

## **The Knocked-out Permanent Tooth: information for patients/parents/caregivers**

Before the accident the 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 either by the accident or by 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.*** This 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 cause the tooth root to rapidly dissolve (months to a year).
- The tooth root can become part of the bone and dissolve slowly (year(s)).
- The tooth may become attached to bone and remain in the same location as the child grows. During adolescent growth the tooth will appear 'shorter' and may later be extracted (year(s)).
- The tooth root can dissolve just below the crown and snap off (years).

### **What do we know?**

- After 5 minutes the damaged periodontal ligament (the tissue that attaches the tooth to bone) will not produce new periodontal ligament but will heal by alternate means.
- Teeth that are so young 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 replantation.
- Adults over 18 have better prospects for extended tooth survival than pre-adolescents or adolescents (years).

### **Responsibilities of the dentist**

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

### **Responsibilities of the patient/parent/caregiver**

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

**Time out of the mouth is the most important reason for eventual tooth removal. Immature roots and adolescent growth (that produces submerging teeth) reduce chances for long-term survival of replanted teeth. Fully-grown youths and adults have the best prognosis for survival of replanted teeth.**