



Dressing Selection

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‘What wound is this? What dressing should I use? How will this wound heal?’

- ▶ The guiding principles of wound care have always been focused around defining the wound, identifying any associated factors that may influence the healing process, then selecting the appropriate wound dressing or treatment device to meet the aim and aid the healing process.
- ▶ This structured approach is essential, as the most common error in wound care management is rushing in to select the latest and greatest new wound dressings without actually giving thought to wound aetiology, tissue type and immediate aim.
- ▶ This overview of wounds and dressings will identify some of the most common wound types and guide you in setting your aim of care and selecting a product or device to achieve that aim.

Rice, Jan Wound Care Manual and Clinical Guidelines for Nurses Published: 08 Feb 2019

H.E.I.D.I. Holistic Assessment

- ▶ History
 - ▶ The patient’s medical, surgical, pharmacological and social history
- ▶ Examination
 - ▶ Of the patient as a whole; then focus on the wound
- ▶ Investigations
 - ▶ What bloods, x-rays, scans do you require to help you make your...
- ❑ Diagnosis
- ❑ Implementation

It's not about the hole in the patient...

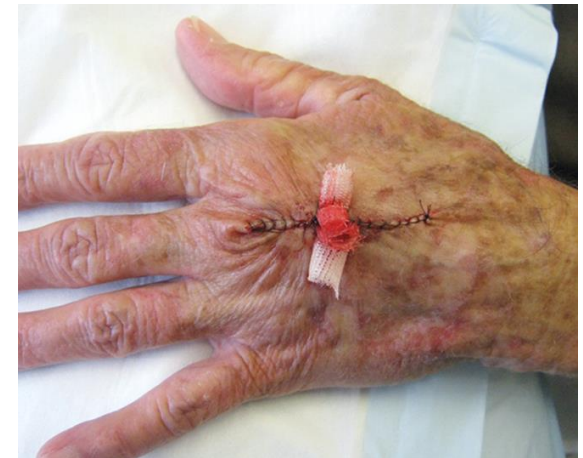


It's the whole of the patient...of any age!

Wound Assessment

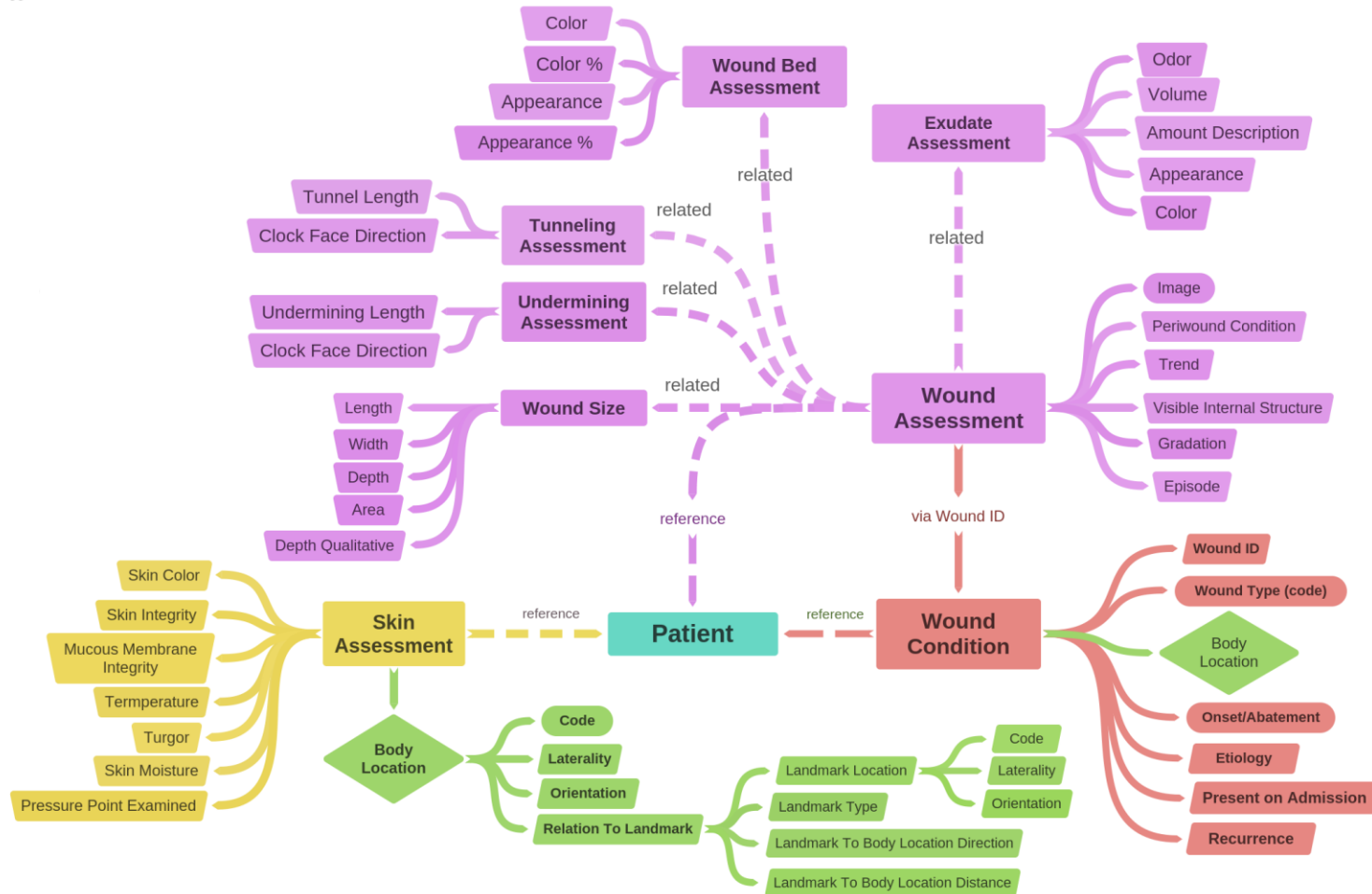
When conducting initial and ongoing wound assessments the following considerations should be taken into account to allow for appropriate management in conjunction with the treating team:

- ▶ Type of wound- acute or chronic
- ▶ Aetiology- surgical, laceration, ulcer, burn, abrasion, traumatic, pressure injury, neoplastic
- ▶ Location and surrounding skin
- ▶ Tissue Loss
- ▶ Clinical appearance of the wound bed and stage of healing
- ▶ Measurement and dimensions
- ▶ Wound edge
- ▶ Exudate
- ▶ Presence of infection
- ▶ Pain
- ▶ Previous wound management



Comprehensive client assessment

coggle



Ask 'what do I want the dressing to do...?'

Establish the objective

- ▶ Rehydrate?
- ▶ Absorb exudate?
- ▶ Remove non viable tissue?
- ▶ Reduce bacterial contamination?
- ▶ Promote granulation, stimulate angiogenesis ?
- ▶ Promote a moist / dry wound bed?
- ▶ Protection?
- ▶ Reduction in frequency of dressing changes?
- ▶ Cost effectiveness?



Wound bed clinical appearance

Granulating

It presents as pinkish/red coloured moist tissue and comprises of newly formed collagen, elastin and capillary networks. The tissue is well vascularised and bleeds easily.

Epithelialising

Is a process by which the wound surface is covered by new epithelium, this begins when the wound has filled with granulation tissue. The tissue is pink, almost white, and only occurs on top of healthy granulation tissue.

