PREDICTION & PREVENTION OF SKIN BREAKDOWN

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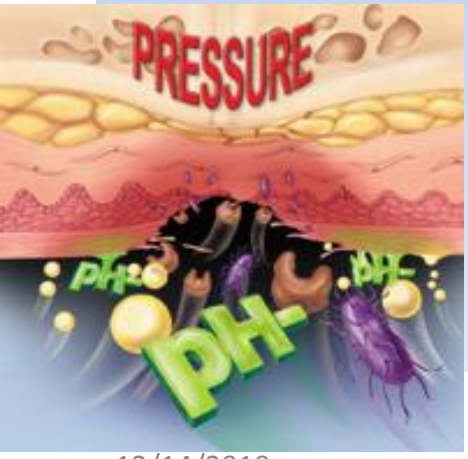
PRESSURE ULCER DEFINITION

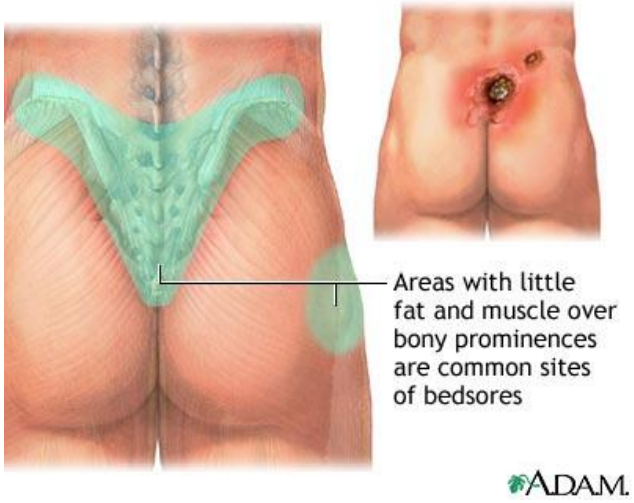
NPUAP (National Pressure Ulcer Advisory Panel) defines pressure ulcer as:

"a localized injury to the skin and/or underlying tissue usually over a bony prominence, as the result of pressure, or pressure in combination with shear and/or friction; a number of contributing or confounding factors" may also be associated



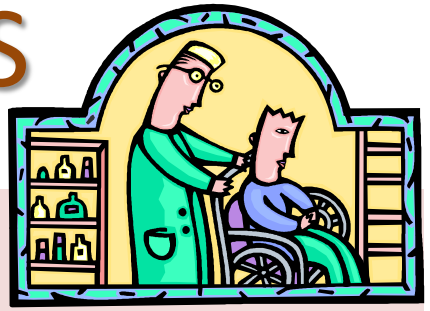
OTHER NAMES FOR PRESSURE ULCERS

- "Bedsore" or "bed sore"
- "decubitus"/"decubiti" (outdated medical term, but still frequently used)
- "skin breakdown"
- "ulcer"
- "pressure sores"



These are all the same thing, but the current preferred term is "**pressure ulcer**"

SKIN RISK FACTORS



CURRENT PRESSURE ULCER

QUADRIPLEGIA (paralysis of all 4 extremities)

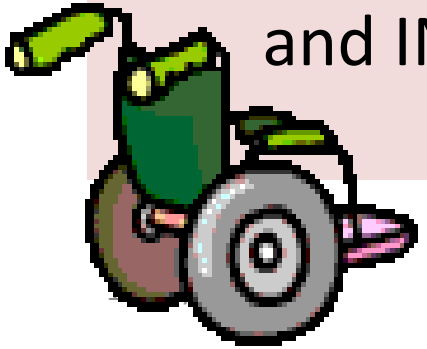
PARAPLEGIA (paralysis of lower body)

TOTAL DEPENDENCE in BED MOBILITY

COMATOSE or PERSISTENT VEGETATIVE STATE

BEDFAST and/or CHAIRFAST*, and INCONTINENT OF BLADDER or BOWEL

HEMIPLEGIA (paralysis on one side of the body), and INCONTINENT OF BLADDER or BOWEL



SKIN RISK FACTORS, continued

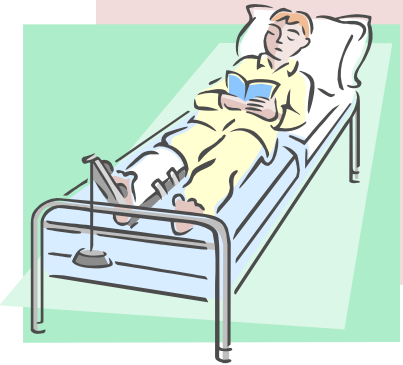
BEDFAST and/or CHAIRFAST, and DIABETES

ALTERED NUTRITION (decreased intake, low protein, inadequate fluids)

SPASTICITY and/or INVOLUNTARY MOVEMENTS

INDEPENDENT MOVEMENT ALTERED (due to physical or cognitive deficits)

DECREASED SENSATION (not only from paralysis as outlined above)



*"Bedfast and/or chairfast" indicates the individual is in bed, wheelchair or recliner most of the day and night.

