

Substances proposed for inclusion under the provision of the equine amendment to 2366/90

Indication	Active substance	Explanation of use	Justification of added clinical benefit	References
Anti-inflammatory - NSAID	Phenylbutazone	Control of orthopaedic pain; laminitis; endotoxaemia and colic	Most effective NSAID for orthopaedic pain control; improves outcomes in laminitis compared to other treatments; provides added analgesia when used in combination with other NSAIDs; shorter duration of action than other NSAIDs allows more accurate monitoring of lameness and colic cases; most effective NSAID for limiting endotoxin-mediated inflammation and effects on cardiovascular system and GI tract.	For detailed justification and references see Appendix 1.
Anti-inflammatory - corticosteroid	Triamcinolone acetonide	Intra-articular medication for degenerative joint disease and osteoarthritis	More effective than systemic treatments and other intra-articular treatments for control of joint inflammation, pain and lameness in acute and chronic joint disease, especially degenerative joint disease and osteoarthritis. In contrast to other intra-articular medications is chondroprotective and promotes cartilage repair; only effective non-surgical treatment for subchondral bone cysts.	For detailed justification and references see Appendix 1.
Anti-endotoxin	Pentoxifylline	Endotoxaemia; colic; laminitis	Decreases endotoxin-mediated release of pro-inflammatory cytokines from macrophages and neutrophils, reduces systemic response to endotoxins; reduces blood viscosity and improves blood flow to the digit.	For detailed justification and references see Appendix 1.
Cardiovascular medicines	Amiodarone	Anti-dysrhythmic	New evidence that amiodarone is effective and safe in atrial fibrillation and better than alternative quinidine sulphate. Different mode of action to other authorised anti-dysrhythmics; effective for different types of arrhythmias including ventricular dysrhythmias.	1. De Clercq D, van Loon G, Baert K, Tavernier R, Croubels S, De Backer P, Deprez P. (2006). Intravenous amiodarone treatment in horses with chronic atrial fibrillation. <i>Vet J.</i> 172, 129-34. 2. De Clercq D, van Loon G, Baert K, De Backer P, Deprez P. (2007). Treatment with amiodarone of refractory ventricular tachycardia in a horse. <i>J Vet Intern Med.</i> 21, 878-880
	Flecainide	Anti-dysrhythmic	New evidence that flecainide is effective and safe in atrial fibrillation and better than alternative quinidine sulphate.	Risberg AI, McGuirk SM (2006). Successful conversion of equine atrial fibrillation using oral flecainide. <i>J Vet Intern Med.</i> 20, 207-209
	Adrenaline	Cardio-pulmonary resuscitation	Most effective CPR agent available, especially useful in foals	Corley, KTT. (2008). Procedures in the neonatal foal. In: <i>The equine hospital manual</i> . Eds: Corley, KTT and Stephen, J. Blackwell Publishing, Oxford. pp 122-125.
