

# Anaesthesia Factsheet

Update April 2020



Anaesthesia in horses carries a significantly higher risk than in dogs, cats or humans. A recent survey of over 40,000 anaesthetics revealed the overall peri-operative death rate was 1.6%. If sick colics were excluded, the death rate was still approximately 1%.

## Anaesthetic Risks

There are several factors which complicate anaesthesia in horses.

**Size:** the sheer size and weight of horses makes them more at risk during an anaesthetic. For an operation, horses are positioned on their back or side. The muscles they are lying on get squashed by the large weight of their lungs/gastrointestinal tract. This, in combination with decreased blood flow to muscles (due to compression and effect of anaesthetic drugs) can result in a myopathy (damage to muscles). This can be very serious and may prevent them from standing after their operation. The weight of their gastrointestinal tract pressing on their lungs when they are positioned on their backs can also impede ventilation and reduce oxygen delivery.

**Injury in induction or recovery:** getting a 500kg horse to lie down before and stand up after surgery comes with risks. Horses are fight or flight animals which makes them prone to panicking in unfamiliar situations. This can result in injury e.g. fractures.

**Cardiac arrest:** in any species the administration of anaesthetic drugs can result in cardiac arrest.



Our anaesthetists and surgeons are supported in theatre by our experienced team of nurses and equine technicians

## Measures Taken to Prevent Anaesthetic Complications

We take every effort to try and reduce the risks of anaesthesia for your horse:

- First, they are well sedated to keep them as calm as possible. We assist them during induction (start of anaesthesia) to ensure they go down safely.
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- During surgery, we use a variety of equipment to monitor their progress. Intravenous fluids are administered routinely to help maintain blood pressure and ensure organs are adequately supplied. If required, drugs can also be given to support blood pressure.
- We have a well-padded table to support your horse/pony during their operation. Our anaesthetist also pays close attention to positioning to try and minimise the load on their muscles.
- Every horse we anaesthetise is put on a ventilator to ensure oxygen and anaesthetic gases are delivered at the required quantities.
- The longer a horse is anaesthetised the higher the risk. Our team take all measures to try and make the anaesthetic time as short as possible.



Our anaesthetic machine (left) and some of our monitoring equipment (right).



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- After surgery, they are monitored by a vet continuously and we routinely provide them with sedation to make their recovery as smooth as possible. Our recovery box has padded walls and floor to minimise the risk of injury.

Horses may need an anaesthetic for routine or emergency surgery. Either way, it is important to consider the risks above. If you have any questions, please contact us to discuss with one of our vets.

For routine operations we usually arrange for you to bring your horse in the day before. This allows us to perform a thorough clinical exam so that we can formulate an anaesthetic plan. We will then place an intravenous catheter (for administration of drugs) and let them settle in to reduce stress on the day of surgery.

- If possible, please arrange for their shoes to be removed before admission. This reduces their risk of injuring themselves in induction/recovery.
- They will routinely be starved for a short while prior to surgery.
- Pre-anaesthetic: Your horse/pony will be given an anxiolytic drug to keep them calm and pre-operative pain relief. Their tail is bandaged, feet scrubbed, and mouth rinsed out before administering a sedative.
- Induction: Once well sedated, they are moved to the padded knock-down box and given an anaesthetic injection. Our anaesthetic team will be with your horse at this point to help them down safely.
- Maintenance of Anaesthesia: Once anaesthetised an endotracheal tube is placed into their trachea which protects their airway and is connected to a machine that delivers oxygen and anaesthetic gases to keep your horse anaesthetised. A hoist is used to lift them onto our padded table.

Intravenous fluids will be given along with any additional drugs required. Monitoring equipment including ECG, pulse oximetry, capnography, arterial blood pressure, and blood gases, are used by our anaesthetist to constantly assess your horse's progress.

- Recovery: At the end of surgery, your horse will be disconnected from the anaesthetic machine and moved back into the recovery box using the hoist. Again, they are monitored closely by a vet from this point until they stand up.
- Once up they will be given some time to come around from the anaesthetic before moving back to their stable. As soon as they are up, we will contact you. We refeed them slowly after surgery with a laxative diet to try and minimise the risk of colic. The length of their stay will depend on what operation they have and how well they recover.
- If possible, we advise you contact your insurance company to check your cover before your horse has surgery, but we realise in an emergency situation this may not be feasible. Please bring their passport in so that we can check their tetanus vaccinations are up to date.



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