

• splint the tooth to the adjacent two or three teeth

Splinting is the appropriate immediate choice of therapy for most root fracture injuries of **permanent** teeth. Endodontic therapy may be needed later if the tooth becomes necrotic. Doing nothing may be tempting if the tooth seems quite stable. However, splinting the tooth will provide additional stability while eating; and it will reduce the chance for additional injury to an already compromised tooth. **Important:** Fractures in the **middle third** of the root have the **poorest prognosis**. However, splinting still is the treatment of choice.



Notes

1. **Fixed splinting**, as opposed to flexible splinting, is the preferred approach for **root fractures**. **Note:** 0.032 to 0.036 SS wire and bonded composite is commonly used.
2. Currently the standard monitoring period for fixed splinting for root fractures is **3 months**.
3. Approximately **75%** of permanent teeth with root fractures maintain their vitality.
4. Treatment of root fractures of the **apical third** of the root has by far the **best prognosis**. You have a better chance of stabilizing and maintaining the vitality of the tooth if you are confronted with a fracture in this area. The reason is that more surface area of the root is in an approximate position with the alveolus with this type of injury
5. These teeth should be monitored aggressively, with follow-up clinical and radiographic evaluations every 3 to 6 months for the first year. Any sign of necrosis or resorption warrants initiation of root canal therapy immediately.
6. Root fractures involving primary teeth are **relatively uncommon** because the more pliable alveolar bone allows displacement of the tooth.
7. Splinting **is not** recommended in the primary dentition.
8. Fractured maxillary anterior teeth occur most often in children with Class II, Division I malocclusion (*maxillary anteriors are flared*).
9. For an **avulsed permanent tooth**, the composite resin retained arch wire splint has been advocated as the best system to use. To allow for **flexibility**, a light orthodontic wire or a 30- to 60-pound test monofilament fishing line can be used. It should be left in place for 1-2 weeks maximum to prevent **ankylosis**.