

MONITORING PATIENTS DURING DEHORNING

First of all ensure there is complete knowledge of the equipment being used to prevent harm to the surgeon and the animal. The depth of anaesthesia must be monitored carefully. Animals that are too light will experience pain and may move during the procedure. Animals that are too deep run the risk of experiencing cardiopulmonary arrest. If an animal is too light the anaesthesia should be supplemented, if too deep, give reversal or emergency drugs. Animals given injectable anaesthetics cannot be lightened directly. Instead respiratory and cardiovascular support must be administered until the anaesthetic is metabolized and the animal begins to lighten on its own.

To monitor the patient, consider the following:

- **Sticking/pinch** - using fingers to pinch or a needle to stick (lightly) the area around the horn will cause a pain response. If the animal withdraws it is not deep enough or the corneal nerve was missed. If it doesn't, it is not sensing pain.
- **Increased vocalization and violent resistance** during the procedure indicates that the nerve block didn't work well. Ensure the animal is given systemic pain killers after the procedure.
- **Muscle tone** increases as the depth of anaesthesia decreases, unless the animal is receiving a cataleptic drug like ketamine in the absence of a sedative. Test muscle tone by pulling on the limb. Rigid tone indicates inadequate depth of anaesthesia.
- **Monitor cardiopulmonary function and body temperature**- As an animal becomes too deeply anesthetized, respiration and cardiac output decrease, resulting in poor blood oxygenation and tissue perfusion and decreased blood pressure and temperature. Likewise, elevations in heart rate and blood pressure may be indications that an animal may be feeling pain and is anesthetized too lightly.
- **Recumbency** is as a result of too much anaesthetic (Xylazine). A low dose of Xylazine is commonly used for sedation in cattle for standing surgeries. This does not cause recumbency in most animals; however some animals may react differently based on how they metabolize the drug.
- **Drooping Head** is a sign that the animal is unable to support its head and this is also a sign that there is too much anaesthetic.
- **Eye movement and pupil position** is also something to watch. The more eye movement decreases the deeper the state of anaesthesia. When the pupil is in a ventromedial aspect the anaesthesia is medium and when the pupil is centred anaesthesia is at a deeper state. Dilated pupils mean medium to deep state of anaesthesia.
- **Convulsions** may occur if lidocaine levels are toxic in the animal.
- **Cauterization** of blood vessels is very efficient at stopping bleeding and works better than the haemostat. There is a greater risk of the recommencement of bleeding if the haemostat is used.
- **Ensure no flies are around** during or immediately after the dehorning. Ensure there is a watchful eye on the open wound at all times until the screw worm spray is applied.