CAUSES OF PRESSURE ULCERS

- **PRESSURE**

  Especially over bony prominences, where bones are near skin surface and have little protective padding

- **FRICTION**

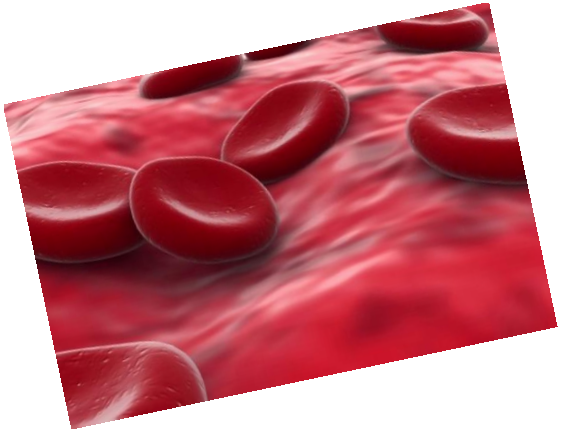
  Spasticity, movements, etc.; pulling or dragging sheets can cause friction issues

- **SHEAR**

  Skin surface goes one direction while underlying tissues go different direction, causing shearing or tearing injury; occurs frequently when person is pulled up in bed or chair, or when they slide down in bed (when head elevated too high) or in wheelchair

HOW PRESSURE ULCERS ACTUALLY FORM

Pressure ulcers occur when pressure (generally) cuts off circulation in small blood vessels in the skin…



Cutting off oxygen and nutrients are carried in blood…

When skin lacks oxygen and nutrients for too long, tissue dies and pressure ulcers can develop

OBJECTIVE IS TO **PREVENT**…

…which is **much easier than to cure**!

- We have the responsibility to KNOW the status of our clients' skin condition

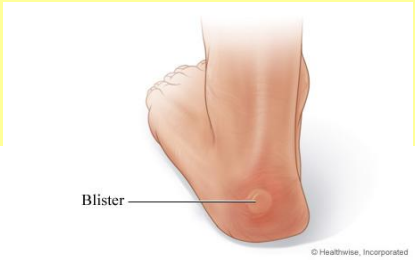
- Healed pressure ulcer skin only regains up to 80% of its prior healthy strength, and that takes at least 1 year in a healthy young adult

HOW DO YOU KNOW WHEN THEY FIRST START?

WATCH FOR and report to nursing/medical:

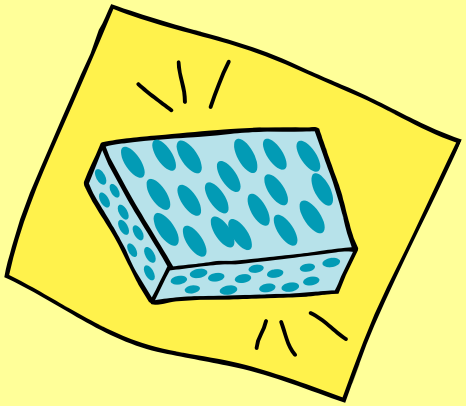
- Discoloration: may be pink, red, brown, blackish, grayish, purple, whitish

- May appear to be: "blister", "pimple" or "bruise"
- Breaks in skin: "tear", "scrape", "scratch"

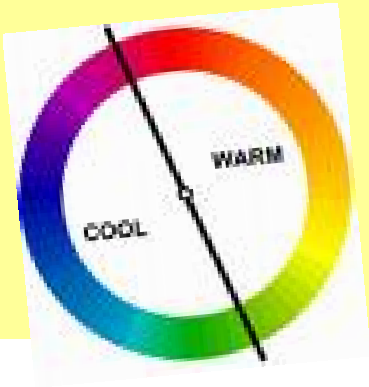


HOW DO YOU KNOW WHEN THEY FIRST START? continued

FEEL FOR and report to nursing/medical:



- harder/softer/ “spongy”
- warmer/cooler
- raised/sunken
- different from surrounding tissue or similar tissue on opposite side of body



PREVENTING PROBLEMS WITH SKIN

DO:

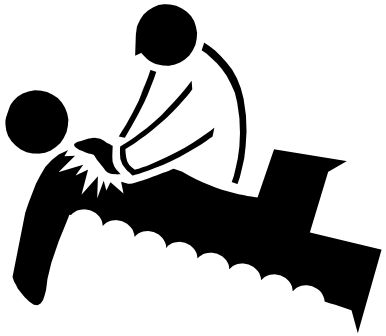
- ❑ Look at skin at least once a day for changes in color or temperature (warmth or coolness), rashes, sores, breaks, odor or pain

- ❑ Use mild soap, avoiding those with "antimicrobial" or "antibacterial" properties; use warm (not hot) water; thoroughly and pat dry well (don't rub)

- ❑ Lubricate dry skin with moisturizing creams or ointments (such as Eucerin, Cetaphil, Aquaphor), avoiding scented substances
- ❑ Use cushion or towel on shower chair to prevent bare skin from pulling or tearing or shearing