	Allopurinol	Neonatal ischaemia - reperfusion	Used in emergency setting following dystocia/hypoxia in newborn foals, no other effective alternative	1. F. T. Bain (2004). Management of the Foal from the Mare with Placentitis: A Clinician's Approach. In: 50th Annual Convention of the American Association of Equine Practitioners, 2004 - Denver, CO, USA. Internet Publisher: International Veterinary Information Service, Ithaca NY (www.ivis.org), P1419.1204. 2. Corley, KTT. (2008). Drugs doses. In: <i>The equine hospital manual</i> . Eds: Corley, KTT and Stephen, J. Blackwell Publishing, Oxford. p 655
Gastro-intestinal medicines	Sucralfate	Gastric ulcer prophylaxis in neonates	Different mode of action from omeprazole and valuable adjunctive gastric ulcer prophylaxis; unique mode of action (mucosal adherent) provides physical lesion stabilisation	1. Borne AT and MacAllister CG. (1993). Effect of sucralfate on healing of subclinical gastric ulcers in foals. <i>J Am Vet Med Assoc.</i> 202, 1465-1468. 2. Bohanon, TC (2005). Colic in the equine neonate. In: <i>Proceeding of the North American Veterinary Conference 2005, Orlando, Florida</i> pp 129-131
	Ranitidine	Gastric ulcer prophylaxis in neonates	Route of administration (i.v.) brings added benefit over all other anti-ulcer medications as these require oral administration. Intravenous ranitidine preparation essential in foals that have absent GI motility, the group that are at high risk for ulcers	1. O'Sullivan, J (2008). Managing the nonsucking foal. In: <i>Proceedings of the 47th British Equine Veterinary Association Congress, Liverpool, UK.</i> 47, 327-328. 2. Bohanon, TC (2005). Colic in the equine neonate. In: <i>Proceeding of the North American Veterinary Conference 2005, Orlando, Florida</i> pp 129-131
	Phenoxybenzamine	Diarrhoea treatment; colitis	Has different mode of action (alpha-1 antagonist and antisecretion agent) compared to other authorised treatments and codeine; provides useful symptomatic management of diarrhoea and colitis in adult horses	1. Hood DM, Stephens KA and Bowen MJ. (1982). Phenoxybenzamine for the treatment of severe nonresponsive diarrhoea in the horse. <i>J Am Vet Med Assoc.</i> 180, 758-762. 2. Britt, B and Byars, TD. (1997). Pharmacology. In: <i>Proceedings of the 43rd Annual Convention of the AAEP.</i> 1997. 43, 170 -177.
	Codeine	Diarrhoea treatment	Motility modulator that provides more effective symptomatic management of non-infectious diarrhoea, especially in foals, than other authorised substances; frequently used in combination with loperamide	1. Zimmel, D. (2008). Neonatal foal diarrhoea. In: <i>Proceedings of the AAEP Focus Meeting: First Year of Life - Austin, TX, USA.</i> 207-213. 2. Hodgson, J. (2006). Diarrhoea in foals. In: <i>Proceedings of the 9th International Congress of World Equine Veterinary Association, Marrakech, Morocco.</i> 9, 221-227
	Loperamide	Diarrhoea treatment in foals	Motility modulator that provides more effective symptomatic management of non-infectious diarrhoea in foals than other authorised substances; frequently used in combination with codeine	1. Zimmel, D. (2008). Neonatal foal diarrhoea. In: <i>Proceedings of the AAEP Focus Meeting: First Year of Life - Austin, TX, USA.</i> 207-213. 2. Hodgson, J. (2006). Diarrhoea in foals. In: <i>Proceedings of the 9th International Congress of World Equine Veterinary Association, Marrakech, Morocco.</i> 9, 221-227

Respiratory medicines	Budesonide	Inhalation corticosteroid for control of allergic pulmonary disease	Inhalation corticosteroid therapy causes less adreno-cortical suppression, with more rapid return to normal function after therapy ends, and fewer systemic side effects than systemic corticosteroid therapy because of limited systemic absorption. Inhalation allows reduced doses and local delivery of high concentrations of active substance and hence greater efficacy; especially useful for control of mild-moderate disease and long-term maintenance therapy. Additional substances with greater potency and different durations of effect than beclomethasone are required to titrate clinical response and provide optimum disease control. Budesonide has intermediate potency between beclomethasone and fluticasone.	1. Lekeux, P. and Duvivier, D.H. Aerosol Therapy. In: Lekeux P. (Ed.), Equine Respiratory Diseases. Ithaca: International Veterinary Information Service (www.avis.org), 2001; Document No. B0331.1101. 2. Rush, BR (2001). Systemic and inhalation therapy with corticosteroids. In: Proceedings of Second World Equine Airways Symposium, Scotland 2001. pp 1-10
