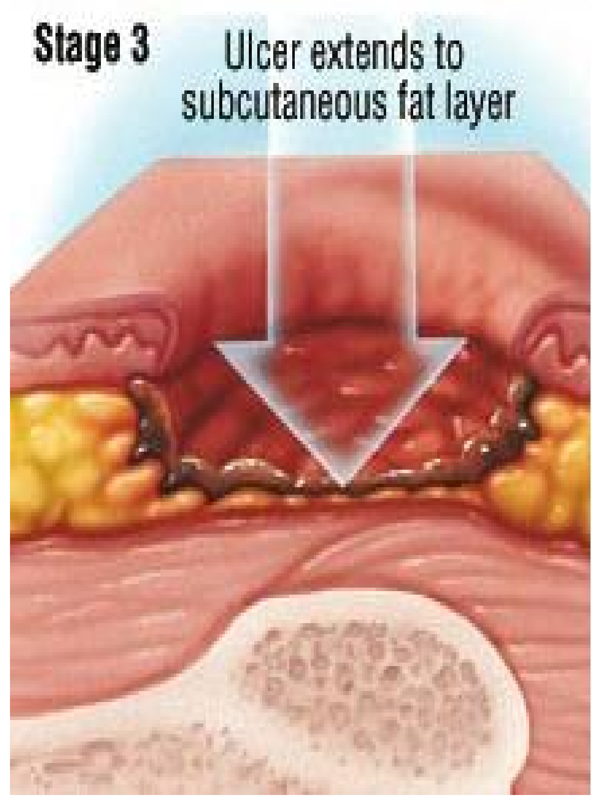
Source: National Institute of Arthritis and Musculoskeletal and Skin Diseases

- The outer layer of skin (epidermis) and the inner layer of skin (dermis) is damaged or lost.
- The wound may be shallow and pinkish or red.
- The wound may look like an abrasion, fluid filled blister or a shallow crater.

Stage 2 pressure ulcer, buttocks.



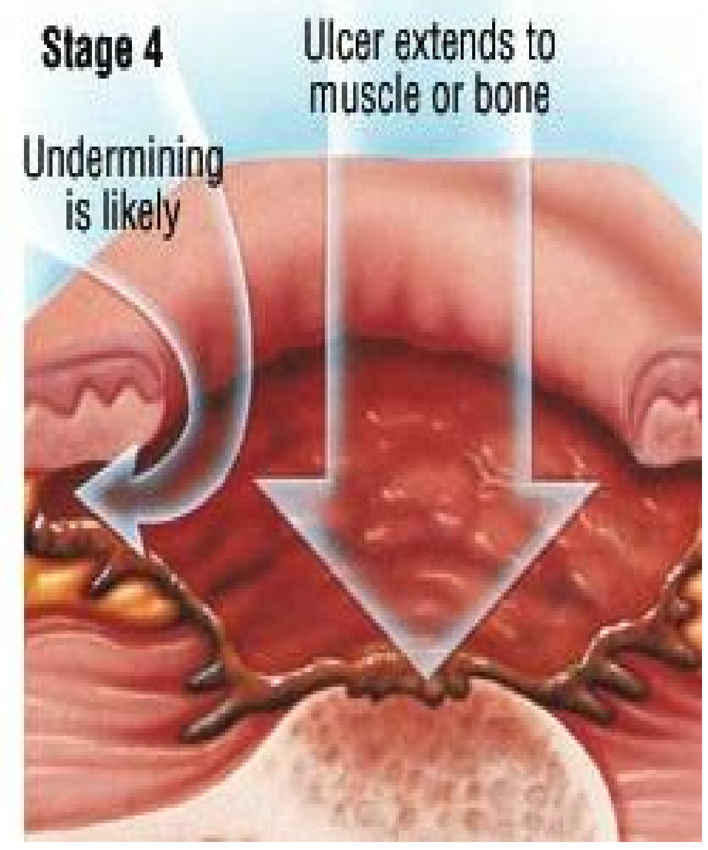
Stage 3



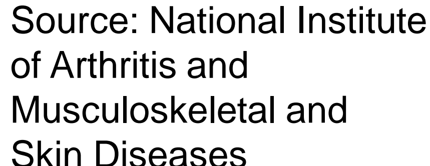
Source: National Institute of Arthritis and Musculoskeletal and Skin Diseases

- The loss of skin usually exposes the fat layer. Bone, tendon, and muscle are not exposed.
- The damage may extend beyond what you see to layers of skin below.

