MS & Skin Integrity:

A provider's primer on pressure ulcers and other skin issues

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VA MS Centers of Excellence
Call in number: 1.800.767.1750, 43157#
Time: 1-2pm PT, 2-3pm MT, 3-4pm CT, 4-5pm ET

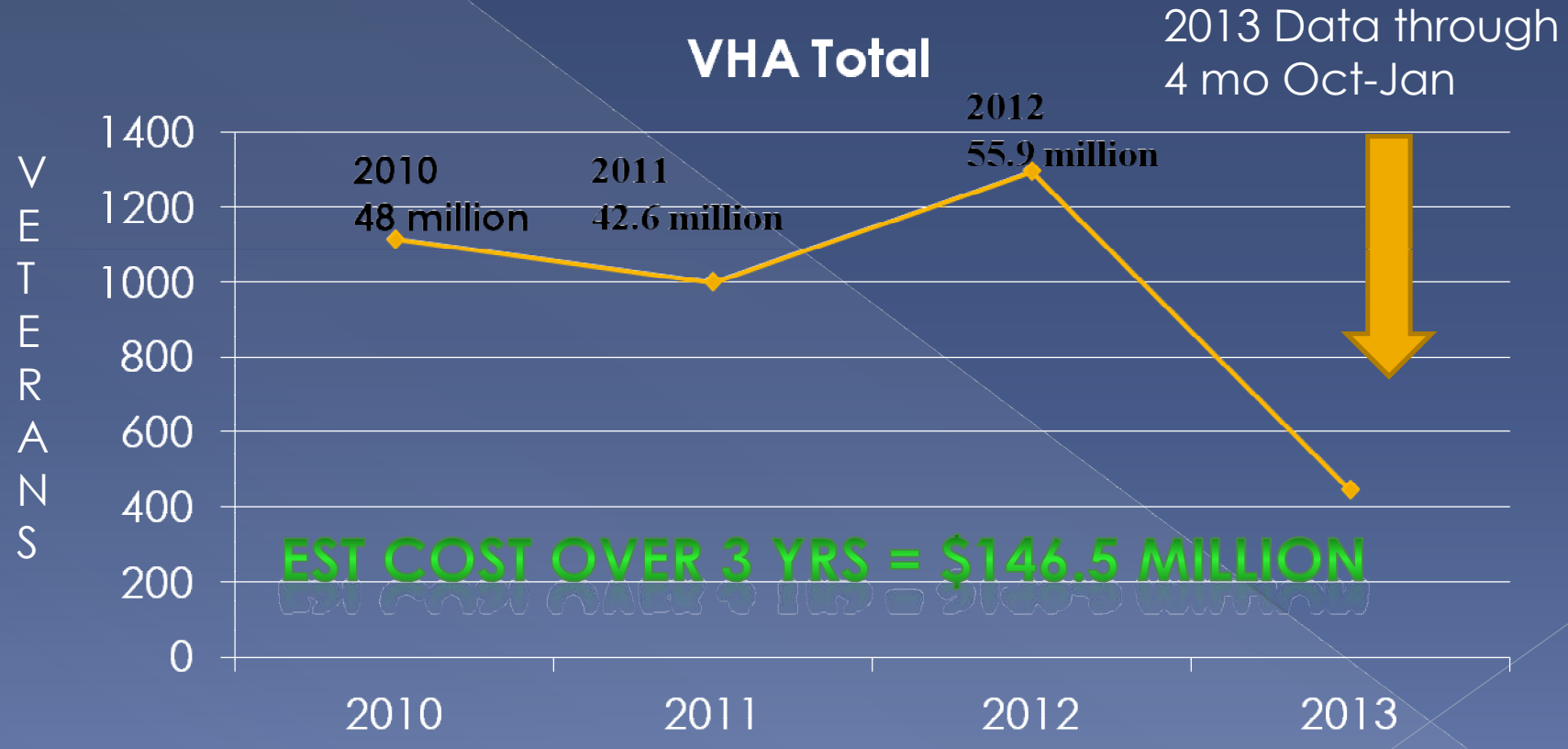
Learning Objectives: At the conclusion of this activity, participants should be able to…

