A decorative graphic on the right side of the page features three overlapping circles in shades of blue. Two thin, light blue lines intersect at the top left and extend diagonally across the page, framing the circles. The circles are arranged vertically, with the largest one at the top, a medium one in the middle, and a large one at the bottom right.

# Anesthesia Update 2019

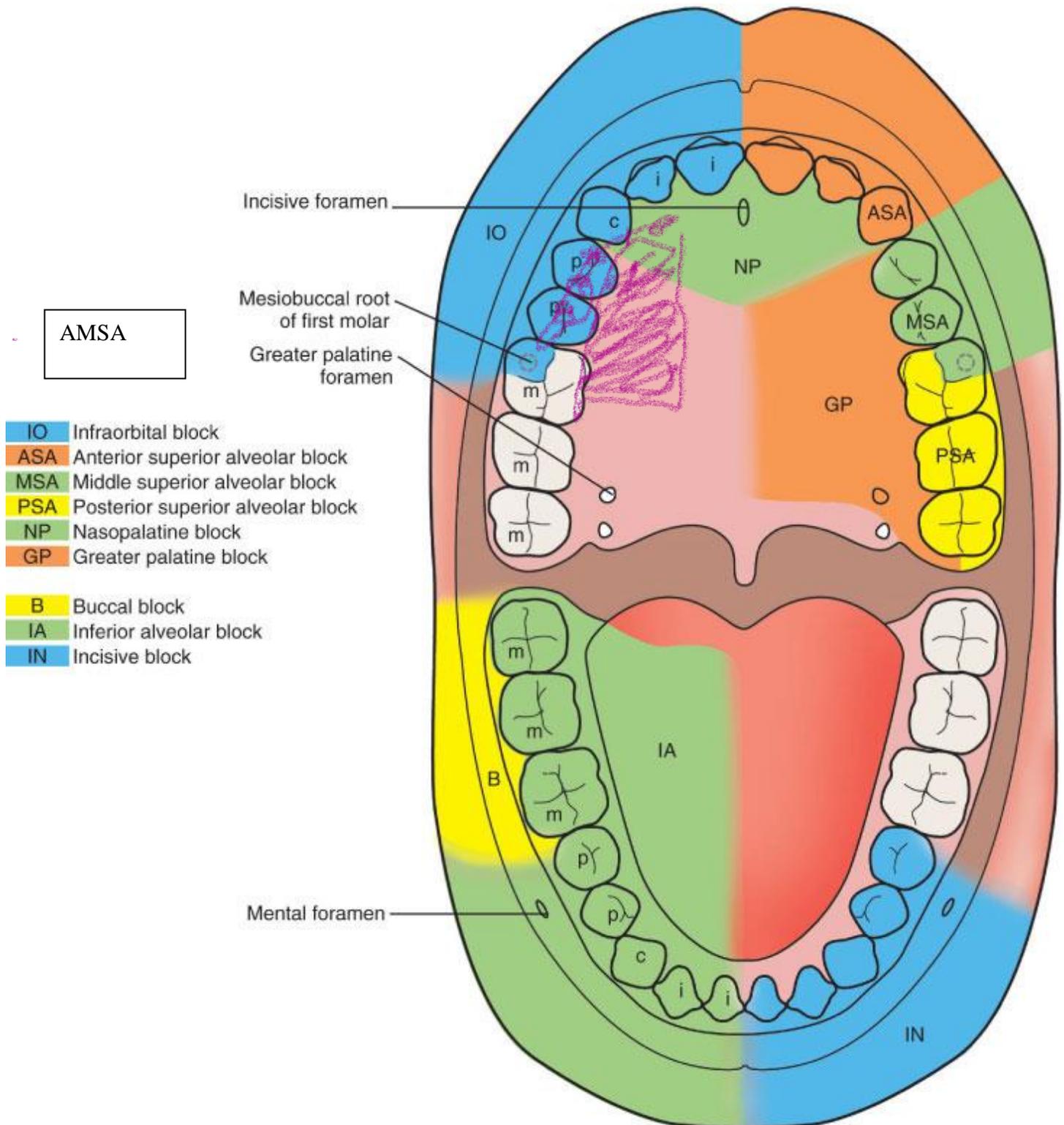
A review of anatomy, techniques  
dosages, and common related  
emergencies

