

# The Good, the Bad and the Ugly...

## Strategies for the Prevention and Management of Pressure Ulcers

Presented by:

-Bev Davis, RN, BN, CACE - Nurse Clinician

- S.C.I. Outpatient Clinic

-Angie Maidment, OTM - Occupational Therapist

- S.C.I. Rehab Program

# Goals of this presentation

- To review the anatomy and function of skin
- To recognize the signs and symptoms of pressure sores
- To be aware of current management strategies for assessing and treating existing pressure sores
- To be aware of strategies to help clients to prevent pressure sores

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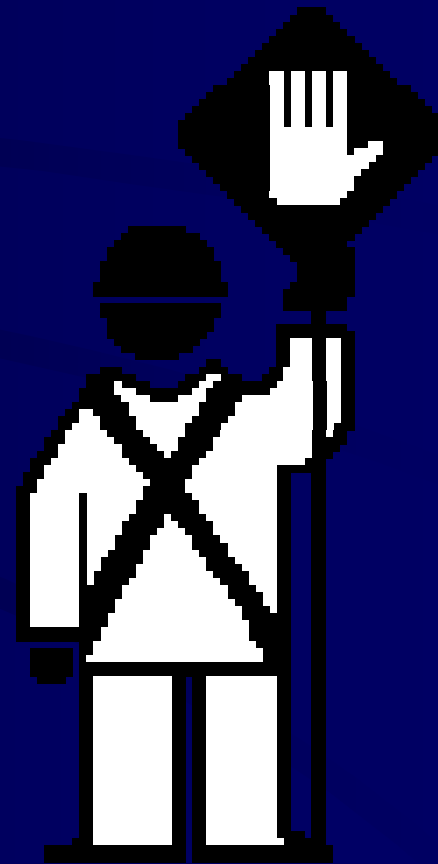
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# Prevention of Pressure Sores

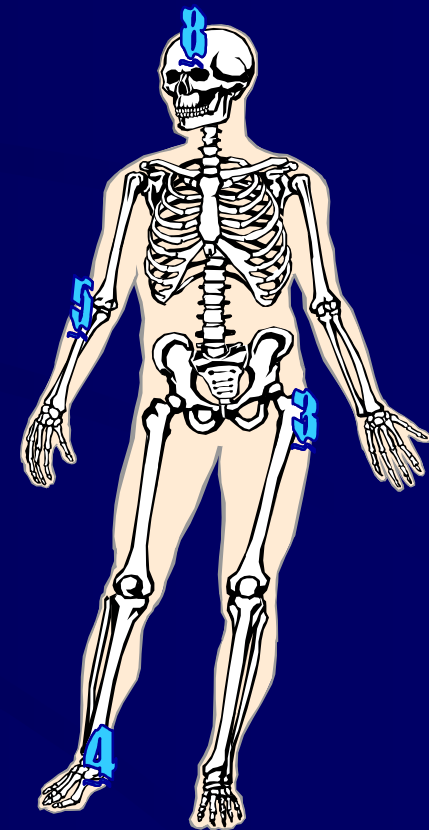
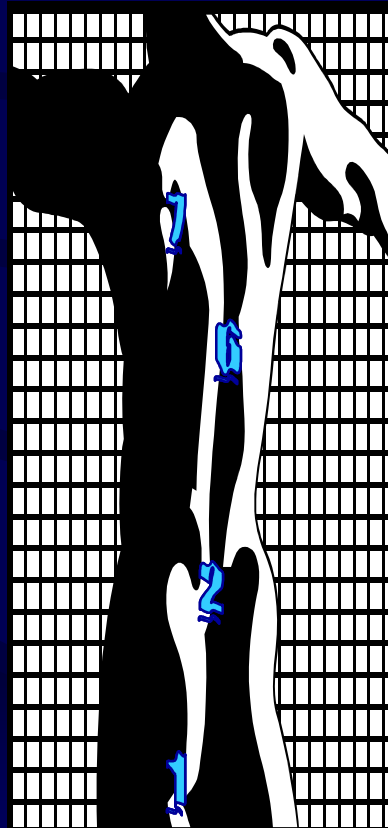
- Peak pressure areas
- Risk factors
- Causes of skin breakdown
- Goals for seating for clients with SCI
- Preventative measures



