



I NEED TO SEE A  
DENTIST

ONE OF MY CANINES  
IS GETTING LOOSE

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# DENTAL EMERGENCIES!

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# DISCLOSURES

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- No disclosures

# LEARNING OBJECTIVES

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- Be able to recognize a dental emergency
- Be able to recognize the treatment required to make a diagnosis of an abscess
- Be able to recognize different dental block techniques
- Be able to recognize different acute dental treatments

# DENTAL EMERGENCIES IN THE ER

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- Dental visits accounted for 1.5% of ED visits
- There are about 2 million visits for non traumatic dental problems in the ED
- Most ED's are not equipped to provide proper dental care
- Second most common discharge diagnosis in ages 20-39
- Associated with being uninsured or no dental coverage
- Resulted in increase in opioid and antibiotic prescriptions
- These are significant and costly to public health

# DENTAL BOX

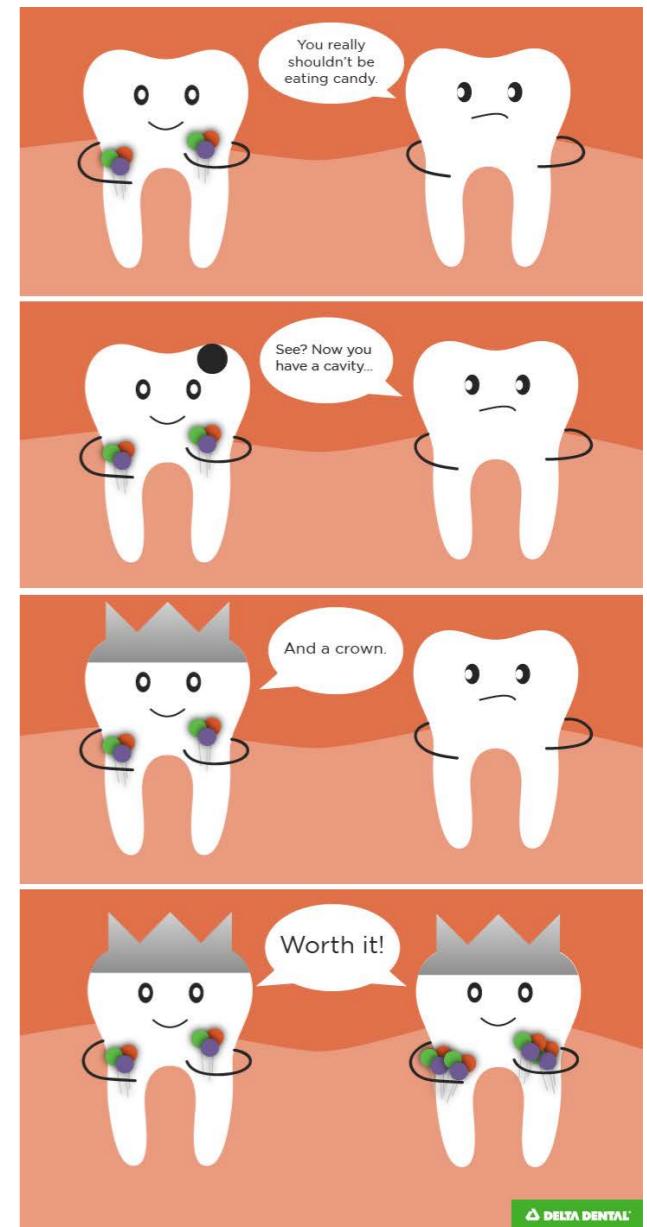
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- Local Anesthetic
- Packing
- Temporary Cement
- Periodontal Dressing
- CaOH paste
- Applicators
- Basic instructions

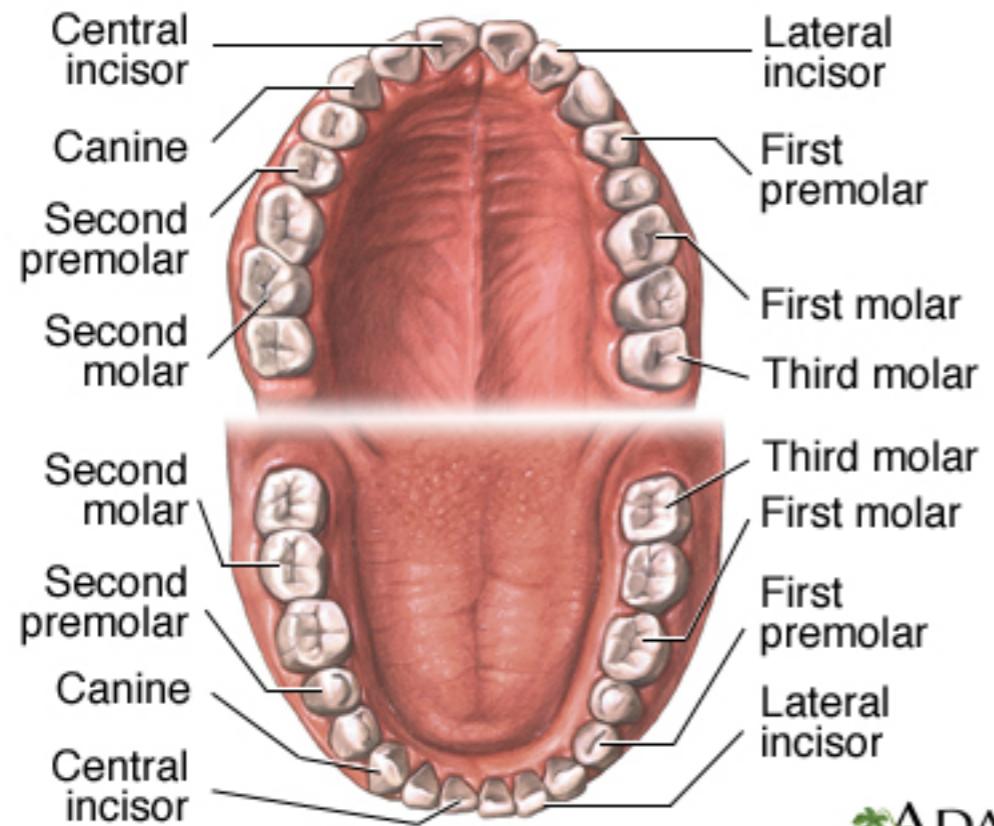
# COMMON DENTAL CONCERNS

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- Odontalgia (toothache)
- Dental Caries
- Loose or Displaced Teeth
- Dry Socket
- Fractured tooth
- Dental Abscess