Stage 4



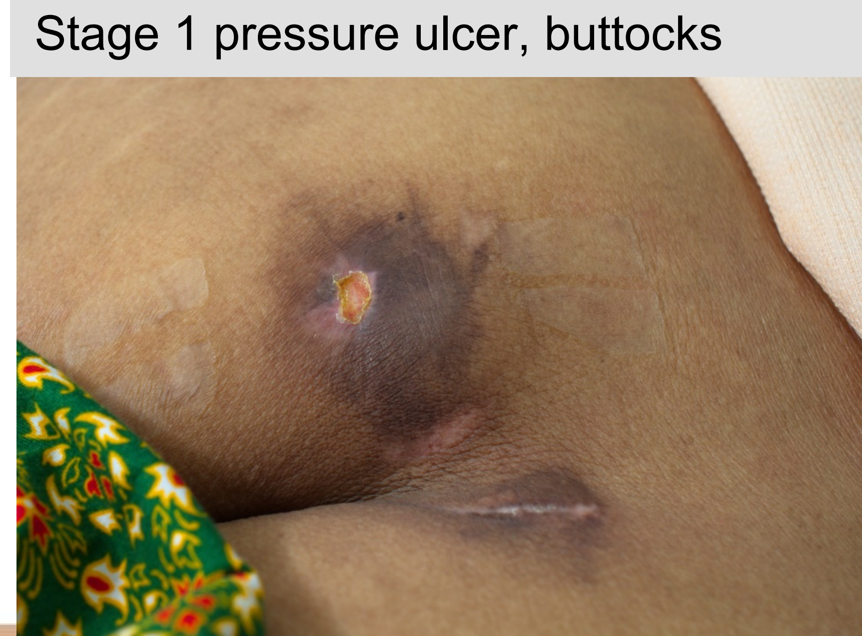
- The pressure ulcer is very deep, reaching into muscle and bone and causing extensive damage.
- Damage to deeper tissues, tendons, and joints may occur.


Source: National Institute of Arthritis and Musculoskeletal and Skin Diseases

What do pressure ulcers look like in different skin tones?

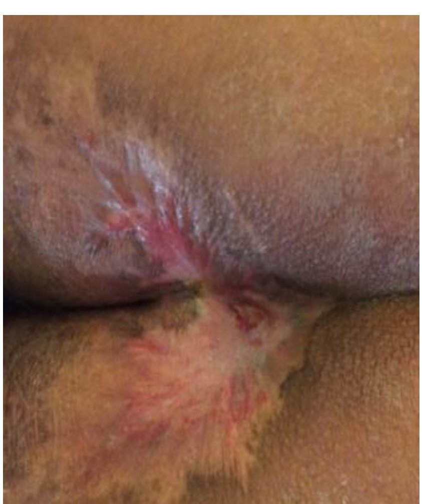
Darker vs Lighter Skin Pigmentations

- The most crucial part of detecting pressure ulcers is understanding changes in skin color.
- A pressure ulcer may appear bluish, purplish, or violet in darker pigmented skin. The same ulcer would look red or pink in lighter skin.


Stage 1 pressure ulcer, buttocks

How to Check for Pressure Ulcers in Darker Skin Tones

- Skin may be taut, shiny, or hard.
- Feel the area to see if it's "boggy" or very soft. It will often be a different temperature from surrounding skin.
- The person will likely be in pain. It's important to identify these areas.



