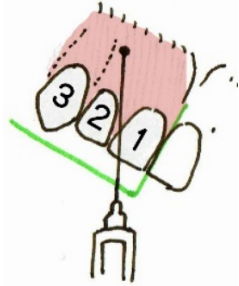
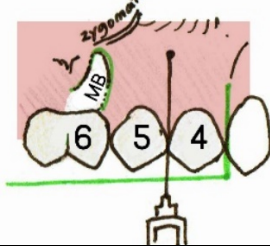
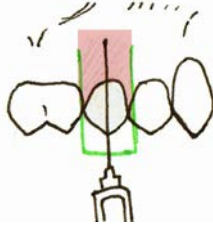
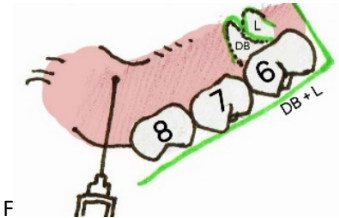
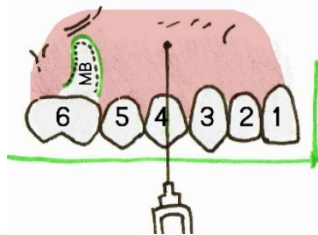
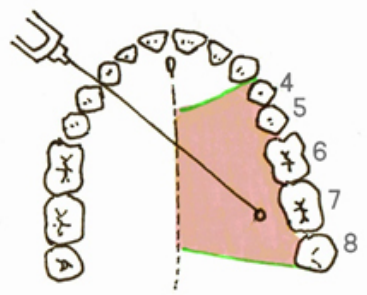
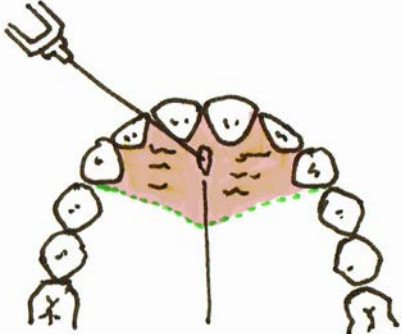
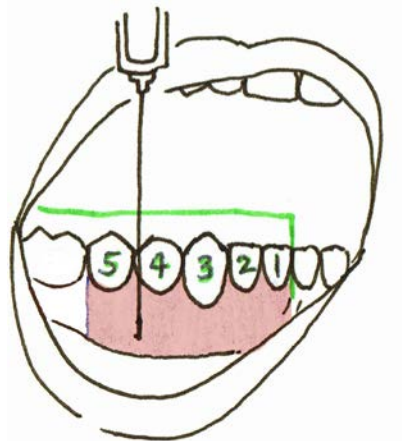
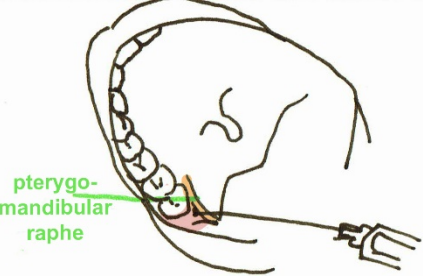
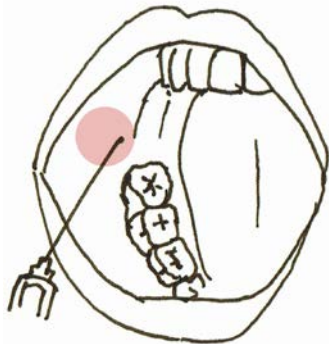


Injection	Landmarks	Site of Penetration	Depth of Penetration	Amount of Anesthetic	Needle	Anatomy anesthetized	Notes:
ASA (anterior superior alveolar)	Mucobuccal fold Canine eminence	Facial vestibule over lateral incisor. Slightly angles towards the apex of the canine 	¼ short needle	¼ cartridge	25 or 27 gauge short	Max central Max lateral Max canine Buccal gingiva 3 2 1	
MSA (middle superior alveolar)	Zygomatic bone Mucobuccal fold above the max second premolars	Facial vestibule between max premolars ANTERIOR to the zygomatic bone/remaining premolar 	¼ - 1/3 short	¼ cartridge	25 or 27 gauge short	Maxillary premolars MB root of 6 Buccal gingiva 6_{MB} 5 4	Only 28% of the population has this. Otherwise, teeth are innervated by the ASA
Supraperiosteal (infiltration)	Mucobuccal fold Crown of tooth Root contour of tooth	Height of mucobuccal fold over target tooth Parallel to the long axis of the tooth 	¼ short	1/3 cartridge	25-27 gauge short	Target tooth and buccal gingiva Only effective for Max teeth and Mand premolar to premolar <u>Other sites:</u> - Mand lingual (interproximal papillae, 2-3 mm below margin) - Palate	NOT effective on mand molars due to thick cortical plate (Articaine may be successful for #36 and # 4)

