

ELEPHANT CARE INTERNATIONAL ELEPHANT FORMULARY

Summary of Commonly Used Medications

<http://elephantcare.org/resources/formulary/drug-index/>

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Note: The following chart includes information on select drugs that have been used in elephants or have a potential use. In many cases the dosages are anecdotal. Drugs for which pharmacokinetic studies have been conducted are indicated with an asterisk (*). If there are multiple dosage recommendations or other information too extensive to include in this table, the reader is referred to the indicated webpage. The web page monographs include detailed information including pharmacology, indications, contraindications, side effects etc. and may include additional dosages. For drugs that lack elephant-specific information, the equine dosage is recommended.

| Drug | Drug class | Elephant Dosage | Link to ECI Formulary Page | Reference |
|-------------------------------|--|---|---|--|
| Acepromazine | Tranquilizer / Sedative | | | |
| Albendazole | Anthelmintic | 2.5 mg/kg PO as a single dose | http://elephantcare.org/resources/formulary/drug-index/albendazole/ | Chandrasekharan,K., Radhakrishnan,K., Cheeran,J.V., Nair,K.N.M., and Prabhakaran,T., 1995. Review of the Incidence, Etiology and Control of Common Diseases of Asian Elephants with Special Reference to Kerala. In: Daniel,J.C. (Editor), A Week with Elephants; Proc of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 439-449 |
| Amikacin* | Antibiotic / Anti-tuberculosis | 6-8 mg/kg IM q 24 h | http://elephantcare.org/resources/formulary/drug-index/amikacin-sulfate/ | Lodwick,L.J., Dubach,J.M., Phillips,L.G., Brown,C.S., and Jandreski,M.A. 1994. Pharmacokinetics of amikacin in African elephants (<i>Loxodonta africana</i>). Zoo Wildl.Med. 25:(3):367-375. |
| Amoxicillin* | Antibiotic | 11 mg/kg IM q 24 h | http://elephantcare.org/resources/formulary/drug-index/amoxicillin/ | Schmidt,M.J. 1978. Penicillin and amoxicillin in elephants: A study comparing dose regimens administered with serum levels achieved in healthy elephants. Journal of Zoo Animal Medicine 9:(4):127-136 |
| Amoxicillin* | Antibiotic | 5.5 mg/kg IM q 24 h | http://elephantcare.org/resources/formulary/drug-index/amoxicillin/ | Sinphithakkul P, Klangkaew N, Sanyathitiseeree P, Giorgi M, Kumagai S, Poapolathep A, Poapolathep S: Pharmacokinetics of amoxicillin trihydrate in male Asian elephants (<i>Elephas maximus</i>) following intramuscular administration. J Vet Pharmacol Ther 2016, 39(3):287-291. |
| Ampicillin* | Antibiotic | 8 mg/kg PO BID-TID | | Rosin,E., Schultz-Darken,N., Perry,B., and Teare,J.A. 1993. Pharmacokinetics of ampicillin administered orally in Asian elephants (<i>Elephas maximus</i>). Journal of Zoo and Wildlife Medicine 24:(4):515-518 |
| Antacids Oral | | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/antacids-oral/ | |
| Atipamezole | Reversal agent / alpha2-adrenergic antagonist | 5-10 mg atipamezole:100 mg xylazine IM or slow IV | http://elephantcare.org/resources/formulary/drug-index/atipamezole-hcl/ | Rietschel,W., Hildebrandt,T., Goritz,F., and Ratanakorn,P. 2001. Sedation of Thai Working Elephants with Xylazine and Atipamezole as a Reversal. A Research Update on Elephants and Rhinos; Proc of the International Elephant and Rhino Research Symposium, Vienna, June 7-11, 2001. Pages: 121-123 |
| Atropine | Anticholinergic | refer to web page | http://elephantcare.org/resources/formulary/drug-index/atropine-sulfate/ | |
| Azaperone | Tranquilizer / Sedative | 0.024-0.038 mg/kg (standing sedation) | http://elephantcare.org/resources/formulary/drug-index/azaperone/ | Schmitt,D., Bradford,J., and Hardy,D.A. 1996. Azaperone for standing sedation in Asian elephants (<i>Elephas maximus</i>). Proc American Association of Zoo Veterinarians. P: 48-51. |