Stage 1 pressure ulcers, buttocks.

How to prevent pressure ulcers

Early Detection

- Inspect skin during bathing or daily personal care.
- Report any and all changes in skin appearance or complaints of pain or itching.
- Do not massage areas that are already red, especially if they are over a boney part of the body (ankle, hip)

Protect Skin

- Evaluate and manage urinary and fecal incontinence.
- Use HCP ordered creams/barrier ointments to protect skin. If not already ordered, ask the HCP if they are needed.

Good Hydration and Nutrition

- Maintain good hydration and nutrition. This helps protect skin and promotes wound healing
- **Drink Enough**- good hydration is important to keeping skin intact
- **Healthy Diet**- a diet high in calories, protein, vitamins, and minerals will promote wound healing

Good Positioning

- When in bed, maintain the lowest possible head elevation appropriate for that person to reduce the impact of shear.

- Position the patient to minimize pressure and shearing forces over the heels, elbows, base of head, and ears

Source: MacMed

Reposition

- Help the person change positions to relieve pressure on body parts.
- People should change position **at least every 2 hours** and more often if they are at risk for pressure ulcers.

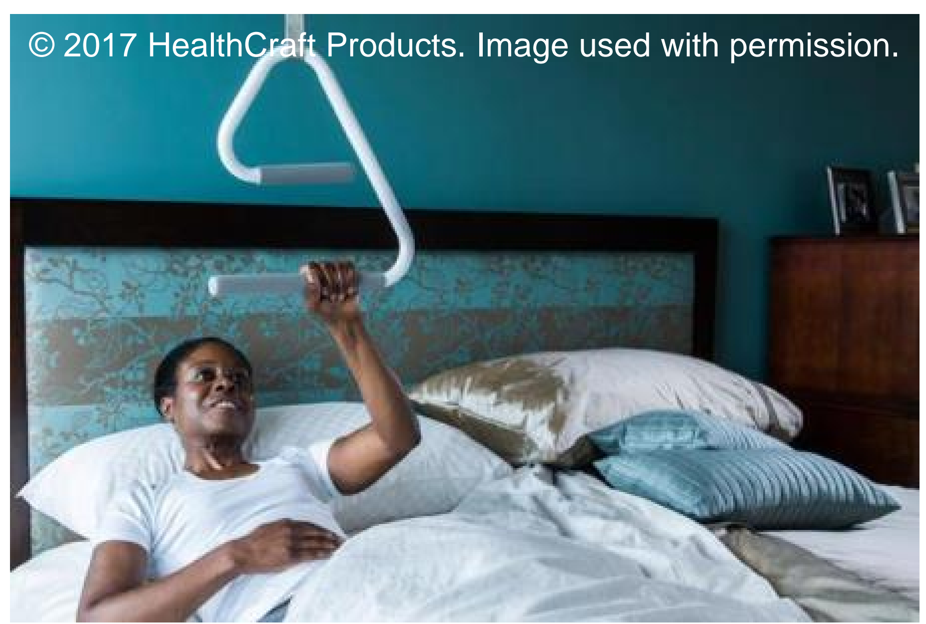
Repositioning Continued …

- Use pillows under one side of the back to offload pressure.
- Use pillows as cushions/wedges between and under knees.
- Place cushion support under feet and ankles.

<u>Follow all health practitioners, physical, and occupational therapists, and nursing orders as prescribed.</u>