Sloughy

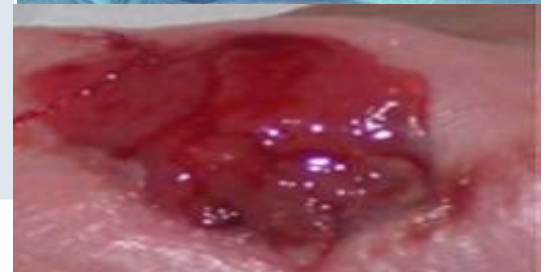
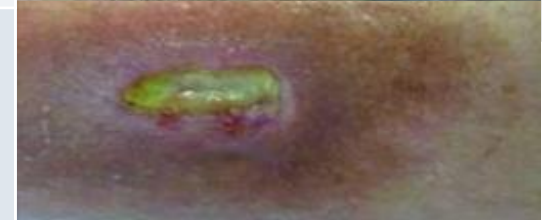
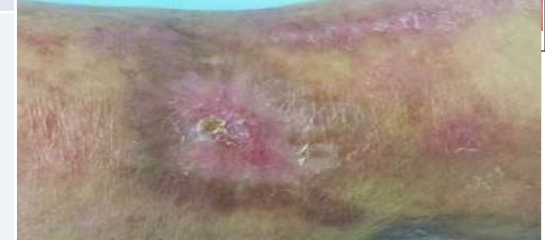
The presence of devitalised yellowish tissue is observed and is formed by an accumulation of dead cells. Must not be confused with the presence of pus.

Necrotic

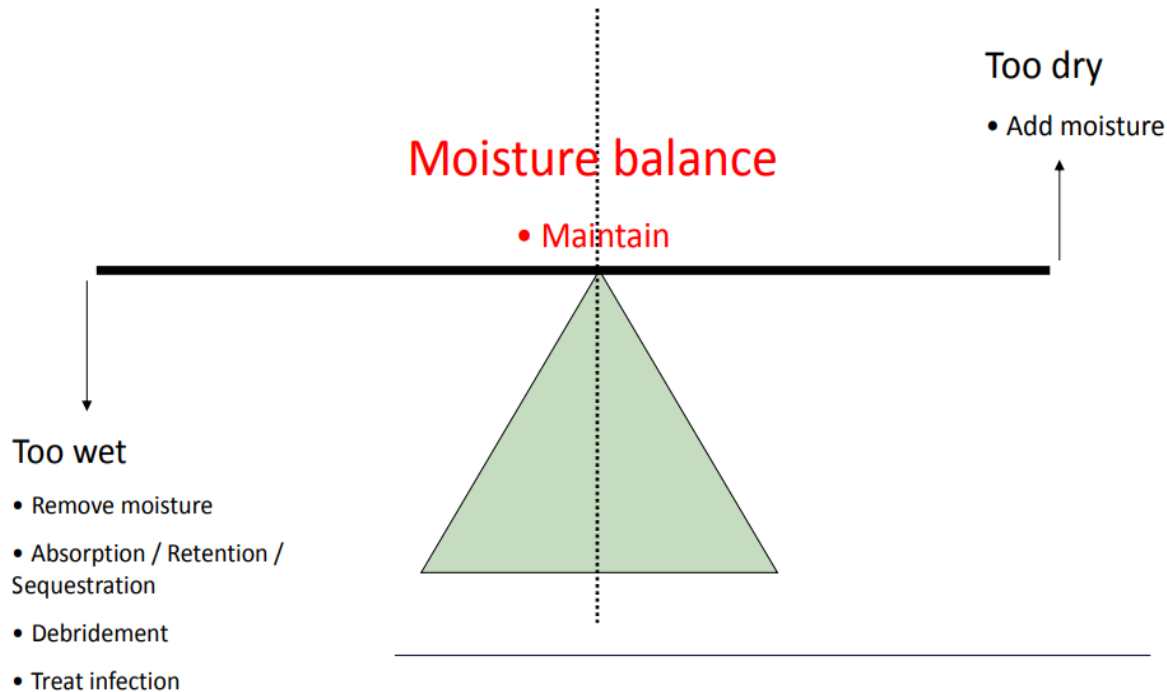
Describes a wound containing dead tissue. The wound may appear hard, dry and black. Dead connective tissue may appear grey. The presence of dead tissue in a wound prevents healing.

Hypergranulating

This is observed when granulation tissue grows above the wound margin. This occurs when the proliferative phase of healing is prolonged usually as a result of bacterial imbalance or irritant forces.



Considerations



It is important to assess and document the type, amount, colour and odour of exudate to identify any changes.

Excess exudate leads to maceration and degradation of skin while too little can result in the wound bed drying out. It may become more viscous and odourous in infected wounds.

