

# Equine surgery and its challenges

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Dr Mahne performing tendon surgery with his patient in an upright position

Equine surgery has its fair share of challenges, but thanks to the well-equipped Onderstepoort Veterinary Academic Hospital (OVAH), equine surgeons such as Dr Arnold Mahne are able to do their utmost for sick and injured horses that are brought in for treatment. Dr Mahne is one of the main equine surgeon specialists at Onderstepoort (OP) and is passionate about horses.

The expertise in the Faculty of Veterinary Science has a rich, shared knowledge base. Valuable opinions give insight in difficult procedures and threatening cases, and often lead to successful outcomes in equine surgery.

The OVAH sees a variety of equine conditions and treats race horses and farm horses. Owing to state of the art equipment, including advanced imaging equipment such as CT and bone scans, equine surgeons can gather much information before operating. Some of the procedures Dr Mahne performs regularly are dental extractions, laparoscopies and arthroscopies.

Dr Mahne explains that of all domestic species, horses are probably one of the most complicated to operate on. Horses do not respond well to anaesthetics and post-operative recovery is a major challenge. 'While a bovine will lie down quietly until it is ready to get up, an equine will jump up and thrash around, running the risk of seriously injuring itself,' explains Dr Mahne. It is not uncommon for a horse that is recovering from an anaesthetic to get up too soon and consequently break a limb. Anaesthesia can also cause horses' hearts to stop and by having to lie down during an operation, muscles or nerves can be jeopardised, even resulting in paralysis. Lying down for long periods can also result in horses' lungs collapsing. Dr Mahne adds that it is imperative for equine surgeons to keep track of the time constantly because every minute counts during surgery.

Equine surgeons across the world have sought alternative ways to anaesthetise these large animals. Dr Mahne has mastered the skill of performing surgery while the horse is standing and regularly does sinus surgery and laparoscopies with his patient in an upright position.

Horses are fairly susceptible to dental conditions, which can give rise to complications. The roots of several of the teeth sit in the sinus cavities and an infection in a tooth can quickly develop into a sinus infection. Because of the high complication rate, Dr Mahne does dental procedures while the horse is sedated and standing if at all possible.

Dr Mahne has a keen interest in key-hole surgery such as laparoscopies, arthroscopies and colonoscopies. During a laparoscopy a fibre-optic instrument is inserted through the abdominal wall of the horse to view the organs in the abdomen or enable small-scale surgery. Arthroscopy is used to diagnose and treat joint problems by inserting a narrow tube attached to a fiber-optic video camera through a small incision. During a colonoscopy, a scope is inserted in the abdominal area in order to examine and take biopsies of the colon.

Dr Mahne has also performed cryptorchid surgery on horses in the upright position. In cryptorchidism, one testicle does not descend into the scrotum and has to be removed from the abdomen.

He is privileged to have trained under Dr Johan Marais (one of his mentors), and feels that he is well on his way to achieving his goal of developing his surgical skills to become the best equine surgeon possible.

Dr Marais is a senior lecturer in equine surgery who has been utilising his expertise to do tremendous work on animals in the wild. He and Dr Gerhard Steenkamp are the dynamic duo who started Saving the Survivors, a programme aimed at treating rhino that have been injured during poaching incidents. Dr Mahne has worked closely with Dr Marais during some of these operations on rhino, and when Dr Marais is in the field, Dr Mahne often stands in to handle the wildlife surgical cases at the OVAH.

- Author Louise de Bruin