| Bisacodyl | Stimulant laxative | 300 mg PO q 12 h X 3-5 days; rectal suppository (400mg) topically to rectal mucosa q 12 h | http://elephantcare.org/resources/formulary/drug-index/bisacodyl/ | Silva, I and Dangolla, A. 2006. Veterinary Problems of Geographic Concern: Section VIII – Sri Lanka. In: Fowler, M.E. and Mikota, S.K.(eds). Biology, Medicine, and Surgery of the Elephant. Blackwell Publishing, Ames, IA. Pp. 468-473. |
| Bismuth Subsalicylate | Antidiarrheal | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/bismuth-subsalicylate/ | |
| Butorphanol* | Analgesic / Opioid / Narcotic agonist | 0.015 mg/kg IV or IM | http://elephantcare.org/resources/formulary/drug-index/butorphanol-tartrate/ | Tana, L. M., Isaza, R., Koch, D. E., and Hunter, R. P. (2010). Pharmacokinetics and intramuscular bioavailability of a single dose of butorphanol in Asian elephants (<i>Elephas maximus</i>). Journal of Zoo and Wildlife Medicine 41, 418-425. |
| Carfentanil | Narcotic immobilizing agent | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/carfentanil/ | |
| Ceftiofur* | Antibiotic | 1.1 mg/kg IM BID or TID or 1.1 mg/kg IV SID depending on the MIC of the pathogen | http://elephantcare.org/resources/formulary/drug-index/ceftiofur-sodium/ | Dumonceaux, G, Isaza, R. Koch, D.E., and Hunter, R.P. 2005. Pharmacokinetics and i.m. bioavailability of ceftiofur in Asian elephants (<i>Elephas maximus</i>). J Vet Pharmacol Ther. 28(5):441-6. |
| Ceftiofur CCFA (long-acting)* | Antibiotic | 6.6 mg/kg SQ Q 7-10 days | http://elephantcare.org/resources/formulary/drug-index/ceftiofur-sodium/ | Adkesson MJ, Junge RE, Allender MC, Martin-Jimenez T: Pharmacokinetics of a long-acting ceftiofur crystalline-free acid formulation in Asian elephants (<i>Elephas maximus</i>). Am J Vet Res 2012, 73(10):1512-1518. |
| Chlorpheniramine Maleate | Antihistamine | Pheniramine: 1700-2300 mg/animal in Asian elephants; author's personal experience | http://elephantcare.org/resources/formulary/drug-index/chlorpheniramine-maleate/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1995. Principles and Practice of Fixing Dose of Drugs for Elephants. In: Daniel,J.C. (Editor), A Week with Elephants; Proceedings of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 430-438 |
| Chlorpromazine | Tranquilizer | 2000 mg orally BID was given to an adult Asian bull elephant | http://elephantcare.org/resources/formulary/drug-index/chlorpromazine/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1992. A case of ophophobia in a tusker. In: Silas,E.G., Nair,M.K., and Nirmalan,G. (Editors), The Asian Elephant: Ecology, Biology, Diseases, Conservation and Management (Proceedings of the National Symposium on the Asian Elephant held at the Kerala Agricultural University, Trichur, India, January 1989). Kerala Agricultural University, Trichur, India p. 176. |
| Clorsulon | Anthelmintic | 1 mg/kg PO | http://elephantcare.org/resources/formulary/drug-index/clorsulon/ | Darunee Tuntasuvan B.Sc., D.V.M., Ph.D. (personal communication) 2003. In an unpublished study, Dr. Tantasuvan found a mixture of 1% ivermectin and 10% Clorsulon (Ivomec – F) administered subcutaneously at a dose of 0.1 mg/kg to be 100 % effective against helminths but not flukes. |
| Detomidine | Tranquilizer / Sedative /alpha2-adrenergic agonist | 5.5 µg/kg IM for standing sedation in Asian elephants | http://elephantcare.org/resources/formulary/drug-index/detomidine-hcl/ | deSilva, D.D.N. and Kuruwita, V.Y. 1994. Sedation of wild elephants (<i>Elephas maximus Ceylonicus</i>) using Detomidine HCL ("Domosedan") in Sri Lanka. 5th International Congress of Veterinary Anesthesia. |