- Define and list the National Pressure Ulcer Advisory Panel stages of pressure ulcers developed to improve patient care.
- **Identify etiological factors that contribute to patients' risk of pressure ulcers**
- List recognized standards of care that aid in the prevention of pressure ulcers
- **Discuss injection site problems and prevention strategies associated with MS disease modifying therapies.**

NOTE:

1. **See slides 35-36 for CEU/CME credit**
2. **See slide 37 for upcoming calls**

of Veterans with Stage III & IV HAPU per VANOD



CMS estimates cost of hospitalization for Stage III & IV Pressure ulcer at $43,180.
Slide developed by Suzy Scott-Williams, RN, MS, CWOCN

Beyond Resource Impact:
Pain & suffering

? ...!

VHA PU Handbook 2011, Pg 23-24

- d. If the Veteran is bed-confined, a wheelchair user, or requires assistance to transfer or change position, performing a skin assessment needs to be considered, and educational materials provided on the prevention of pressure ulcers.

- e. Qualified **clinicians need to** consider performing a complete skin assessment, if they identify a significant decline in condition or functional status of the Veteran that would contribute to increased risk of pressure ulcers.

- If a new or existing pressure ulcer is identified, the ulcer needs to be documented and a prevention or treatment plan initiated or revised to reflect the Veteran's current condition. The provider may **request a wound care consult, or other consults** deemed appropriate to other service(s).

Definition

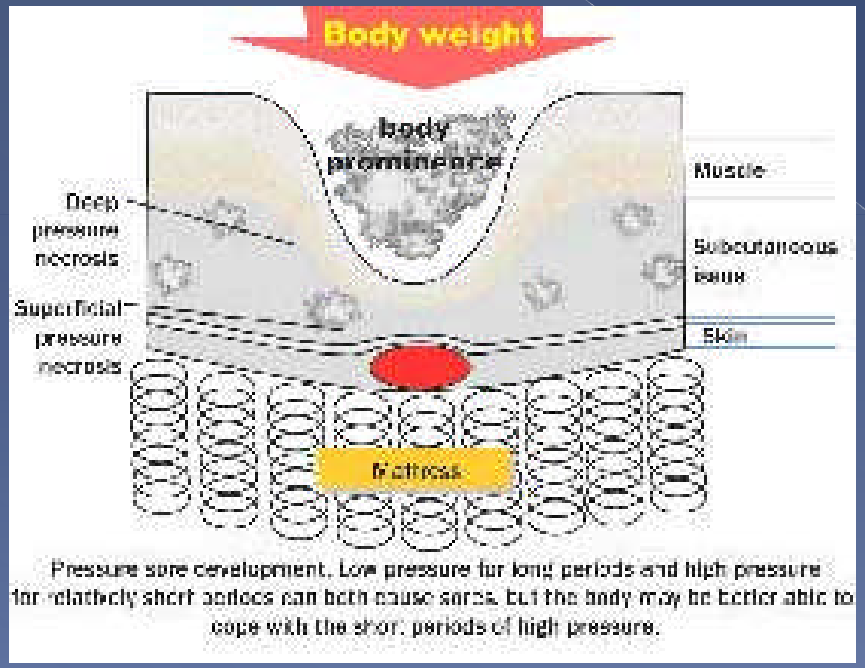
The National Pressure Ulcer Advisory Panel (NPUAP) serves as the authoritative voice for improved patient outcomes in pressure ulcer prevention and treatment through public policy, education and research.

