

WOUND MANAGEMENT

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DEBRIDEMENT :

“Removal of dead(necrotic) and infected tissue to help in wound healing.”

- It is essential to do thorough **debridement** before proceeding for any advanced dressings/ VAC or even closure/cover.
- Usage of various dressing materials without debridement can cause further damage by trapping the infected tissue underneath and leading to further necrosis and even local or systemic manifestations.

VAC:

- Vacuum Assisted Closure

NPWT:

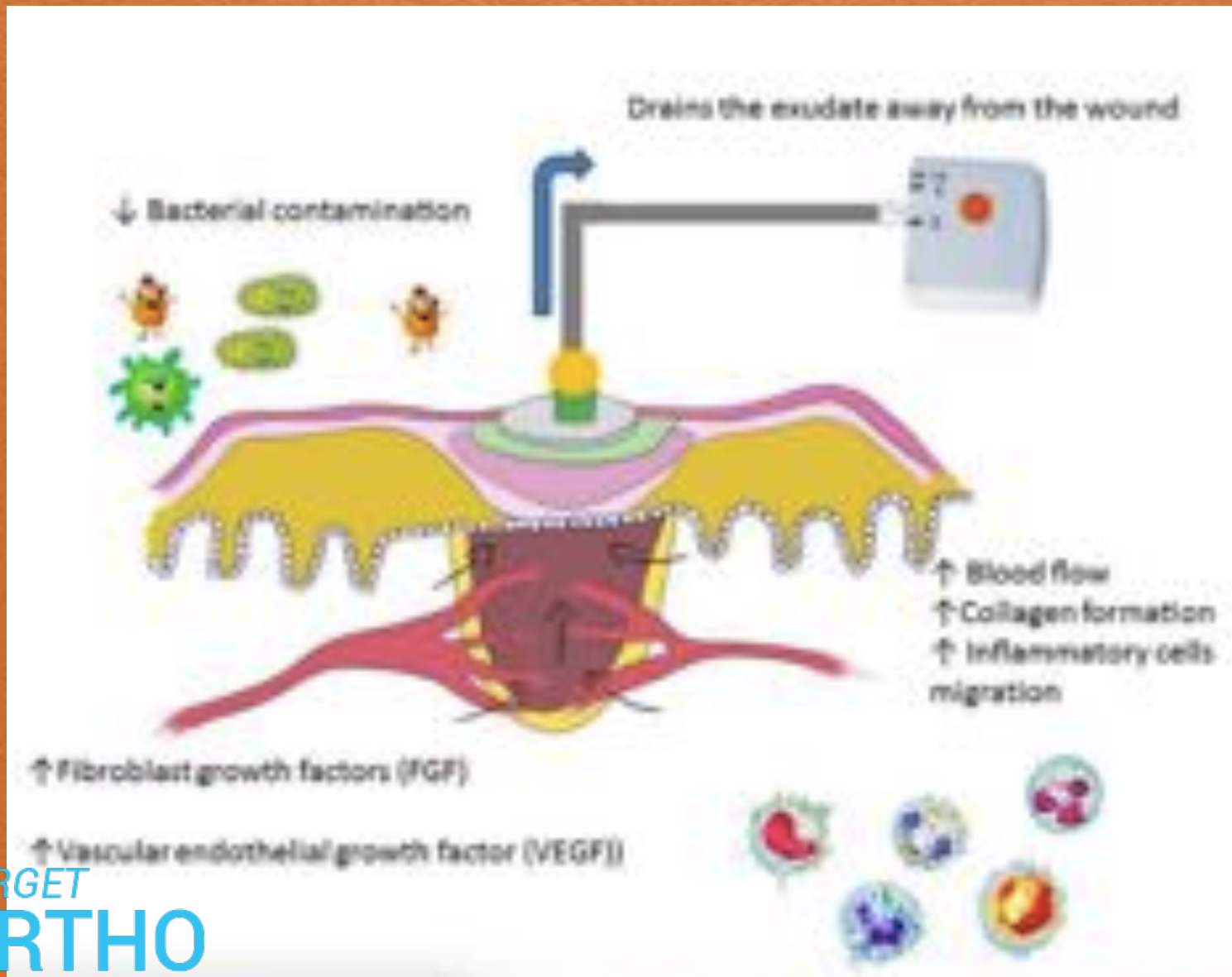
- Negative Pressure Wound Therapy

PRINCIPLE:

The application of negative pressure to a debrided, healing surface leads to :