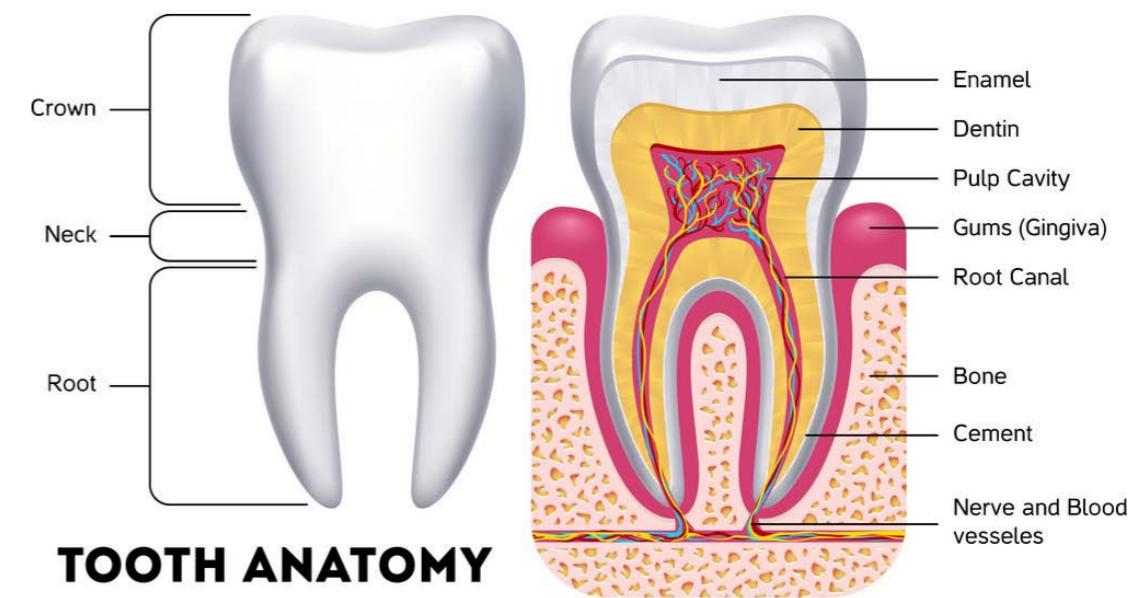


DELTA DENTAL



ADAM.

# DENTAL ANATOMY



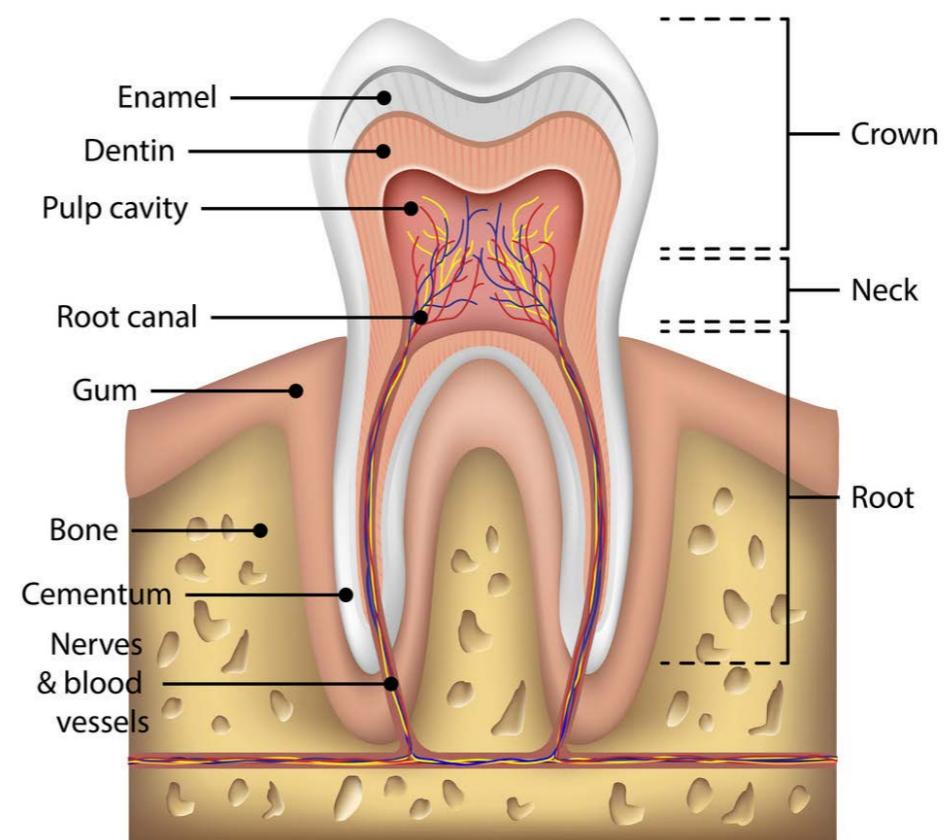
TOOTH ANATOMY

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# ODONTALGIA

- Painless structures
  - Enamel
- Innervated structures (painful)
  - Dentin
  - Pulp
  - Periodontium



# ODONTALGIA

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- Pulpitis
- Bacterial
  - cavities or tooth decay
- Traumatic
  - impact injury, fractured tooth
- Chemical
- Management
  - Dental Blocks
  - NSAIDs
  - Narcotics
  - Antibiotics
    - irreversible vs reversible pulpitis



# PULP OR DENTIN FRACTURES

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- perform a dental block
- apply a small amount of the calcium hydroxide paste over the fractured or caried tooth using a q-tip
- it hardens within minutes
- if there is bleeding from the tooth may put a few drops of lido with epi onto the tooth pulp and have pt bite into gauze
- Make sure the tooth is dry!