- ❑ Protect bare skin during all transfers and position changes

PREVENTING PROBLEMS WITH SKIN continued

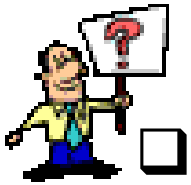


DO NOT:

Don't rub skin over bony pressure areas

REPORT THESE CHANGES TO APPROPRIATE PERSON/S:

- ❑ The person gets worse in his/her ability to shift weight, turn, reposition, etc.
- ❑ You feel using special equipment might help to transfer more safely and easily
- ❑ There are new or worsening changes in skin such as discoloration, swelling, a break in the skin, heat or pain over a pressure point
- ❑ You are unaware how to provide care, or if equipment might be beneficial



MANAGEMENT OF BOWEL AND BLADDER SUPPLIES

DO:

- ❑ Establish and follow <u>toileting schedule</u>
- ❑ If person is unable to control his/her urine or stool, use <u>incontinence products of choice</u> and assist with <u>changing as soon as soiled or moist</u>

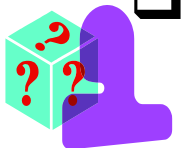
- ❑ Gently <u>cleanse or bathe</u> the person after soiling from urine or stool
- ❑ Apply thin layer of <u>barrier cream</u> such as zinc oxide based products (store brands often contain higher percentages of that active ingredient)

BOWEL AND BLADDER continued

DO NOT:

- ❑ If at all possible do not use "chux" or "blue pads" (disposable waterproof underpads), as they hold moisture on skin and can bunch up causing areas of pressure; preferred and more skin friendly alternatives are waterproof cloth pads that can be laundered and reused
- ❑ Don't use scented commercial wipes when skin irritation is present

REPORT THESE CHANGES TO APPROPRIATE PERSON/S:



- ❑ You are not sure when to use incontinent products or barrier creams; the case manager may make referral to have a nurse speak with the client and/or caregiver
- ❑ You are unsure how to provide care, or if special equipment might be needed

"STANDARD PRECAUTIONS"

Previously known as "Universal Precautions", with additions

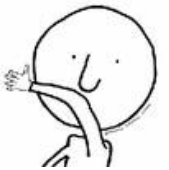
"Assume that every person is potentially infected or colonized with an organism that could be transmitted… and apply… infection control practices during the delivery of… care"

(CDC, 10/12/07)

STANDARD PRECAUTIONS, continued

❑ Hand hygiene

- ❑ Do not wear artificial fingernails or extenders if duties include direct contact with people at high risk for infection and associated adverse outcomes



- ❑ Personal Protective Equipment (PPE) which includes latex gloves, eye protection, masks. gowns

- ❑ Respiratory hygiene/cough etiquette
- ❑ Patient placement, equipment and environmental care, textiles/laundry

DRY SKIN ISSUES/DANGERS

- Skin is Mother Nature's protection for the inside of the body
- Bacteria are always present on the skin surface and if skin is not intact, bacteria can get inside where they don't belong, and cause infections

- Dry skin cracks, chaps, splits, itches and may not remain intact, letting bacteria in
- Hot weather/air conditioning as well as cold weather/heating dry out skin, increase dryness and the risk of breaks in skin integrity

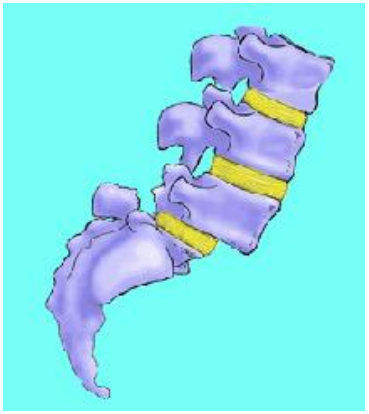
DRY SKIN ISSUES/DANGERS, continued

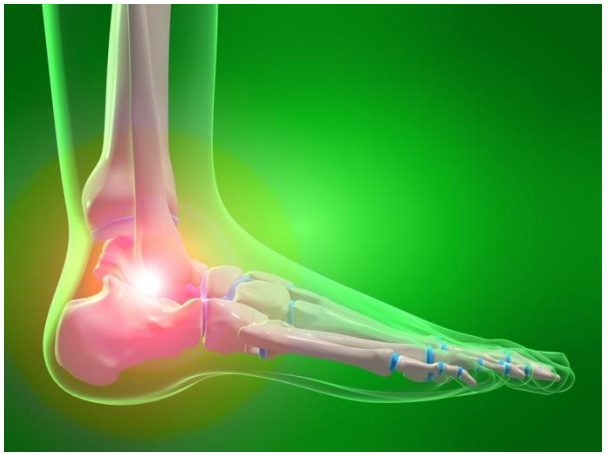
- Excessive bathing, swimming, soaps, detergents, perfumes, “antibacterial”/“antimicrobial”, are among many other things which can dry out skin
- Inherited and metabolic factors may also influence skin dryness

TREATMENT: Careful use of soaps/detergents, thorough rinsing, pat (don’t rub) skin dry, decrease bathing, liberal and frequent application of lubricating creams

