

# Wound Assessment Pocket Guide



2nd Edition September 2012

Pocket Guide created by:

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Available at: <http://cawc.net/index.php/resources/store/>

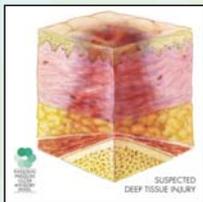
Canadian Association  
of Wound Care



Association canadienne  
du soin des plaies

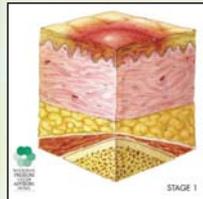
## NATIONAL PRESSURE ULCER ADVISORY PANEL (NPUAP) UPDATED STAGING SYSTEM FEBRUARY 2007

### SUSPECTED DEEP TISSUE INJURY



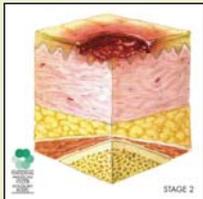
Purple or maroon localized area of discoloured intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

### STAGE I



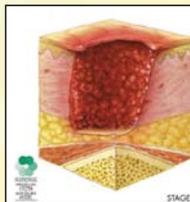
Intact skin with non-blanchable redness of a localized area.  
**Further description:** The area may be painful, firm, soft, warmer or cooler as compared to adjacent dark skin tones. May indicate "at risk" persons (a heralding sign of risk).

### STAGE II



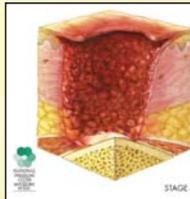
Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled blister.  
**Further description:** Presents as a shiny or dry shallow ulcer without slough or bruising.\* This stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation. \*Bruising indicates suspected deep tissue injury.

### STAGE III



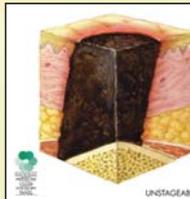
Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.  
**Further description:** The depth of a stage III pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and stage III ulcers can be shallow. In contrast, areas of significant adiposity can develop extremely deep stage III pressure ulcers. Bone/tendon is not visible or directly palpable.

### 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.  
**Further description:** The depth of a stage IV pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and these ulcers can be shallow. Stage IV ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon or joint osteomyelitis possible). Exposed bone/tendon is visible or directly palpable.

### 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.  
**Further description:** Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore stage, cannot be determined. Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as "the body's natural (biological) cover" and should not be removed.

## INTRODUCTION TO THE WOUND ASSESSMENT POCKET GUIDE

This guide contains five tools that will assist health care professionals in performing assessment of: wound status (Bates-Jensen Wound Assessment Tool- BWAT<sup>®</sup> Pictorial Guide<sup>®</sup>), percentage of wound healing (calculation), wound-related pain (Wong-Baker Faces Pain Scale), stages of pressure ulcer injury (NPUAP Staging) and pressure sore risk (Braden Scale). Together, these form a foundational tool-kit to guide initial and subsequent assessments that provide meaningful outcomes measurements of wound prevention and care interventions.

### % REDUCTION IN SURFACE AREA OVER TIME\*

$$\frac{\text{SA (Initial)} - \text{SA (Current)}}{\text{SA (Initial)}} \times 100$$

= % reduction in surface area

(SA = surface area calculated as Longest Length X Perpendicular Widest Width)

\*Sussman and Bates-Jensen 2007

### % REDUCTION IN VOLUME OVER TIME

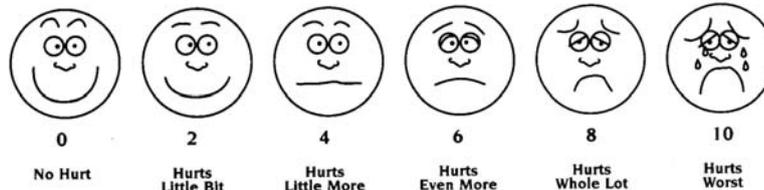
$$\frac{\text{V (Initial)} - \text{V (Current)}}{\text{V (Initial)}} \times 100$$

= % reduction in volume

(V = volume of wound calculated as Longest Length x Perpendicular Widest Width x Depth straight in)

## WONG-BAKER FACES PAIN RATING SCALE<sup>®</sup>

**Instructions:** Explain to the person that each face is for a person who feels happy because he has no pain (hurt) or sad because he has some or a lot of pain. Face 0 is very happy because he doesn't hurt at all. Face 2 just a little bit. Face 4 hurts a little bit more. Face 6 hurts even more. Face 8 hurts a whole lot. Face 10 hurts as much as you can imagine, although you don't have to be crying to feel this bad. Ask the person to choose the face that best describes how he is feeling. The rating scale is recommended for persons age 3 years and older.



