Disclosures

• We have nothing to disclose.
Goals of laceration repair

• Avoid infection
• Achieve hemostasis
• Leave an aesthetically pleasing scar
Suture Types

• Nonabsorbable:
  – Nylon (Ethilon) - black
  – Polypropylene (Prolene) - blue

• Absorbable (name; tensile strength; use)
  – Chromic gut; 10-14d; mucous membranes, nail beds, under casts/splints
  – Fast gut; 4-7d; face
  – Vicryl; 30+ days; deep closure
  – Vicryl rapide; 7-10d; face?, extremities, under casts/splints, mucous membranes
Suture Selection

• Facial lacerations: Absorbable?
  – Fast absorbing gut (5-0)
    • Studies suggest no difference in cosmetic outcome, infection rate, dehiscence, keloid formation, or parental satisfaction.
    • Consider reinforcing with steri-strips.
  – Non-absorbable (6-0)
• Hands and fingers 5-0
• Extremities 5-0 or 4-0
Suture removal

- Face: 3-5 days
- Scalp: 7 days
- Extremity: 7-10 days
- Very high tension area: 10-14 days
Simple Interrupted

Proper technique for wound edge eversion

The proper technique for evverting the edges of a wound is illustrated in the panels on the left.
(A) The needle has been inserted at a 90 degree angle.
(B) The suture loop is as wide at the base as it is at the skin surface. The width and depth of the suture loop are the same on both sides of the wound. In the panels on the right, improper technique has resulted in inversion of the wound edges, which will interfere with wound healing.
(C) The needle has entered the skin at an angle.
(D) The base of the wound is narrower than the skin surface.
“Deep” Subcutaneous

Technique for placing a dermal suture

Absorbable suture material should be used for dermal sutures. The knot is buried by placing the suture using an inverted technique in which the suture loop begins in the dermis. The needle is directed toward the skin surface, exiting near the dermal-epidermal junction. It is then inserted into the opposite side of the wound directly across from the point of exit. The loop is completed in the dermis at the level where the needle was initially placed.
Horizontal Mattress
Technique for closing the corner of a flap: half-buried horizontal mattress

The half-buried horizontal mattress suture combines elements of the horizontal mattress suture with a dermal skin closure and can be used to approximate the corner of a flap. The needle is introduced through the skin in the non-flap portion of the wound. In the dermal (or buried) portion of the suture, the corner of the flap is picked up horizontally through the dermis. The suture loop is completed by bringing the needle out through the skin on the opposite side of the non-flap portion.

Graphic 51901 Version 2.0
Skin Glue (Dermabond)

• Mainly used for clean, well approximate, low tension, hairless* wounds <4 cm.
• Can be used over deep sutures.
• Wound must be hemostatic and dry.
• Don’t forget to evert the edges!
• Can cause a sudden sensation of warmth, otherwise is relatively painless.
• Allow 30 seconds between layers. Achieves full strength by 2 minutes.
Skin Glue (Dermabond)

• Try using a tegaderm with a hole cut in it to prevent runoff.
• In case of emergency (you are stuck to the patient, eyelids are glued shut, etc) apply antibiotic ointment or petroleum jelly for 30 minutes.
Hair Tie/Hair Apposition

Modified hair apposition of scalp wounds

(A) Grasp 3-15 hairs on either side of the wound with hemostats or forceps.
(B) Twist the hairs once until the wound edges appose.
(C) Place one drop of glue on the twist. Do not get glue in the wound.
(D) Repeat the procedure until the laceration is closed.
Additional Resources:

• [https://lacerationrepair.com](https://lacerationrepair.com)
• Physician consultation and referral line (800) 266-0366