

Inflacam®

Keep a tight
rein on
musculoskeletal
pain



Reduce inflammation with
confidence and convenience

Shaping the future
of animal health

Virbac

Why choose meloxicam?

Inflacam, containing the active ingredient meloxicam, is an NSAID offering powerful, targeted relief from musculoskeletal inflammation and pain that compromises equine well-being and performance.

The meloxicam advantage: gastrointestinal comfort

Meloxicam's efficacy lies in its preferential inhibition of COX-2 enzymes, which are produced rapidly at sites of injury and inflammation, synthesising pro-inflammatory prostaglandins.

By preferentially targeting COX-2, meloxicam provides potent anti-inflammatory and analgesic effects, while maintaining a better safety profile for the gastrointestinal tract and kidneys^{1,2}.

Crucially, meloxicam exhibits lower inhibitory effects on COX-1 enzymes, including those that maintain the gastric mucosal barrier.

By sparing the COX-1 pathway more than non-selective NSAIDs such as phenylbutazone, meloxicam offers a significant advantage in practice.

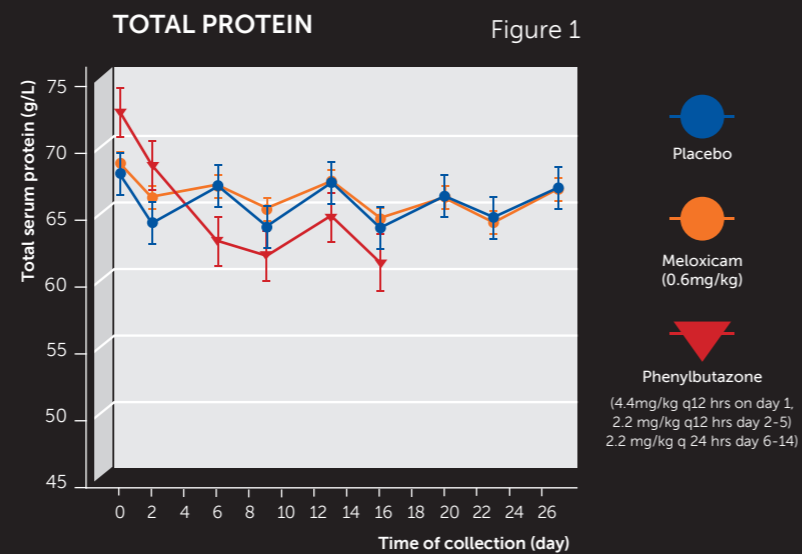
Reduced risk of Equine Gastric Ulcer Syndrome (EGUS):

Meloxicam might spare COX-1 and hence have a less detrimental effect on gastric mucosal integrity than nonselective NSAIDs such as phenylbutazone², reducing the risk of damage from stomach acid.

Reduced risk of NSAID-associated colitis: Serum albumin concentration is considered one of the most sensitive markers of chronic NSAID-associated colitis in the horse³.

In a study comparing phenylbutazone and meloxicam, total serum protein (Fig. 1) and albumin concentrations decreased for the phenylbutazone group, while they remained stable for the placebo and meloxicam group during the course of the study¹.

Phenylbutazone at the recommended dose rate resulted in significant right dorsal colitis in at least one treated horse and significant protein loss in two horses.



The meloxicam advantage: protection against cartilage breakdown

Meloxicam has been proven to have a chondroprotective action in inflamed joints⁴.

- Markers of cartilage breakdown were lower in meloxicam treated horses at 24 hours than in the control group⁴.
- Phenylbutazone does not protect against cartilage breakdown, with markers of cartilage degradation not reduced compared to the control group⁵.

Furthermore cartilage synthesis was reduced at 24 and 168 hours in phenylbutazone treated cases⁵, suggesting that phenylbutazone may be detrimental for cartilage health.

Equal analgesia

Olsen et al (2016)⁶ demonstrated non-inferiority when comparing the analgesic effects of phenylbutazone and meloxicam. In a blind, randomised study of 77 chronically lame horses, they were administered either 0.6mg/kg meloxicam every 24 hours or 1g/454kg of phenylbutazone every 12 hours.