From Wong D.L., Hockenberry-Eaton M., Wilson D., Winkelstein M.L., Schwartz P.: Wong's Essentials of Pediatric Nursing, ed. 6, St. Louis, 2001, p. 1301. Copyrighted by Mosby, Inc. Reprinted by permission.

## BWAT<sup>®</sup> PICTORIAL GUIDE<sup>®</sup> INSTRUCTIONS

This photographic guide to the Bates-Jensen Wound Assessment Tool (BWAT<sup>®</sup>) is intended to be used with the paper tool available at:

[http://www.geronet.med.ucla.edu/centers/borun/modules/Pressure\\_ulcer\\_prevention/puBWAT.pdf](http://www.geronet.med.ucla.edu/centers/borun/modules/Pressure_ulcer_prevention/puBWAT.pdf)

Items that appear in (brackets) are found on pages 1 and 2 of the original BWAT "Instructions for use".

Items that appear in [brackets] were developed as part of the BWAT<sup>®</sup> Pictorial Guide<sup>®</sup> validation project (2008).

See <http://www.woundcarecanada.ca/category/publication-archive/> 2008. Volume 7. No 2 Pages 33-38.

<b>BWAT® ITEM</b>	<b>ASSESSMENT</b>
<p><b>1 &gt; SIZE</b> Use ruler to measure the longest and widest aspect of the wound surface in centimeters; multiply length x width.</p>	<p><b>1 &gt; SIZE</b> 1 = Length x width &lt; 4 sq cm 2 = Length x width 4 --&lt; 16 sq cm 3 = Length x width 16.1 --&lt; 36 sq cm 4 = Length x width 36.1 --&lt; 80 sq cm 5 = Length x width &gt; 80 sq cm</p>
<p><b>2 &gt; DEPTH</b> Measure deepest portion of the wound using a sterile cotton-tipped applicator or measurement device Measurement stops when applicator shaft emerges at skin level Estimate 0.1 cm for very shallow wounds</p>	<p><b>2 &gt; DEPTH</b> 1 = Non-blanchable erythema on intact skin (tissues damaged but no break in skin surface) 2 = Partial thickness skin loss involving epidermis &amp;/or dermis (superficial, abrasion, blister or shallow crater. Even with, &amp;/or elevated above skin surface (e.g., hyperplasia). 3 = Full thickness skin loss involving damage or necrosis of subcutaneous tissue; may extend down to but not through underlying fascia; &amp;/or mixed partial &amp; full thickness &amp;/or tissue layers obscured by granulation tissue (deep crater with or without undermining of adjacent tissue.) 4 = Obscured by necrosis (visualization of tissue layers not possible due to necrosis.) 5 = Full thickness skin loss with extensive destruction, tissue necrosis or damage to muscle, bone or supporting structures (supporting structures include tendon, joint capsule.)</p>
<p><b>3 &gt; EDGES - OBSERVE FOR</b> Callus Thickness Attachment to wound base</p>	<p><b>3 &gt; EDGES - OBSERVE FOR</b> 1 = Indistinct, diffuse, none clearly visible (unable to clearly distinguish wound outline). 2 = Distinct, outline clearly visible, attached, even with wound base (even or flush with wound base, <u>no</u> sides or walls present; flat).</p>

**SIZE ~ 1.1**  
Length x width < 4 sq cm

**SIZE ~ 1.2**  
Length x width 4 --< 16 sq cm

**SIZE ~ 1.3**  
Length x width 16.1 --< 36 sq cm

**SIZE ~ 1.4**  
Length x width 36.1 --< 80 sq cm

**SIZE ~ 1.5**  
Length x width > 80 sq cm

**DEPTH ~ 2.1**  
Non-blanchable erythema on intact skin (tissues damaged but no break in skin surface).

**DEPTH ~ 2.2**  
Partial thickness skin loss involving epidermis &/or dermis (superficial, abrasion, blister or shallow crater. Even with, &/or elevated above skin surface (e.g., hyperplasia).

**DEPTH ~ 2.3**  
Full thickness skin loss involving damage or necrosis of subcutaneous tissue; may extend down to but not through underlying fascia; &/or mixed partial & full thickness &/or tissue layers obscured by granulation tissue (deep crater with or without undermining of adjacent tissue).

**DEPTH ~ 2.4**  
Obscured by necrosis (visualization of tissue layers not possible due to necrosis).

**DEPTH ~ 2.5**  
Full thickness skin loss with extensive destruction, tissue necrosis or damage to muscle, bone or supporting structures (supporting structures include tendon, joint capsule).

