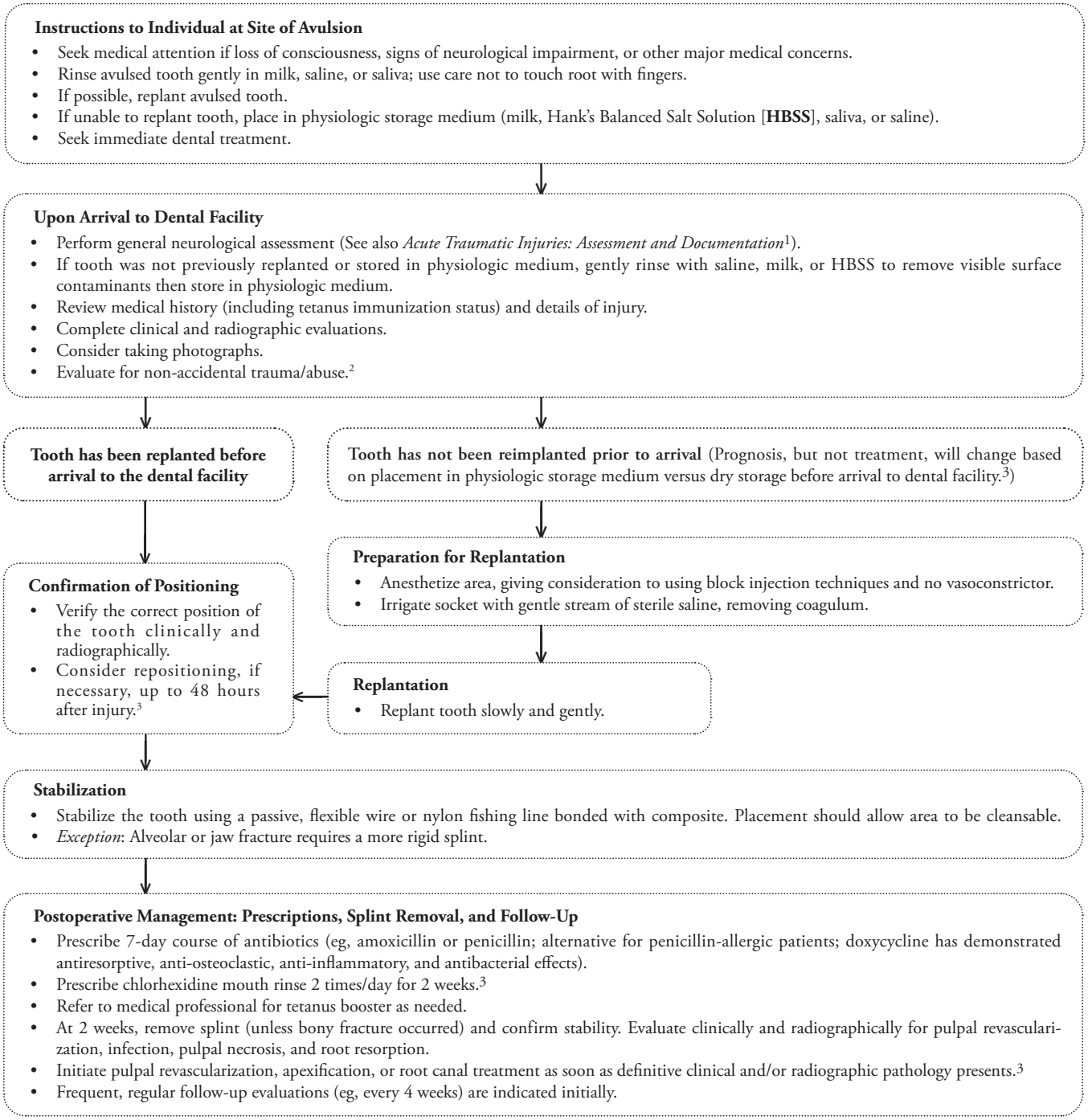
Acute Management of an Avulsed Permanent Tooth with an Open (≥1 mm) Apex



Adapted with permission: McIntyre J, Lee J, Trope M, Vann WJ. Permanent tooth replantation following avulsion: Using a decision tree to achieve the best outcome. *Pediatr Dent.* 2009;31(2):137-144.

References

1. American Academy of Pediatric Dentistry. Acute traumatic injuries: Assessment and documentation. *The Reference Manual of Pediatric Dentistry*. American Academy of Pediatric Dentistry; 2026:728-729.
2. American Academy of Pediatric Dentistry. Policy on recognition and management of child abuse and neglect in a dental setting. *The Reference Manual of Pediatric Dentistry*. American Academy of Pediatric Dentistry; 2026:80-83.
3. 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. DOI: 10.1111/edt.12573

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 non-accidental trauma/abuse.[2]

Tooth has been replanted before arrival to the dental facility

Confirmation of Positioning

- Verify the correct position of the tooth clinically and radiographically.
- Consider repositioning, if necessary, up to 48 hours after injury.[3]

Tooth has not been reimplanted prior to arrival (Prognosis, but not treatment, will change based on placement in physiologic storage medium versus dry storage before arrival to dental facility.[3])

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, 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.[3]
- Refer to medical professional for tetanus booster as needed.
- Initiate root canal treatment (eg, calcium hydroxide) within 2 weeks of replantation.[3]
- 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.

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