E.4 DEBRIDEMENT: WHO, HOW, WHERE, WHEN TO DEBRIDE

4.4 and 4.5

4.4 Where to Debride
The area to be debrided can be accessed without any strain or injury to the individual with a wound or to the nurse. The physical environment where debridement is being done has adequate lighting, and equipment is available to ensure safe delivery and care of any consequences of debridement. If the wound to be debrided is on an individual who has involuntary movements or spasms, a second person must be available to ensure that the affected area is immobilized.

4.5 When to Debride
The patient’s wound must first be assessed for “healability”. Healability is based on the ability to achieve healing based on circulatory status (adequate blood supply), consideration of host factors (coexisting diseases, medications), and the patient’s willingness and ability to adhere to the treatment plan. Cancers, deep wound infections, and osteomyelitis, if left untreated, will also render a wound unhealable. It is appropriate to send people with “unhealable” wounds to be assessed by the appropriate specialist. Prompt and appropriate assessment and treatment can convert some unhealable wounds into healed wounds.

Please refer to sections E.1. DETERMINE HEALABILITY OF WOUND: E 1.1 Introductions and Purpose, and E.1.2 Determine Healability Tool to assist with this.

Signe-Picard et al (2010) identified non-healing wounds with contraindications to debridement as the following:

- Arterial wounds in patients with peripheral arterial disease - dry gangrene or dry ischemic wounds (need vascular consultation for circulatory status determination)
- Wounds with haemorrhagic risk, close to large vessels or in patients receiving a high dose of anticoagulant
- Malignant wounds
- Lower limb pressure ulcers in patients with arterial insufficiency
- Exposure of bone/tendinous tissue, osteosynthesis implants, organs
- Wounds in patients receiving palliative care.

If the wound is considered healable, it must then be assessed for the type of necrotic tissue present. The RED/YELLOW/BLACK (RYB)(Table 2) is a classification tool used to assess the characteristics of the tissue in the wound bed.

As described by Krasner in 1995:

“The strength of the RYB system is that it identifies what phase a wound is in on the continuum of the wound healing process. Red wounds can be in the inflammatory (reaction) phase, proliferation (regeneration), or maturation (remodeling) phase of wound healing. Yellow wounds are infected or contain fibrinous slough and aren’t ready to heal. Black wounds contain necrotic tissue (eschar) and aren’t ready to heal either.”
Treatment options also follow directly from this system. For example, red wounds must be kept clean, protected, and moist—the right environment to complement healing. For yellow wounds, infection must be addressed and slough or fibrinous tissue removed. Eschar must be removed from black wounds for healing to occur. Managing wounds with the RYB system helps you to optimize wound healing and, in most cases, will result in wound closure.”

If all three colours are present, target the treatment for the colour that is present in more than 50% of the wound (Cooper, 2000).

Table 2: Red/Yellow/Black System

| RED:                        | Clean and uniformly pink to red.                      |
|                            | Often heals by secondary intention.                  |
|                            | Dressings need to be changed less often but should be moist at all times. |
| YELLOW:                    | Varies from ivory to canary yellow or even green in colour, depending on whether or not infection is present. |
|                            | **Caution:** Tendon may appear as yellow or white |
|                            | The goal of care is to manage exudate, and remove slough through surgical, sharp, mechanical, enzymatic, or autolytic debridement. |
|                            | Not all Yellow is detrimental to healing—granulation grows through yellow fibrin. |
| BLACK:                     | Ranges in colour from dark brown and gray to black.  |
|                            | The goal for most individuals is to remove the necrotic tissue by surgical, sharp, enzymatic, or autolytic debridement. |
|                            | Where there is no drainage or there is boggy surrounding tissue, leave the hard, dry eschar or black scab intact on the lower legs, feet, or heels of individuals whose healing potential is compromised by inadequate circulation. It provides a protective base for the wound. |
South West Regional Wound Care Toolkit

The following algorithm developed by Sibbald et al (2000) (Figure 1) demonstrates the need to consider many factors in choosing whether to debride, and what method to use. It also demonstrates the need to reassess the wound, re-evaluate the treatment plan, and consider further debridement, particularly if the wound is not healing.

**Figure 1: Debriding a Wound Feedback Loop  Algorithm from Sibbald et al. 2000**  Used with permission.

![Debriding a Wound Feedback Loop Algorithm](image-url)
Falanga et al (2008) reviewed the evidence around the role of conservative “maintenance” debridement in chronic wounds that are not healing in spite of apparently good circulation, adequate nutrition and positive “healability”. They ascribe the failure to heal to a number of microbial, biochemical, and cellular features and abnormalities. The maintenance debridement will eliminate tissues that are colonized with an excessive bacterial burden, and diminish any biochemical and cellular burden impeding healing. This is a proactive way to “jumpstart” the wound and keep it in a healing mode, even when traditional debridement would not seem to be necessary.

**Figure 2: Maintenance Debridement in Chronic Wounds Algorithm ©Dr. Vincent Falanga Used with permission of author and publisher.**