Wound Care in Disaster Situations

In a disaster, ALL wounds are contaminated. Do not suture Wounds. Suturing Wounds may cause infection. Follow these steps when managing wounds during disasters to prevent infection and further tissue loss.

A. ABC
1. Scene assessment
2. Primary Survey: airway, breathing, circulation, disability, environment/exposure
3. Stop bleeding preferably by direct local pressure.
   Consider use of a tourniquet if direct pressure fails.
   - Record time of tourniquet and remove within 1 – 1.5 hours
   - (upper limb: within 1 hour, lower limb: within 1.5 hours)

B. Baseline Wound Assessment
1. Distal function
2. Associated fractures
3. Underlying structures
4. Need for exploration or extension

C. Control Contamination
1. Anaesthesia: Use anaesthesia if available and indicated
2. Clean: Wash the wound. Use potable (drinkable) water, saline or antiseptic solution. DO NOT use river water or seawater
3. Remove foreign matter: Pick out removable foreign material
4. Scrub the wound to remove embedded foreign material
5. Explore to assess wound and underlying structures. This may require extension of wound margins
6. Excise: Debride to remove remaining foreign material and necrotic and devitalised tissue. This may require trimming or excision of wound edges.

D. Dress, Don’t close, Document
1. Leave wound open
2. Pack wound loosely with moist gauze. Saline soaked is best.
3. Dress with clean, dry dressing
4. Document on dressing, label or case notes: Place, date & time; Procedure; Proceduralist & Plan.

E. Essential medicine, Explain & Elevate
1. Elevate the limb & minimise wound movement
2. Consider Tetanus status – administer Tetanus Toxoid prophylaxis if unimmunised or uncertain
3. Broad spectrum antibiotics
   – Single dose if no established infection
   – IV route if practical
   – Continue if hands, feet or underlying fracture
   – Continue if established infection
4. Elevate or rest an affected limb where possible

F. 48 Hour Follow-up
1. Re-inspect the wound
2. Plan for definitive wound closure if no signs of infection
3. Re-debride and further excise if signs of infection, necrosis or contamination persist

G. Get Specialist Help for:
1. Wounds that can’t be closed
2. Complex Orthoplastic reconstruction
3. Complex wounds in children
4. Decisions about amputation and withdrawal of care

SPECIAL CASES

Splinting
Preferably use a splint in cases of suspected or confirmed fractures; Wounds on the limb: test distal function

Definitive fracture management
Soft tissues are best treated by fracture stabilisation

Amputate
Remove devitalised and mangled tissue/limbs in unsalvageable cases; is surgical input to decision-making possible?

Absence of distal pulses
Or other signs of distal limb ischaemia requires immediate attention

Fasciotomy: (for compartment syndrome)
Should be considered in all limb trauma when pain is out of proportion to injury

Delayed primary closure (2-5 days) where tissue defect
Alternative closure technique with skin graft or flap (local or free); Secondary closure (> 5 days)

Crush injury
Aggressive fluid resuscitation; Alkalisation with bicarbonate; Serum CPK and electrolyte monitoring at 6-hourly intervals

Blunt Injury
Extraction
Amputation indicated when alternative retrieval failed, for life-saving purposes only; Amputation by specialised team in coordinated effort; Maximum limb preservation must be considered