

# The Knocked-out Permanent Tooth: Information for Patients, Parents and Caregivers

Before the accident, the tooth was held in place by fibres and cells called the periodontal ligament. The fibres were torn apart and many of the cells were damaged, either by the accident or because of the length of time out of the mouth. *If the tooth has been out of the mouth more than 5 minutes, it will never be the same again.* That means that if it is put back in, it will have to be extracted sooner or later.

## Things that can cause a tooth to fail

- Infection can lead to the root rapidly dissolving (months to a year).
- The tooth can become part of the bone and simply dissolve over time (year(s)).
- The child can grow while the tooth remains in its same position. The tooth will appear “short” and will have to be removed (year(s)).
- The tooth can dissolve just below the crown and snap off; the root must be extracted (years).

## What do we know?

- After 5 minutes, the periodontal ligament (the tissue that normally attaches the tooth to the bone) will not heal by its normal mechanism.
- Teeth that are so young that the root has not fully formed have very poor survival prospects (months to a year).
- Dentists can prevent infection by completing root canal treatment before putting the tooth back.
- Replanted teeth in youth over 16 have better prospects for longer (years) survival than those in pre-adolescents.

## Responsibilities of the patient, parent or caregiver

- Allow radiographs for diagnosis of damage.
- **Decide whether the tooth should be replanted or left out of the mouth.**
- Cooperate in the replantation, splinting and root canal treatment.
- Comply with instructions if antibiotic coverage is required.
- Return for post-operative splint removal and radiographs at the appropriate times as described by the dentist before replantation (usually splint removal before 2 weeks and radiographs at that time, at 6 weeks, 6 months, 12 months, then yearly).

## Responsibilities of the dentist

- Determine extra-alveolar duration and storage conditions.
- Inform the patient or parent of the prospects and outcomes of replacing the tooth.
- Attempt to replant the tooth if the patient, parent or caregiver wishes.
- Prevent or control infection.
- Splint the tooth and remove the splint at the appropriate time.
- Begin or complete root canal treatment.

**Time out of the mouth is the most important factor determining eventual failure. Immature roots and adolescent growth (that produces submerging teeth) can also reduce the chances for long-term survival of replanted teeth.**

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