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What's in your box?



1

Disclosures

- None

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Objectives

- Describe relevant anatomy
- Understand the major classifications of dental trauma
- Understand approach to dental blocks
- Understand options for stabilization and reimplantation of displaced teeth.
- List solutions for hemorrhage control
- Identify materials needed for common dental emergencies

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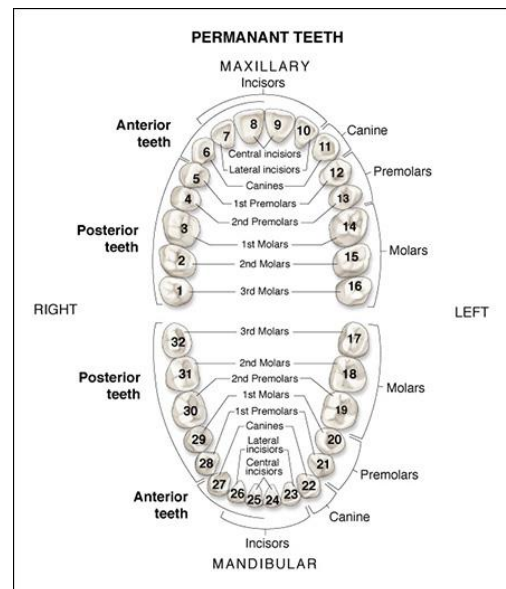
Anatomy

Adult Dentition

- 32 Teeth

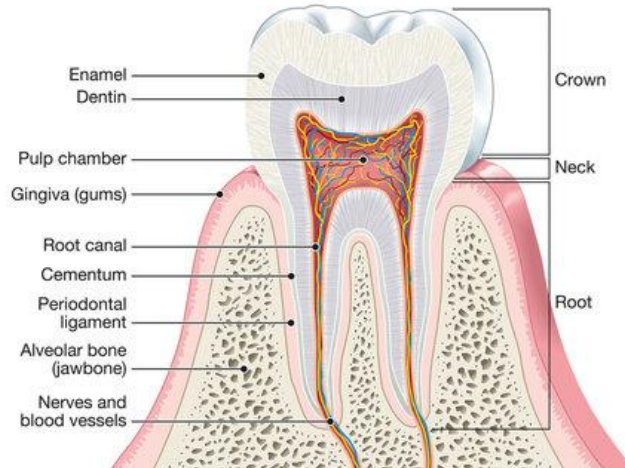
Pediatric Dentition

- 20 Primary (deciduous) teeth

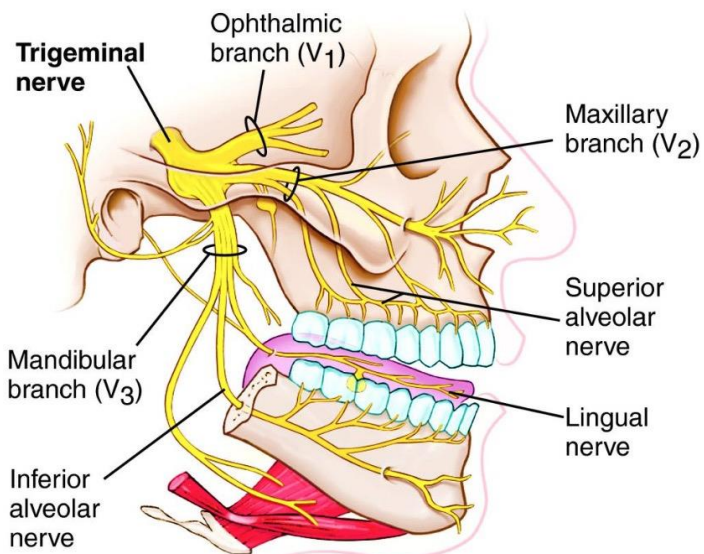


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Tooth anatomy



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https://operativeneurosurgery.com/doku.php?id=trigeminal_nerve

