PAIN OF DENTAL ORIGIN

Reversible pulpitis
- Cavity approaching pulp of tooth
- Transient pain with hot, cold or sweet stimuli
- Tx = filling*

Irreversible pulpitis
- Cavity into pulp of tooth
- Spontaneous, prolonged, poorly localized pain
- Tx = root canal or extraction*

Periapical periodontitis
- Cavity causes pulp necrosis & periapical inflammation
- Spontaneous, prolonged, localized pain, tooth tender to percussion
- Tx = root canal or extraction*

Periapical abscess
- Localized purulent form of periapical periodontitis
- Spontaneous, prolonged, localized pain, tooth tender to percussion
- Tx = I and D if ‘pointing’; no antibiotics unless cellulitis; root canal or extraction*

Cellulitis
- Periapical periodontitis involves soft tissue
- Tx = Rx Pencillin: Adults 500mg tid; Children 50mg/kg per day divided (Erythromycin if allergic); root canal or extraction

Pericoronitis
- Food and bacteria under gum of erupting molar
- Tx = irrigation; removal of gum flap; or extraction

* While waiting for definitive treatment, treat pain adequately, and counsel to avoid aggravating food/drinks.

ORAL TRAUMA

Triage
- Airway
- Other systemic injuries
- Neurologic exam
- Primary vs. permanent teeth
- Availability of dental care
- Pain management
- Check Tetanus status
- Remind patient – wear a mouth guard

Examination
Order
- Irrigate to remove blood, clots, and debris
- Soft tissues
- Teeth
- Bony structures

Check for:
- Tenderness, swelling, lacerations
- Damaged or mobile teeth
- Malocclusion
- Mobile jaw segments
- Pain or limitation on opening

If missing teeth:
- Do not assume missing teeth are lost at scene
- Consider x-ray to determine if missing teeth are:
  - swallowed
  - aspirated
  - intruded into sinus or other structures

Traumatized permanent teeth

Subluxation
- Tooth is not mobile/displaced but tender on biting
- Tx = Monitoring with dentist

Extrusive or Lateral Luxation
- Tooth is loose with some displacement
- Tx = Repositioning, splinting, +/-root canal

Intrusive Luxation
- Tooth is pushed deeper into its socket
- Tx = Repositioning, splinting, +/-root canal
- More complications than for other luxations

Avulsion
- Tooth is knocked out
- Tx = A true dental emergency!
  - Hold tooth by crown only, DO NOT touch root
  - Rinse off debris with saline or milk
  - Re-implant immediately
  - Bite on gauze or hold tooth in place
  - Check Tetanus status; booster if necessary
  - Rx Penicillin (Erythromycin if allergic)
  - See dentist immediately for radiograph, splinting, and root canal treatment.
  - If can’t re-implant on scene, transport in saline, milk, or buccal sulcus (not water!)

Traumatized primary teeth

- Luxated teeth that are very loose or interfering with occlusion are extracted
- Luxated teeth that are not too loose are monitored
- Intruded teeth are variable and often grow back out; should be evaluated and monitored by a dentist
- Avulsed teeth are NOT reimplanted
**Fractured Teeth**

- **Enamel only**
  - Tx = Dental referral non-urgently to smooth rough edges and long term monitoring

- **Enamel plus dentin**
  - Tx = Dental referral with 12 hours for restoration to protect pulp and decrease sensitivity*

- **Enamel, dentin and pulp**
  - Pulp will be visible (either bleeding or pale pink)
  - Pain can be severe
  - Tx = Immediate dental referral for root canal treatment, restoration and long term monitoring or extraction.*

- **Root fracture**
  - Tooth may or may not be mobile depending on fracture location
  - Other traumatic tooth injuries may be present
  - Radiograph mandatory for diagnosis
  - Tx = Immediate dental referral for splinting, root canal therapy or extraction.*

*If fragments available, keep hydrated in saline or milk

**Alveolar Bone Fractures**

- Often associated with gingival laceration
- Palpate alveolar ridge for step-offs (can often see teeth are at different heights in mouth)
- Segmental alveolar fractures move when assessing tooth mobility
- Tx = Oral surgeon referral within 1 hour. Reduction easier before swelling occurs

**Chin trauma**

- Suspect and inspect for:
  - Mandibular condyle fracture
  - Tooth fracture (including posterior teeth)

**Oral piercings**

- High risk for:
  - Tooth fracture or injury
  - Stud aspiration
  - Allergic reaction
  - Speech impediment
  - Gum/tongue infection
  - Gingival recession

**PERMANENT TOOTH CHART**

For describing teeth when charting or talking to consultants:

**GENERAL PRINCIPLES**

- Locate origin of oral pain.
- Consider non-dental origin:
  - Sinusitis
  - Otitis media / otitis externa
  - Oral ulcerations
  - Temperomandibular joint

- Assess and treat origin of problem.
- Treat pain with narcotics, NSAIDs and acetaminophen.
- Consult as needed.

**INJURY PREVENTION: MOUTH GUARDS**

- Mouth guards should be worn for all sports with risk of high impact accidents which include:
  - Soccer
  - Bicycling
  - Lacrosse
  - Boxing
  - Inline Skating
  - Skateboarding
  - Wrestling
  - Basketball
  - Field Hockey
  - Baseball

(Note: falls, violence, and MVAs are also high risk events for oral injuries)

- Mouth Guard types:
  - Stock: inexpensive, fair protection
  - Boil and Bite: better fit, best fabricated with aid of dentist.
  - Custom: most expensive; made by dentist; best fit/protection and most likely to be worn.