	Fluticasone	Inhalation corticosteroid for control of allergic pulmonary disease	Inhalation corticosteroid therapy causes less adreno-cortical suppression with quick rebound after therapy ends and fewer systemic side effects than systemic corticosteroid therapy because of limited systemic absorption. Inhalation allows local delivery of high concentrations of active substance and hence greater efficacy; especially useful for control of mild-moderate disease and long-term maintenance therapy. Additional substances with greater potency and different durations of effect than beclomethasone are required to titrate clinical response and provide optimum disease control. Fluticasone is 50% more potent than beclomethasone and has longer half life (6hr), providing added benefit for more severely affected or refractory cases.	1. Viel L, Celly, C, Staempfli H, and Tesarowski DB. Therapeutic efficacy of inhaled fluticasone propionate in horses with chronic obstructive pulmonary disease. In: Proceedings of the Ann Conv Am Assoc Equine Pract 1999; 45:306-307. 2. Giguere S, Viel L, Lee E, et al. Cytokine induction in pulmonary airways of horses with heaves and effect of therapy with inhaled fluticasone propionate. Vet Immunol Immunopathol 2002; 85:147-158. 3. Rush, BR and Mair, TS (2004). Aerosolised corticosteroids. In: Equine respiratory disease. Eds: Rush, BR and Mair, TS. Blackwell Publishing, Oxford, UK. pp 197-200
Anaesthesia	Halothane	Inhalational anaesthesia	Different pharmacological properties produce slower recoveries than isoflurane and sevoflurane which reduces risk of anaesthesia-related mortality; particular benefit for fracture repair recovery.	For detailed justification and references see Appendix 1.
Antimicrobial	Clarithromycin	Rhodococcus equi treatment	New evidence that clarithromycin is more effective than current authorised treatments; provides optimum disease control with improved clinical outcomes; useful alternative treatment on problem farms	1. Giguere, S., Jacks, S., Roberts, G.D., Hernandez, J., Long, M.T. and Ellis, C. (2004) Retrospective comparison of azithromycin, clarithromycin, and erythromycin for the treatment of foals with Rhodococcus equi pneumonia. J. vet. int. Med. 18, 568-573. 2. Giguere, SS and Jacks, S. (2005). Therapy and Control of Rhodococcus equi Infections in Foals. In: Third World Equine Airways Symposium, Ainsworth D.M., McGorum B.C., Viel L., Robinson N.E. and Ducharme N.G. (Eds.), International Veterinary Information Service, Ithaca NY (www.avis.org). P2121.0705. 3. Marr, CM (2008). Diagnosis and management of Rhodococcus equi. In: Proceedings of the 47th British Equine Veterinary Association Congress, Liverpool, UK. 47, 197-198.
Antiprotozoal	Ponazuril	Equine protozoal myelitis (Sarcocystis neurona) treatment	New evidence that ponazuril has increased clinical efficacy compared to other authorised substances	1. Furr M, McKenzie H, Saville WJ, Dubey JP, Reed SM, Davis W. (2006). Prophylactic administration of ponazuril reduces clinical signs and delays seroconversion in horses challenged with Sarcocystis neurona. J Parasitol. 92, 637-643. 2. Mackay RJ, Tanhauser ST, Gillis KD, Mayhew IG, Kennedy TJ. (2008). Effect of intermittent oral administration of ponazuril on experimental Sarcocystis neurona infection of horses. Am J Vet Res. 69, 396-402.
Diagnostic imaging	Radiopharmaceutical Tc99	Scintigraphy	Most sensitive diagnostic imaging modality for identification of early bone pathology and fractures - more sensitive than radiography; allows quantitation; enables imaging of regions not amenable to radiography. Essential imaging technique safeguarding welfare of performance horses through early injury detection and prevention of catastrophic fractures. Short half life (6.01 hr) of Tc99 results in rapid clearance of detectable radioactivity (<72 hr) from the horse.	For references see Appendix 1.