There was a reduction in lameness score with meloxicam and phenylbutazone, with no difference in lameness scores or change in score between the two.



When to use meloxicam

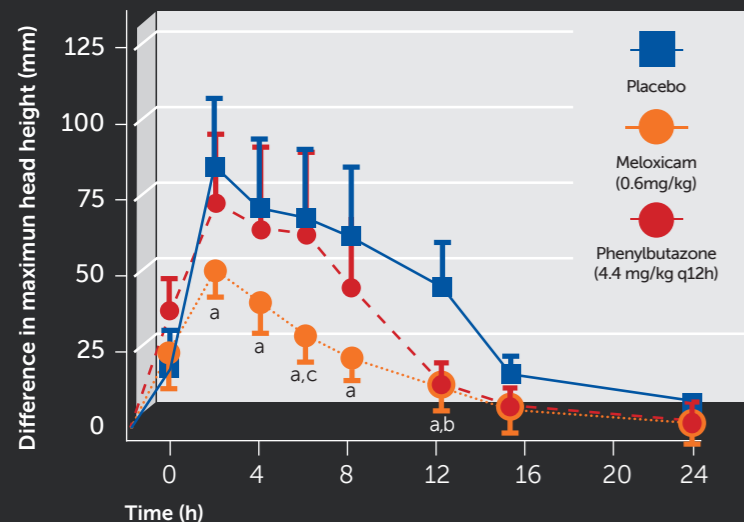
Inflammatory lameness and arthritis

There are multiple studies that show meloxicam's efficacy in an inflammatory lameness model^{4,7}.

De Grauw et al⁴ found that meloxicam significantly reduced markers of joint inflammation (PGE2, Substance P, Bradykinin and MMP) at 8 and 24 hours when administered at 0.6mg/kg SID, compared with the placebo group in a model of LPS-induced synovitis.

Another study showed that meloxicam had greater analgesic efficacy and reduced lameness more significantly than phenylbutazone in an inflammatory model, determined by the Equinosis lameness locator⁷.

Figure 2



Differences in maximum head height during the stride on the affected leg compared to the unaffected leg in horses with LPS-induced synovitis following treatment with placebo, meloxicam, or phenylbutazone. a=P<0.05 placebo vs meloxicam, b=P<0.05 placebo vs phenylbutazone, c=P<0.05 meloxicam vs phenylbutazone

Meloxicam also reduces inflammation induced cartilage metabolism⁴, suggesting meloxicam is a good choice for treatment of acute and chronic inflammatory orthopaedic conditions.

Post-operative pain

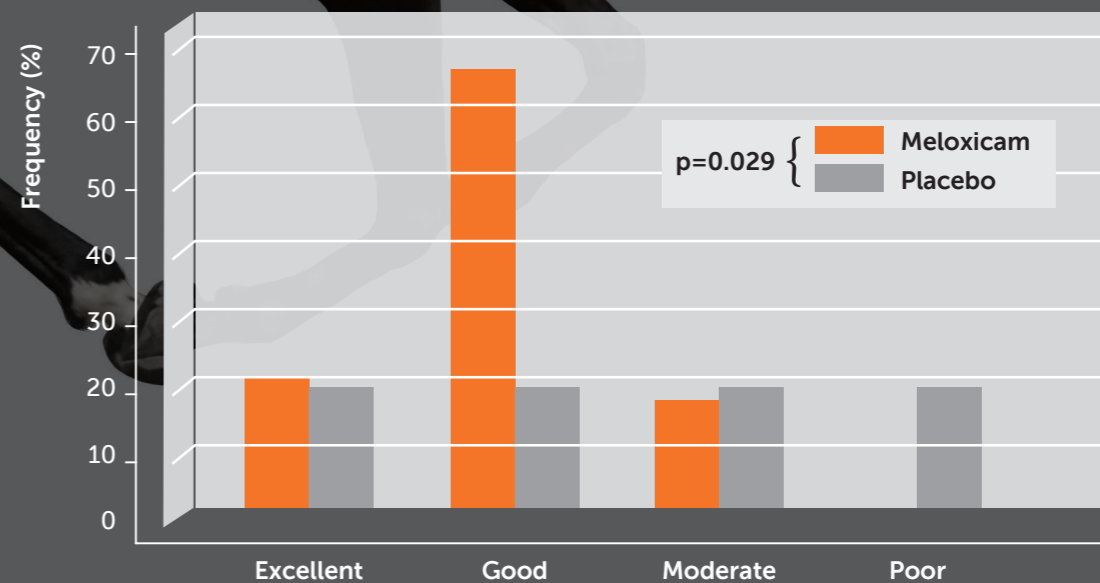
The benefit of pre and post-operative administration of NSAIDs for the relief of post-operative pain and control of inflammation is well-known.

