



Wound Debridement: 2016 Classifications

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Recent medical and technological advancements have made changes to the way wound debridements are achieved. In this article we have revisited the many different methods of wound debridement available for wound practitioners and re-categorized for better understanding.

The process of removal of non-viable tissue or foreign material and debris from within or around a wound is called “Debridement”. The wound debridement is considered to be one of the most important aspects of wound management strategy. Wounds that contain necrotic /non- viable tissue take longer to heal because necrotic tissue provides an ideal growth medium for bacteria which can develop into a general infection that may invade the bloodstream (sepsis) and lead to amputation and even death. There are many different methods of wound debridement available for wound practitioners

TYPES OF WOUND DEBRIDEMENT:

1. Enzymatic Debridement
2. Biological Debridement
3. Mechanical Debridement
4. Chemical Debridement
5. Ultrasonic Debridement
6. Conservative Sharp Debridement
7. Surgical Debridement
8. Autolytic Debridement

Enzymatic Debridement

Enzymatic debridement is a process in which non-viable /necrotic tissue is liquefied and or the adhesion between necrotic tissue and the underlying viable tissue is detached with the use of topical enzymes.

Biological Debridement

Biological debridement is a process in which medical grade larvae (maggots) are applied to the wound to ingest necrotic / non-viable tissue.

Mechanical Debridement

Mechanical debridement is a process in which necrotic / non-viable tissue is removed or dislodged by utilizing high pressure (> 12 PSI) irrigation method or by applying “wet to dry gauze” dressing.

Chemical Debridement

Chemical debridement is a process in which necrotic / non-viable tissue is disrupted or denatured by utilizing topical chemical agents (non-enzymatic).

Ultrasonic Debridement

Ultrasonic debridement is a process in which ultrasound waves are utilized to produce acoustic streaming and cavitation causing disruption and removal of the necrotic / non-viable tissue. A liquid solution is also used as a coupling medium that not only carries energy from the ultrasound probe directly onto the tissues, but also provides a cooling effect on the energy transferred.

Conservative Sharp Debridement

Conservative sharp debridement is a process in which necrotic / non-viable tissue is removed by utilizing forceps, scissors, dermal curette and a scalpel. Only necrotic / non-viable is removed without bleeding and causing pain. This process does not involve the debridement of viable tissue and tendons, ligaments or bone; even though necrosis may be present.

Surgical Debridement

Surgical debridement is a process in which necrotic / non-viable and viable tissue is removed utilizing surgical instruments. General anesthesia or local anesthetics may be utilized as this process may involve pain and bleeding. This process may also involve the debridement of viable tissue, tendons, ligaments or bone.

Autolytic Debridement

Autolytic debridement is a process in which necrotic / non-viable tissue is loosen or liquefied by promoting or enabling the body's own enzymes. Autolysis refers to the natural breakdown of necrotic tissue by the action of lysosomal enzymes produced by the body, which digest the necrotic tissue.

References:

- A. Bruno, B. Schmidt, P. Blume, (2015). Ultrasonic Debridement For Wounds: Where Are We Now. *Podiatry Today*, July 2015.
- K. Schum, (2015). Debridement of wounds with ultrasound. *Podiatry Management*, August 2015.
- J. Poston, (1995). Sharp debridement of devitalized tissue: The nurse's role. *British Journal of Nursing*.
- J. Haynes, G. Thompson, (2007). The different methods of wound debridement. *Journal of Wound Care*, June 2007.