Minimize Friction and Shearing

- Avoid dragging heels, hip, or tail bones across sheets
- Use lifting devices such as a draw sheet or trapeze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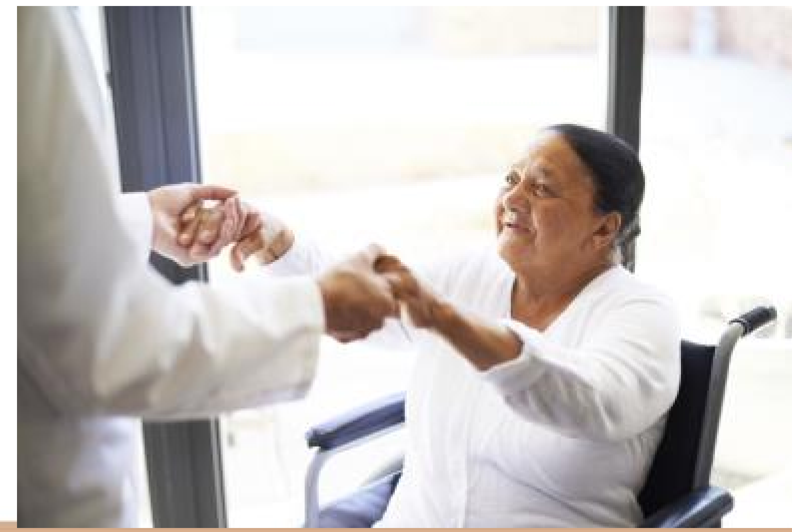
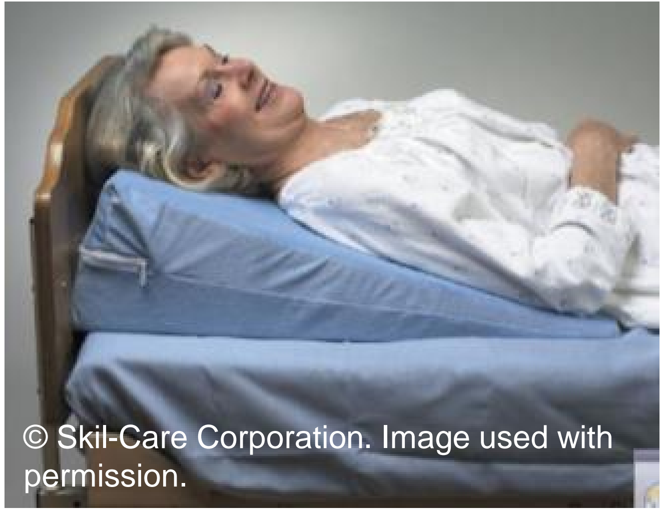
Wheel Chair Repositioning and Assessment

- Encourage people to shift their weight every 15 minutes while seated.
- Use tilt feature on chair to reposition every hour.
- Inspect cushions for signs of wear, proper inflation, and proper placement.
- Wheel chairs should be inspected daily and cleaned to avoid sharp edges or pressure related injury



Provide Good Support

- Specially ordered air mattresses, wedges, cushions, or pillows will relieve pressure and provide support both in and out of bed.
- This support is needed to offload pressure.
- These would be recommended by a doctor or physical or occupational therapist.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Skin Care

- Keep the skin clean and dry. Wash with mild soap and water, rinse thoroughly, gently pat dry.
- Apply lotions as prescribed- to prevent skin breakdown and keep skin intact.
- Never massage over an area of skin that is reddened or has skin breakdown.

Pressure Ulcer Management

Pressure Ulcer Management

- All wound care is to be managed or overseen by a certified wound and ostomy nurse under the order of a health care provider.
- An individualized protocol for the prevention and management of pressure ulcers must be created for any person determined to be at risk.