Injection	Landmarks	Site of Penetration	Depth of Penetration	Amount of Anesthetic	Needle	Anatomy anesthetized	Notes:
<p>PSA (posterior superior alveolar)</p>	<p>Mucobuccal fold Maxillary tuberosity Zygomatic bone</p>	<p>Facial vestibule DISTAL to zygomatic arch. Opposite DB root of max 2nd molar (7) 45° below occlusal plane 45° to midsagittal plane Barrel should be down at corner of mouth</p> 	<p>½ - 3/4 short</p>	<p>½ - ¾ cartridge</p>	<p>25 or 27 g short</p>	<p>Max 3rd, 2nd, 1st molar except MB root of the 1st, AND Buccal gingiva</p> <p>8 7 6_{DB+L}</p>	<p>Highest risk of hematoma and intravascular injection</p>
<p>Infra-orbital</p>	<p>Mucobuccal fold 1st premolar Infraorbital notch Infraorbital foramen</p>	<p>Height of mucobuccal fold directly over the 1st premolar Below the infraorbital notch Syringe toward the infraorbital foramen</p> 	<p>½ long (depending on anatomy)</p>	<p>½ - 2/3 cartridge</p>	<p>25-27 g long</p>	<p>Max anteriors, premolars and MB root of first molar Buccal gingiva Lower eyelid Lateral aspect of the nose Upper lip</p> <p>6_{MB} 5 4 3 2 1</p>	<p>Apply pressure on the foramen for ~2 mins after injection to force anesthesia through in order to anes. teeth</p>
<p>Greater Palatine</p>	<p>Greater palatine foramen Junction of maxillary alveolar process and palatine bone</p>	<p>½ way between palatal midline and free gingival margin. Anterior to soft palate</p> 	<p>< 10 mm (but enough to cover the bevel)</p>	<p>¼ cartridge (until blanching occurs and spreads)</p>	<p>27 g short</p>	<p>Palate and tissue from distal of canines to soft palate</p> <p>4 5 6 7 8</p>	<p>No teeth anesthetized. Only palatal tissues to midline of soft palate</p> <p>Injecting in the soft palate directly causes throat numbness</p>

Injection	Landmarks	Site of Penetration	Depth of Penetration	Amount of Anesthetic	Needle	Anatomy anesthetized	Notes:
Nasopalatine	Central Incisors Incisive Papilla	<p>Incisive papilla NOT into the foramen but in LATERAL portion of the papilla 45° angle</p> 	6-10 mm Cover the bevel	Until tissue blanches. Not more than ¼ cartridge	27 g short	<p>Palate and tissue between canines (pre-maxilla)</p> <p><u>3 2 1 1 2 3</u></p>	<p>Gingiva ONLY</p> <p>Only injection that anesthetizes both right and left sides simultaneously</p>
M/I (mental/incisive)	Mandibular Premolars and Mucobuccal fold	<p>Facial vestibule just anterior to the mental foramen</p> 	5-6 mm Cover the bevel	0.6 ml (1/3 cartridge)	25 or 27 g short	<p>Buccal mucosa anterior to mental foramen (premolars, canines, incisors on one side)</p> <p>Lower lip, skin of chin.</p> <p>For pulpal anesthesia – pressure over foramen for ~2 mins will anesthetize the Incisive Nerve</p>	<p>3rd highest rate for hematoma</p> <p>Look at a radiograph to accurately locate the mental foramen (usually found at apex of 2nd premolar)</p>
Lingual Nerve	Same as IA	Same as IA but withdraw needle ½ of the length/depth of penetration	10-12 mm 1/3 long	0.3 ml	25 g long	<p>Lingual gingiva to midline Anterior 2/3 of tongue and floor of oral cavity</p> <p><u>8 ← 1</u></p>	Withdraw the needle ½ of the depth of penetration of the IA

Injection	Landmarks	Site of Penetration	Depth of Penetration	Amount of Anesthetic	Needle	Anatomy anesthetized	Notes:
Inferior Alveolar Nerve	<p>Coronoid notch Pterygomandibular raphe Occlusal plane of the mandibular posterior teeth Internal oblique ridge</p>	<p>Needle parallel with occlusal plane of mand teeth, apex of pterygomandibular triangle between internal oblique ridge and pterygomandibular raphe at level of coronoid notch</p> <p>Come from the opposite premolars of the arch being anesthetized</p> 	<p>20-25 mm 2/3 – ¾ long</p>	<p>1.5 ml (2/3 cartridge)</p>	<p>25 g long</p>	<p>Mandibular teeth to midline Buccal gingiva mesial to molars to midline</p> <p>Teeth: 8 ← 1</p> <p>Buccal Tissue: 5 ← 1</p>	<p>2nd highest rate for hematoma</p> <p>80-85% success rate only</p> <p>Highest rate of aspiration</p> <p>To anesthetize buccal tissue of 6, 7, 8, do a long buccal</p>
Long Buccal	<p>Mand molars Mucobuccal fold</p>	<p>1 cm above the occlusal plane medial to external oblique ridge</p> <p>OR</p> <p>In facial vestibule at the level of the buccal cusps just distal to the last molar</p> 	<p>2/4 mm (cover the bevel)</p>	<p>0.3 ml (1/6 cartridge)</p>	<p>25 g long</p>	<p>Buccal gingiva of the mandibular molars and cheek adjacent to mandibular molar teeth</p> <p>8 ← 6</p>	<p>Not given by dentists for less complex posterior restorations since teeth are already anesthetized by the IA</p> <p>May be given during crown prep or during use of subg clamps since tissue will be sensitive</p>