# DRY SOCKET

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- occurs after you have a permanent adult tooth extracted and a blood clot at the site fails to develop or dislodges before the wound has healed
- treatment
  - can do a dental block
  - gently irrigate the socket
  - use a cotton tip applicator and apply a small amount of dry socket paste to the socket
  - warm salt water rinses
  - follow up with a dentist in 24-48 hours

## BROKEN OR LOOSE CROWNS

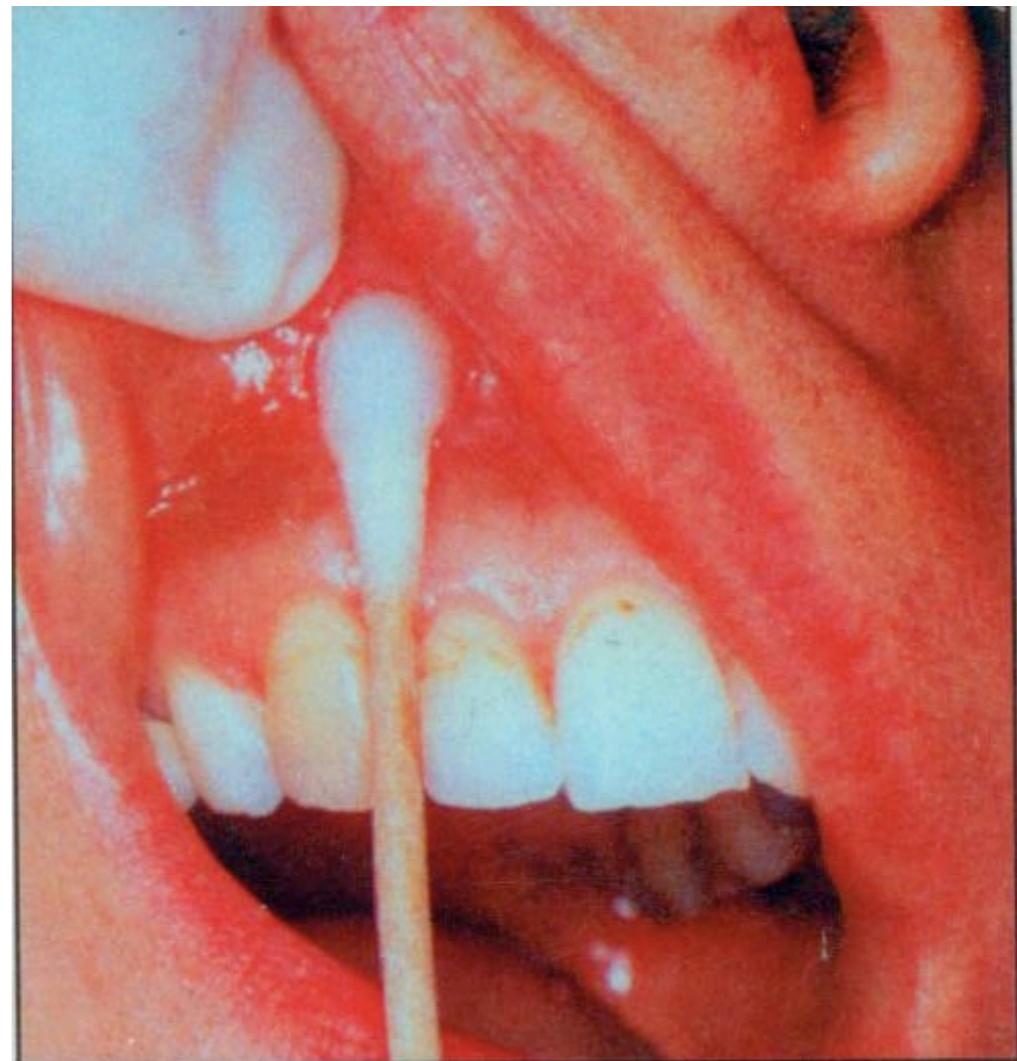
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- may use tempered cement
- use 1 scoop of powder and 2-3 drops of liquid
- apply the mixture onto the crown, cap, or deep carie
- setting time is 4-6 minutes
- use less liquid if using to fill deep cavities (1 drop)

# TOPICAL BENZOCAINE

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- Dry the area well
- Rub onto the mucosal injection site
- Onset in 2-3 minutes
- Lasts about 10 minutes
- Complications
  - Allergic reaction
  - Methemoglobinemia



# LOCAL ANESTHETICS

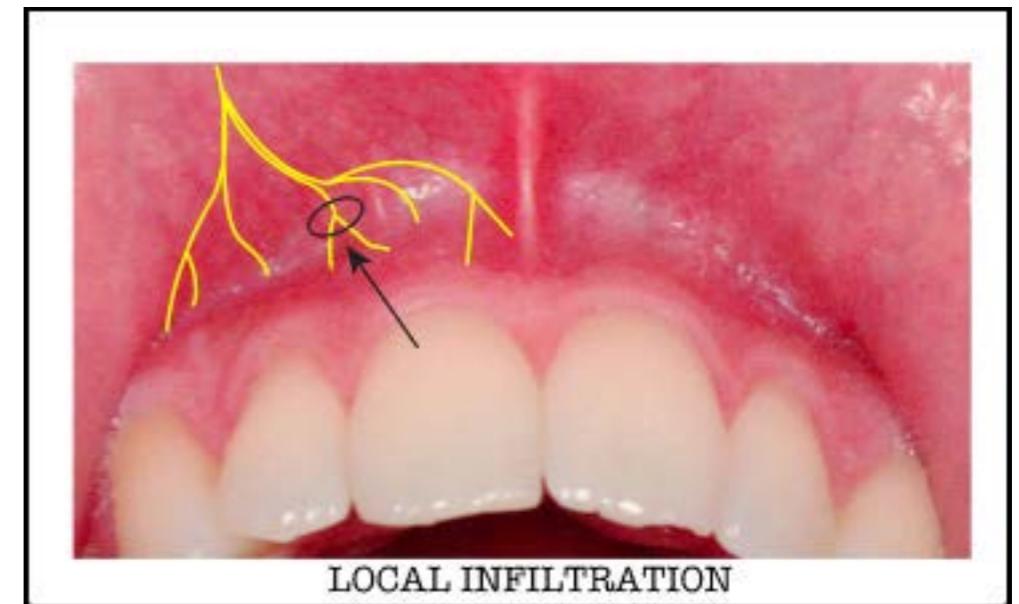
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Local Anesthetic	Maximum Dose
Bupivacaine 0.5% with epinephrine	2 mg/kg (max = 200 mg)
Lidocaine 1% with epinephrine	7 mg/kg (max = 500 mg)

