

The Extruded Permanent Tooth: information for dentists

Before the accident your tooth was held in place by fibers and cells called the periodontal ligament. These fibers were torn apart and many of the cells were damaged as the tooth was torn from its location in the bone.

What do we know?

- When extruded teeth are repositioned they are quite likely to be retained for a lifetime¹.
- The longer the tooth has been extruded without repositioning, the more difficult repositioning becomes because a blood clot forms that makes repositioning less successful. By 48 hours it is unlikely the tooth can be repositioned to its original location.
- About 40% of extruded teeth require root canal treatment, usually within the first year (chance of dental pulp death increases with increased extrusion)¹.
- The dental pulps ('nerves') of about 40% of extruded teeth become smaller with time but remain alive and do not require any treatment¹.
- The crown might become darker with time as the dental pulp ('nerve') becomes smaller.

Responsibilities of the dentist

- Inform patient/parent/caregiver of the prospects/outcomes of repositioning the tooth
- Attempt to reposition the tooth if the patient/parent/caregiver wishes
- Prevent/control infection
- Splint the tooth and remove the splint at the appropriate time
- Begin/complete root canal treatment if required

Responsibilities of the patient/parent/caregiver

- Allow radiographs for diagnosis of damage
- Cooperate for repositioning/splinting
- Comply with instructions if antibiotic coverage is required
- Return for post-operative splint removal/radiographs at the appropriate times as described by the dentist.

Management of extrusions

Two periapical radiographs at different angles at the time of trauma. Reduce the extruded tooth and stabilize it with a flexible splint for up to 2 weeks^{2,3,4}

Examination/radiographs at 2 weeks, 3 months, 6 months, 12 months
Parents/patient should be informed of the signs and symptoms of pulp necrosis. Clinical and radiographic tests for vitality are required for the first year and radiographic vigilance for alterations in the dimensions of the pulp canal. Do not perform prophylactic root canal treatment for asymptomatic pulp canal obliteration.

1. Lee R, Barrett EJ, Kenny DJ: Clinical outcomes for permanent incisor luxations in a pediatric population: II. Extrusions. Dent Traumatol 2003;19:274-9

2. Andreasen FM, Andreasen JO. Luxation injuries. In: Andreasen JO, Andreasen FM, eds. Textbook and Color Atlas of Traumatic Injuries to the Teeth, 3rd edn. Copenhagen: Munksgaard; 1994. p. 318.

3. Roberts G, Longhurst P. Luxation injuries. In: Roberts G, Longhurst P, eds. Oral and Dental Trauma in Children and Adolescents. Oxford: Oxford University Press; 1996. p. 76.

4. Oikarinen K. Tooth splinting. A review of the literature and consideration of the versatility of a wire-composite splint. Endod Dent Traumatol 1990;6:237-50