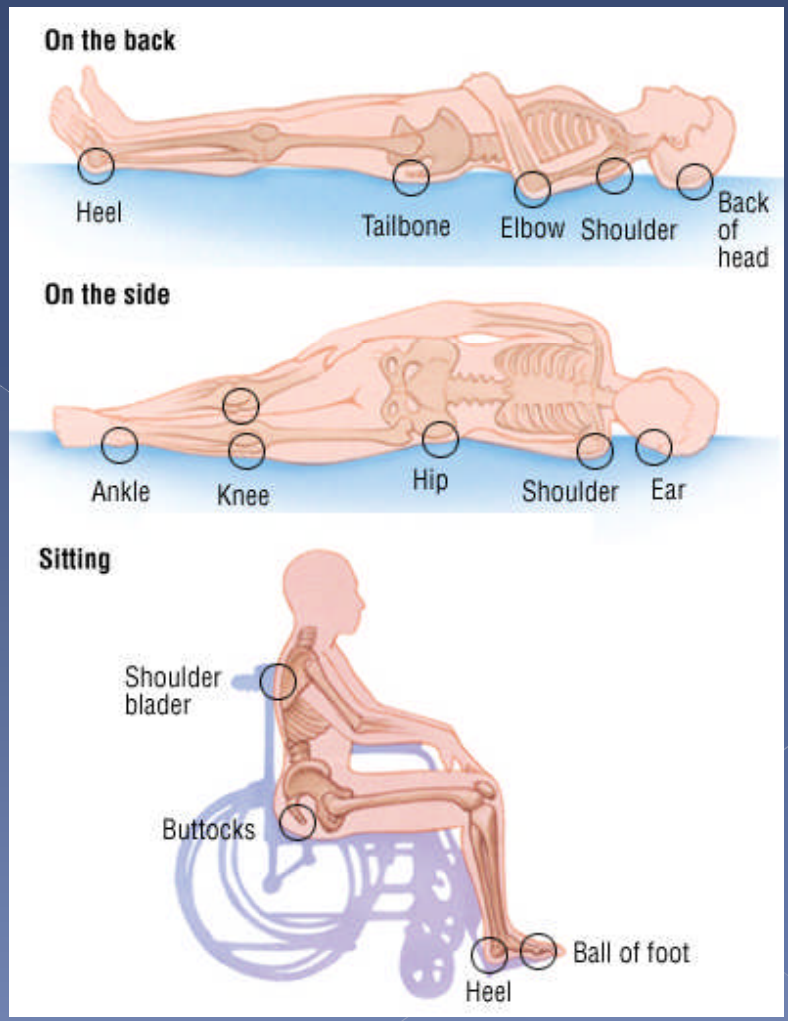
- **International NPUAP-EPUAP Pressure Ulcer Definition**

A pressure ulcer is localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear.

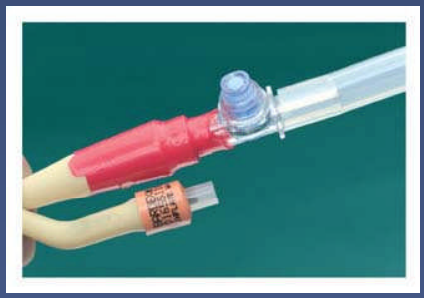
A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated.

How & Where PU develop





Over a boney prominence or **hard object on soft tissue**:



How long does it take?