**EDGES ~ 3.1**  
Indistinct, diffuse, none clearly visible (unable to clearly distinguish wound outline).

**EDGES ~ 3.2**  
Distinct, outline clearly visible, attached, even with wound base (even or flush with wound base, no sides or walls present; flat).

<b>BWAT® ITEM</b>	<b>ASSESSMENT</b>
<p>Presence of hypertrophic scarring Flexibility or firmness Flat, sloping or “cut-out” appearance</p>	<p>3 = Well-defined, not attached to wound base (sides or walls are present, floor or base of wound is deeper than edge). 4 = Well-defined, not attached to base, rolled under, thickened (soft to firm and flexible to touch) 5 = Well-defined, fibrotic, scarred (hard, rigid to touch), or hyperkeratotic (callous-like tissue formation around wound &amp; at edges, hard, rigid to touch).</p>
<p><b>4 &gt; UNDERMINING</b> Undermining and tunneling both describe loss of tissue underneath intact skin. Undermining is erosion of the wound edges, following the fascial plane and may cause an extension of the wound similar to a cave. Tunneling involves a small percentage of the wound edges (if any) and is caused by separation of the fascial planes leading to a sinus tract; it is long, narrow and may connect to another open area. [Assess by inserting a cotton tipped applicator under the wound edge; advance it as far as it will go. Never force the applicator! Raise the tip of the applicator so it may be seen or felt on the surface of the skin; mark the surface with a pen]. Measure the distance from the mark on the skin to the edge of the wound. Continue process around the wound. Use a transparent metric measuring guide with concentric circles divided into 4 (25%) pie-shaped quadrants to help determine percent of wound involved. If no round tool is available, picture the wound as a pie and mentally divide it into 4 equal quadrants.</p>	<p><b>4 &gt; UNDERMINING</b> 1 = None present 2 = Undermining &lt; 2 cm in any area 3 = Undermining 2-4 cm involving &lt; 50% wound margins 4 = Undermining 2-4 cm involving &gt; 50% wound margins 5 = Undermining &gt; 4 cm or tunneling in any area</p>
<p><b>5 &gt; NECROTIC TISSUE TYPE</b> Pick the type of necrotic tissue that is <u>predominant</u> in the wound [according to: colour, consistency and adherence. Slough usually indicates a wound of less severity than eschar. It can be yellow to tan mucinous or stringy material. Non-adherent means that you could remove it by gentle mechanical debridement with a gauze 4x4” or with forceps. Loosely adherent means that it is still attached to the wound bed. Eschar indicates deeper tissue damage. Soft, soggy eschar may be lifting from</p>	<p><b>5 &gt; NECROTIC TISSUE TYPE</b> 1 = None visible 2 = White/grey non-viable tissue (may appear prior to wound opening, skin surface is white or gray) &amp;/or non-adherent yellow slough (thin, mucinous substance; scattered throughout wound bed; easily separated from wound tissue). 3 = Loosely adherent yellow slough (thick, stringy, clumps of debris; attached to wound tissue).</p>

**EDGES ~ 3.3**  
Well-defined, not attached to wound base (floor or base of wound is deeper than edge).

**A** **B**

**EDGES ~ 3.4**  
Well-defined, not attached to base, rolled under, thickened (soft to firm and flexible to touch).

**A** **B**

**EDGES ~ 3.5**  
Well-defined, fibrotic, scarred or hyperkeratotic (callous-like tissue formation around wound & at edges, hard, rigid to touch).

**Pre-debridement**

**Callus covering this wound**

**Post-debridement**

**A** **B**

**UNDERMINING ~ 4.1**  
None present.

**UNDERMINING ~ 4.2**  
Undermining < 2 cm in any area.

**Extent of undermining shown by white dotted line**

**UNDERMINING ~ 4.3**  
Undermining 2- 4 cm involving < 50% wound margins.

**wound opening**

**UNDERMINING ~ 4.4**  
Undermining 2- 4 cm involving > 50% wound margins.

**UNDERMINING ~ 4.5**  
Undermining > 4 cm or tunneling in any area.

**Extent of undermining shown by white dotted line**

**NECROTIC TISSUE TYPE ~ 5.1**  
None visible.

**NECROTIC TISSUE TYPE ~ 5.2**  
White/grey non-viable tissue &/or non-adherent yellow slough (thin, mucinous substance; scattered throughout wound bed; easily separated from wound tissue).

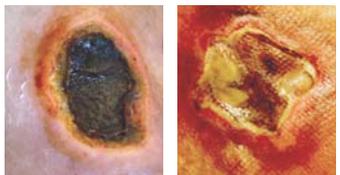
**A** **B**

**NECROTIC TISSUE TYPE ~ 5.3**  
Loosely adherent yellow slough (thick, stringy, clumps of debris; attached to wound tissue).