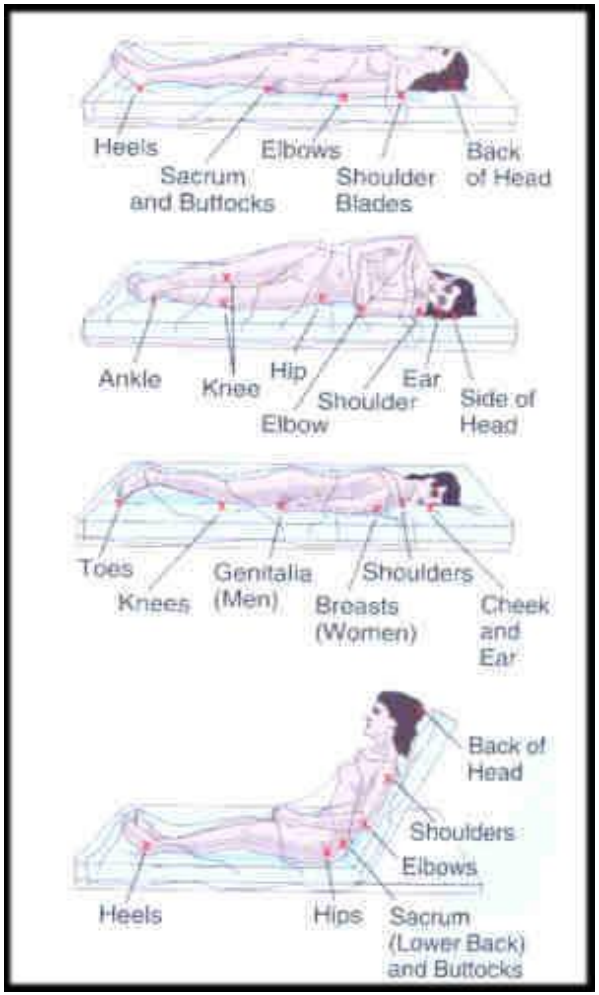
BONY PROMINENCES

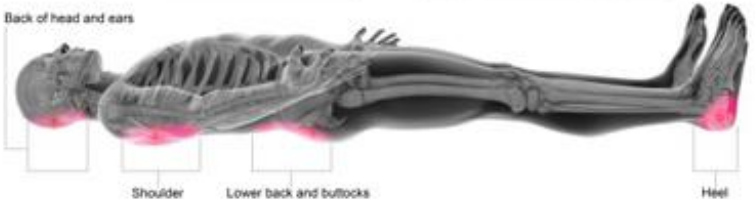
- Areas over bony prominences are particularly vulnerable: hips, coccyx/"tailbone", spine, shoulders, elbows, heels, feet, knees, ankles, ears, head, etc.

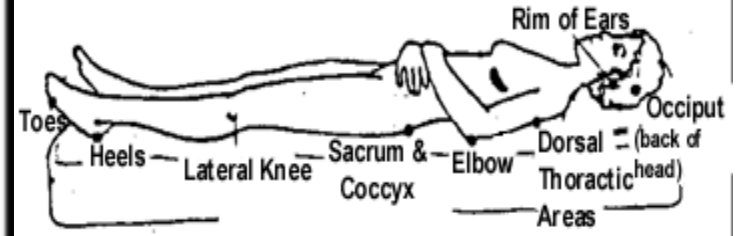


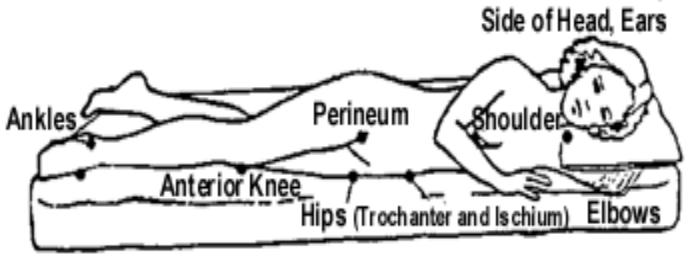


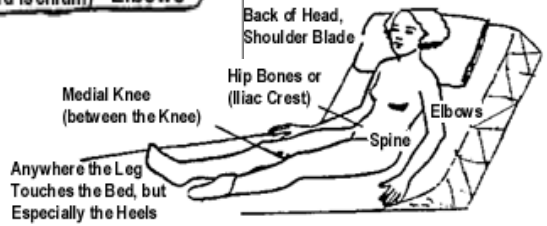
BONY PROMINENCES/ PRESSURE POINTS





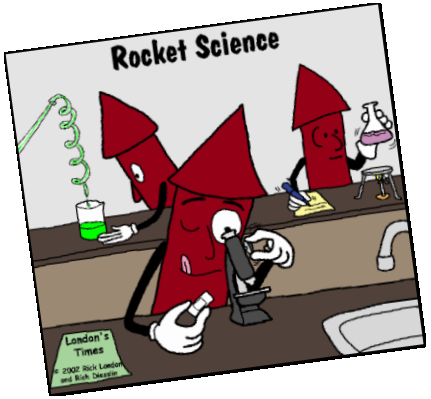






BE A GOOD DETECTIVE!

