

# Wound Debridement

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# Definition

Debridement is the removal of devascularised or infected tissue or foreign material from, or adjacent to, a wound with the aim of exposing healthy tissue

Carville 2001

*'Debridement' is not synonymous with Conservative Sharp Wound Debridement*



# Principles of local wound management

## Wound bed preparation

- **T** tissue viability
  - Debride non-viable tissue
  - (unless contraindicated)
- **I** infection and inflammation control
  - Look for clinical signs
  - Antimicrobials, antibiotics
- **M** moisture control
  - Dressings
- **E** edge
  - Edge characteristics
  - Edge advancement



# When to debride

- Some infections (eg necrotising fasciitis)
- Eschar with separation of edges, bogginess
- Necrotic tissue
- Slough
- Blisters with clear fluid
  - Burst blisters must be debrided
- Foreign matter (eg road dirt)
- Burns
- Haematomas



# When not to debride

Debridement of dry necrotic tissue without separation of edges is contra-indicated where there is inadequate blood supply to support infection control & wound healing



# Why debride

- Non viable tissue will inhibit wound healing by
  - Hindering adequate wound assessment
  - Slowing granulation
  - Inhibiting wound contraction
  - Preventing epithelial cell migration
  - Encouraging bacterial growth
  - Possibly causing malodour
- Removal of non viable tissue can turn a chronic wound into an acute wound
  - Removes senescent cells
  - Stimulates blood flow
  - Removes bacteria laden tissue



# Methods of debridement

<b>Surgical</b>	Used in surgery Extends into healthy tissue	✓
<b>Conservative sharp</b>	Bedside method Does not extend into nor excise healthy tissue	✓
<b>Autolytic</b>	Uses dressings to achieve the optimal moisture balance to facilitate the body's processes	✓
<b>Mechanical</b>	Uses force eg wet-to-dry gauze, hydrosurgery, dry gauze	✓ selective methods
<b>Biological</b>	Use of sterile blue-bottle fly maggots Only commercially produced maggots should be used	✓
<b>Chemical</b>	Use of chemicals	✗
<b>Enzymatic</b>	Use of enzymes	✗ (n/a)

# Factors influencing method

- Extent & type of non viable tissue
- Aetiology of wound
- Location of wound
- Size of wound
- Availability of resources
- Practitioner skill, experience & training
- Patient co-morbidities
- Patient wishes



# Surgical debridement

- Selective and very rapid
- Uses sterile sharp instruments to remove non viable tissue
- Usually requires anaesthesia
- Performed by trained surgeons
- Includes excision into healthy tissue
- Requires good control of bleeding
- Can turn a chronic wound into an acute wound
  - But must address underlying aetiology



# Mechanical debridement

- Can be selective or non selective and rapid to slow depending on method chosen
- Bedside method – anaesthetic not required but analgesia may be needed as this can be a very painful method
- Uses force
  - eg dry gauze; wet-dry saline soaks; ½ plastic forcep; hydrosurgery



# Versajet™ Hydrosurgery

- VERSAJET™ Hydrosurgery System uses pressurized streams of sterile fluid to cut, ablate and remove tissue and foreign matter from wounds and to resect and remove material in a variety of applications
- Allows precise and controlled debridement to varying depths that is operator controlled
- Highly selective
- Can be used for operative and bed side debridement



# Versajet™



# Autolytic debridement

- Most widely used method
- Selective and slow
- Uses dressings to facilitate the body's natural ability to break down non viable tissue
- Creates the ideal wound environment
- Bedside procedure
- Gentle and painless



# Basic Contemporary dressings

ideal wound environment

dry none      **MOIST** low      wet moderate      wet high



HYDRATION

MOISTURE  
RETENTION

EXUDATE  
MANAGEMENT

Hydrogel

Hydrocolloid  
Clear acrylic  
Thin foam  
Hydroselective

Foam

Alginate  
Cellulose fibre  
Composite



# Specialised dressings

- There are several products useful for wound debridement
  - Wet therapy (tenderwet)
  - Rapid capillary action (vacutex, advadraw)
  - High sodium (mesalt, hypergel)
  - Wound honey (medihoney gel / gel sheet)
  - Cadexomer iodine (iodosorb)



# Conservative sharp debridement

- Selective and reasonably rapid
- Bedside debridement without anaesthesia – or local anaesthesia
  - eg EMLA
- Uses sterile, sharp instruments
- Does not include healthy tissue
- Usually combined with other types of debridement for optimal results
- Must have the training, skills and equipment



# Biological debridement

- Selective and relatively rapid
- Uses maggots to degrade non viable tissue
- Must be correct type of maggots
  - Sterile blue-bottle fly maggots
- Practitioner training required
- Usually reserved for specialist in-patient settings



# Other methods of debridement

## Chemical

- Non selective and relatively rapid
- Uses chemicals to break down non viable tissue
- Not recommended due to potential for destruction of healthy tissue and pain

## Enzymatic

- Selective and relatively rapid
- Uses enzymes to degrade non viable tissue
- Not currently available in Australia



# THANK YOU

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