<b>BWAT® ITEM</b>	<b>ASSESSMENT</b>
<p>the wound edges. If there is yellow slough that is ADHERENT to the wound bed, this is the most critical element in the assessment, regardless of the color of the tissue. Please note: if there are two characteristics present in the wound, rate it on the PREDOMINANT characteristic present. E.g. If you assess that the necrotic tissue present is mostly yellow slough, but a little black soggy eschar remains in one area of the wound, the rating would be for yellow slough. If both characteristics appear to be present in about the same quantity then rate it on the worst of the two present. E.g. If the assessment reveals a wound with nearly equal amounts of yellow slough and black soggy eschar, the rating would be for black soggy eschar].</p>	<p>4 = Adherent, soft, black eschar (soggy tissue; strongly attached to tissue in center or base of wound).                      5 = Firmly adherent, hard, black eschar (firm, crusty tissue; strongly attached to wound base <u>and</u> edges like a hard scab).</p>
<p><b>6 &gt; NECROTIC TISSUE AMOUNT</b>                      Use a transparent metric measuring guide with concentric circles divided into 4 (25%) pie-shaped quadrants.                      Estimate the % of necrotic tissue in each quadrant and add up the four quadrants. If no round tool is available, picture the wound as a pie and mentally divide it into 4 equal quadrants.</p>	<p><b>6 &gt; NECROTIC TISSUE AMOUNT</b>                      1 = None visible                      2 = &lt; 25% of wound bed covered                      3 = 25% to 50% of wound covered                      4 = &gt; 50% and &lt; 75% of wound covered                      5 = 75% to 100% of wound covered</p>
<p><b>7 &gt; EXUDATE TYPE</b>                      (Some dressings interact with wound drainage to produce a gel or trap liquid. Before assessing exudates type, gently cleanse the wound with NS or H2O. Pick the type that is predominant.)                      [To evaluate exudate it is important to assess the wound AND the dressing as one OR the other or BOTH may provide the necessary data for making a decision on colour and type of exudate.                      In some cases, the dressing provides most of the information for making the decision, in other cases the exudate type is clear from assessing the wound. Remember that silver dressings may produce a gray or brownish colouring, which does not reflect the true colour of the exudate. Next, cleanse the wound of any dressing residue, then evaluate wound exudate. Dressing residue in the wound bed can be easily mistaken for wound exudate (e.g. hydrocolloids or</p>	<p><b>7 &gt; EXUDATE TYPE</b>                      1 = None                      2 = Bloody (thin, bright red).                      3 = Serosanguineous: thin, watery, pale red/pink</p>

**NECROTIC TISSUE TYPE ~ 5.4**

Adherent, soft, black eschar (soggy tissue; strongly attached to tissue in center or base of wound).



**A** **B**

**NECROTIC TISSUE TYPE ~ 5.5**

Firmly adherent, hard, black eschar (firm, crusty tissue; strongly attached to wound base and edges like a hard scab).



Note that in all three photos, the firmly adherent black eschar is the **PREDOMINANT** characteristic.

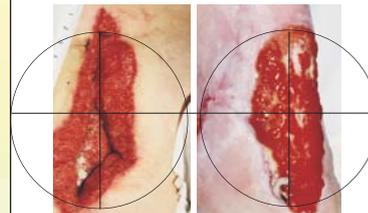
**NECROTIC TISSUE AMOUNT ~ 6.1**

None visible.



**NECROTIC TISSUE AMOUNT ~ 6.2**

< 25% of wound bed covered.



**A** **B**

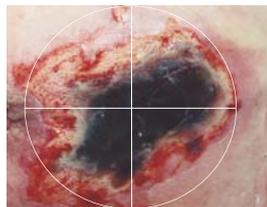
**NECROTIC TISSUE AMOUNT ~ 6.3**

25% to 50% of wound covered.



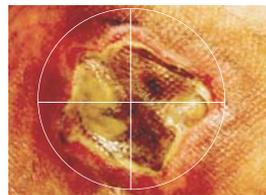
**NECROTIC TISSUE AMOUNT ~ 6.4**

> 50% and < 75% of wound covered.



**NECROTIC TISSUE AMOUNT ~ 6.5**

75% to 100% of wound covered with, &/or elevated above skin surface (e.g., hyperplasia).



**EXUDATE TYPES ~ 7.1**

None.



**EXUDATE TYPES ~ 7.2**

Bloody (thin, bright red).