- High pressure over relatively short periods

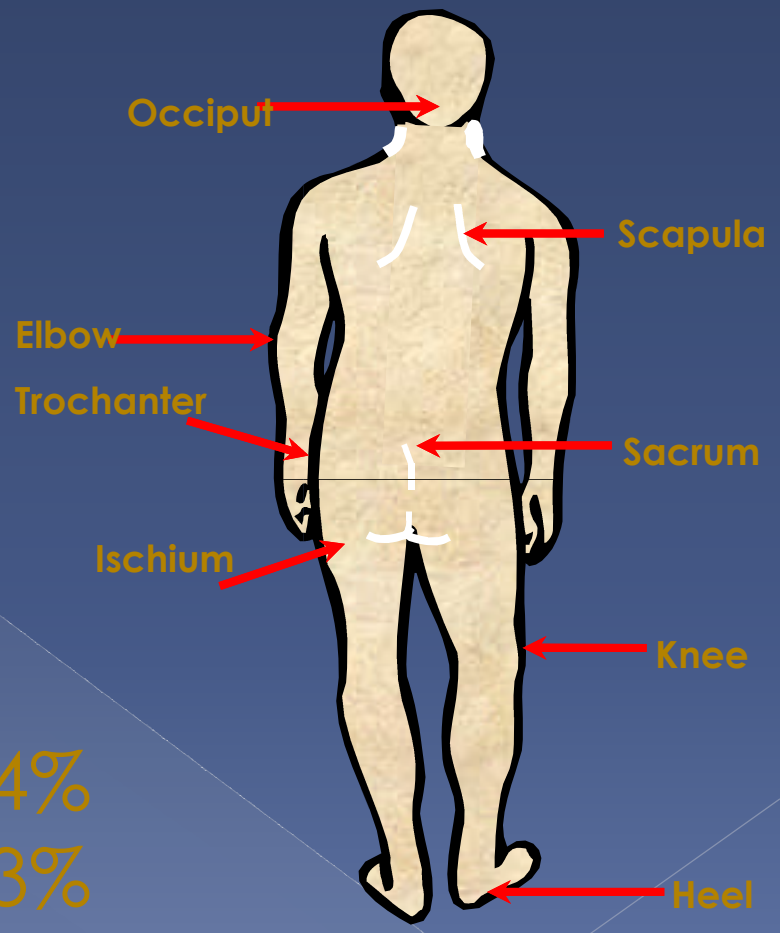
OR

- Low pressures over extended periods of time when tissue tolerance is diminished.

- As little as 2-6 hours!

Anatomic Locations of Pressure Ulcers

1. **Sacrum** **36.9%**
2. **Heel** **30.3%**
3. Ischium (sit bone) 8.0%
4. Elbow 6.9%
6. Trochanter (hip bone) 5.1%
7. Knee 3.0%
8. Scapula (shoulder blade) 2.4%
9. Occiput (back of head) 1.3%

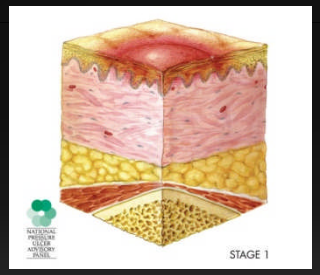


Amlung SR, Miller WL, Bosley LM, Adv Skin Wound Care. 2001 Nov/Dec;14(6):297-301.

NPUAP Pressure Ulcer Stages

The staging system is a classification tool to document the extent of tissue damage due to pressure. How deep did the tissue loss extend to? It is not to be used to describe any other type of tissue damage or ulceration.

I



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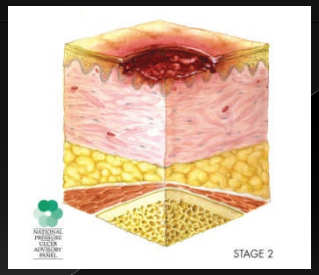

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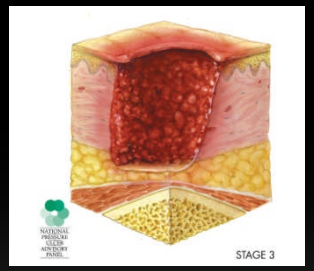

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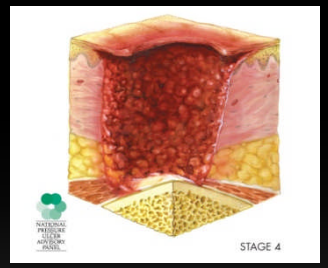
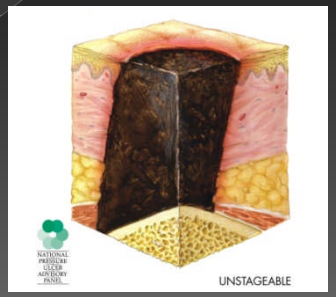
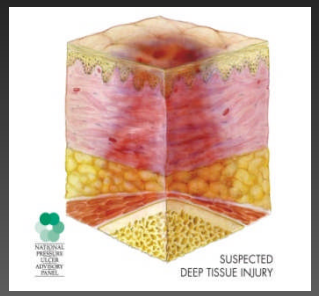


