Gabapentin is widely used to treat neuropathic pain in both human and veterinary patients. Although its structure resembles GABA, it does not have any affinity for GABA receptors. In contrast, it is thought to modulate the activity of pre-synaptic voltage gated calcium channels, which are upregulated in chronic pain states. Gabapentin does not act specifically as an analgesic agent but can reduce established hyperalgesia. It has been described to effectively treat neuropathic pain due to femoral neuropathy in a pregnant horse, which was unresponsive to conventional treatment, at a dose of 2.5 mg/kg PO BID for 3.5 days followed by every 24 hours for another 2 days (Davis et al., 2007). The pharmacokinetic properties and behavioural effects of oral (5 mg/kg and 20 mg/kg) and intravenous (20 mg/kg) gabapentin in healthy horses have been studied (Dirikolu et al., 2008; Terry et al., 2010). No adverse cardiovascular or behavioural effects were noted after the high intravenous dose; however some horses displayed increased drinking behaviour and reduced standing rest time for up to 11 hours (Terry et al., 2010). More studies are needed to evaluate the efficacy of gabapentin as an analgesic agent in horses.

SOURCE: <http://norbrook.com/uploads/EQHE_2013_Sept-Oct_Suppl_01_24_Web_res.pdf>