BRADEN PRESSURE ULCER RISK ASSESSMENT

ACT TO PREVENT PRESSURE ULCERS

	4	3	2	1	Score
SENSORY PERCEPTION Ability to respond meaningfully to pressure-related discomfort	**NO IMPAIRMENT** Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.	**SLIGHTLY LIMITED** Responds to verbal commands but cannot always communicate discomfort or ask to be moved or turned OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	**VERY LIMITED** Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.	**COMPLETELY LIMITED** Unresponsive (does not moan, flinch, or grasp) to painful stimuli due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body surface.	4 3 2 1 ADD TO TOTAL SCORE
MOISTURE Degree to which skin is exposed to moisture	**RARELY MOIST** Skin is usually dry; linen only requires changing at routine intervals.	**OCCASIONALLY MOIST** Skin is occasionally moist, requiring an extra linen change approximately once a day.	**OFTEN MOIST** Skin is often but not always moist. Linen must be changed at least once a shift.	**CONSTANTLY MOIST** Skin is kept moist almost constantly by perspiration urine, etc. Dampness is detected every time patient is moved or turned.	4 3 2 1 ADD TO TOTAL SCORE
ACTIVITY Degree of physical activity	**WALKS FREQUENTLY** Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.	**WALKS OCCASIONALLY** Walks occasionally during day but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	**CHAIRFAST** Ability to walk severely limited or non existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	**BEDFAST** Confined to bed	4 3 2 1 ADD TO TOTAL SCORE
MOBILITY Ability to change and control body position	**NO LIMITATIONS** Makes major and frequent changes in position without assistance.	**SLIGHTLY LIMITED** Makes frequent though slight changes in body or extremity position independently.	**VERY LIMITED** Makes occasional slight changes in body extremity position but unable to make frequent or significant changes independently.	**COMPLETELY IMMOBILE** Does not make even slight changes in body or extremity position without assistance.	4 3 2 1 ADD TO TOTAL SCORE
NUTRITION Usual food intake pattern [1]NPO: Nothing by mouth. [2]IV: Intravenously. [3]TPN: Total parenteral nutrition.	**EXCELLENT** Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.	**ADEQUATE** Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered, OR is on a tube feeding or TPN[3] regimen, which probably meets most of nutritional needs.	**PROBABLY INADEQUATE** Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings or meat or dairy products per day. Occasionally will take a dietary supplement, OR receives less than optimum amount of liquid diet or tube feeding.	**VERY POOR** Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement, OR is NPO[1] and/or maintained on clear liquids or IV[2] for more than 5 days.	4 3 2 1 ADD TO TOTAL SCORE
FRICTION & SHEAR		**NO APPARENT PROBLEM** Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.	**POTENTIAL PROBLEM** Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	**PROBLEM** Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures, or agitation leads to almost constant friction.	4 3 2 1 ADD TO TOTAL SCORE

RISK SCALE	NONE	MILD	MODERATE	HIGH	SEVERE	TOTAL SCORE
	23 22 21 20 19	18 17 16 15	14 13	12 11 10	9 8 7 6	USE CHART ON LEFT TO DETERMINE YOUR PATIENTS RISK

	NONE	MILD / MODERATE	HIGH / SEVERE
EQUIPMENT	No additional pressure support required	High specification foam mattress or static air overlay. Consider cushion for chair, Bedcradle/gooseneck	Dynamic air overlay, Dynamic air cushion Dynamic mattress Replacement or Low Air Loss
PRACTICE	• Educate Weight-shifting, Skin inspection • Evaluate on change of condition	• Reposition Weight-shifting, Skin inspection • Promote Activity • Manage individual risk factors nutrition; shear; friction; continence • Educate • Evaluate on change of condition	ALL PLUS • Supplement with small positional shifts • Seating/posture assessment • Nutritional assessment • Educate • Evaluate on change of condition

Reference: "The Braden Scale of Predicting Pressure Sore Risk" Bergstrom, N; Braden, B et al. Nursing Research 1987 Vol 36 No 4 pp205-210. Issued by Royal Adelaide Hospital Staff Development Department in conjunction with South Australian Quality Council Pressure Ulcer Prevention Practices - Integration of Evidence.

Braden Scale

- The Braden scale is used for predicting pressure ulcer risk. The purpose of the scale is to help health care professionals, especially nurses, to assess a patient's risk of developing a pressure ulcer.