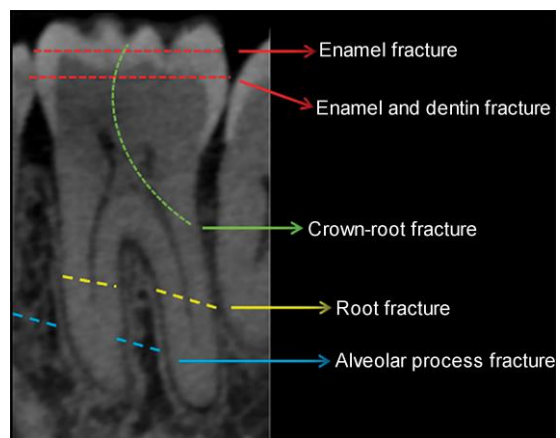
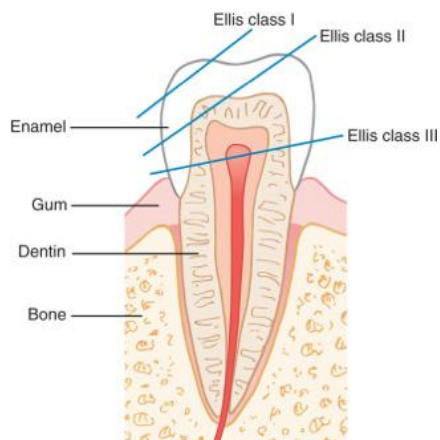
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Exam Tips

- Have suction/irrigation available
- Bleeding?
- Malocclusion?
- Loose, displaced, or avulsed teeth?
- Movement where there shouldn't be?

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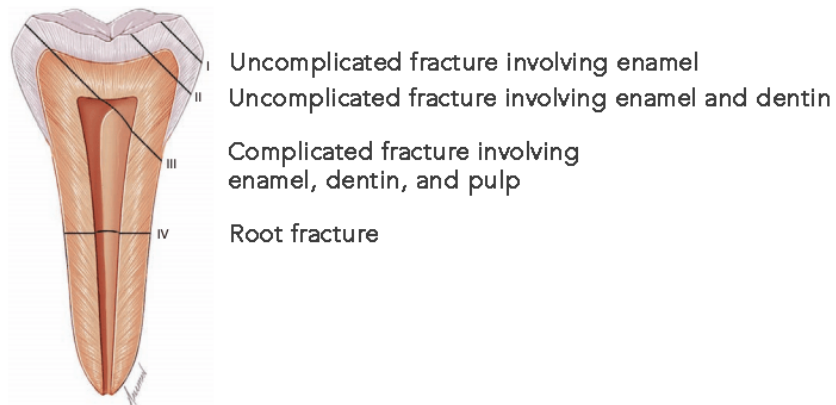
Dental Fractures



Loureiro, R. M., Naves, E. A., Zanello, R. F., Sumi, D. v., Gomes, R. L. E., & Daniel, M. M. (2019). Dental emergencies: A practical guide. *Radiographics*, 39(6), 1782–1795. <https://doi.org/10.1148/rg.2019190019>

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Dental Fractures



Hupp J, Ellis E, Tucker M. Contemporary Oral and Maxillofacial Surgery. Elsevier; 2019

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Dental Fractures

Uncomplicated Fracture

- Ellis 1 and 2
- Through enamel, or enamel and dentin
- Outpatient dental follow up
- Fragments may be bonded

Complicated Fracture

- Ellis 3
- Involves pulp
- Significant pain, sensitivity
- Will need extraction vs root canal

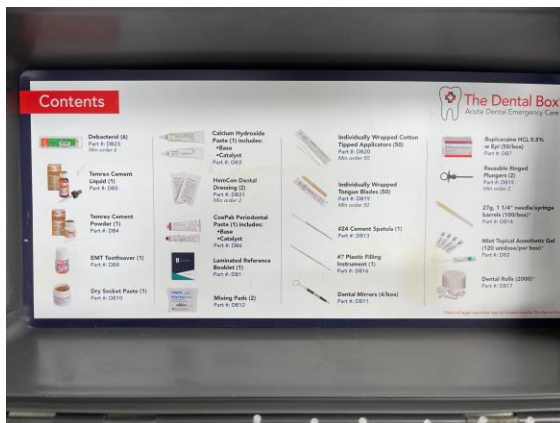
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- Ellis III/Complicated fracture

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What's in your box?



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Ca Hydroxide paste



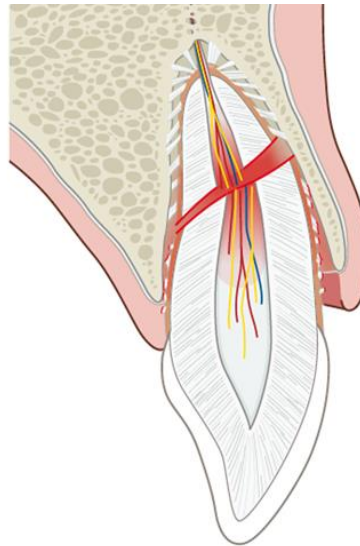
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No box?