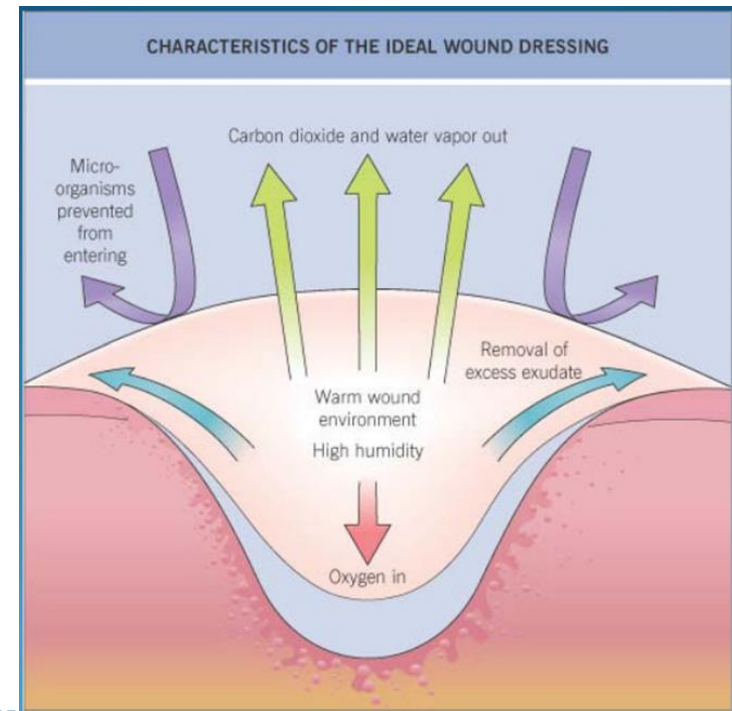
If there is no blood supply keep it dry

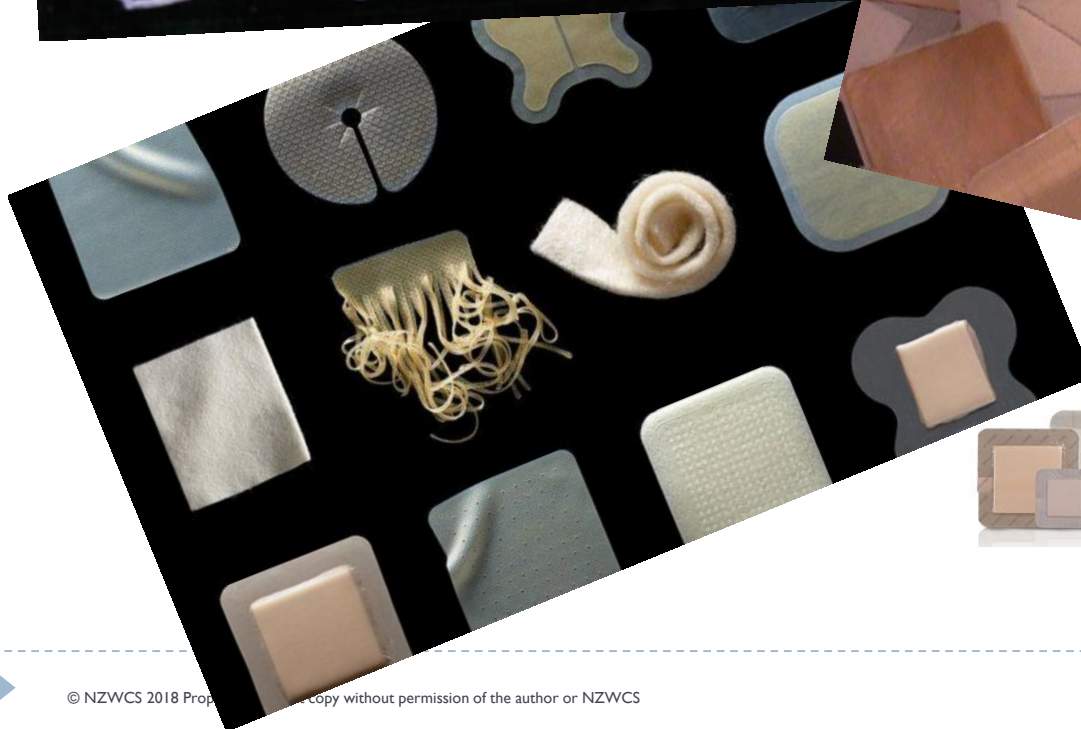
- ▶ Keep areas dry unless you are 100% sure there is viable tissue beneath or you have been advised by a tissue viability specialist or responsible physician.