Unstagable





SDTI
suspected deep tissue injury

Suspected Deep Tissue Injury:

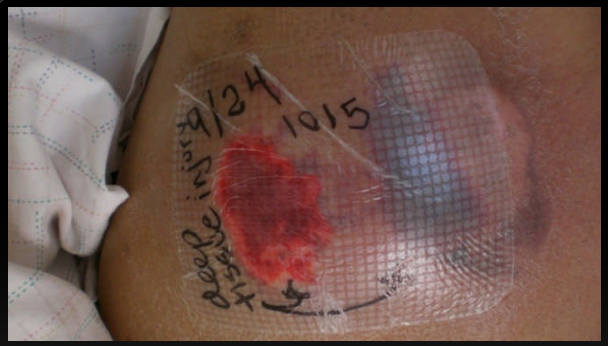
Purple or maroon localized area of discolored intact skin or **blood-filled blister** due to damage of underlying soft tissue from pressure and/or shear.

The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

Suspected Deep Tissue Injury

Evolution may include a **thin blister over a dark wound bed**.

The wound may further evolve and become covered by thin eschar. **Evolution may be rapid** exposing additional layers of tissue even with optimal treatment.



Suspected Deep Tissue Injury

Stage I

Intact skin with **non-blanchable redness** of a localized area usually over a bony prominence.

Darkly pigmented skin may not have visible blanching;
its color may differ from the surrounding area.

Stage II

Partial thickness loss of dermis presenting as a shallow open ulcer with a **red pink wound bed**, without slough.

May also present as an intact or open/ruptured serum-filled blister.

Stage III

Full thickness tissue loss. **Subcutaneous fat** may be visible but bone, tendon or muscle are not exposed.

Slough may be present but does not obscure the depth of tissue loss.

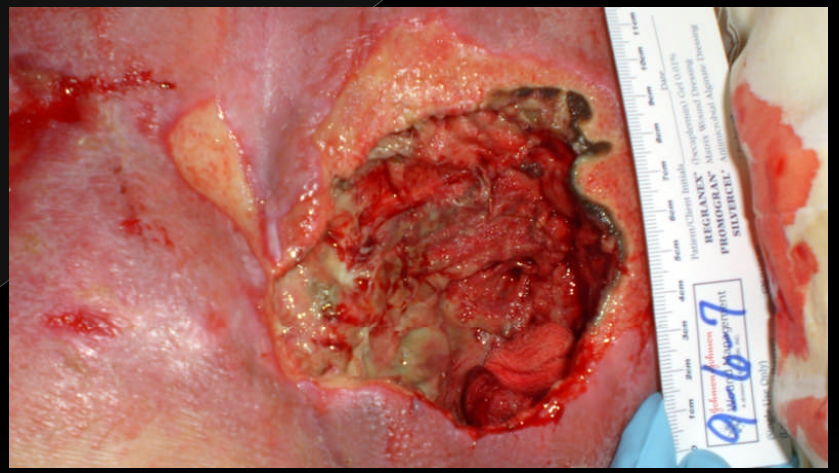
May include undermining and tunneling.

Stage IV

Full thickness tissue loss with exposed **bone, tendon or muscle**.

Slough or eschar may be present on some parts of the wound bed.

Often include undermining and tunneling.