Selecting the right pain relief for the type of pain, is key.

The efficacy of meloxicam in horses following partial resection of fractured splint bones has been studied⁹. Researchers found that administration of meloxicam IV once prior to surgery, followed by once-daily oral administration for four consecutive days resulted in a significant reduction in lameness (P=0.007) and soft tissue swelling on the 6th day after surgery (Fig 3).

General assessment of treatment success (Day 6)

Figure 3



General assessment of treatment success on Day 6. Distribution (%) of the categories for the general assessment of analgesic and anti-inflammatory efficacy of treatment for the meloxicam and placebo treatment groups on Day 6. Treatment groups were significantly different based on chi-square analysis (p=0.029).



Colic

NSAIDs are often used in horses with colic during the post-operative period, due to their ability to contrast endotoxemia and for analgesic and anti-inflammatory effect⁹.

As non-selective NSAIDs such as flunixin meglumine inhibit both COX-1 and COX-2

enzymes, the healing of the enteric mucosa may be impaired⁹. Meloxicam may be a useful alternative for treatment of horses with colic, through its ability to provide adequate analgesia and beneficial effects on clinical variables while permitting recovery of intestinal barrier function¹⁰.

Reduce inflammation with confidence and convenience

- No loading dose required making a cost effective treatment plan for owners.
- Once daily dosing - ideal if horses are only fed once a day.
- Short withdrawal period.
The detection time for oral meloxicam with the FEI and British Horseracing Authority is 3 days*.

- No passport, no problem! Unlike phenylbutazone and firocoxib, meloxicam is permitted in food producing animals and can therefore be used if the horse's passport is not available.

*A safety margin should be added to create a withdrawal time



Flexible Dosing Options to Suit Every Horse

Offering all three Infracam formulations ensures a seamless care plan, supporting the patient from the initial veterinary callout to sustained at-home support.

GRANULES



Easy to give
A small volume of granules that can be added to a small amount of feed, ideal for good-doers!

Simple to dose
One sachet, once a day for horses 500-600kg

Apple flavoured
to aid acceptance



ORAL SUSPENSION



Accurate dosing
for all sizes of horses and ponies.
Can be used in foals from six weeks old.

Available in 100ml and 250ml bottles

Honey flavoured
for excellent acceptance and palatability



INJECTABLE



Licensed for both
the treatment of acute and chronic musculoskeletal pain and the relief of pain associated with colic.

Administered by IV injection

Can be used in foals from six weeks old



SEDATIVES

DENTAL

WORMERS

ANTI-
INFLAMMATORIES



EQUINE PRODUCT STABLE

WORMERS

Equimax® gel wormer for horses containing ivermectin and praziquantel for the treatment of redworm, bots and tapeworm. One syringe will treat a 700kg horse.

Eraquell® oral paste wormer for horses contains ivermectin and is effective against most common worms with the exception of tapeworm and encysted small redworms. One syringe treats a 700kg horse.



SEDATIVES

Medesedan® is a detomidine hydrochloride (10mg/ml) solution for injection available in 5ml and 20ml bottles.



DENTAL

Hexarinse® oral rinsing solution for horses is a soothing rinse containing 0.12% chlorhexidine gluconate with an attractive mint flavour. Hexarinse is available in a multi-use 5l container.



ANTI-INFLAMMATORIES

THE INFLACAM® RANGE FOR HORSES, FLEXIBLE, INTEGRATED DOSING FOR EVERY HORSES' NEEDS

Inflacam® Granules

Individual 1.5g sachets containing 330mg meloxicam in apple flavoured granules that can be given in-feed. Available in packs of 100 sachets.