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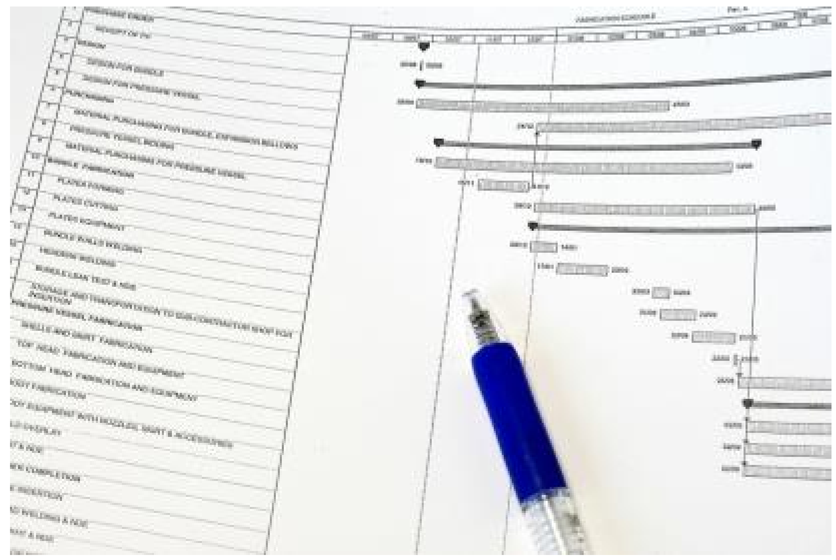
A Team Approach

- Planning to provide evidence based treatment interventions is the responsibility of the whole team. This includes nurses, case managers, family members, and direct care staff.

Pressure Ulcer Treatment

Treatment of Pressure Ulcers

- Provided by a Wound and Ostomy nurse
- Your input is important!
- Let the nurse know if the wound looks, smells, or feels different to you.



Treatment Monitoring

- A healthcare professional should evaluate a pressure ulcer at every dressing change, including: drainage (including type, color, odor, and approximate amount), pain, status of the wound, and a description of wound edges and surrounding tissue.
- Staff play the most essential role!
- Staff can notice the beginning of a pressure ulcer and then report it immediately.

Treatment Goals

- Open pressure wounds need to be covered by a dressing.
- Keep the wound bed MOIST and the surrounding skin DRY.
- Protect the ulcer from contamination.
- Promote moist wound healing.

Case Examples

Case 1

- 57 year old active male admitted to the hospital with pneumonia/sepsis.
- Intubated while there and spent 3 days in bed.
- Developed a stage 4 pressure ulcer.
- Would we normally think that an active 57 year old person would be affected by pressure wounds?
- He was immobile while in the hospital (didn't walk around). The pressure ulcer developed rapidly!

Case 1

- Repositioning, good nutrition and hydration, and frequent skin checks during the hospital stay will help prevent pressure ulcers from developing.
- Statistically, hospitalizations and illness increase the chances of every person for developing a pressure ulcer.

Case 2

- 61 year old male with a history of diabetes, kidney failure and arterial disease.
- Has an amputated leg and wears a prosthetic.
- Developed a blister on his right leg above the knee amputation stump that turned into a stage 2 pressure ulcer.
- This was caused by wearing his prosthetic device while his stump was edematous (swollen).
- Is this a pressure related injury because it is not located over where we would normally think a pressure wound would develop?

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Case 2

- A pressure ulcer can develop anywhere the skin comes in contact with a harder surface, including under prosthetic devices, braces and tubing.
- When doing daily skin inspections, remember to look at all skin areas that may come into contact with any of these devices to detect any early redness or discoloration of the skin.

More Information

- DDS Guidelines for Managing Pressure Ulcers
  - Released June 2017
  - All people with risk factors should be evaluated and a protocol created for how to manage that risk.
  - All wound care is managed by a Certified Wound and Ostomy Nurse

http://www.mass.gov/eohhs/docs/dmr/reports/fs-pressure-ulcers-protocol.pdf

DDS Signs & Symptoms Sheet

Pressure Ulcers

What is it?