- We frequently have to play "detective" to determine the cause of skin problems
- Pay special attention to any area where there may be: pressure, friction and/or shear
- It's not rocket science, it's a matter of observing and asking the right questions



WE CAN'T CURE THE PROBLEM IF WE DON'T KNOW THE CAUSE!

SOME RED FLAGS!

Nutritional difficulties: limited preparation ability, frequent use of prepared foods, dental problems, limited funds, swallowing problems, decreased appetite, depression, inadequate nutritional knowledge

MORE RED FLAGS

- Resistance to visit health care professional or have skin checked; possible embarrassment

- Appears undernourished or "over nourished": weights can fluctuate and increase dramatically from diet high in prepared foods, junk food, fast food, etc., not providing adequate nutrition or protein content and can be very high in sodium, salt and/or sugar

- Body odor, unclean clothing, poor hygiene

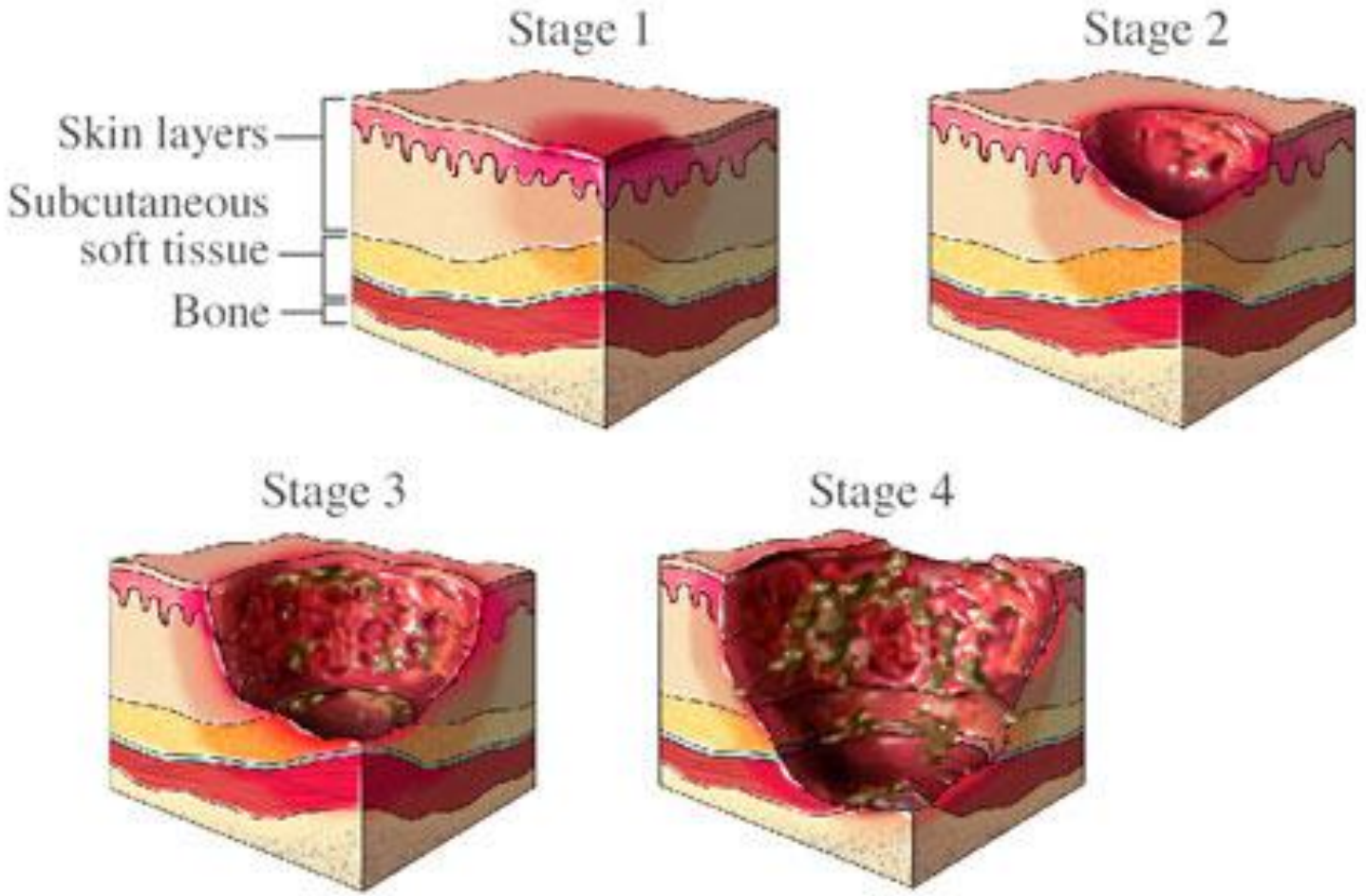
STAGING PRESSURE ULCERS

- Pressure ulcers are "staged" I, II, III, or IV, based on their severity and amount of tissue damage