# SUPRAPERIOSTEAL INFILTRATION

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- Used for 1-2 individualized teeth
- Primarily for maxillary teeth
- technique
  - advance the needle 3-4 mm into the mucobuccal fold while keeping the needle parallel to the teeth
  - Aspirate
  - inject 1-3 cc of anesthetic at the alveolar bone at the root of the tooth



**Figure 5. Supraperiosteal Injection**



at the height of  
mucobuccal fold

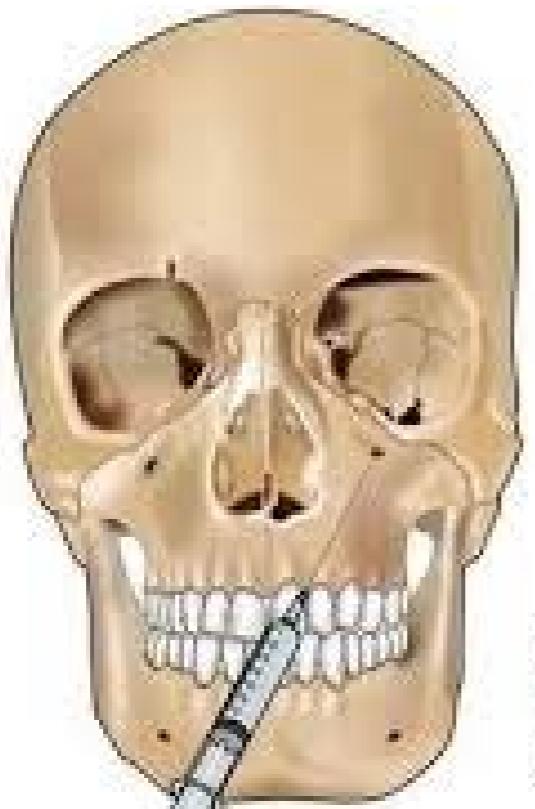
# INFRAORBITAL NERVE BLOCK

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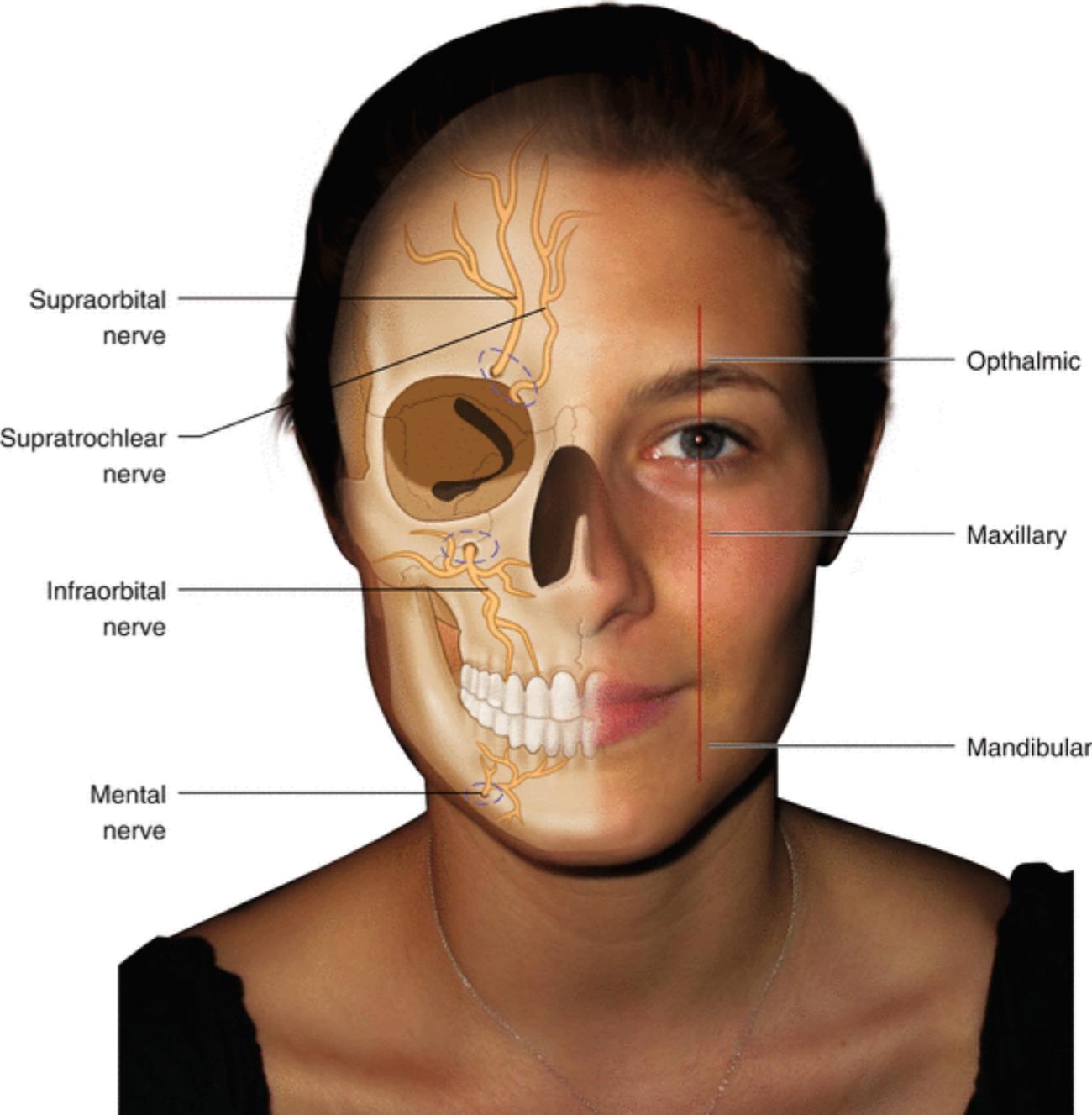
- Anesthesia to upper lip, lateral nose, lower eyelid, cheek, canine teeth to central incisors.
- Technique
  - Advance needle over the 1st premolar fossa to the infraorbital foramen
  - Have the index finger palpate the infraorbital foramen and the thumb retract the lip
  - Aspirate
  - inject 2-3 cc near the foramen then massage into cheek