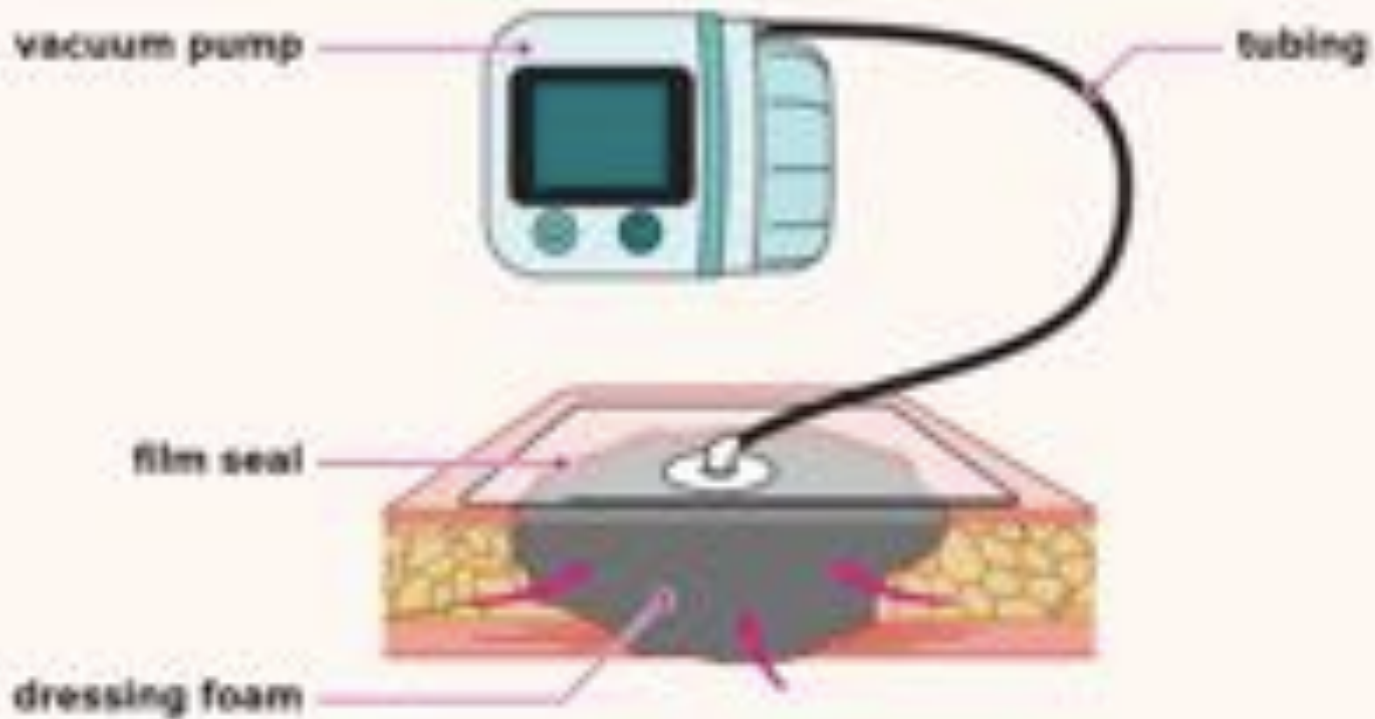
- Angiogenesis
- Wound contraction
- Granulation tissue formation
- Reduced bacterial load