- "Unstageable": full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed

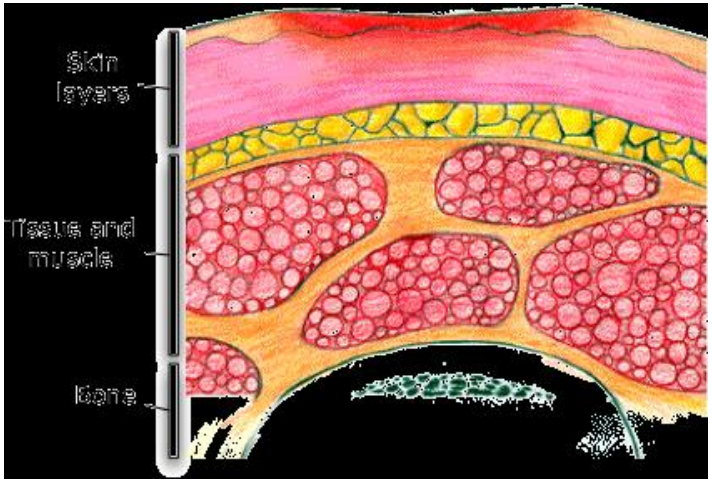
- "Suspected Deep Tissue Injury": Purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear; area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue

STAGES I, II, III, & IV



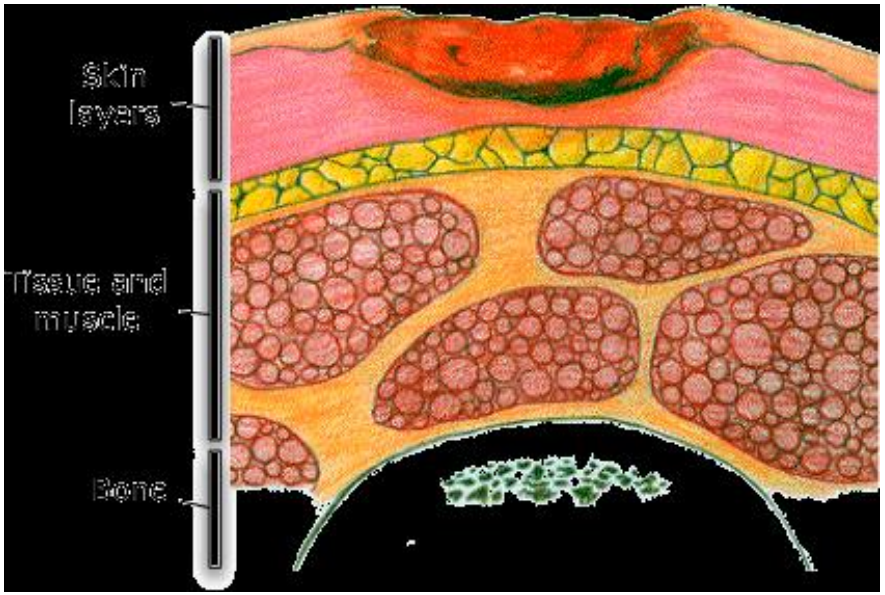
STAGE I

- 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



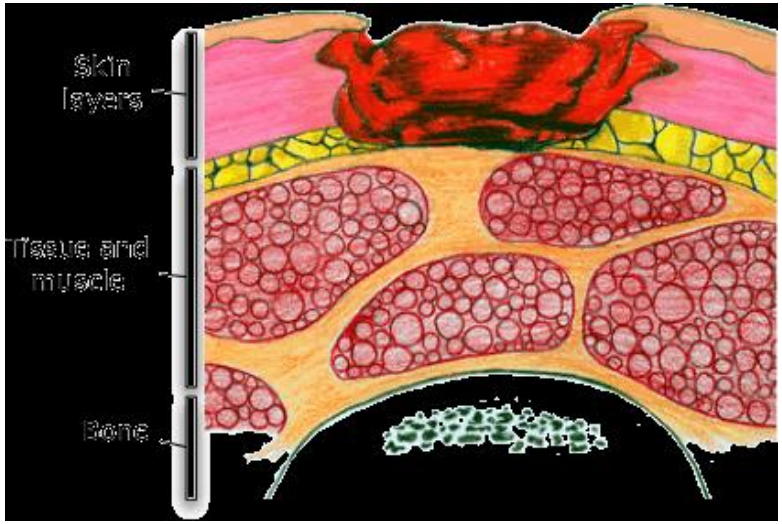
STAGE II

- **II-** Partial thickness loss of dermis (skin) 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