A pressure ulcer can also be called a "decubitus ulcer" or a "bed sore". It happens when muscles and other soft tissues in the body are squeezed between one of the bones of the body and an outside hard surface like a chair or a bed or even oxygen tubing or eyeglasses. The pressure slows or stops the blood from flowing to the skin and muscles and causes damage. **Pressure can cause serious damage to the skin and muscle when a person stays in one position in a chair for as little as 1 hour and in a bed for as little as 2 hours.** Another way to get a pressure ulcer is through "shearing". When delicate skin is dragged across a surface like sheets, it can cause the skin to tear or "shear". Sliding up and down in bed or transferring from a bed to a chair can cause this. Once the skin is opened it can continue to break down and worsen.

What does it look like?

The skin may be intact but it is red, or spongy, or the person complains of pain or itch in the affected area. Or the skin may be open with a shallow sore. If left untreated, the ulcer can become larger and deeper, become infected and even lead to sepsis.

Where can they form?

On any bony part of the body like:

- Tail bone
- Hip bones

Who is most at risk?

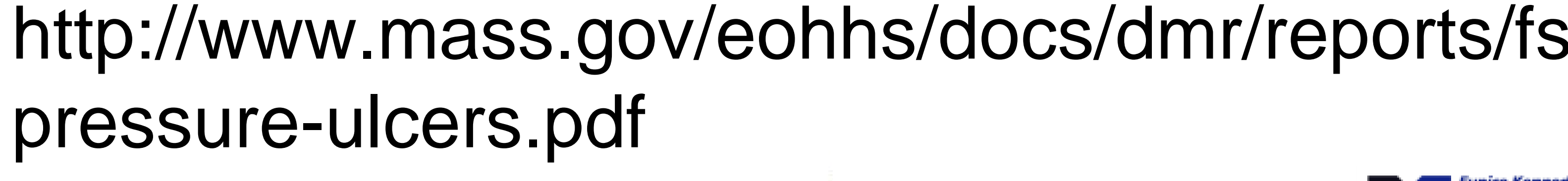
People who:

- Don't move
- Remain in a chair or bed most of the time
- Are incontinent of bowel and/or bladder
- Do not eat a balanced diet or drink enough fluids
- Are overweight or underweight
- Have thin, dry or fragile skin
- Have mobility issues
- Are confused or restless
- Take steroids
- Take medications that make them sleepy

What can I do to prevent it?

Complete a risk assessment for each person in your care. For those at risk, create an individualized plan to prevent pressure ulcers. This plan should include:

- Examining their skin thoroughly every day
- Keeping their skin clean and dry
- Keeping their dry skin moisturized
- Repositioning every 1-2 hours and more often if in a debilitated state
- Providing them with nutritious foods, especially protein
- Keeping them hydrated
- Keeping them as active as possible
- Avoiding dragging them across sheets or surfaces
- Using pillows to protect bony parts


http://www.mass.gov/eohhs/docs/dmr/reports/fs-pressure-ulcers.pdf

Quality Is No Accident Brief

DID YOU KNOW?

- Ninety-five (95%) of pressure ulcers develop on the lower body. Common sites are the tail bone, hip bone, heel, ankles, elbows, and spine, as well as the back, back of head, or ears.
- People with pressure ulcers are at 2-6 times greater mortality risk than people without.

Managing Pressure Ulcers

A pressure ulcer, also called a "decubitus ulcer" or a "bed sore," is an injury to the skin or underlying tissue as a result of lying or sitting in one position for too long. Serious damage to the skin and muscle can occur in as little as 1 hour in a chair and in as little as 2 hours in a bed!

How do pressure ulcers develop?

Muscles and other soft tissues in the body are squeezed between one of the bones on the body and an outside hard surface like a chair or bed. This pressure slows or stops the blood from flowing to the skin and muscles, causing damage. Pressure ulcers can also form from **shearing** or **friction.** This is when delicate skin tissue is dragged across (shearing), or rubbed against (friction), a hard surface such as sheets.

What are the effects of pressure ulcers?

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Thank you

- Questions?
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