**Figure 13-20.** Insert the needle for anterior superior alveolar (ASA) nerve block in mucobuccal fold over maxillary first premolar.



**Fig.17.11:** Infraorbital nerve block—Central incisor approach. The position of the point of the needle is in the vicinity of infraorbital foramen

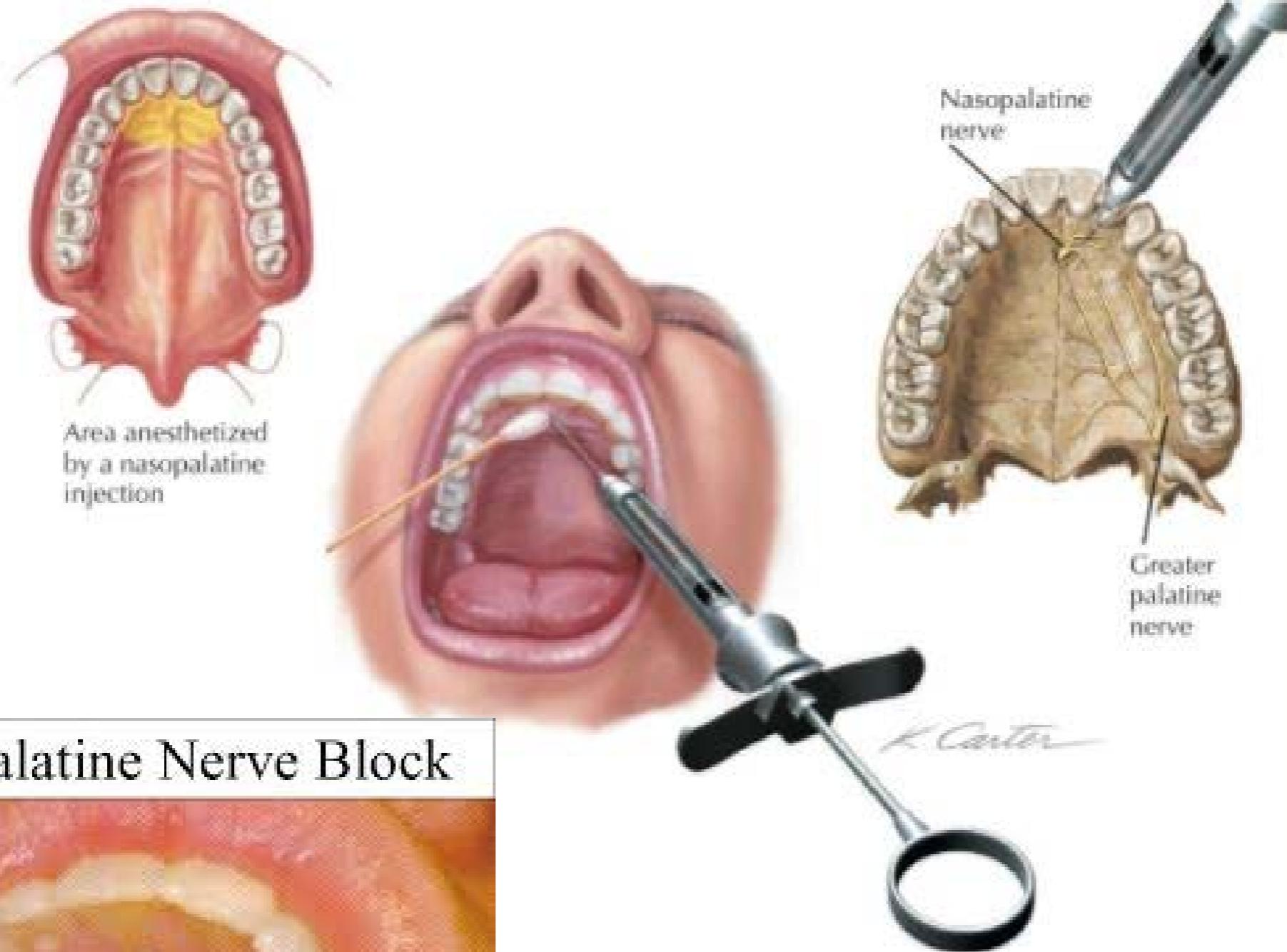


# NASOPALATINE NERVE BLOCK

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- Anesthesia to the anterior 1/3 of the hard palate from canine to canine
- This block is used to augment a supraperiosteal injection or provide anesthesia to the hard palate
- Technique
  - Insert the needle at the lateral edge of the incisive papilla
  - Aspirate
  - inject 0.3-0.5 cc