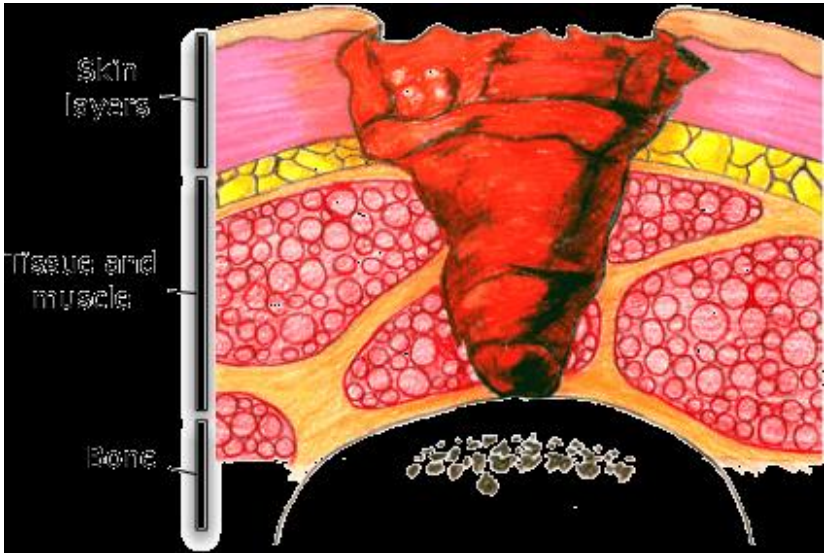
STAGE III

- **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

- **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



REPOSITIONING

- **When in bed** repositioning needs to be done

  AT LEAST EVERY 2 hours

- **When in chair** repositioning needs to be done

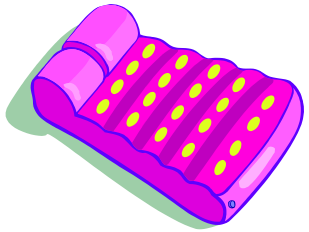
  AT LEAST EVERY 1 hour

  PLUS, weight shifts for 15 seconds every 15 minutes should also be done

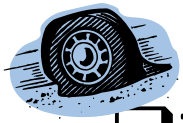
If PINKENED/REDDENED/DISCOLORED areas remain on skin longer than 30 minutes after position change repositioning needs to be done more

ALTERNATING PRESSURE AIR MATTRESSES & OVERLAYS

- They are helpful in **redistributing weight** (they do NOT eliminate pressure)



- They do not eliminate need to reposition
- They do not eliminate risk of or cure breakdown
- They can go "flat" like a car tire and must be checked regularly



- They should be set on "dynamic" setting rather than "static" setting if those options are available
- And they must be turned "**ON**" and in adequate working order to do their job

PREVENTION PLAN FOR THOSE WHO ARE PRIMARILY BEDFAST

DO:

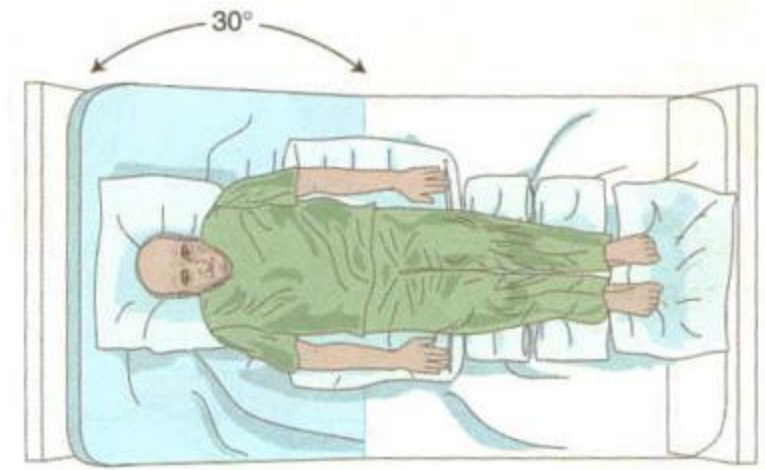
- ❑ Look at skin at least daily for changes in color or temperature, rashes, sores, odor or pain, paying special attention to pressure points
- ❑ Assist with repositioning at least every 2 hours
- ❑ Use pillows or other cushioning to:

a. Keep bone pressure points from direct contact with bed

b. Raise the heels off bed

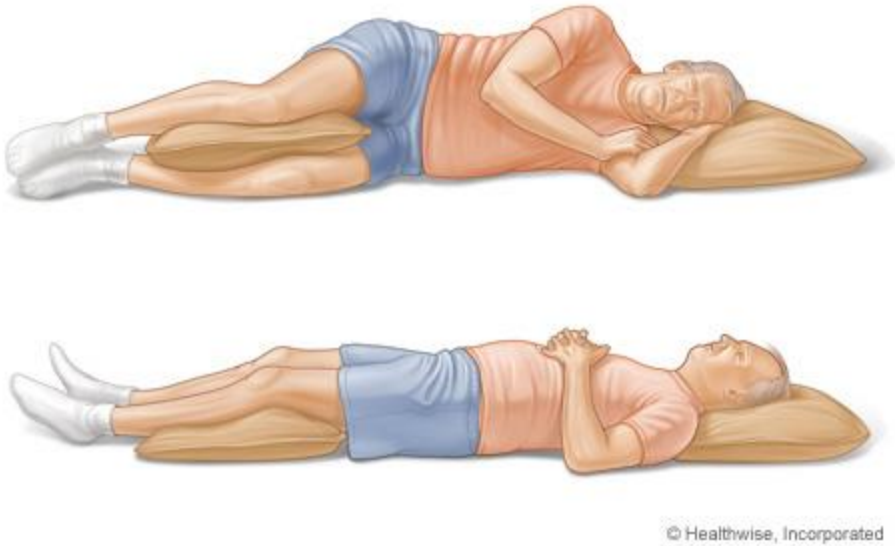
c. Keep knees and ankles from directly touching one another

EXAMPLES OF PROPER POSITIONING



Fowler's Position

Right lateral position.