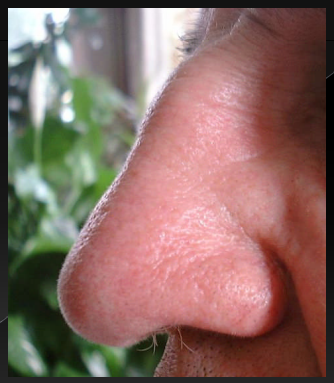


Unstagable

Presence of necrotic tissue prevents us from being able to assign a stage.

Other considerations in staging

The depth of a Stage III & IV pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have (adipose) subcutaneous tissue and Stage III & IV ulcers can be shallow.



Etiology: Pressure vs ?

Etiology: Pressure vs ?

VA Skin Bundle

V

- Veteran's Skin Bundle

A

- Assess Skin and Risk Status[1,2,3,4]
  - Risk Assessment on Admission (Braden, SCI, Surgery, medical device)
  - Inspect skin during care activities (e.g. turning, bathing)

S

- Select Surfaces and Devices to Redistribute/Relieve Pressure[1,2,3]

K

- Keep Turning and Repositioning[1,2,3]

I

- Incontinence Management[1,2,3]

N

- Nutrition and Hydration Assessment and Intervention[1,2,3,4]

Slide developed by Suzy Scott-Williams, RN, MS, CWOC

Assessing **Risk** for PU:

- The Braden Scale score is the total of the subcategory scores.
  - **Sensory Perception**
  - **Moisture**
  - **Activity**
  - **Mobility**
  - **Nutrition**
  - **Friction and Shear**

- Lower score→ higher risk. Score 18 or less = at risk for PU development

BRADEN SCALE–For Predicting Pressure Sore Risk

SEVERE RISK: Total Score ≤ 9 **HIGH RISK:** Total score 10 - 12
MODERATE RISK: Total score 13 - 14 **MILD RISK:** Total score 15 - 18

DATE OF ASSESS ➡

RISK FACTOR	SCORE/DESCRIPTION				1	2	3	4
SENSORY PERCEPTION Ability to respond meaningfully to pressure-related discomfort	1. 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.	2. 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 in ½ of body.	3. SLIGHTLY LIMITED–Responds to verbal commands, but cannot always communicate discomfort or need to be turned, OR Has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities	4. NO IMPAIRMENT–Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.				
MOISTURE Degree to which skin is exposed to moisture	1. CONSTANTLY MOIST–Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned	2. OFTEN MOIST–Skin is often but not always moist. Linen must be changed at least once a shift.	3. OCCASIONALLY MOIST–Skin is occasionally moist, requiring an extra linen change approximately once a day.	4. RARELY MOIST–Skin is usually dry; linen only requires changing at routine intervals.				
ACTIVITY Degree of physical activity	1. BEDFAST–Confined to bed.	2. CHAIRFAST–Ability to walk severely limited or nonexistent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	3. WALKS OCCASIONALLY–Walks occasionally during day but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	4. WALKS FREQUENTLY–Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.				
MOBILITY Ability to change and control body position	1. COMPLETELY IMMOBILE–Does not make even slight changes in body or extremity position without assistance.	2. VERY LIMITED–Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	3. SLIGHTLY LIMITED–Makes frequent though slight changes in body or extremity position independently	4. NO LIMITATIONS–Makes major and frequent changes in position without assistance.				
NUTRITION Usual food intake pattern * NPO: Nothing by mouth. † IV: Intravenously. ‡ TPN: Total parenteral nutrition.	1. 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* and/or maintained on clear liquids or IV† for more than 5 days.	2. PROBABLY INADEQUATE–Rarely eats a complete meal and generally eats only about ½ of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement, OR Receives less than optimum amount of liquid diet or tube feeding.	3. 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† regimen, which probably meets most of nutritional needs.	4. 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.				
FRICTION AND SHEAR	1. 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.	2. 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.	3. 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.					
TOTAL SCORE	Total score of 12 or less represents HIGH RISK							

