

# Wound VAC Therapy 101

## Mechanism of Action

### • Direct Effect

- Creates a pressure gradient
- Promotes fluid transport
- Removes fluid & and infectious materials
- Decreased wound edema
- **Macrostrain**
  - Draws wound edges together
  - Reduces wound size
  - Promotes perfusion & reduces edema

### • Indirect Effect

- Increased local blood flow
- Decreased inflammatory response
- **Decreased MMP activity**
- Decreased bacterial bioburden
- **Microstrain**
  - Cell stretch --stimulates cellular deformity and activity
  - Microdeformation of tissue
    - Increased fibroblast activity/migration
    - Increased VEGF / FGF-2

## Contraindications

- Exposed vital structures
  - vessels, organs, nerves
- Untreated osteomyelitis
- Malignancy in the wound
- Non-enteric / unexplored fistulas
- Necrotic tissue/eschar in the wound

## NPWT Device Options

- Standard NPWT
- Portable NPWT
- Disposable NPWT
- NPWT with instillation
- Incisional NPWT