

Primefact

Appendix 6: Humane destruction of Equines

November 2025, Primefact [PUB26/37], First edition

Dr Petrea Wait, Senior Program & Project Officer, Animal Welfare Branch, Cooma

Conducting humane destruction, or euthanasia, of domestic horses, donkeys and mules.

Handling and restraint

- Temperament and ease of handling of horses, donkeys and mules will vary greatly depending on their degree of education and exposure to humans. This may range from completely unhandled and fearful, to calm and docile. Despite this, every equine has the potential to cause serious injury to a handler when sufficiently provoked by fear or perceived threat.
- When equids are euthanased, consideration should be given to the unpredictability of a falling or thrashing animal. Most methods of euthanasia will result in some degree of exaggerated muscular activity after the equid falls even though it is not experiencing pain or distress. Whatever euthanasia method is used, personnel must not be put at unnecessary risk.
- Equines that are used to being handled may be haltered and led to a suitable position for euthanasia. The administration of a sedative by a veterinarian can be used to make anxious or excitable horses more tractable and reduce unnecessary movement by the animal.
- If a race or crush is available, unhandled equines may be placed in this to enable the administration of heavy sedation prior to releasing into a yard where they can be euthanased. Care should be taken with unhandled horses in a race or crush as severe injury may result if the horse becomes fractious and attempts to escape. Equines often remain standing even with heavy sedation.
- If euthanasia is to occur by lethal injection, the horse may be restrained by a competent handler until the point that the anaesthetic takes effect, and the equine becomes unconscious and falls. Handlers should move clear of the animal until it has become recumbent. Any follow up euthanasia solution should be administered from behind the neck of the animal to avoid the movement of limbs.
- Equines that are unhandled should be moved to a large yard or clear area in a paddock where they can be safely euthanased by firearm. Keep them within sight of other equines to help them remain calm. Placing feed in the area should encourage the animal to remain still while the procedure is undertaken, although the point of aim must be adjusted to account for the lowered head.
- If an equine is to euthanased by a free-bullet firearm, they must not be manually restrained by a handler. If an equine is to be euthanased by a captive bolt device, the animal should either be already recumbent (i.e. due to illness or injury), heavily sedated, or placed in a crush or 'knocking box' which has a side-opening panel to allow for removal of the carcass once deceased.

Euthanasia method

- The recommended methods for humane destruction of equines of any age include use of a firearm or captive bolt device.
- Lethal injection may also be used, particularly in companion animals, but must be administered by a veterinarian or under their direct supervision. Appropriate disposal of the carcass must be undertaken if this method is used.

Euthanasia by firearm

- A rifle shot by the frontal method at close range is the preferred method of humanely destroying equines. For adult equines, and foals, a rifle should deliver a minimum muzzle energy of a standard 0.22-long rifle cartridge for close-range shooting.
- If shots are to be taken from a distance with unhandled equines, a large calibre, high powered, centre-fire rifle should be used. Preferred calibre is .300 Magnum ballistics or greater, with cartridges of .308 Win performance being the minimum. Rifles should be fitted with quality telescopic sights of at least 4x magnification. Soft-point ammunition with heavily constructed, controlled expansion projectiles (eg Winchester Fail Safe, Barnes X, or Nosler Partition) should be used. Minimum weight is 150 grain for .308, and 180 or 200 grain for .300 Magnum.
- Shotguns are NOT recommended for use on equines. If they must be used in an emergency, rifled slugs are to be used as ammunition and the animal must be no more than 20 meters away.

Euthanasia by intravenous injection

- Euthanasia by chemical means is most commonly performed with pentobarbital, although administration of potassium chloride may be used in prior anaesthetised horses. Because a large volume of solution must be injected, an IV catheter should be placed in the jugular vein. Sedation may be administered to facilitate catheter placement in fractious equines.
- Intravenous injection is considered more difficult in donkeys for several reasons. Donkeys have a thick coat, so clipping is advisable to give clear visibility of the vein. Donkeys also have thicker skin so placing an intradermal local anaesthetic bleb and nicking the skin with a scalpel blade prior to catheter placement is advised. A prominent cutaneous colli muscle can conceal the middle third of the jugular groove, therefore the upper third or lower third of the jugular groove is the best site for injection. A steeper angle of needle introduction is needed compared with that in the horse.

Anatomy and point of aim

Frontal position

Horses (Figures 1 and 3)

- The brain is situated high in the head.
- The firearm should be directed at the point of intersection of diagonal lines taken from the base of each ear to the opposite eye.
- The bullet should be directed through the cerebral cortex towards the brain stem.

Donkeys (Figure 2)

- This position is most suited to younger animals and instances where there is only a short distance between the shooter and animal. This is due to the flat facial conformation and the extensive sinus structure of the mature donkey skull which can make penetration of the projectile into the brain difficult with the frontal shot.
- The landmark on the head for humane destruction via the frontal shot is slightly higher than in horses. The recommended site in the average donkey is 1-2 cm above the intersection of two lines drawn between the base of the ear and the outer edge of the opposite eye.

Temporal position

- The horse or donkey (Figure 4) is shot from the side so that the bullet enters the skull midway between the eye and the base of the ear.

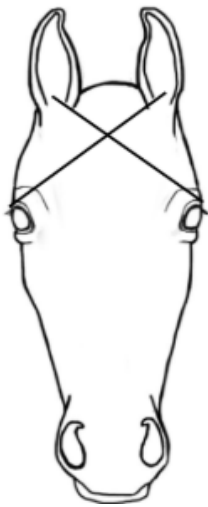


Figure 1: The point of entry of the projectile should be at the intersection of 2 imaginary lines, each drawn from the outside corner of the eye to the centre of the base of the opposite ear.

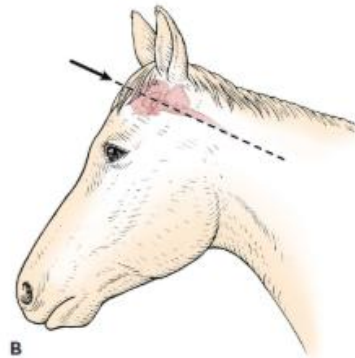


Figure 3: The projectile should be directed towards the brainstem when a frontal shot is used.

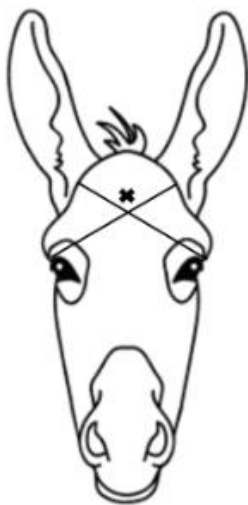


Figure 2: The point of aim in donkeys is 2 cm above the point of aim in horses.



Figure 4: The point of aim for the temporal shot is a point midway between the eye and the base of the ear.

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Acknowledgements

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ISSN: 1832-6668

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