# Peak Pressure Areas of the Body

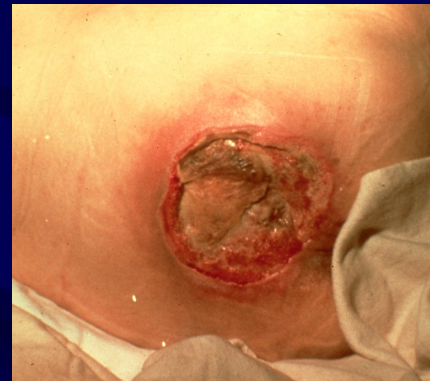
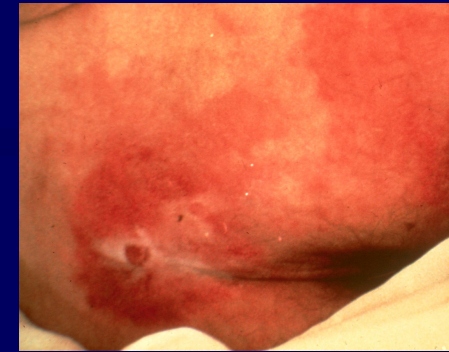
## Bony Prominences

1. Ischial Tuberosities
2. Sacrum/Coccyx
3. Trochanters
4. Heels/Malleoli
5. Elbows
6. Spinal Column
7. Scapulae
8. Head
9. Other...



# Pressure Sores and Grades

- Grade I
  - First 2 layers...
- Grade II
  - Skin...
- Grade III
  - Skin and ...
- Grade IV
  - Skin, ... and ...



Footnote #1 (See CAPM&R  
Pres'n)

# Risk Factors to skin related to SCI

- Loss of sensation
- Loss of muscle mass
  - lack of protection
- Loss of mobility/strength
  - inability to weight shift
  - asymmetrical posture
- Incontinence
- Poor hygiene
- Malnutrition/Dehydration
- Circulatory problems

# Direct Causes of Skin Breakdown

- Lying
- Sitting
- Standing
- Chemical Irritants
- Cuts/Abrasions
- Falls
- Burns
- Weather



# Direct Causes of Skin Breakdown

## 1. Lying

- unable to turn in bed

## 2. Sitting

- unable to shift weight
- poor posture
- poor cushion
- spasticity causes increased pressure in certain areas

## 3. Standing

- improperly fitting braces, shoes

## 4. Chemical Irritants

- incontinence – B+B
- soaps, creams, etc.
- perspiration
- drainage from wounds

# Direct Causes of Skin Breakdown

## 5. Cuts/Abrasions

- shearing of skin while transferring
- scraping ankles, feet, elbows and knees
- improper fit of wheelchair
- ridges or roughness on clothing
- open wounds

## 6. Falls due to:

- lack of strength
- lack of balance
- poor sensation
- spasticity
- improper transfer techniques

# Direct Causes of Skin Breakdown

## 7. Burns due to:

Loss of ability or less ability to sense temperature such as:

- hot water/hot pipes
- cigarette burns
- cooking
- hot water bottles/heating pads
- sunburn

## 8. Weather

- Hot...increases metabolism causing increased nutritional requirements and increased perspiration
- Cold...causes decreased circulation and nutrition to the skin which may tissue damage

# Goals of Seating for Clients with SCI

- Promote body symmetry and prevent deformity
- Prevention of pressure sores
- Promote function (provide support and control)
- Enhance respiratory function
- Promote comfort
- Promote sitting tolerance
- Control spasticity
- Decrease work of caregivers
- Enhance appearance

