

Third annual Disaster Training Summit workshop on
Wound Management

from the folks at the
Iowa-1 Disaster Medical Assistance Team
HHS/ASPR/OPEO/NDMS/IA-1DMAT



Who sutures?

Which ones do you *not* close?

Wound cleansing

Materials and techniques

Who Will Suture?

Don't close these wounds

- Cannot be adequately cleaned
 - Especially at its deepest point
- Deep, with significant tissue destruction.
 - E.g. crush wounds
- Bites
- Old (>6 hours)
- Occurred in contaminated water

(loose approximation may be indicated in some cases)

Wound Cleansing

No:



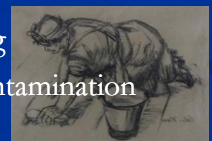
Betadine
 Peroxide
 Soap
 Soaking

Wound Cleansing

- Normal Saline
 - Spray wound at 20 PSI
 (30ml syringe with 18 G needle over 7 seconds)



- Mechanical scrubbing
 - Particulate matter contamination



Wound Cleansing

- Anesthetize for cleansing if necessary
- Explore the wound to its depth.
- Remove foreign bodies
- Debride devitalized tissue



Anesthesia

- Lidocaine 1% (max dose 30 ml)
- Epinephrine?
- 30 G needle
- Inject slowly



Anesthesia

- Lidocaine 1% (max dose 30 ml)
- Epinephrine?
- 30 G needle
- Inject slowly
- Inject through wound



Anesthesia

- Local vs. Nerve Block

Wound Care

Don't damage tissue when suturing

- Be careful with the forceps.
- Sharply remove dead tissue.
- Consider using skin hooks.

Suture Type

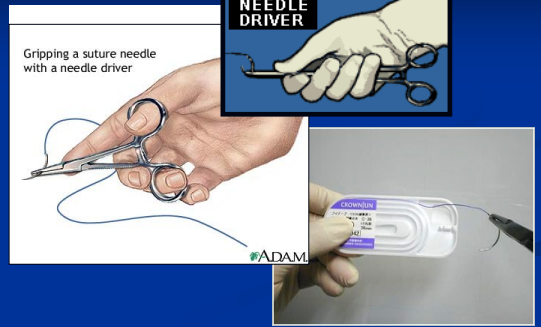
- Monofilament vs. Braided
 - Gut, nylon
 - Silk, polymer
- Absorbable vs. not
 - Gut
 - Nylon

Closure Principles

- Approximate, Don't Strangulate!
- Evert wound edges.
- Tie square knots.



Technique



Technique

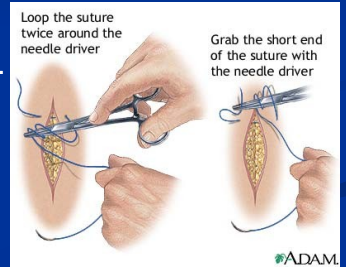
- In on side one
- Out at middle
- In at middle
- Out on side two



No fingers on needle!

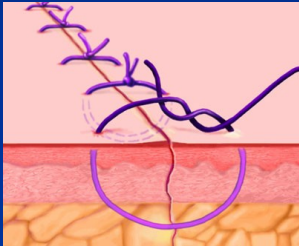
Technique

- Knots
 - 4 for braided
 - 6 for monofil.



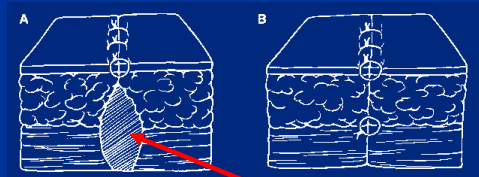
Technique

- Simple interrupted



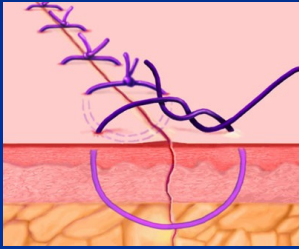
Technique

- Deep stitches, use absorbable material!



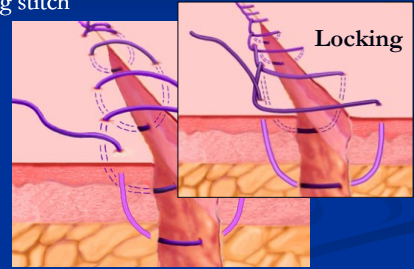
Technique

- Simple interrupted



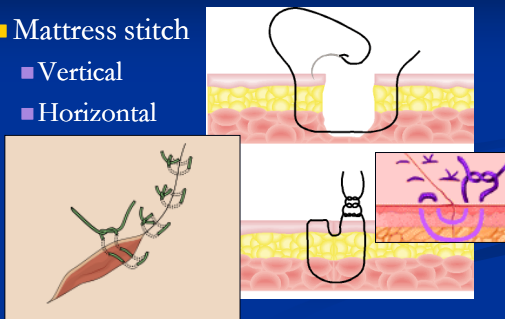
Technique

- Running stitch



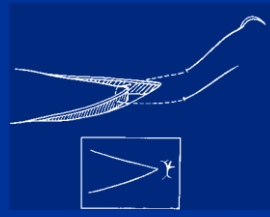
Technique

- Mattress stitch
 - Vertical
 - Horizontal



Technique

- Long lacerations: do "halves"
- Stellate lacerations: do "points"



Technique

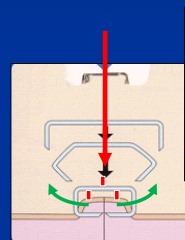
- Skin staples

- Grasp and evert
- Staple and hold
- Grasp and evert
- Release staple
- Staple and hold
- Etc.



Technique

- Skin staples - removal



Dressings

- Antibiotic Ointment?
 - Always on the face.
 - Extremities?
- Non stick Telfa.
- Keep Dry?

Suture Removal

- Face – 3 to 5 days
- Scalp/Trunk - 7 to 10 days
- Hands/Feet – 10 to 14 days

Patient Education

- Discuss wound care.
- Infection risk, signs and symptoms.

Summary

- Who will be suturing?
- Clean and explore the wound.
- Anesthesia
- Suture Techniques

The fine print

- Useful references:
 - www.fammed.washington.edu
 - Pfenninger's Procedures in Primary Care (Mosby)
 - Trotter's Wounds and Lacerations (Mosby)
- Disclaimer:
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