**EXUDATE TYPES ~ 7.3**

Serosanguineous: thin, watery, pale red/pink.



**BWAT® ITEM**

cadexomer iodine). In this case, the exudate from the wound is more accurate than what is on the dressing. There is no hard and fast rule for which (the dressing or the wound) will provide the information that the nurse needs to make a decision. Please note that some dressings will wick the exudate and concentrate it depending on the absorptive capabilities of the dressing].

**8 > EXUDATE AMOUNT**

Use a transparent metric measuring guide with concentric circles divided into 4 (25%) pie-shaped quadrants to determine percent of dressing involved with exudate.

If no round tool is available, picture the wound as a pie and mentally divide it into 4 equal quadrants.

[This is very subjective, particularly with advanced wound products that stay in situ for several days, or that donate or retain moisture. However, the BWAT exudate amount item was developed with moisture retentive dressings in mind. Observe the wound tissues- are they dry and desiccated, moist or is exudate dripping as you watch? Look for signs of excess exudate like maceration of surrounding skin. Evaluate the dressing being used, considering its exudate management properties].

**9 > SKIN COLOR SURROUNDING WOUND**

Assess tissues within 4 cm. of wound edge.

[To test for blanching (capillary refill), press on the reddened area and observe whether the area has blanched (sudden whiteness). The colour should return promptly. If it does not blanch, it should have a score of 4 (non-blanchable) and signals more severe tissue damage.

Maceration- the tissues are moist and the pigment of the skin is drained, and can be soft, soggy and have poor tensile strength.

**ASSESSMENT**

- 4 = Serous: thin, watery, clear [Increased serous exudate is one of the signs of infection in chronic wounds. Gardner et al 2001]
- 5 = Purulent: thin or thick, opaque, tan/yellow, with or without odor (thick opaque yellow to green, offensive).

**8 > EXUDATE AMOUNT**

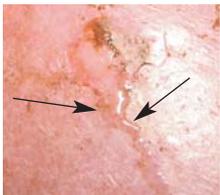
- 1 = None, dry wound (wound tissues dry) [A wound that is healed, skin intact or hard dry eschar and no moisture exists on the wound surface at all.]
- 2 = Scant, wound moist but no observable exudates [Wounds with scant moisture are those that are open and appear "shiny" as one sees some level of moisture in the wound tissues but no **observable drainage** from the wound or involving the wound dressing.]
- 3 = Small (wound tissues wet; moisture evenly distributed in wound; involves ≤ 25% dressing).
- 4 = Moderate (wound tissues saturated; drainage may or may not be evenly distributed in wound; involves > 25% to ≤ 75% dressing).
- 5 = Large (wound tissues bathed in fluid; drainage freely expressed; may or may not be evenly distributed in wound; involves > 75% of dressing). [A wound that has a large amount of drainage is one that is saturating or using up a dressing, including those designed to absorb exudate such as a calcium alginate]

**9 > SKIN COLOR SURROUNDING WOUND**

- 1 = Pink or normal for ethnic group
- 2 = Bright red &/or blanches to touch (Dark-skinned persons show the colors "bright red" as a deepening of normal ethnic skin color or a purple hue).
- 3 = White or grey pallor or hypopigmented (As healing occurs in dark-skinned persons, the new skin is pink and may never darken).

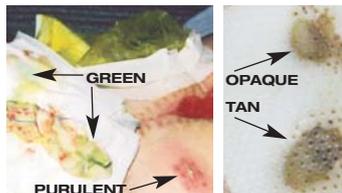
**EXUDATE TYPES ~ 7.4**

Serous: thin, watery, clear.



**EXUDATE TYPES ~ 7.5**

Purulent: thin or thick, opaque, tan/yellow with or without odor (tan, green, offensive).



**EXUDATE AMOUNT ~ 8.1**

None, dry wound (wound tissues dry).



**EXUDATE AMOUNT ~ 8.2**

Scant - wound moist but no observable (measurable) exudate.



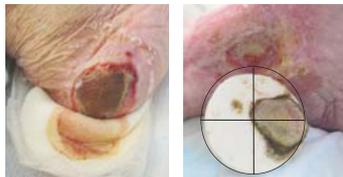
**EXUDATE AMOUNT ~ 8.3**

Small (wound tissues wet; moisture evenly distributed in wound; involves < 25% dressing).



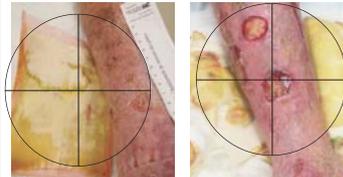
**EXUDATE AMOUNT ~ 8.4**

Moderate (wound tissues saturated; drainage may or may not be evenly distributed in wound; involves > 25% to ≤ 75% dressing).