# Nasopalatine Nerve Block

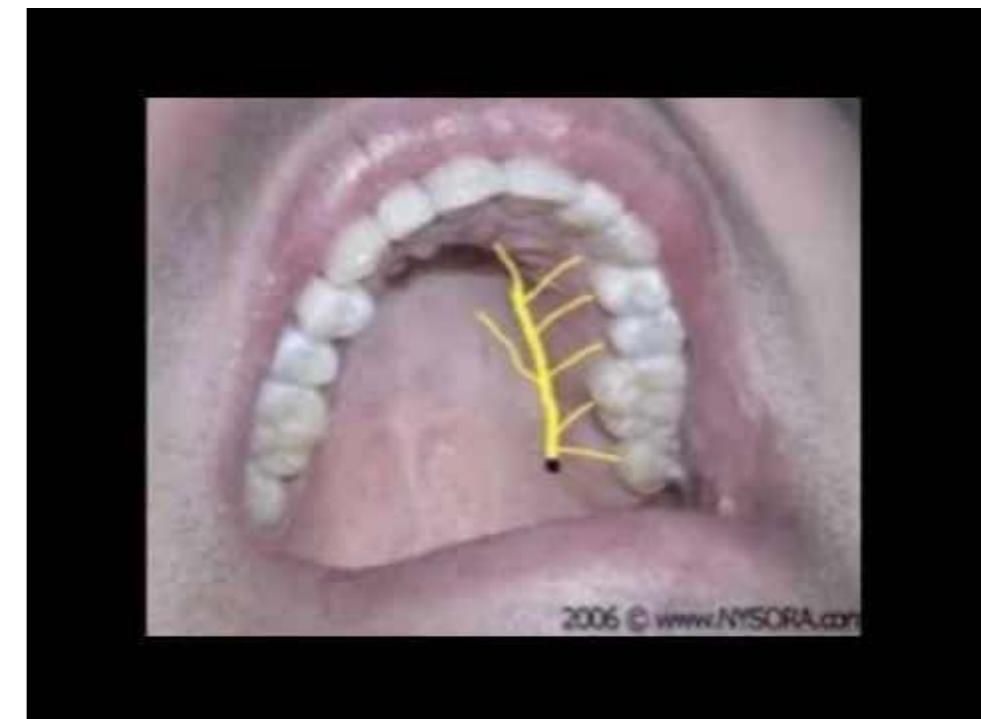


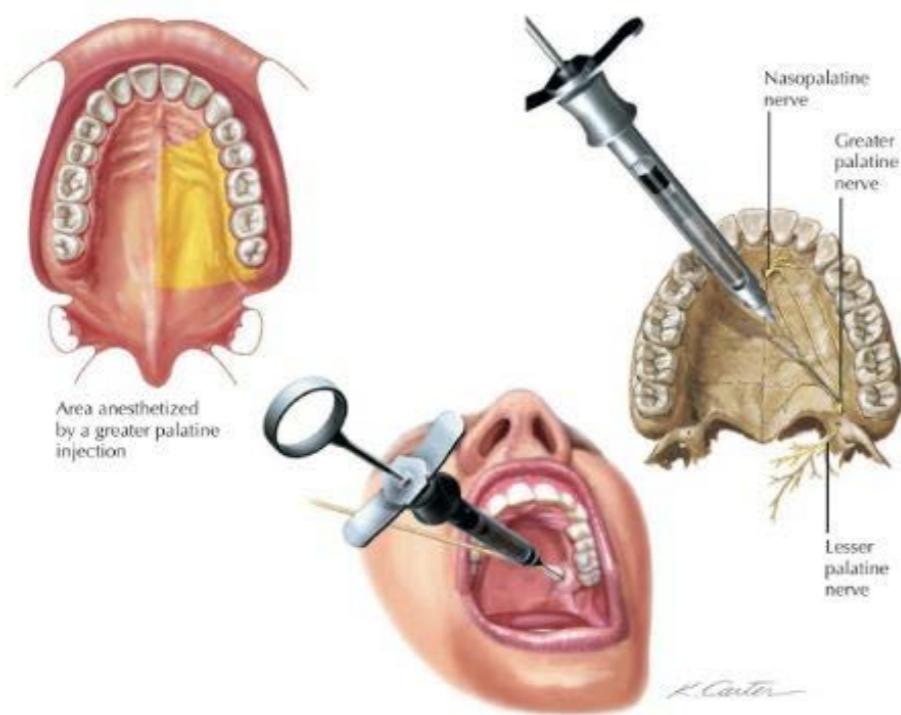
## Nasopalatine Nerve Block

# GREATER PALATINE NERVE BLOCK

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- Anesthesia to the posterior unilateral 2/3 of the hard palate including the molars and premolars
- Technique
  - approach the injection site from the opposite side of the mouth, it is situated on the lateral aspect of the hard palate medial to the 2nd molar
  - Advance the needle 3-5mm
  - Aspirate
  - Inject <0.5 cc





