

## Management of acute dental trauma

In the workplace, oral and facial injuries are generally related to head or neck trauma. Occasionally, workers with catastrophic or multiple traumas may also sustain dental traumas that can be overlooked and not acutely dealt with, as the more serious injury treatment may take precedence. However, oral facial injuries can result in disfigurement and dysfunction that can have significant negative effects on an individual's quality of life. A worker with fractured, displaced, or lost teeth can have improved outcomes with appropriate first aid measures and early dental treatment.

Crown fractures and luxations (teeth pushed sideways or out of or into their socket) are the most common of all dental injuries. Prompt, correct emergency management is vital to the prognosis of an injured tooth. Treatment strategy after injury to a permanent tooth is dictated by the concern for vitality of the pulp tissue. All traumatized teeth require continued periodic monitoring, as long-term sequelae can include necrosis (pulp tissue death) and subsequent need for urgent treatment.

A fractured tooth can usually be restored or the fractured fragment reattached. If cold air or liquids cause

pain in a fractured tooth, biting on a clean, moist piece of gauze or cloth may help reduce symptoms until the tooth is examined and treated by a dentist. When pulp tissue in the tooth is exposed or damaged because of a fracture, root canal therapy may be

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necessary. A vertical fracture extending into the root of a tooth usually requires extraction, while in a horizontal root fracture, the closer the fracture is to the root tip, the better the chances for long-term health of the tooth.

If a tooth is avulsed (knocked out completely) due to an injury or accident, it does not necessarily mean the tooth has been lost for good. Proper emergency action can result in a tooth being replanted successfully and lasting for many years. Treatment within 30 minutes offers a greater chance to save a tooth. If an avulsed tooth can be located immediately, handle it carefully and pick it up by the crown, without touching the root surface. If

the root is dirty, gently rinse with water, do not use soap or chemicals, and do not scrub or dry the tooth. Avoid wrapping the tooth in tissue or a cloth and instead, if possible, immediately replace the tooth in the socket and gently push it into position and hold it in place with fingers or by closing the teeth together. Keeping the tooth moist is very important. If the tooth cannot be replaced in the socket, place the tooth in the mouth next to the cheek or in milk or tooth preservation solution. A dentist should be seen within 30 minutes, if possible, for evaluation and treatment. Even if the tooth cannot be reattached, the exam may pick up other injuries: sometimes neighboring teeth suffer an injury that can only be detected by a thorough dental examination.

A luxated tooth must be repositioned and stabilized by a dentist. Root canal treatment is often required and usually not initiated for at least a few days following injury.

Health care professionals should be prepared to give appropriate advice to patients on first aid for injured teeth. If you would like additional information or assistance for a worker patient with acute dental trauma, please contact a WorkSafeBC dental consultant through a medical advisor in your nearest WorkSafeBC office.

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*This article is the opinion of WorkSafeBC and has not been peer reviewed by the BCMJ Editorial Board.*

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