**EXUDATE AMOUNT ~ 8.5**

Large (wound tissues bathed in fluid; drainage freely expressed; may or may not be evenly distributed in wound; involves > 75% of dressing).



**SKIN COLOUR**

**SURROUNDING WOUND ~ 9.1**

Pink or normal for ethnic group.



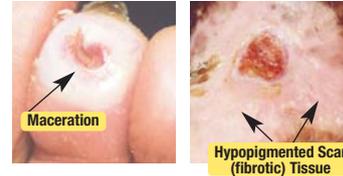
**SKIN COLOUR SURROUNDING WOUND ~ 9.2**

Bright red &/or blanches to touch (Dark-skinned persons show the colors "bright red" as a deepening of normal ethnic skin color or a purple hue).



**SKIN COLOUR SURROUNDING WOUND ~ 9.3**

White or grey pallor or hypopigmented (As healing occurs in dark-skinned persons, the new skin is pink and may never darken).



**BWAT® ITEM**

Grey pallor - lack of color; unnatural paleness, that can be associated with poor circulation].  
 Deep tissue injury can also be dark purple in colour.  
 When darkly pigmented skin becomes inflamed, it becomes darker in colour.  
 Hemosiderin staining occurs in chronic venous hypertension, or as a symptom of wound chronicity or repeated injury where it occurs close to the wound edges.

**ASSESSMENT**

4 = Dark red or purple &/or non-blanchable (Dark-skinned persons show the colors "dark red" as a deepening of normal ethnic skin color or a purple hue).  
 5 = Black or hyperpigmented.

**10 > PERIPHERAL TISSUE EDEMA**

Assess tissues within 4 cm of wound edge.  
 Use a transparent metric measuring guide to determine how far edema extends beyond wound.  
 [With pitting edema, the tissue indentation takes several minutes to rebound].

**10 > PERIPHERAL TISSUE EDEMA**

1 = No swelling or edema  
 2 = Non-pitting edema extends < 4 cm around wound (Non-pitting edema appears as skin that is shiny and taut). [Can also be almost glistening].  
 3 = Non-pitting edema extends > 4 cm around wound (Non-pitting edema appears as skin that is shiny and taut). [Can also be almost glistening].  
 4 = Pitting edema extends < 4 cm around wound (Identify pitting edema by firmly pressing a finger down into the tissues and waiting for 5 seconds, on release of pressure, tissues fail to resume previous position and an indentation appears).  
 5 = Crepitus and/or pitting edema extends > 4 cm around wound.

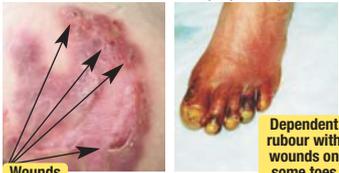
**11 > PERIPHERAL TISSUE INDURATION**

Induration is abnormal firmness of tissues with margins. Palpate where it starts and stops.  
 Assess by gently pinching the tissues. Induration results in an inability to pinch the tissues.  
 Use a transparent metric measuring guide to determine how far induration extends beyond wound.

**11 > PERIPHERAL TISSUE INDURATION**

1 = None present (Induration).  
 2 = Induration, < 2 cm around wound.  
 3 = Induration 2-4 cm extending < 50% around wound.  
 4 = Induration 2-4 cm extending ≥ 50% around wound.  
 5 = Induration > 4 cm in any area around wound.

**SKIN COLOUR SURROUNDING WOUND ~ 9.4**  
 Dark red or purple &/or non-blanchable (Dark-skinned persons show the colors "dark red" as a deepening of normal ethnic skin color or a purple hue).



**Wounds**

**Dependent rubour with wounds on some toes**

**SKIN COLOUR SURROUNDING WOUND ~ 9.5**  
 Black or hyperpigmented



**PERIPHERAL TISSUE EDEMA ~ 10.1**  
 No swelling or edema.



**PERIPHERAL TISSUE EDEMA ~ 10.2**  
 Non-pitting edema extends < 4 cm around wound (Non-pitting edema appears as skin that is shiny and taut).

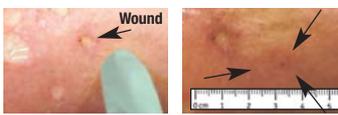


**PERIPHERAL TISSUE EDEMA ~ 10.3**  
 Non-pitting edema extends > 4 cm around wound (Non-pitting edema appears as skin that is shiny and taut).