The Ideal dressing

- ▶ Provide mechanical protection
- ▶ Protect against secondary infection
- ▶ Non adherent and easily removed without trauma
- ▶ Leave no foreign particles in the wound
- ▶ Remove excess exudate
- ▶ Be cost effective
- ▶ Offer effective pain relief
- ▶ Protects surrounding skin or peri wound





Dressing classifications

- ▶ Impregnated mesh dressings
- ▶ Absorbent pads – including super absorbents
- ▶ Island dressings
- ▶ Films
- ▶ Foams
- ▶ Hydrocolloids
- ▶ Hydrogels & gel sheets
- ▶ Calcium alginates
- ▶ Gelling fibres
- ▶ Antimicrobials
- ▶ New Technology

Impregnated mesh dressings

- ▶ Properties:
 - ▶ Primary dressing on dry or lightly exuding wounds
 - ▶ Secondary dressing required
 - ▶ Most are low adherent
- ▶ Wound types:
 - ▶ Especially suited to epithelising wounds
- ▶ How to use, when to change:
 - ▶ Apply directly to wound bed
- ▶ Contraindications:
 - ▶ Moderate to highly exudating wounds



Absorbent pads incl super absorbents

▶ Properties:

- ▶ Cotton, viscose, polyester
- ▶ Super absorbent gelling crystals or fibre
- ▶ +/- Integrated wound contact layer

▶ Wound types:

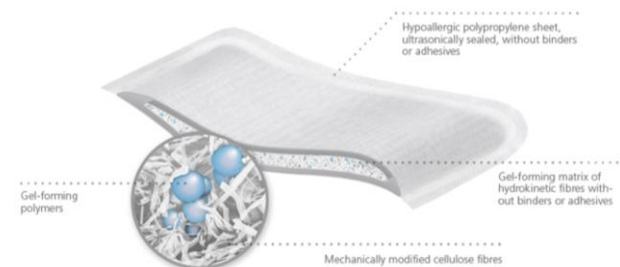
- ▶ Moderate to high exudate

▶ How to use, when to change:

- ▶ PRN – depends on wound

▶ Contraindications:

- ▶ Moderate to highly exudating wounds



Island dressings

- ▶ Properties:

- ▶ primary dressing on dry or lightly exuding wounds
- ▶ Barrier and non barrier available

- ▶ Wound types:

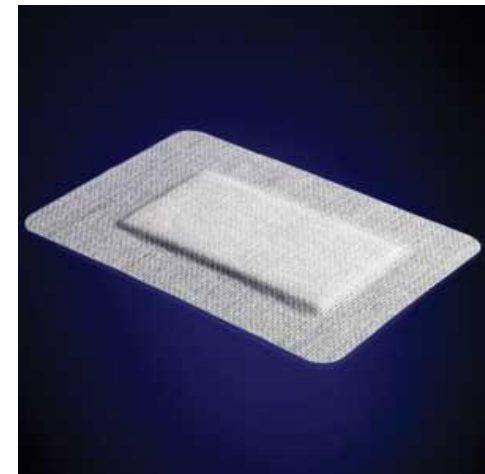
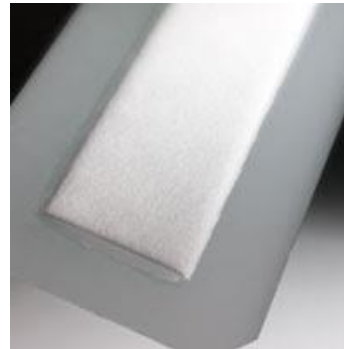
- ▶ Postop, low exudate

- ▶ How to use, when to change:

- ▶ PRN – depends on wound and protocols postop

- ▶ Contraindications:

- ▶ Moderate to highly exuding wounds



Films

- ▶ Properties:

- ▶ High moisture vapour transmission
- ▶ Polyurethane coated with adhesive

- ▶ Wound type:

- ▶ Low exuding wounds, as they do not absorb
- ▶ Only suitable for relatively shallow wounds, e.g. dermabrasion, burns and donor sites retention dressings, e.g. for cannulas.