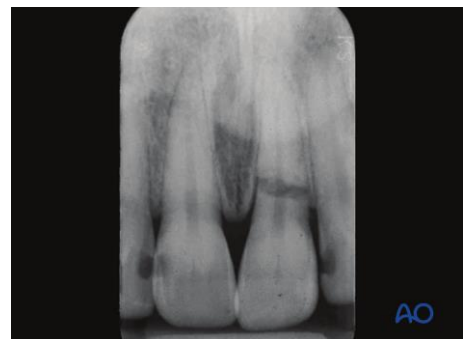
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Root Fracture



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Root Fracture



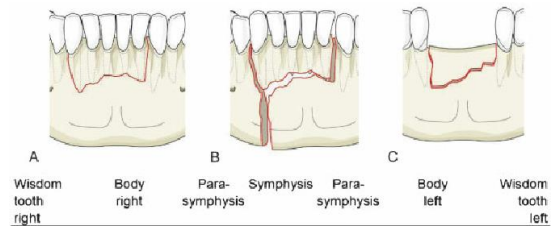
<https://surgeryreference.aofoundation.org/cmf/trauma/dentoalveolar-trauma/tooth-fracture-root-fracture/definition>

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Alveolar Fracture



Auld, David & Wright, Graeme. (2010). The Initial Management of Dento-Alveolar Trauma in General Dental Practice. Dental update. 37. 286-8, 291. 10.12968/denu.2010.37.5.286.



Cornelius, Carl & Audigé, Laurent & Kunz, Christoph & Rudderman, Randal & Buitrago-Téllez, Carlos & Frodel, John & Prein, Joachim. (2014). The Comprehensive AOCMF Classification System: Mandible Fractures-Level 3 Tutorial. Craniomaxillofacial trauma & reconstruction. 7. S031-S043. 10.1055/s-0034-1389558.

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Let's splint...in a bit

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Concussions, Luxations, and Avulsions oh my!

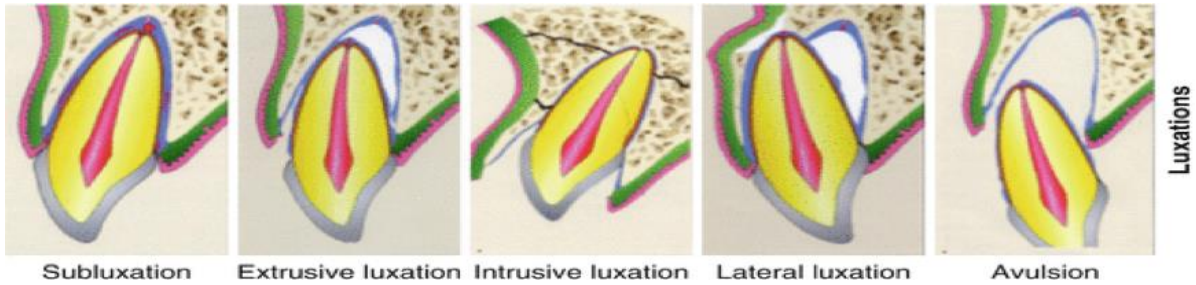
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Dental Concussion

- Supporting tissues are injured, but intact.
- Clinical tenderness
- No mobility

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Luxations and Avulsion



<https://emdaily.cooperhealth.org/content>

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Treatment

- Concussions and Subluxation
 - Soft diet, NSAIDs prn, f/u with dentist
- Luxation
 - Splint
 - Emergent dental f/u

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Treatment

- Avulsion
 - Clean
 - **Gently** irrigate tooth and socket with saline
 - Re-implant ASAP (within 2-3 hrs)
 - Splint
 - Emergent dental f/u
- If cannot re-implant promptly
- Preserve the tooth
 - Hank solution
 - Sterile saline
 - Milk



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Splinting



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COE-PAK



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COE-PAK periodontal paste

- Tongue depressor
- Basin of water
- Mixing pad
- Tips:
 - Keep gloves wet
 - Sticks to anything dry

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COE-PAK

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No COE-PAK?

Dermabond and Metal splint

- Nasal bridge from N95
- paperclip

Tips:

- Keep it dry!
- Use nasal canula to continuously dry teeth/gums
- Gauze or cotton pledgets
- Apply dermabond to mesial and distal edges of the tooth as well