MECHANISM OF ACTION



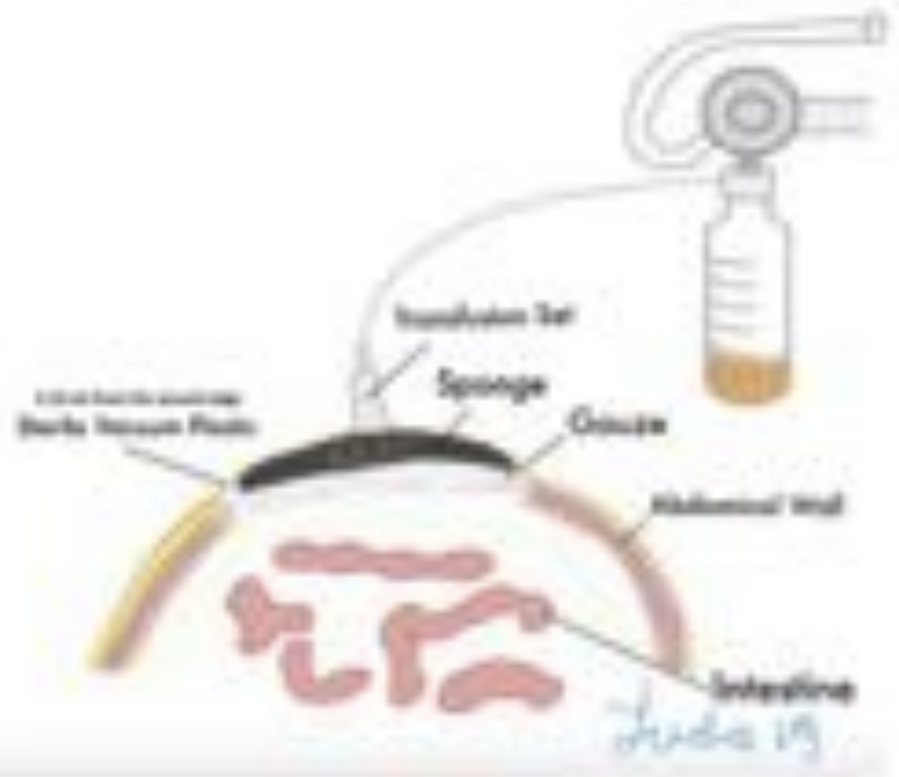
EQUIPEMENT

Wound vacuum





VAC & WALL SUCTION



SETTINGS:

- Continuous or intermittent
- 50 to 125 mmHg. (negative)
- Intermittent mode consists of a cycle of 5 min on and 2 min off phase.
- Intermittent mode and low pressure is used for chronic painful wounds or in case of abdomen.

POINTS TO REMEMBER:

- To debride thoroughly before VAC application
- To apply paraffin mesh (bactigras) over wound to avoid foam intergration into the wound
- To change VAC dressing every 3 days
- To consider debridment again in case of murky collection in canister and fever
- ABSOLUTE CONTRAINDICATION : Acute bleeding surface, slipped ligature!

USAGE:

- Pressure sores
- Exposed bony surfaces
- Chronic ulcers
- Diabetic foot
- Abdomen wounds
- Delayed flap closure

HYPERBARIC OXYGEN THERAPY

WHAT IS HBOT

➤ Hyperbaric oxygen therapy (HBOT) entails breathing pure oxygen in a room/enclosure with high pressure

➤ The HBOT chamber has three times the normal air pressure so that the lungs take in more oxygen

➤ This oxygen-rich blood circulating in the body can help fight bacterial infection or produce growth factors and stem cells to accelerate healing



➤ HBOT helps patients with serious infections, bubbles of air in blood vessels and wounds that won't heal as a result of diabetes or radiation injury





THERAPY:

- 2 or 3 ATA
- 60–90 min each session
- 3 to 5 sessions for acute conditions
- 50–60 sessions for radiation illnesses.
- ABSOLUTE C.I : Impending Pneumothorax
- Side effect : Barotrauma to ear

ANTISEPTIC SOLUTIONS:

- Betadiene : 10% Povidone Iodine solution
: 5% Ointment
- Savlon : Chlorhexidine + cetrimide
- Dettol : Chlorxylenol
- EUSOL : Edinburgh University Solution
1.25gm Boric Acid
1.25gm bleaching powder
100ml NS

SILVER DRESSINGS :

- Silver nitrate cream/gel (silverex) (staining)
- Ionised colloidal silver gel (Megaheal)
- Ionised silver foam dressing (Mepilex Ag)

WHY silver?

- Broad spectrum antimicrobial
- Alters MMP in wounds
- Reduced frequency of dressing

SPECIAL DRESSING MATERIALS:

SILVER FOAM



SILICON/FOAM DRESSING



SKIN SUBSTITUTES

- Burns
- SSG donor sites
- Chronic ulcers
- Dressing/ treatment
- Xenogenic
- Allogenic
- Combined

COLLAGEN:

- Bovine/ porcine
- Dry sheet (applied directly)
- Wet sheet (applied after rinsing in NS due to alcohol solvent)
- Granules (for ulcers)
- Gel (for cavities)
- Temporary dressing till healing occurs by epithelialisation

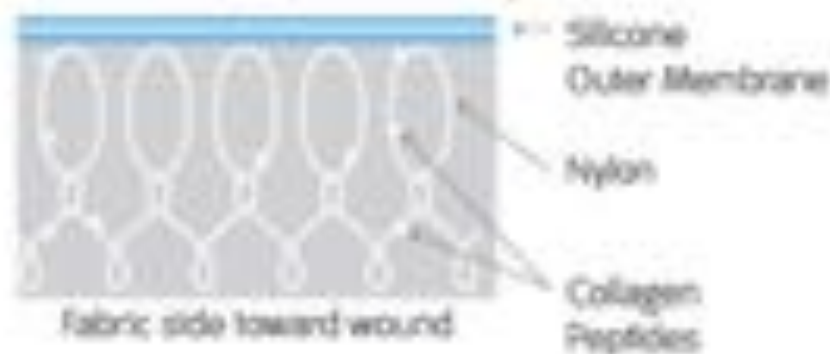


ACELLULAR DERMAL MATRIX (ALLODERM)