- ▶ How to use, when to change:

- ▶ Frequency of change depends on nature of wound
- ▶ Skin surrounding wound must be clean and dry

- ▶ Contraindications:

- ▶ Excessive exudate may accumulate under dressing
- ▶ May cause adhesive trauma on removal

Foams

- ▶ Properties:

- ▶ Absorbent dressings, primary & secondary

- ▶ Wound types:

- ▶ Light to heavily exuding wounds

- ▶ How to use, when to change:

- ▶ Exudate is absorbed into the foam & becomes visible at the dressing edges, once saturated
 - ▶ Use secondary dressing such as tape or appropriate bandage if product does not have an adhesive border do not cover with occlusive film, this may effect the vapour permeability of the dressing

- ▶ Contraindications:

- ▶ Very dry sloughy or necrotic wounds May cause peri wound maceration in highly exuding wounds



Hydrocolloids

- ▶ Properties
 - ▶ Composed of cellulose, can contain gelatine
- ▶ Wound types:
 - ▶ Clean, granulating or necrotic wounds with low to moderate exudate
 - ▶ Primary dressing for epithelising wounds
- ▶ How to use, when to change
 - ▶ Change every 3 to 7 days (warm to make more pliable & adhesive)
 - ▶ Warn patient about characteristic odour to expect when hydrocolloid mixes with exudates.
 - ▶ Requires 1.5 to 2cm margin
- ▶ Contraindications:
 - ▶ Heavily exuding wounds & infected wounds



Hydrogel

► Properties:

- ▶ Come in sheets & gel high water content facilitates debridement by rehydration

► Wound Types:

- ▶ Sheets are used for shallow wounds & cavity edges
- ▶ Gels are suitable for cavities

► How to use, when to change:

- ▶ Change dressing every 1 to 3 days
- ▶ Apply directly into/onto wound & cover

► **Contradictions:**

- ▶ Heavily exuding wounds
- ▶ Maceration & excoriation of the peri-wound area
- ▶ Infected wounds



Calcium Alginates

▶ Properties:

- ▶ Absorbent dressings, the main purpose of which is haemostasis
- ▶ Forms a gel which conforms to shape of the wound
- ▶ Made from calcium alginate found in seaweed
- ▶ Calcium in the dressing exchanges with sodium in the wound to form a gel

▶ Wound types:

- ▶ Moderate to heavily exuding wounds of all types

▶ How to use, when to change:

- ▶ Remove by irrigating
- ▶ Change dressing every 2 to 7 days.
- ▶ Use secondary dressing

▶ Contradictions:

- ▶ Dry wounds & necrotic wounds



Gelling Fibres



▶ Properties

- ▶ composed of hydrocolloid fibres
- ▶ Sodium carboxymethylcellulose (CMC) spun into a fibre that forms a gel in contact with wound exudate
- ▶ Allows for the absorption & retention of exudate



▶ Wound types:

- ▶ Indicated as primary dressing for management of medium to highly exuding wounds
- ▶ May be useful for infected wounds as “holds” bacteria

▶ How to use, when to change:

- ▶ apply directly to the wound requires at least 1cm margin overlapping surrounding skin to ensure adhesion/reduce leakage/seal wound borders
- ▶ requires a secondary dressing – some are built in

▶ Contraindications:

- ▶ lightly exuding wounds

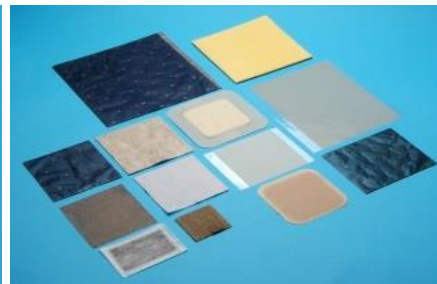
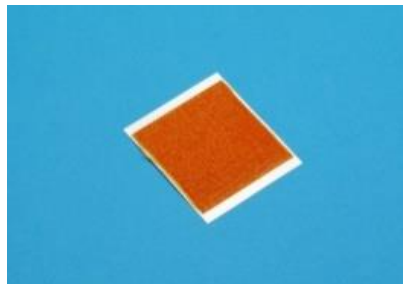


