

# LOCAL ANESTHESIA OVERVIEW

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## TYPES OF INJECTIONS

**INFILTRATION:** Anesthetic is delivered to the terminal branches of the nerve and is confined to a small region of anesthesia.

**FIELD BLOCK:** Anesthetizes multiple structures at a time The anesthetic is delivered further away from the terminal branches but still near the affected area. Usually impacting multiple terminal endings of nerves.

**NERVE BLOCK.** The deposition site is far from the targeted area, closer to a nerve trunk and impact several structures.

**PSA-POSTERIOR SUPERIOR ALVEOLAR:**

maxillary molars

**MSA-MIDDLE SUPERIOR ALVEOLAR:**

maxillary premolars

**ASA-ANTERIOR SUPERIOR ALVEOLAR:**

maxillary canine to midline

**IO-INFRAORBITAL:** maxillary premolars to midline

**GP-GREATER PALATINE:** maxillary posterior hard palate

**NP-NASOPALATINE:** maxillary anterior hard palate canine to canine

**AMSA-ANTERIOR MIDDLE SUPERIOR**

**ALVEOLAR:** maxillary premolar to midline, posterior/anterior hard palate

**IA-INFERIOR ALVEOLAR:** mandibular

molars to midline, lingual tissues, facial tissue premolar to midline

**LB-LONG BUCCAL:** mandibular molar facial tissues

**GG-GOW-GATES:** mandibular quadrant

**VA-VAZIRANI AKINOSI:** mandibular quadrant

**INCISIVE-INCISIVE:** mandibular premolar to midline (no lingual tissue)



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## QUADRANT THERAPY OPTIONS

### MAXILLARY INJECTIONS

PSA, IO

PSA, AMSA

PSA, IO, GP, NP

### MANDIBULAR INJECTIONS

IA, LB

GG

## ATRAUMATIC TECHNIQUES

**NEEDLE/INFECTION:** Use of a fresh needle max of 3 penetrations. Avoid inserting into active infection like abscess

**PRE-ANESTHESIA/NON-INJECTABLE:** small amount of benzo. Options include neurotransmitter, ice, pressure

**RETRACT/DEPOSITION RATE:** Retract to pull tissue tight, use of retraction devices helpful. Slow deposition approx 1-2 min per cartridge.

**BUFFERED ANESTHETIC:** Increases pH which reduces the sting of anesthetic. Decreases onset time for profound anesthesia



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## ANESTHETIC SOLUTION INFORMATION

**LIDOCAINE:** Moderate duration approx. 1 hour pulpal and 2.5-3.5 hours soft tissue. Be aware of vaso's for cardiac compromised patients. MRD 3.2 mg/lb Absolute 500 mg

**ARTICAINE:** Moderate duration approx. 1 hour pulpal and 2.5-3.5 hours soft tissue. Be aware of vaso's for cardiac compromised patients. High preference for patients with liver issues due to metabolism in bloodstream. MRD 3.2 mg/lb

**MEPVICAINE:** Short duration approx 30 min pulpal and 2-2.5 soft tissue. Be cautious with liver compromised patients. MRD 3.0 mg/lb Absolute 400 mg

**PRILOCAINE:** short-moderate duration Plain solution: 10 min pulpal 1.5-2 hours soft tissue. W/Vaso 60 min pulpal and 3-5 hours soft tissue. Moderate preference for liver compromised patients. Be aware of vaso's for cardiac compromised patients MRD 3.6 mg/lb Absolute 600 mg

**BUPIVACAINE:** Long duration approx 1.5-3 hours pulpal up to 12 hours soft tissue. Be aware of vaso's for cardiac compromised patients. MRD .9mg/lb absolute 90 mg.





Cardiac Compromised Patients: Be Aware of Epinephrine-Reduce dose. 1:100k epi (max 2 cartridges) 1:200k epi (max 4 cartridges).



Liver Compromised Patients: Caution with Mepivacaine due to high metabolism in liver. Prilocaine is a good choice. Articaine is even better due to metabolism in blood pseudocholinesterase.

Diabetic Patient and/or Kidney Compromised: Articaine is a great option.



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