**1600 hours 20 seconds**    **1600 hours 22 seconds**

**PERIPHERAL TISSUE EDEMA ~ 10.4**  
 Pitting edema extends < 4 cm around wound (Identify pitting edema by firmly pressing a finger down into the tissues and waiting for 5 seconds, on release of pressure, tissues fail to resume previous position and an indentation appears).



**Wound**

**1515 hours**    **1518 hours**

**PERIPHERAL TISSUE EDEMA ~ 10.5**  
 Crepitus and/or pitting edema extends > 4 cm around wound.



**Pitting edema**

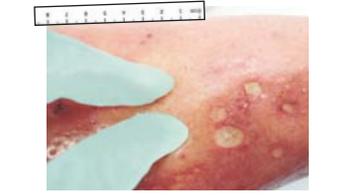
**PERIPHERAL TISSUE INDURATION ~ 11.1**  
 None present (Induration).



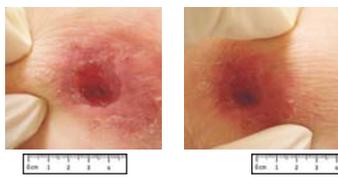
**PERIPHERAL TISSUE INDURATION ~ 11.2**  
 Induration < 2 cm. around wound.



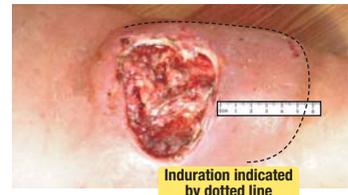
**PERIPHERAL TISSUE INDURATION ~ 11.3**  
 Induration 2- 4 cm extending < 50% around wound.



**PERIPHERAL TISSUE INDURATION ~ 11.4**  
 Induration 2-4 cm extending > 50% around wound.



**PERIPHERAL TISSUE INDURATION ~ 11.5**  
 Induration > 4 cm in any area around wound.



**Induration indicated by dotted line**

**BWAT® ITEM****ASSESSMENT****12 > GRANULATION TISSUE**

Growth of small blood vessels and connective tissue to fill in full thickness wounds. Tissue is healthy when bright, beefy red, shiny and granular with a velvety appearance. Poor vascular supply appears as pale pink or blanched to dull, dusky red color. [Concentric circles are NOT used for this assessment]. Granulation tissue is judged on the color and the percent the wound has filled in with new tissue (so having some history with the wound is helpful as the clinician has an idea of how deep the wound was originally). If the wound is being seen for the first time, most of the judgment must be made on the color of the tissue and best guess as to how much the wound has filled in. Hypertrophic granulation tissue (hypergranulation) is red or dark pink and often forms a raw-looking, visibly layered bump or a layer of loose granulation tissue that moves when the wound is flushed. Capillaries will grow into the tissue, and the tissue will often bleed when disturbed.

**13 > EPITHELIALIZATION**

The process of epidermal resurfacing and appears as pink or red skin. In partial thickness wounds it can occur throughout the wound bed (epithelial islands) as well as from the wound edges.

In full thickness wounds it occurs from the edges only. Use a transparent metric measuring guide with concentric circles divided into 4 (25%) pie-shaped quadrants to help determine percent of wound involved and to measure the distance the epithelial tissue extends into the wound.

If no round tool is available, picture the wound as a pie and mentally divide it into 4 equal quadrants.

**TOTAL SCORE**

**When you have rated the wound on all items, determine the total score by adding together the 13-item scores. The HIGHER the total score, the more severe the wound status. Plot total score on the Wound Status Continuum to determine progress.**

**12 > GRANULATION TISSUE**

- 1 = Skin intact or partial thickness wound
- 2 = Bright, beefy red; 75% to 100% of wound filled &/or tissue overgrowth
- 3 = Bright, beefy red; < 75% & > 25% of wound filled
- 4 = Pink, &/or dull, dusky red &/or fills ≤ 25% of wound
- 5 = No granulation tissue present

**13 > EPITHELIALIZATION**

- 1 = 100% wound covered, surface intact
- 2 = 75% to < 100% wound covered &/or epithelial tissue extends > 0.5cm into wound bed
- 3 = 50% to < 75% wound covered &/or epithelial tissue extends to < 0.5cm into wound bed
- 4 = 25% to < 50% wound covered
- 5 = < 25% wound covered