Inflacam® Injectable

Contains 20mg/ml meloxicam. Reliable pain relief. Available in 100ml bottles.



Inflacam® Oral Suspension

Contains 15mg/ml meloxicam in a honey-flavoured suspension. Available in 100ml and 250ml bottles.



Equipred®

Easy dosing of prednisolone for equine asthma. Each tablet contains 50mg prednisolone and is scored into 4 to allow dosing down to 12.5kg for improved accuracy.



References:

1. Noble, G., Edwards, S., Lievaert, J., Pippia, J., Boston, R. and Raidal, S.L. (2012). Pharmacokinetics and safety of single and multiple oral doses of meloxicam in adult horses. *J Vet Intern Med* 26(5):1192-201. 2. D'Arcy-Moskwa, E., Noble, G.K., Weston, L.A., Boston, R., Raidal, S.L. (2012) Effects of meloxicam and phenylbutazone in equine gastric mucosa permeability. *J Vet Intern Med* 26(6):1494-9. 3. McConnico, R.S et al (2008). Pathophysiological effects of phenylbutazone on the right dorsal colon in horses. *American Journal of Veterinary Research*, 69: 1496-1505. 4. De Grauw, J.C., van de Lest, C.H., Brama, P.A., Rambags, B.P., van Weeran, P.R (2009) In vivo effects of meloxicam on inflammatory mediators, MMPS activity and cartilage biomarkers in equine joints with acute synovitis. *Equine Vet J* 41(7) 693-9. 5. De Grauw, J.C., van Loon, J.P., van de Lest, C.H., Brunott, A. and van Weeran, P.R (2014) In vivo effects of phenylbutazone on inflammations and cartilage-derived biomarkers in equine joints with acute synovitis. *Vet J* 201:151-6. 6. Olson, M.E., Nagel, D., Custead, S., Wise, W., Penttila, K., Burwash, L., Ralston, B., Schatz, C. and Matheson-Bird, H. J (2016) The palatability and comparative efficacy of meloxicam oral suspension for the treatment of chronic musculoskeletal disease in horses. *Equine Vet Sci* 44:26-30. 7. Banse, H. and Cribb, A.E. (2017) Comparative efficacy of oral meloxicam and phenylbutazone in 2 experimental pain models in the horse. *Can Vet J* 58(2):157-167. 8. Walliser, U., Fenner, A., Mohren, N. et al. *Evaluation of the efficacy of meloxicam for post-operative management of pain and inflammation in horses after orthopaedic surgery in a placebo controlled clinical field trial. BMC Vet Res* 11, 113 (2015). <https://doi.org/10.1186/s12917-015-0427-4>. 9. Di Salvo A, Giorgi M, Nannarone S, Lee HK, Corsalini J, della Rocca G. Postoperative pharmacokinetics of meloxicam in horses after surgery for colic syndrome. *J vet Pharmacol Therap*. 2018; 41: 369-373. <https://doi.org/10.1111/jvp.12461>. 10. Little, D., Brown, S.A., Campbell, N.B., Moeser, A.J., Davis, J.L., Blikslager, A.T. Effects of the cyclooxygenase inhibitor meloxicam on recovery of ischemia-injured equine jejunum. *Am. J. Vet. Res.* 2007, 68, 614-624.

Inflacam Granules contains 330gm meloxicam POM-V

Inflacam Injectable contains 20mg/ml meloxicam POM-V

Inflacam Oral Suspension contains 15mg/ml meloxicam POM-V

Equimax contains 1.87mg/g ivermectin and 14.03mg/kg praziquantel POM-VPS

Equipred contains 50mg prednisolone POM-V

Eraquell contains 1.87mg/g ivermectin POM-VPS

Hexarinse contains 0.12% chlorhexidine gluconate

Medesedan contains 10mg/ml detomidine hydrochloride POM-V

Further information available on the product SPC or from Virbac Limited, Woolpit Business Park, Windmill Avenue, Woolpit, Bury St Edmunds, Suffolk, IP30 9UP, UK.

Tel: 01359 243243. Email: enquiries@virbac.co.uk www.virbac.co.uk

Use medicines responsibly. www.noah.co.uk/responsible

Prescription decisions are for the person issuing the prescription alone

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of animal health

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