ASSESS.	DATE	EVALUATOR SIGNATURE/TITLE	ASSESS.	DATE	EVALUATOR SIGNATURE/TITLE
1	/ /		3	/ /	
2	/ /		4	/ /	

NAME–Last | First | Middle | Attending Physician | Record No. | Room/Bed

Source: Barbara Braden and Nancy Bergstrom
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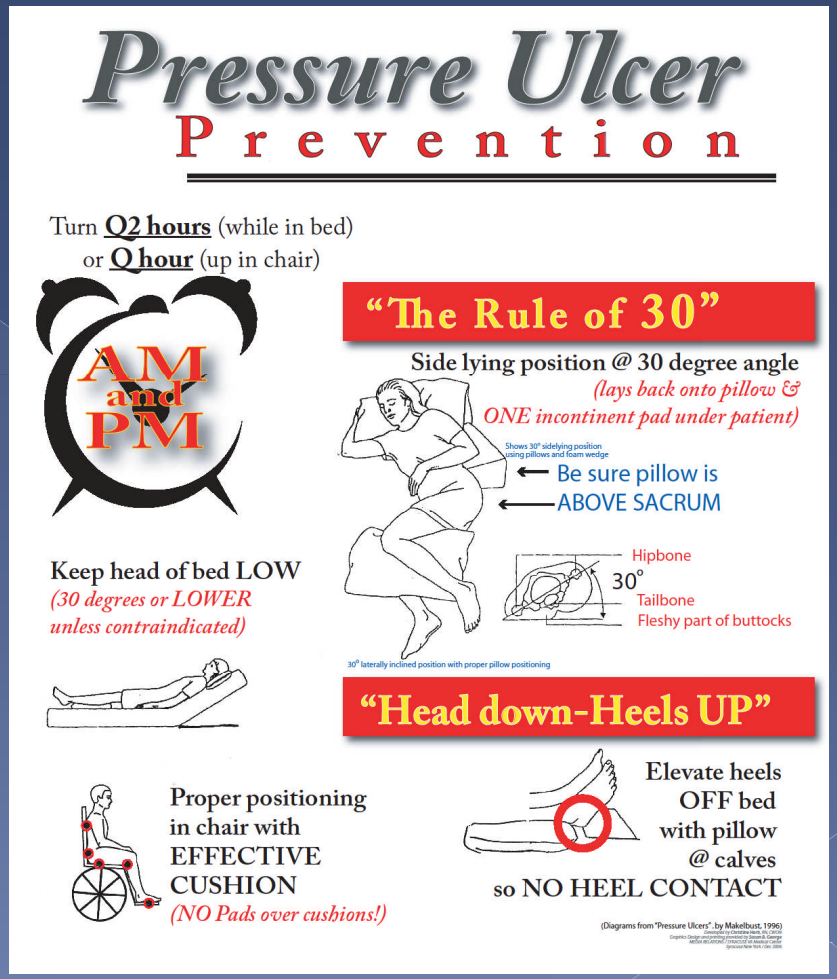
BRADEN SCALE

Slide adapted from Natalie Tukpah, RN, BSN, MBA, CWON / Braden Scale developed by Barbara Braden & Nancy Bergstrom c 1988

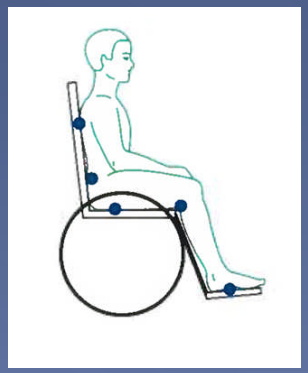
Prevention correlated w/ low scoring Risk factors:

- Skin Care
- **Pressure Redistribution**
- Nutritional Interventions
- Incontinence Care



Position – Position - Position!
IS the  to prevention.