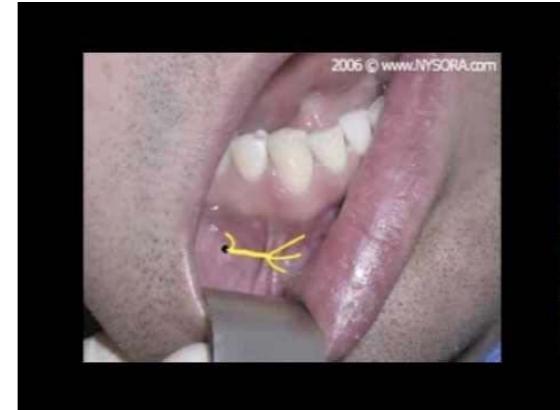
Greater Palatine Nerve Block

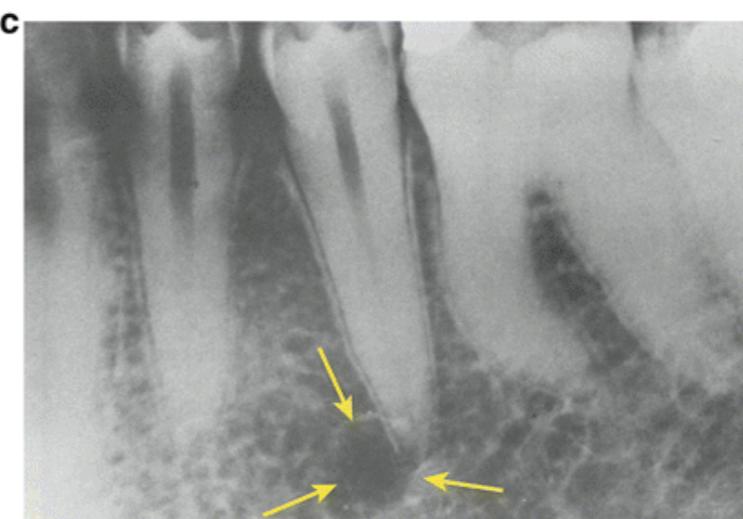
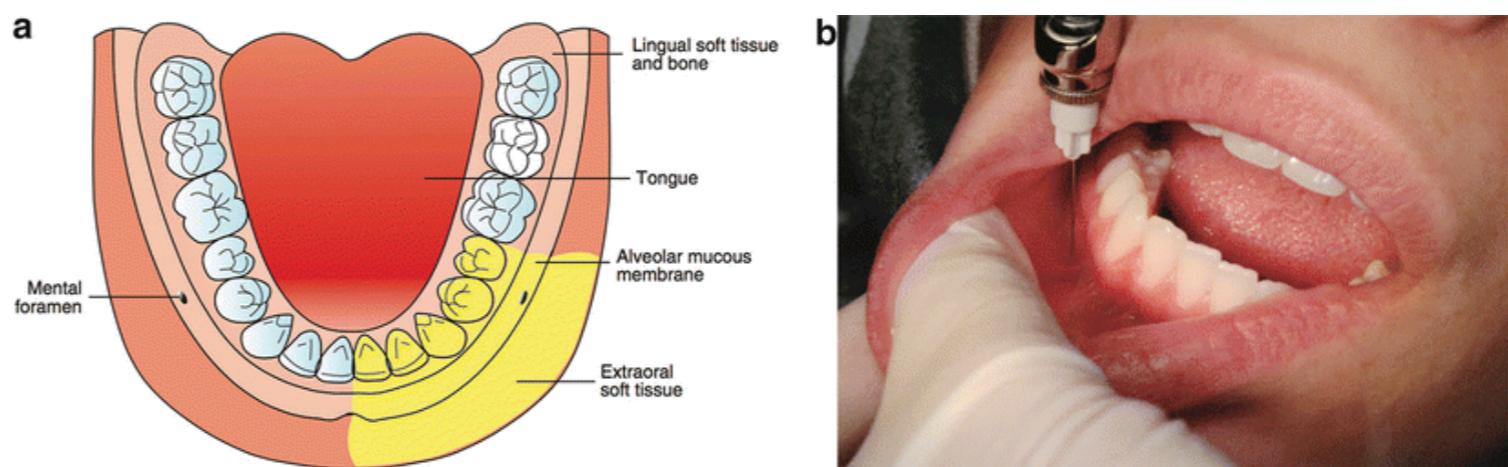


# MENTAL/INCISIVE NERVE BLOCK

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- Anesthesia of the lower lip, chin, and anterior mandibular teeth.  
1st premolar to central incisor
- Technique
  - near the opening of the mental foramen, located below the roots of the premolars
  - Aspirate
  - Inject 1.5-3 cc
  - to block the incisive nerve digitally apply pressure over the foramen for 2 minutes
  - This block is several mm deeper than the supraperiosteal block