# Preventative Measures

- Cushions
- Wheelchairs
- Equipment
- Lifestyle

$$\text{Pressure} = \frac{\text{Total Force}}{\text{Area}}$$

# Preventative Measures

## *Cushions/Backrests*



Objectives	Solutions
<ul style="list-style-type: none"> <li>• <b>Relieve pressure</b></li> <li>• <b>Provide support</b></li> <li>• <b>Encourage body symmetry</b></li> <li>• <b>Enhance function</b></li> <li>• <b>Enhance comfort</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Cushions = Roho, Stimulite, Jay 2, Jay Xtreme, Ottobock Cloud</b></li> <li>• <b>Backs = Jay2, Jay2 tall, Personal back, Infinity, Ultimate Air, added lateral supports</b></li> </ul>



# Preventative Measures

## *Cushions/Backrests*



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# Preventative Measures

## *Wheelchair Styles*



Objectives	Solutions
<ul style="list-style-type: none"><li>• <b>Relieve pressure</b></li><li>• <b>Provide support</b></li><li>• <b>Encourage symmetrical body alignment</b></li><li>• <b>Allow comfort</b></li><li>• <b>Enhance function</b></li></ul>	<ul style="list-style-type: none"><li>• Tilt in space</li><li>• Manual ultra-lightweight</li><li>• Power wheelchairs</li><li>• Sports wheelchairs</li></ul>





# Preventative Measures

## *Home Equipment*

Objectives	Solutions
<ul style="list-style-type: none"><li>• <b>Enhance function!</b></li><li>• <b>Relieve pressure</b></li><li>• <b>Provide support</b></li><li>• <b>Encourage symmetrical body alignment</b></li></ul>	<ul style="list-style-type: none"><li>• Electric beds with rails</li><li>• Pressure reducing replacement mattresses</li><li>• Pressure reducing mattress overlays</li><li>• Padded bath seats</li><li>• Commode chairs with tilt, footrests and/or padded/gel seats</li><li>• Sliding boards</li></ul>

# Preventative Measures

## *Home Equipment*

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<ul style="list-style-type: none"><li>• <b>Enhance function!</b></li><li>• <b>Relieve pressure</b></li><li>• <b>Provide support</b></li><li>• <b>Encourage symmetrical body alignment</b></li></ul>	<ul style="list-style-type: none"><li>• Electric beds with rails</li><li>• Pressure reducing replacement mattresses</li><li>• Pressure reducing mattress overlays</li><li>• Padded bath seats</li><li>• Commode chairs with tilt, footrests and/or padded/gel seats</li><li>• Sliding boards</li></ul>

# Preventative Measures

## *Lifestyle Options*

Objectives	Lifestyle Issues	Solutions
<b>•Maintain health</b>	<ul style="list-style-type: none"><li>•Work</li><li>•Weight shifts</li><li>•Nutrition</li><li>•Hydration</li><li>•Recreation<ul style="list-style-type: none"><li>-sports</li><li>-outdoor activities</li><li>-sedentary activities</li></ul></li></ul>	<ul style="list-style-type: none"><li>•Approp. breaks and work heights</li><li>•Education and strengthening</li><li>•Education re: appropriate intake related to changes metabolism due to SCI</li><li>•Encourage good hygiene and hydration</li><li>•Keep warm/cool according to weather</li><li>•Remain active</li></ul>

# Preventative Measures

## *Lifestyle Options*

Objectives	Lifestyle Issues	Solutions
<ul style="list-style-type: none"><li>•Maintain health</li></ul>	<ul style="list-style-type: none"><li>•Transfer techniques</li><li>•Clothing choices</li><li>•Bowel and Bladder management</li><li>•Fall prevention</li><li>•ETOH/Drug use</li></ul>	<ul style="list-style-type: none"><li>•Prevent shearing/dragging</li><li>•Sit on smooth surfaces<ul style="list-style-type: none"><li>-eg. remove back pockets and buttons</li></ul></li><li>•Promote continence<ul style="list-style-type: none"><li>-have regular schedule</li></ul></li><li>•Maintain/Improve strength, decrease spasticity, improve tf techniques</li><li>•Education/Counselling</li></ul>

# Thankyou