- ✓ Upright seating w/ effective seat cushion

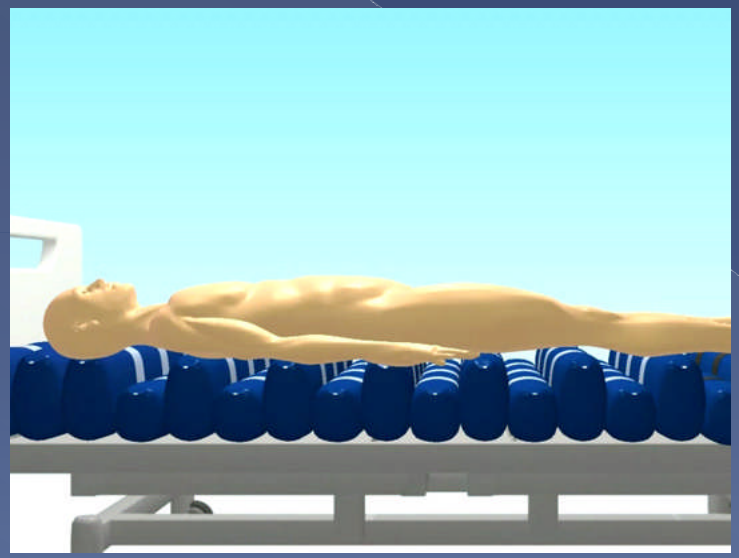


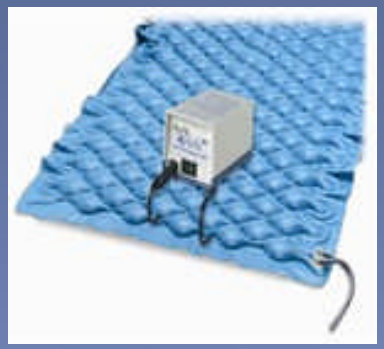
Reposition **every 1 hr**

✓ Positioning w/ pillows, foam wedges

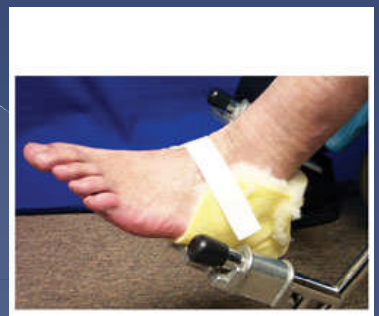
Reposition **every 2 hrs**

Therapeutic dynamic **off-loading** bed & seat surfaces are essential





Ineffective pressure relief devices



Potentially effective or harmful

Every device applied to the body has the potential of causing skin damage

Sometimes simple solutions are best.

Float heels!

Injection Site Reactions

Disease modulating Treatment

- Localized erythema and/or hives
- Lipoatrophy
- Necrosis

Slide developed by Mary Fitzpatrick, BSN, MPH, ANP, MSCN

Injection Site Reactions
Beta Interferon

Slide developed by Mary Fitzpatrick, BSN, MPH, ANP, MSCN

Glatiramer Injection Site Reactions

Slide developed by Mary Fitzpatrick, BSN, MPH, ANP, MSCN

Prevent or minimize site reactions

- ✓Monitoring sites & catch problems early
- ✓Proper skin cleansing & skin warming
- ✓Site rotation (use map or log book)
- ✓Proper needle length for sc vs IM & body type
- ✓Dry needle tip
- ✓Consider auto injectors
- ✓Follow proper injection procedure (not too much force)
- ✓Avoid sun exposure

- ❖ Seek wound specialist for severe reactions involving necrosis

Thank you!

Questions?

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Upcoming Calls & Satellite Event:

- May 14 – Optic Neuritis: A Comparison in MS and NMO
  - Jane Chan, MD, neuro-ophthalmologist, Reno VA
- June 12 – Bladder & Bowel satellite broadcast
  - Drs. Peter Gorman, Nina Davis and Heidi Maloni
- June 11 – Updates on Oral DMTs (admin call)
  - Chris Bever, MD – MSCoE Director-East
- July 9 – Rural Health: Delivering Comprehensive MS Care
  - Paul Hoffman, MD, neurologist, Gainesville VA