

The most common injury site is the maxillary (upper) central incisors accounting for more than 50% of all dental injuries. Oral injuries typically result from falls, bike and car accidents, sports-related injuries, and violence. The mouth is also a common site for non-accidental trauma, and child abuse should always be considered in a child presenting with oral trauma.
Permanent Dentition Peak Incidence: boys 9-10 years of age.

Caring for a Patient with Dental Trauma

Clinical examination

Examine the face, lips and oral muscles for soft tissue lesions.

Palpate the facial skeleton for signs of fractures.

Inspect the dental trauma region for fractures, abnormal tooth position, tooth mobility, and abnormal response to percussion.

Questions relating to the injury

Where did the injury occur? Screening for wound contamination.

How did the injury occur? This may lead to identification of the impact zones.

When did the injury occur? Many dental injuries are time sensitive and prognosis is dependent on prompt treatment.

Was there a period of unconsciousness? If so, will require medical attention.

Is there any disturbance in the bite? If so, prompt referral to a dentist is indicated.

Is there any reaction in the teeth to cold and/or heat exposure? If so, pulpal irritation has occurred.

****When in doubt and for additional consultation, take a picture and email it to a dental provider on call.**

Crown Fracture of Permanent Incisor without Pulp Exposure



Findings:

Fracture of a crown that involves enamel and dentin only with no pulp exposure. The crown of the tooth does not bleed but there may be bleeding in the gingival sulcus.

Treatment:

Inspect injured lips, tongue, and gingiva to rule out presence of tooth fragments. Referral to a dentist within 24-48 hours. The fracture will be restored with a composite dental restoration. If the tooth is also mobile and/or displaced, immediate referral to a dentist to determine if additional treatment is necessary.

Inform Parent:

- Fractured tooth should be restored to guard pulpal health.
- Fractured tooth requires clinical and radiographic follow-up.
- Fractured tooth should be monitored for potential color changes.

Crown Fracture of Permanent Incisor with Pulp Exposure



Findings:

Fracture of a crown that involves enamel, dentin and pulp tissues. The crown of the tooth will appear to "bleed" due to pulp exposure. Tooth may or may not be mobile and injury is often painful.

Treatment

Immediate referral to dentist for evaluation and treatment. Exposed pulp tissue will be treated or removed to prevent further infection of remaining pulp tissues.

Inform Parent:

- The "nerve" of the tooth has been exposed and prompt treatment is necessary.
- Definitive treatment is dependent on size of exposure, age of tooth and restorability of tooth structures.
- Guarded prognosis and increased risk for secondary inflammation or infection requiring additional treatment.

Subluxation of Permanent Incisor



Findings:

Subluxation involves injury to supporting structures of the tooth. The tooth is tender to percussion and there will be bleeding in the gingival sulcus. The tooth is loose but is not displaced.

Treatment:

Refer to dentist for prompt evaluation as the tooth may require splinting.

Soft diet for 2 weeks.

Follow-up pending clinical and radiographic findings.

Inform Parent

- Monitor for changes in tooth color that may indicate pulpal necrosis.
- Monitor health of soft tissues and seek immediate treatment if pain or swelling arise.

Dental Trauma – Permanent Teeth

Luxation of Permanent Incisor



Findings:

Luxation involves injury to the tooth and its supporting structures, resulting in tooth displacement. The injured tooth is at risk for pulpal necrosis and root resorption. Depending on the severity of luxation, occlusion may be compromised.

Treatment:

Immediate referral to a dentist for repositioning and splinting of the injured tooth/teeth.

Inform Parent:

- This injury is time sensitive and requires prompt treatment.
- Luxated teeth require close clinical and radiographic follow-up.
- Luxated teeth often display pulpal necrosis and require future root canal treatment.
- Guarded prognosis.

Intrusion of Permanent Incisor

Intruded permanent teeth



Findings:

An intrusion injury is the most severe type of luxation injury of a permanent tooth. The intruded tooth is impacted into the alveolar bone, and the alveolar socket is fractured. The intruded incisors may appear short or barely visible and is often mistaken as being a fractured incisor.

Treatment:

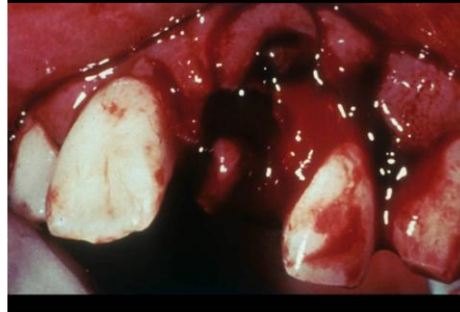
Immediate referral to dentist for evaluation and treatment. Tooth may require manual or orthodontic forces to reposition and long-term stabilization.

Inform Parent:

- Intrusion of a permanent incisor is a significant dental injury.
- Treatment is complex and requires close follow-up by the dental provider.
- Guarded prognosis and increased risk for secondary inflammation or infection requiring additional treatment such as root canal treatment or extraction.
- Oral hygiene is critical during the healing period.

Avulsion of Permanent Incisor

Avulsion site



Findings:

The tooth is completely displaced *out* of its socket. Clinically the socket is found empty or filled with a coagulum.

Treatment :

If a tooth is avulsed, make sure it is a permanent tooth

- primary teeth should not be replanted.
- TIME SENSITIVE TOOTH INJURY.

Find the tooth and pick it up by the crown. Avoid touching the root.

If the tooth is dirty, wash it briefly (10 seconds) under cold running water and reposition it. Do not scrub the tooth surface. Try to encourage the patient/parent to replant the tooth and to bite on a handkerchief to hold it in position.

If this is not possible, place the tooth in a suitable storage medium, e.g. a glass of milk or a special storage media for avulsed teeth if available (e.g. Hanks balanced storage medium or saline). Avoid storage in water!

Seek emergency dental treatment to ensure proper re-implantation and stabilization.

**if the avulsed tooth is not found, a chest x-ray may be needed to rule out potential aspiration.

Inform Parent:

- Avulsion of a permanent tooth is a severe dental injury requiring immediate treatment and frequent follow-up care.
- Prognosis is very guarded and avulsed teeth may require root canal treatment or extraction.
- Oral hygiene is critical during the healing period.