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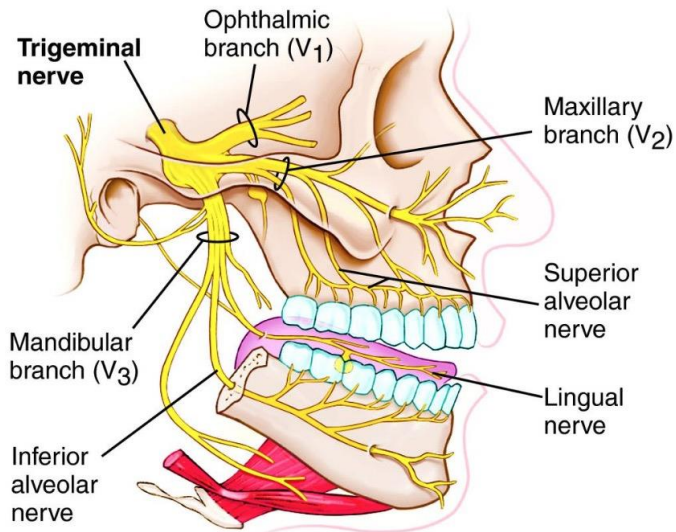


<https://www.aliem.com/trick-of-trade-dental/>

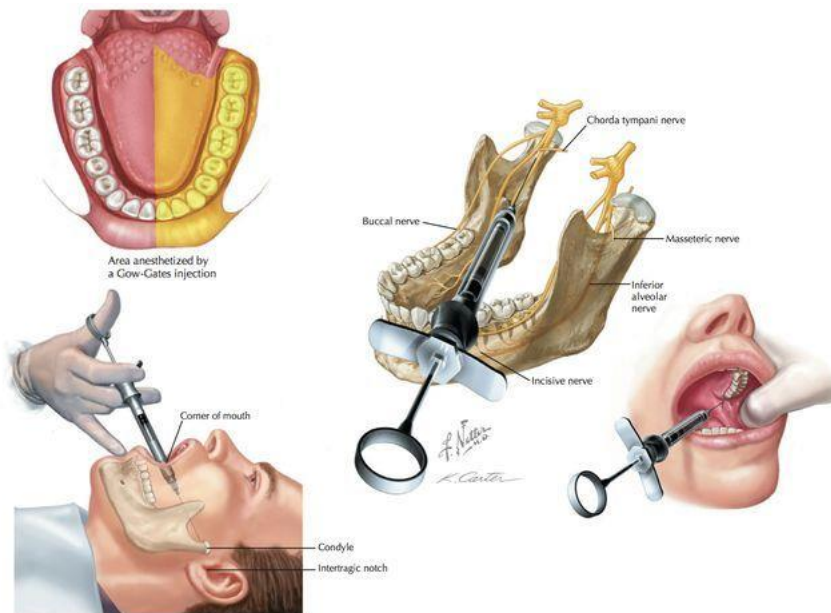
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Dental blocks

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Gow-gates Block

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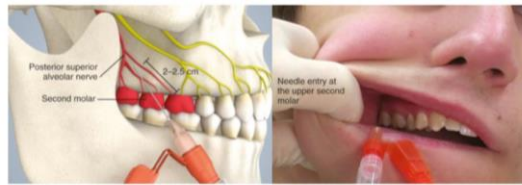


Figure 2: For the posterior superior alveolar nerve, enter just posterior to the root of the second molar. [1]

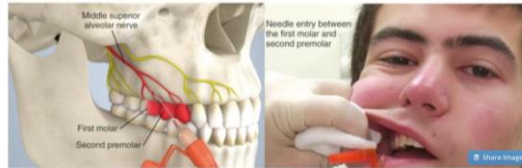


Figure 3: For the middle superior alveolar nerve, enter between the first molar and second premolar. [1]



Figure 4: For the anterior superior alveolar nerve, enter just above the canine tooth. [1]

<https://www.nuemblog.com/blog/oral-nerve-blocks>

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Oral hemorrhage

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Oral Hemorrhage

- Common presentation
- Often iatrogenic
- Consideration of underlying medical conditions
- Complicated by anticoagulants

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Oral
Hemorrhage
Control-
What's in
your box?



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What's in
your box?



37

What's in
your box?



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No Box?



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Still Bleeding?

- Lidocaine with epi
 - Inject directly
- TXA
 - On pledget, gelfoam, surgicel
- Topical thrombin
- Tea bags
 - can soak with txa
- Bone wax



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Questions?



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References

1. Loureiro, R. M., Naves, E. A., Zanello, R. F., Sumi, D. v., Gomes, R. L. E., & Daniel, M. M. (2019). Dental emergencies: A practical guide. *Radiographics*, 39(6), 1782–1795. <https://doi.org/10.1148/rg.2019190019>
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3. Beaudreau R: Oral and Dental Emergencies. In Tintinalli J, Kelen G, Stapczynski S: Emergency Medicine: A Comprehensive Study Guide, 6th edition, New York, McGraw-Hill 2004
4. Auld, David & Wright, Graeme. (2010). The Initial Management of Dento-Alveolar Trauma in General Dental Practice. Dental update. 37. 286-8, 291. 10.12968/denu.2010.37.5.286.
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