

Acute Management of an Avulsed Permanent Tooth with an Open (>1 mm) Apex

Instructions to Individual at Site of Avulsion

- Seek medical attention if loss of consciousness, signs of neurological impairment, or other major medical concerns.
- Rinse avulsed tooth gently in milk, saline, or saliva; use care not to touch root with fingers.
- If possible, replant avulsed tooth.
- If unable to replant tooth, place in physiologic storage medium (milk, Hank's Balanced Salt Solution [HBSS], saliva, or saline).
- Seek immediate dental treatment.

Upon Arrival to Dental Facility

- Perform general neurological assessment (See also *Acute Traumatic Injuries: Assessment and Documentation*¹).
- If tooth was not previously replanted or stored in physiologic medium, gently rinse with saline, milk, or HBSS to remove visible surface contaminants then store in physiologic medium.
- Review medical history (including tetanus immunization status) and details of injury.
- Complete clinical and radiographic evaluations.
- Consider taking photographs.
- Evaluate for abuse.

Tooth has been replanted before arrival to the dental facility

Confirmation of Positioning

- Verify the correct position of the tooth clinically and radiographically.
- Reposition if necessary.

Tooth has not been replanted prior to arrival (Prognosis, but not treatment, will change based on placement in physiologic storage medium versus dry storage before arrival to dental facility.²)

Preparation for Replantation

- Anesthetize area, giving consideration to using block injection techniques and no vasoconstrictor.
- Irrigate socket with gentle stream of sterile saline, removing coagulum.

Replantation

- Replant tooth slowly and gently.

Stabilization

- Stabilize the tooth using a passive, flexible wire or nylon fishing line bonded with composite. Placement should allow area to be cleansable.
- *Exception:* Alveolar or jaw fracture requires a more rigid splint.

Postoperative Management: Prescriptions, Splint Removal, and Follow-Up

- Prescribe 7-day course of antibiotics (eg, amoxicillin or penicillin; alternative for penicillin-allergic patients; doxycycline has demonstrated antiresorptive, anti-osteoclastic, anti-inflammatory, and antibacterial effects).
- Prescribe chlorhexidine mouth rinse 2 times/day for 2 weeks.²
- Refer to medical professional for tetanus booster as needed.
- At 2 weeks, remove splint (unless bony fracture occurred) and confirm stability. Evaluate clinically and radiographically for pulpal revascularization, infection, pulpal necrosis, and root resorption.
- Initiate pulpal revascularization, apexification, or root canal treatment as soon as definitive clinical and/or radiographic pathology presents.²
- Frequent, regular follow-up evaluations (eg, every 4 weeks) are indicated initially.

References

1. American Academy of Pediatric Dentistry. Acute traumatic injuries: Assessment and documentation. The Reference Manual of Pediatric Dentistry. Chicago, IL: American Academy of Pediatric Dentistry; 2025:700-1.
2. Fouad AF, Abbott PV, Tsilingaridis G, et al. International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 2. Avulsion of permanent teeth. Dent Traumatol 2020;36:331-342. Available at: "https://doi.org/10.1111/edt.12573". Accessed August 13, 2025.

Acute Management of an Avulsed Permanent Tooth with an Closed (<1 mm) Apex

Instructions to Individual at Site of Avulsion

- Seek medical attention if loss of consciousness, signs of neurological impairment, or other major medical concerns.
- Rinse avulsed tooth gently in milk, saline, or saliva; use care not to touch root with fingers.
- If possible, replant avulsed tooth.
- If unable to replant tooth, place in physiologic storage medium (milk, Hank's Balanced Salt Solution [HBSS], saliva, or saline).
- Seek immediate dental treatment.

Upon Arrival to Dental Facility

- Perform general neurological assessment (See also *Acute Traumatic Injuries: Assessment and Documentation*¹).
- If tooth was not previously replanted or stored in physiologic medium, gently rinse with saline, milk, or HBSS to remove visible surface contaminants then store in physiologic medium.
- Review medical history (including tetanus immunization status) and details of injury.
- Complete clinical and radiographic evaluations.
- Consider taking photographs.
- Evaluate for abuse.

Tooth has been replanted before arrival to the dental facility

Confirmation of Positioning

- Verify the correct position of the tooth clinically and radiographically.
- Reposition if necessary.

Stabilization

- Stabilize the tooth using a passive, flexible wire or nylon fishing line bonded with composite. Placement should allow area to be cleansable.
- *Exception:* Alveolar or jaw fracture requires a more rigid splint.

Postoperative Management: Prescriptions, Root Canal Treatment, Splint Removal, and Follow-Up

- Prescribe 7-day course of antibiotics (eg, amoxicillin or penicillin; alternative for penicillin-allergic patients; doxycycline has demonstrated antiresorptive, anti-osteoclastic, anti-inflammatory, and antibacterial effects).
- Prescribe chlorhexidine mouth rinse 2 times/day for 2 weeks.²
- Refer to medical professional for tetanus booster as needed.
- Initiate root canal treatment (eg, calcium hydroxide) within 2 weeks of replantation.²
- At 2 weeks, remove splint (unless bony fracture occurred) and confirm stability; rigid splint placed for bony fracture should remain for 4 weeks.
- Follow-up evaluations: 1 month, 3 months, 6 months, 12 months, and annually for 5 years.

Tooth has not been reimplemented prior to arrival (Prognosis, but not treatment, will change based on placement in physiologic storage medium versus dry storage before arrival to dental facility.²)

Preparation for Replantation

- Anesthetize area, giving consideration to using block injection techniques and no vasoconstrictor.
- Irrigate socket with gentle stream of sterile saline, removing coagulum.

Replantation

- Replant tooth slowly and gently.

References

1. American Academy of Pediatric Dentistry. Acute traumatic injuries: Assessment and documentation. The Reference Manual of Pediatric Dentistry. Chicago, IL: American Academy of Pediatric Dentistry; 2025:700-1.
2. Fouad AF, Abbott PV, Tsilingaridis G, et al. International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 2. Avulsion of permanent teeth. Dent Traumatol 2020;36:331-342. Available at: "https://doi.org/10.1111/edt.12573". Accessed August 13, 2025.