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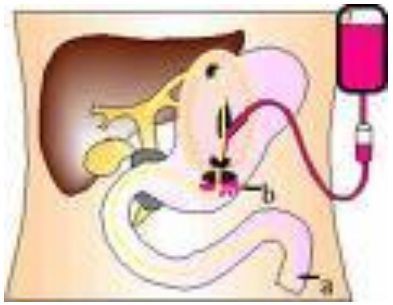
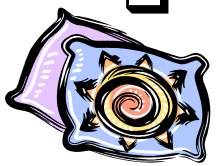
BEDFAST continued



- When person is lying on side, avoid placing directly on hip bone
- Raise head of bed:
  - Only as much as necessary for comfort, feeding, etc.
  - Consistent with other medical conditions and restrictions
  - Only as long as necessary for eating, grooming, toileting, etc.
  - Raising the foot of the bed at the same time helps keep the person from sliding down to the bottom of the bed

- Lift, do not drag, pull or push person who is unable to assist during transfers or positioning; small amounts of cornstarch on sheets may be helpful

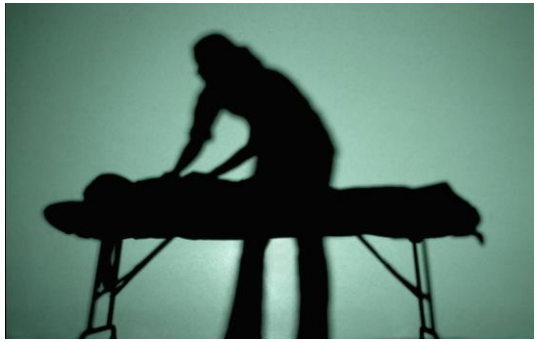


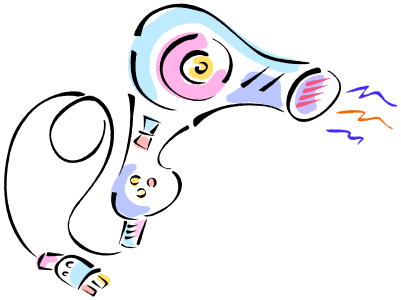
- Use special pressure reducing equipment for bed as available

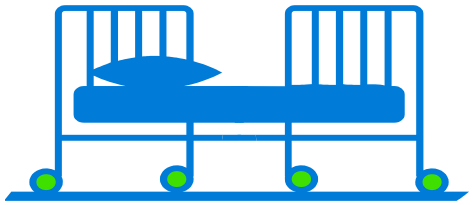
BEDFAST continued

DO NOT:

- Don't use donut type devices, as they cause more pressure to surrounding tissue
- Don't use heat lamps, hair dryers or "potions" that could dry out skin
- Don't massage pressure points or affected areas







BEDFAST continued

REPORT THESE CHANGES TO APPROPRIATE PERSON/S:

- The person you are caring for has skin changes such as discoloration, swelling, heat or pain, or break in skin, especially over pressure point
- You notice that heels turn hard/soft and the color changes
- You are unsure how to provide care, or if special equipment might be beneficial

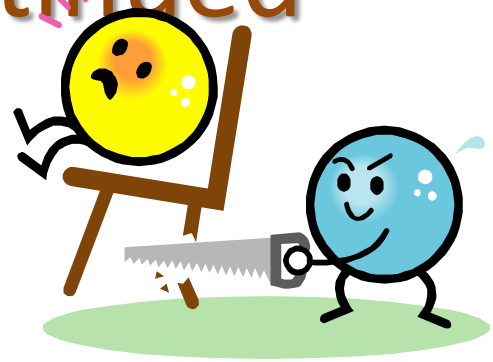
PREVENTION PLAN FOR THOSE WHO ARE PRIMARILY CHAIRFAST

DO:

- ❑ Look at skin at least daily for changes in color or temperature, rashes, sores, odor or pain, paying special attention to pressure points
- ❑ Assist with repositioning at least every 1 hour
- ❑ Ask or help person to shift weight in chair every 15 minutes for 15 seconds

- ❑ Use cushions, wedges, pillows or other pressure reducing devices to protect pressure points from "hard" surfaces
- ❑ Position person in chair with good posture and equal pressure over bony prominences

CHAIRFAST continued

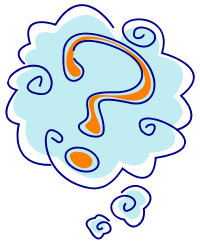


DO NOT:

- Don't use donut type devices, as they cause more pressure to surrounding tissue

- Don't massage pressure points or affected areas

CHAIRFAST continued

REPORT THESE CHANGES TO APPROPRIATE PERSON/S:

- The person you are caring for has skin changes such as discoloration, swelling, heat or pain, or break in skin, especially over pressure point
- You notice that heels turn hard/soft and color changes
- You are unsure how to provide care, or if special equipment might be beneficial