Antimicrobials

Agent	Action
Iodine	10% in dressings or as solution
Cadexomer Iodine	starch microbeads, iodine trapped in 3D lattice
Silver	cell membrane interaction – structural and receptor function damage
Honey	low concentrations of hydrogen peroxide high sugar content draws lymph fluid from beneath the wounds surface
Polyhexamethylene biguanide PHMB Polihexanide	adheres to bacterial cell membranes, causing them to leak potassium ions & other components which results in cell death
Bacteriostatic	fatty acid impregnated that binds to bacteria cells walls & prevents growth
Surfactants Betaine	works directly to break the chemical bonds that cement slough to the wound bed
Gentians violet & methylene blue	works in controlling bioburden without risks of cytotoxicity or residual absorption.

When should antimicrobial therapy be started and stopped?

- ▶ The use of antimicrobial dressings in wound management is recommended for:
 - Prevention of infection in patients at increased risk of wound infection
 - Treatment of localised wound infection
 - Local treatment of wound infection in cases of spreading or systemic wound infection in conjunction with systemic antibiotics. Once started, the effect of antimicrobial dressings on the wound must be closely monitored.
 - A failure to respond or a further deterioration of the wound will indicate the need for a full reassessment to exclude contributing causes other than infection and may indicate the need for an alternative approach or the addition of systemic therapy.
 - For wounds that improve, antimicrobial dressings should be continued for 14–21 days, at which time the need for further antimicrobial therapy should be re-assessed. For most wounds antimicrobial dressings can be stopped at this stage, but careful observation of the wound should continue in case signs of an increasing bacterial load recur



New Technology

- ▶ Collagen
- ▶ Extra cellular matrix modulators
- ▶ Gentians violet & methylene blue New Twist on an Old Favourite
- ▶ Freeze dried placenta
- ▶ Negative Pressure
 - ▶ Disposable units



Case Studies – one per table



What is the management aim?
What is the dressing plan?



Photos accessed from Adv Wound Care (New Rochelle). 2016 Jan 1; 5(1): 32–41.

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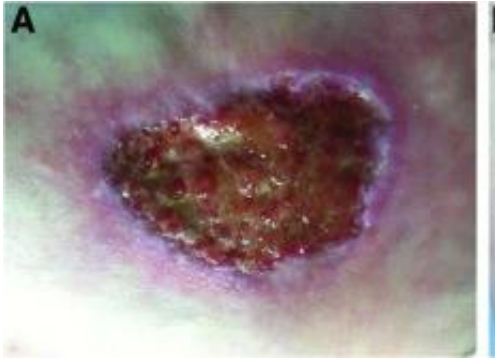
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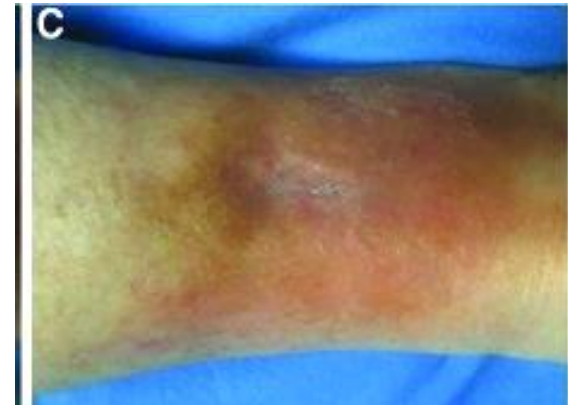
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Take home message

Select the most appropriate dressing according for:

- ▶ Wound bed tissue
- ▶ Colour
- ▶ Volume of exudate
- ▶ Depth of the wound
- ▶ Surrounding tissue



Avoid the dressing sandwich

Follow your wound formulary

If you don't have one – collaborate with others

