Laceration Repair

General Technique cont.

6. Clean and dry: Apply topical antibiotic ointment and cover with dry sterile gauze
   - **Tetanus prophylaxis:** if have not received tetanus prophylaxis in preceding 5 years or if they have not finished primary series.
   - **Antibiotic prophylaxis:** if wound is a bite wound, there is exposed cartilage/joint, or a contaminated wound (esp. on plantar surface)

Table 5. Timing of Suture or Staple Removal

Wound location	*Timing of removal (days)*
Face	3 to 5
Scalp	7 to 10
Arms	7 to 10
Trunk	10 to 14
Legs	10 to 14
Hands or feet	10 to 14
Palms or soles	14 to 21

Mild Traumatic Brain Injury (Concussion)

Sources	**BCH Minor Head Trauma EBG**
Definition	• Traumatic brain injury induced by biomechanical forces; may be caused by direct blow to head/face/neck or blow causing impulsive force transmitted to the head • Neuropathologic changes may result, but these reflect a functional disturbance (no changes on neuroimaging) • Patient must present with history or physical exam signs of minor head injury AND • In children < 2 years: be alert or awaken to voice or light touch • In children ≥ 2 years: have normal mental status, normal neurologic exam, and no evidence of skull fracture
Pathogenesis	• Linear forces: acceleration/deceleration injuries. Less likely to cause LOC, more commonly cause skull fractures, intracranial hematoma, cerebral contusion • Rotational forces: commonly cause LOC, associated with diffuse axonal injury and concussion
Presentation	• Likely indicators of concussion (any/all of below) ▪ Disorientation or confusion immediately after the event ▪ Impaired balance within 1 day after injury ▪ Slower reaction time within 2 days after injury ▪ Impaired verbal learning and memory within 2 days after injury • Signs/symptoms: broad range, categorized within somatic, vestibular, oculomotor, cognitive, emotional/sleep ▪ Headache most common > dizziness > difficulty concentrating > confusion • Loss of consciousness NOT necessary for diagnosis of concussion
Workup	• History: Mechanism of injury, loss of consciousness, whether infant cried immediately, seizure activity, level of alertness after injury, headache, vision changes, and vomiting. • Physical: Full neurological exam, scalp abnormalities (hematoma, tenderness or depression), signs of basilar skull fracture (e.g. periorbital ecchymosis, Battle's sign, hemotympanum, CSF otorrhea or rhinorrhea), bulging fontanelle in infants. • **Use a post-concussion symptom checklist** at time of evaluation - both for facilitating history and tracking recovery (different checklists available based on age of patient)

MTBI (Concussion) continued on next page →

Mild Traumatic Brain Injury (Concussion)

Workup cont.	• PECARN algorithm to determine need for imaging: **For children less than 2 years:** • Any altered mental status or palpable skull fracture • *Other considerations ▪ Non-frontal scalp hematoma ▪ LOC ≥5 seconds ▪ **Severe mechanism of injury ▪ Acting abnormally per parent **For children 2 years and older:** • Any altered mental status or signs of a basilar skull fracture (retro-auricular or periorbital bruising, CSF otorrhea or rhinorrhea, hemotympanum) • *Other considerations: ▪ Any loss of consciousness ▪ History of vomiting ▪ **Severe injury mechanism ▪ Severe headache * If 1-2 of above is present, monitor 4-6 hours and obtain head CT if symptoms worsen or don't improve; If ≥3 above are present, head CT is recommended; If none is present, head CT not recommended **Severe mechanism of injury: Motor vehicle crash with patient ejection, death of another passenger or rollover, pedestrian or bicyclist without helmet struck by motorized vehicle, falls (>3 feet children < 2 years or > 5 feet for children ≥ 2 years) or head struck by high impact object.
Treatment	• Intracranial injury or depress, basilar, diastatic skull fx → NSGY consult & admit • Simple skull fx (i.e <3 mm, non-depressed, single bone) → consider admit if young (<6 mo), d/c home if normal mental status, able to PO, no social concern • Dx of concussion with negative imaging: ▪ DO NOT return to play same day, risk of second-impact syndrome (2nd injury before full recovery → possible cerebral vascular congestion → diffuse cerebral edema) ▪ Physical rest: avoid "bed rest," but limit activity to level that does not provoke/increase sx ▪ Cognitive rest: academic adjustments as needed to reduce symptom exacerbation ▪ **Complete cognitive rest and avoidance of screen time NOT recommended** ▪ PT for patients suffering from vestibular or oculomotor dysfunction ▪ No sports until asymptomatic and cleared by a physician, emphasize individualized course, warn of possible persistent symptoms beyond 1 month (See *Graduated Return-to-Sport Program*) ▪ Refer if: Symptoms > 4 weeks, lack of progression, confounding by coexisting conditions

Graduated Return-to-Sport Program

	Aim	Activity	Goal
1	Symptom-limited activity	Daily activities that do not provoke symptoms	Gradual reintroduction of work and/or school activities
2	Light aerobic exercise	Walking or stationary cycling at slow-to-medium pace; no resistance training	Increase heart rate
3	Sport-specific exercise	Running or skating drills; no activities with risk of head impact	Add movement
4	Noncontact training drills	Harder drills (eg, passing drills and team drills); may begin progressive resistance training	Exercise, coordination, and increased thinking during sport
5	Full-contact practice	After medical clearance, participate in full, normal training activities	Restore confidence and allow coaching staff to assess functional skills
6	Return to sport	Normal game play	Full clearance/participation

Recommend **48 hr of relative physical and cognitive rest before beginning the program**. No more than 1 step should be completed per day. If any symptoms worsen during exercise, the athlete should return to the previous step. Consider prolonging and/or altering the return-to-sport program for any pediatric and/or adolescent patient with symptoms over 4 wk.