**GRANULATION TISSUE ~ 12.1**  
Skin intact or partial thickness wound.

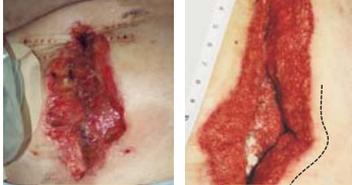


**GRANULATION TISSUE ~ 12.2**  
Bright, beefy red; 75% to 100% of wound filled &/or tissue overgrowth.



Initial wound      Wound today

**GRANULATION TISSUE ~ 12.3**  
Bright, beefy red; < 75% & > 25% of wound filled.



Initial wound      Wound today

**GRANULATION TISSUE ~ 12.4**  
Pink, &/or dull, dusky red &/or fills < 25% of wound.



Initial wound      Wound today

**GRANULATION TISSUE ~ 12.5**  
No granulation tissue present.

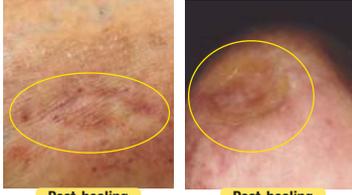


**EPITHELIALIZATION**

- The process of epidermal resurfacing and appears as pink or red skin.
- In partial thickness wounds it can occur throughout the wound bed as well as from the wound edges.
- In full thickness wounds it occurs from the edges only.

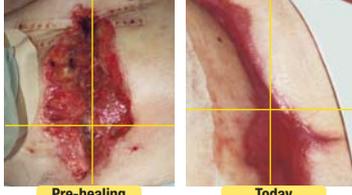


**EPITHELIALIZATION ~ 13.1**  
100% wound covered, surface intact.



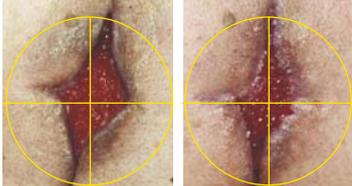
Post-healing      Post-healing

**EPITHELIALIZATION ~ 13.2**  
75% to < 100% wound covered &/or epithelial tissue extends > 0.5cm into wound bed.



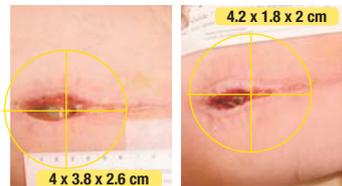
Pre-healing      Today

**EPITHELIALIZATION ~ 13.3**  
50% to < 75% wound covered &/or epithelial tissue extends to < 0.5cm into wound bed.



Day of Admission      Today

**EPITHELIALIZATION ~ 13.4**  
25% to < 50% wound covered.



4 x 3.8 x 2.6 cm      4.2 x 1.8 x 2 cm

**EPITHELIALIZATION ~ 13.5**  
< 25% wound covered.



## BRADEN SCALE FOR PREDICTING PRESSURE SORE RISK

<b>SENSORY PERCEPTION</b>  ability to respond meaningfully to pressure-related discomfort	<b>1. Completely Limited</b> 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	<b>2. Very Limited</b> 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.	<b>3. Slightly Limited</b> Responds to verbal commands, but cannot always communicate discomfort or the need to be turned. OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	<b>4. No Impairment</b> Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.				
<b>MOISTURE</b>  degree to which skin is exposed to moisture	<b>1. Constantly Moist</b> Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.	<b>2. Very Moist</b> Skin is often, but not always moist. Linen must be changed at least once a shift.	<b>3. Occasionally Moist</b> Skin is occasionally moist, requiring an extra linen change approximately once a day.	<b>4. Rarely Moist</b> Skin is usually dry, linen only requires changing at routine intervals.				
<b>ACTIVITY</b>  degree of physical activity	<b>1. Bedfast</b> Confined to bed.	<b>2. Chairfast</b> Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	<b>3. Walks Occasionally</b> Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	<b>4. Walks Frequently</b> Walks outside room at least twice a day and inside room at least once every two hours during waking hours.				
<b>MOBILITY</b>  ability to change and control body position	<b>1. Completely Immobile</b> Does not make even slight changes in body or extremity position without assistance.	<b>2. Very Limited</b> Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	<b>3. Slightly Limited</b> Makes frequent though slight changes in body or extremity position independently.	<b>4. No Limitation</b> Makes major and frequent changes in position without assistance.				
<b>NUTRITION</b>  usual food intake pattern	<b>1. Very Poor</b> 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's for more than 5 days.	<b>2. Probably Inadequate</b> Rarely eats a complete meal and generally eats only about 1/2 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	<b>3. Adequate</b> Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products per day. Occasionally will refuse a meal, but will usually take a supplement when offered OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs	<b>4. Excellent</b> 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.				
<b>FRICION &amp; SHEAR</b>	<b>1. Problem</b> 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	<b>2. Potential Problem</b> 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.	<b>3. No Apparent Problem</b> 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.					
				Total Score				

Note: Individuals with a score of 18 or less are considered to be at risk of developing pressure ulcers. At risk - 15 to 18; Moderate Risk - 13 to 14; High Risk - 10 to 12; Very High Risk - 9 or below.