BIOBRANE

BIOBRANE (temporary wound dressing)



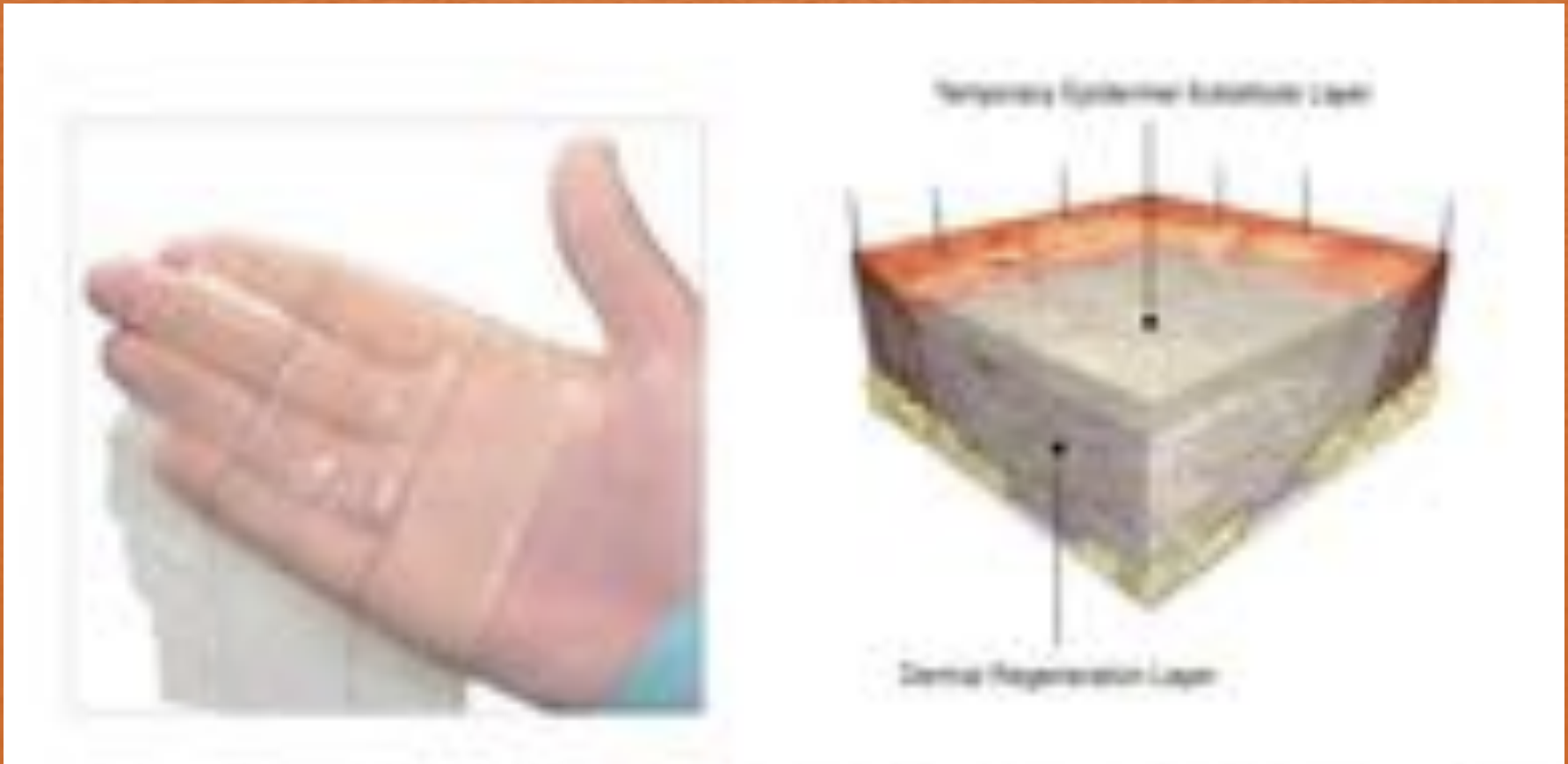
Reduces water vapour loss

- The silicone outer layer acts like a protective epidermal barrier and reduces the water loss from the wound which is essential to avoid wound desiccation
- Allows some water vapour permeability which is beneficial in preventing excess fluid accumulation

Reduces pain

INTEGRA

(permanent dermal matrix)



CADAVERIC SKIN GRAFT

- Allograft
- Cadaver skin grafts
- Temporary substitute
- 60 to 70% burns
- Skin bank
- Problems with infection, sepsis

THANK YOU!

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Youtube – DrPS