**Tina Clarke BSDH MEd**

4/17/2019

TRIGEMINAL/FACIAL NERVE review

<b>CRANIAL NERVE V - TRIGEMINAL</b>	
<b>Ophthalmic V<sub>1</sub></b>	
<b>Frontal</b>	Supraorbital
	Supratrochlear
<b>Lacrimal</b>	
<b>Nasociliary</b>	Intertrochlear
	Ciliary
	Anterior Ethmoid      External/Internal Nasal
<b>Maxillary V<sub>2</sub></b>	
<b>Zygomatic</b>	Zygomaticofacial
	Zygomaticotemporal
<b>Infraorbital</b>	Anterior Superior Alveolar
	Middle Superior Alveolar
<b>Posterior Superior Alveolar</b>	
<b>Greater/Lesser Palatine</b>	
<b>Nasopalatine</b>	
<b>Mandibular V<sub>3</sub></b>	
<b>Buccal</b>	
<b>Muscular</b>	
<b>Auriculotemporal</b>	
<b>Lingual</b>	
<b>Inferior Alveolar</b>	Mylohyoid
	Mental
	Incisive
<b>CRANIAL NERVE VII - FACIAL</b>	
<b>Greater Petrosal</b>	
<b>Chorda Tympani</b>	
<b>Posterior Auricular</b>	
<b>Stylohyoid</b>	
<b>Posterior Digastric</b>	
<b>Branches of Facial Expression</b>	Temporal
	Zygomatic
	Buccal
	Mandibular
	Cervical



Anesthesia Update 2019

INJECTION TECHNIQUES:

INJECTION TYPE	AFFECTED NERVE	LANDMARKS	INSERTION SITE	DEPOSITION SITE
PSA				
MSA				
IO				
ASA				
GP				
AMSA				
NP				
IA				





## Summary of Dental Local Anesthetic Drugs\*

Local Anesthetic Drugs Color Coded Box	MRD (mg/lb)	MRD (mg/kg)	MRD Absolute	pH	Half-Life $t_{1/2}$ (in minutes)	Pulpal Anesthesia (in minutes)	Soft Tissue Anesthesia (in minutes)	Vasoconstrictor	Relative Potency	Relative Toxicity	Duration Category
									(Reference value = lidocaine @ 100%)		
4% Articaine (w/ vaso)	3.2	7.0	**	4.4– 5.2	30	75	180–300	Epinephrine 1:100,000	150%	100%	Intermediate
4% Articaine (w/ vaso)	3.2	7.0	**	4.4– 5.2	30	45	120–300	Epinephrine 1:200,000	150%	100%	Intermediate
0.5% Bupivacaine	***	***	90	3.0– 4.5	270	90–180	240–540	Epinephrine 1:200,000	400%	Less than 400%	Long
2% Lidocaine (plain)	3.2	7.0	500	6.5	96	5–10	60–120	None	100%	100%	Very short
2% Lidocaine (w/ vaso)	3.2	7.0	500	3.3– 5.5	96	60	180–300	Epinephrine 1:50,000	100%	100%	Intermediate
2% Lidocaine (w/ vaso)	3.2	7.0	500	3.3– 5.5	96	60	180–300	Epinephrine 1:100,000	100%	100%	Intermediate
3% Mepivacaine (plain)	3.0	6.6	400	4.5– 6.8	114	20–40	120–180	None	100%	125%	Short
2% Mepivacaine (w/ vaso)	3.0	6.6	400	3.0– 3.5	114	60	180–300	Levonorefin 1:20,000	100%	125%	Intermediate
4% Prilocaine (plain)	4.0	8.8	600	4.5– 6.8	96	10–15 infiltration (I) 40–60 block (B)	90–120 (I) 120–240 (B)	None	100%	85%	Short (I) Intermediate (B)
4% Prilocaine (w/ vaso)	4.0	8.8	600	3.0– 4.0	96	60–90	180–480	Epinephrine 1:200,000	100%	85%	Intermediate

\*FDA maximum recommended dose and drug insert information for each drug should be consulted prior to use.

\*\*No FDA absolute maximum recommended dose.

\*\*\*No FDA weight-based recommendation, MRD = 90 mg. Health Canada weight-based recommendation 0.9 mg/lb or 2.0 mg/kg.

Source: Bassett, K.B., DiMarco A.C., Naughton D.K. (2015) Local Anesthesia for Dental Professionals.  
New Jersey. Pearson Higher Education