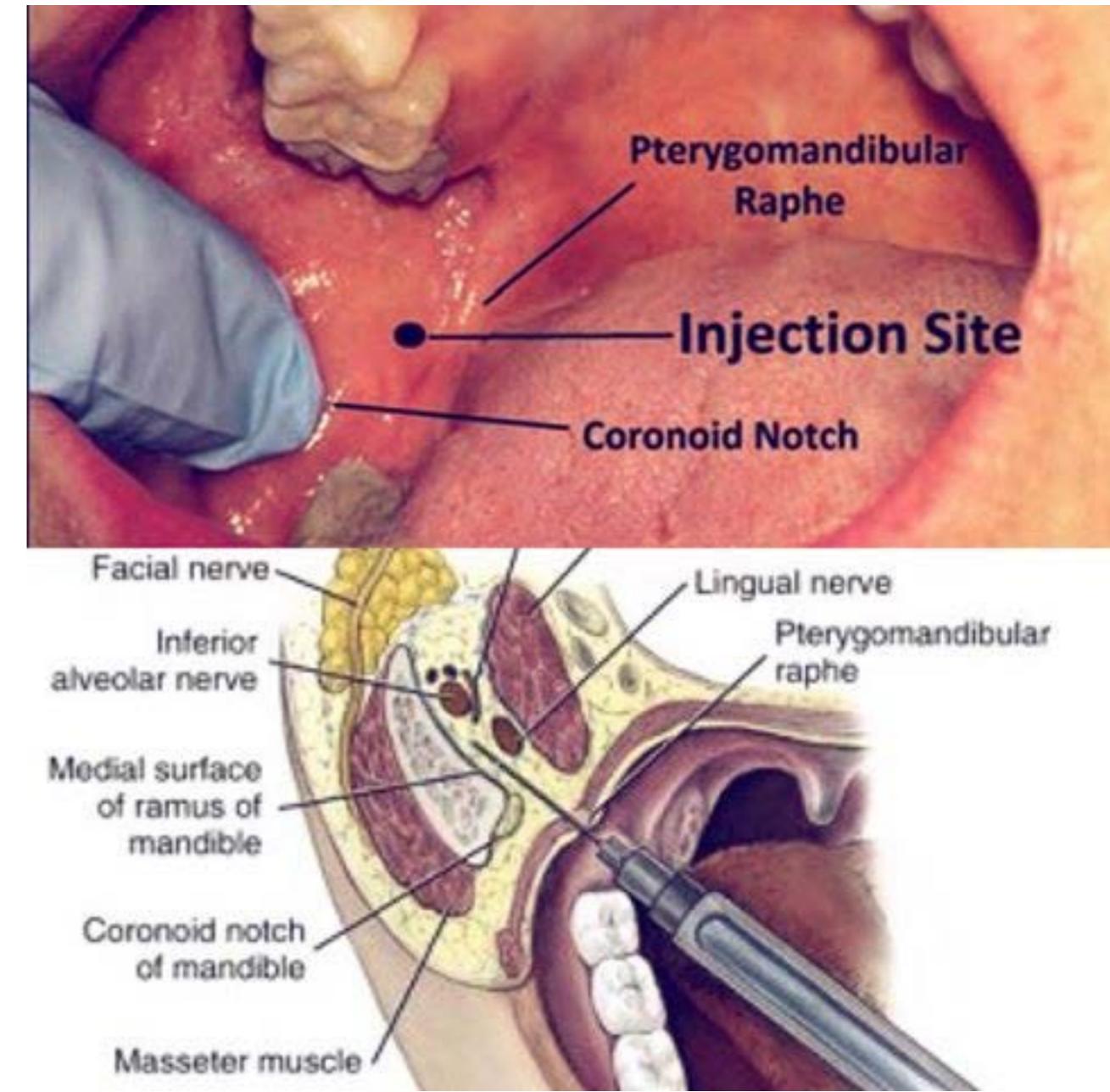
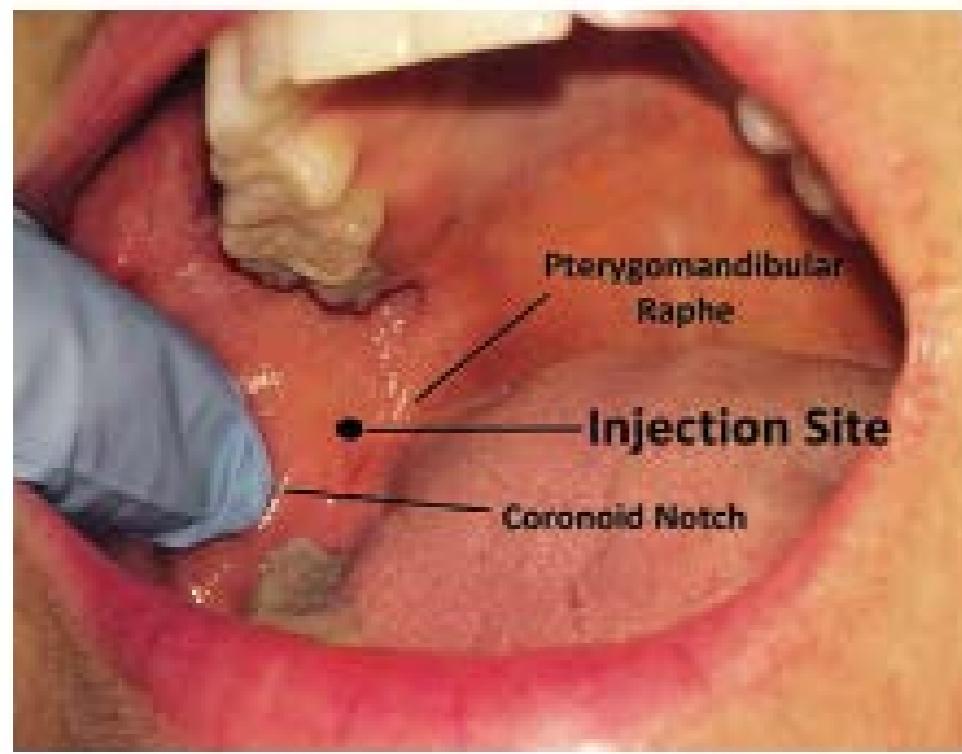


**Figure 2:** The injection administered in the depth of buccal mucosa between two premolars at a depth of 5-6 mm using a 27 gauge short needle with the mouth half open while standing in front.

# INFERIOR ALVEOLAR NERVE BLOCK

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- Anesthesia of unilateral Mandibular Teeth, lower lip, and Chin
- Technique
  - place the thumb of the non injecting hand in the coronoid notch (against the ramus of the mandible)
  - approach from the opposite pre molars
  - penetrate the mucosa 1-2 cm distal from the midline of the fingernail of your non injecting hand into the pterygomandibular raphe
  - advance until you contact bone
  - aspirate
  - inject 1.5-4cc
  - DO NOT INJECT if you DO NOT contact BONE!!



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# ANTIBIOTICS USED WITH OVERT INFECTIONS

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- Temp .38.1
- Swelling
- Purulence
- Trismus
- Drain obvious abscess
- PCN is the drug of choice
- Need dental follow up

# PERIAPICAL DENTAL ABSCESS

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- Periapical abscess
  - occurs at the tip of the root
  - usually the result of a untreated dental cavity
- Tenderness
- May need to get CT scan if widespread swelling
- Spread of infection
  - Alveolar
  - Gingiva
  - Deep structures of neck

# PERIODONTAL DENTAL ABSCESS

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- Peridental abscess
  - occurs in the gums at the side of a tooth root
- Assess for the need for drainage
- Antibiotics and dental follow up



# DEEP SPACE INFECTIONS

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- Deep space infections
  - infra-orbital space
  - Sublingual space
  - Submandibular space
- Systemically ill
- Rapid surgical intervention and IV antibiotics
- Airway Management
  - Depending on severity be ready with a surgical airway!!



Figure 3: Clinical appearance. Swelling of the floor of the mouth.

# DENTAL ABSCESS DRAINAGE

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- intra-oral technique
  - dental block
  - Make a 0.5-1 cm stab incision at point of fluctuance
  - blunt dissection
  - irrigate wound with water
  - culture if immunocompromised

# DENTAL ABSCESS DISCHARGE

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- dentist in 24-48 hours
- PCN 500 mg q.i.d x 7 days
- salt water oral rinses
- Oral analgesia

# THE MISSING TOOTH

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- Evaluation
  - Has the tooth come completely out or is partially still in
  - Do they have the missing tooth with them
  - For every minute the tooth is out you loose 1% of viability
- Keep the tooth moist
- Rinse the tooth with sterile saline, remove any clots from the socket
- Try to place the missing tooth back in the socket without touching the root
- Can splint the tooth with coe-pak periodontal paste
  - extend the paste to at least 1 stable tooth on each side

## IN SUMMARY

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- All dental emergencies seen in the setting other than a dental office should be encouraged to follow up in 24-48 hours with a dentist
- always be aware of airway needs and emergencies
- dental blocks are non narcotic ways to treat dental and facial conditions

# REFERENCES

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