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| **Peterson Nerve Block** |
| **Uses**  | * This block involves local anesthesia of the cranial nerves supplying sensory and motor function to the eye and some of its surrounding structures.
* This block produces anesthesia of the eye and orbit, with immobilization of the globe and produces almost complete anesthesia of the lateral aspect of the head except for the eyelids.
* The Peterson block is usually combined with the auriculopalpebral block to provide complete paralysis of the eyelids to facilitate surgery.
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| **Restraint**  | Manual restraint with a halter and the animal in a crush Chemical restraint may be necessary in fractious animals. |
| **Materials Required**  | 23-gauge, 1 inch needle.18-gauge, 6 inch needle.15 – 20mls of local anesthetic  |
| **Site Preparation**  | Site of injection is only clipped in thick haired or dirty animals.The site should be cleaned and disinfected appropriately. |
| **Procedure**  | Landmarks: Locate the notch formed by the caudal bony orbital rim, cranially, the zygomatic arch, ventrally and the coronoid process of the mandible, caudally .1. Inject 5 mls of local anesthetic subcutaneously at the located notch using a 23-gauge needle to desensitize the skin.
2. Place an 18 gauge, 6 inch needle through the desensitized skin caudally within the notch to strike the coronoid process of the mandible.
3. Once this is encountered, the animal’s head is fully extended with the nasal and frontal bones parallel to the ground and the needle is gently manipulated off the front of the coronoid process and advanced towards the pterygopalatine fossa. To facilitate placement, the needle can be bent slightly if preferred.
4. 15 – 20 mls of local anesthetic is injected in the region of the orbitorotundum foramen
5. Careful aspiration must be performed during the injection as the site is close to the maxillary artery.

Signs of anesthesia:* Reduced blinking.
* Relaxation and protrusion of the globe.
* Desensitization of the face on the ipsilateral side of the block.

Duration of anesthesia: Lidocaine 90 – 200 mins. |
| **Advantages**  | * Safer than the Retrobulbar block as there is less risk of globe penetration and hemorrhage.
* Additionally, potential catastrophic injection of the meninges surrounding the optic nerve is minimized using this technique.
* More effective than alternative techniques if performed correctly.
* Less edema and inflammation with this block than with infiltration of local anesthetics into the eyelids and orbit.
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| **Disadvantages**  | Technically more challenging to perform than other blocks anesthetizing the same or similar area. |
| **Potential Complications**  | * Block failure.
* Inadvertent penetration of the turbinates or the meninges surrounding the optic nerve can lead to severe CNS local anesthetic toxicity (hyper-excitability, seizures, cardiac and respiratory arrest)
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