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| Dexamethasone | Glucocorticoid | 1mg/5 kg body weight (heatstroke) | http://elephantcare.org/resources/formulary/drug-index/dexamethasone/ | Schmidt,M.J., 1986. Proboscidea (Elephants). In: Fowler,M.E. (Editor), Zoo and wild animal medicine. W.B. Saunders, Philadelphia,PA, USA pp. 884-923 |
| Diazepam | Tranquilizer / Sedative / Axiolytic / Anticonvulsant | 400-800 mg/animal IM as an anticonvulsant | http://elephantcare.org/resources/formulary/drug-index/diazepam/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1995. Principles and Practice of Fixing Dose of Drugs for Elephants . In: Daniel,J.C. (Editor), A Week with Elephants; Proceedings of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 430-438 |
| Diprenorphine | Reversal agent | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/diprenorphine/ | |
| Dobutamine | Inotropic agent | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/dobutamine/ | |
| Ducosate (Dioctyl sodium succinate, DSS) | Stool softener | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/ducosate/ | |
| Doxapram | Respiratory stimulant | 0.5 mg/kg IV or under tongue in newborn calf | http://elephantcare.org/resources/formulary/drug-index/doxapram-hcl/ | Dr. Dennis Schmitt personal communication |
| Enrofloxacin* | Antibiotic | 2.5 mg/kg PO sid | http://elephantcare.org/resources/formulary/drug-index/enrofloxacin/ | Sanchez, C.R. Murray, S.Z., Isaza, R., Papich, M.G. 2005. Pharmacokinetics of a single dose of enrofloxacin administered orally to captive Asian elephants (<i>Elephas maximus</i>). <i>Am J Vet Res.</i> 66 (11):1948-53. |
| Epinephrine | Catecholamine / bronchodilator | Emergency treatment of newborn calf. calculate the dose at 0.1 ml/kg of a 1:1000 solution. Inter-cardiac, intra-tracheal, or IV. 200 lb (90 kg) calf = 9 ml;250 lb (113 kg) calf = 11.3 ml;300 lb (136 kg) calf = 13.6 ml | http://elephantcare.org/resources/formulary/drug-index/epinephrine/ | Schmitt, 2001 |
| Estradiol Cypionate | Steroidal estrogen | The administration of 10 mg estradiol cypionate IM followed by the 200 IU oxytocin IV on day 15 postpartum and an additional 10 IU oxytocin the following day facilitated the removal of a retained placenta in an Asian cow. | http://elephantcare.org/resources/formulary/drug-index/estradiol-cypionate/ | Murray,S., Bush,M., and Tell,L.A. 1996. Medical management of postpartum problems in an Asian elephant (<i>Elephas maximus</i>) cow and calf. <i>Journal of Zoo and Wildlife Medicine</i> 27(2):255-258 |
| Ethambutol* | Antibiotic / Anti-tuberculosis | 30 mg/kg PO; adjust to achieve serum drug level of 2-5 µg/ml (rectal administration not recommended) | http://elephantcare.org/resources/formulary/drug-index/ethambutol/ | Maslow JN, Mikota SK, Zhu M, Riddle H, Peloquin CA: Pharmacokinetics of ethambutol (EMB) in elephants. <i>J Vet Pharmacol Ther</i> 2005, 28(3):321-323. Brock AP, Isaza R, Egelund EF, Hunter RP, Peloquin CA: The pharmacokinetics of a single oral or rectal dose of concurrently administered isoniazid, rifampin, pyrazinamide, and ethambutol in Asian elephants (<i>Elephas maximus</i>). <i>Journal of Veterinary Pharmacology and Therapeutics</i> 2014, 37(5):472-479. |
| Etorphine | Narcotic immobilizing agent | Refer to webpage | http://elephantcare.org/resources/formulary/drug-index/etorphine/ | |
| Euthanasia agents | | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/euthanasia-agents-containing-pentobarbital/ | |
| Famciclovir* | Antiviral | 8-15 mg/kg Po or per rectum at least q 8 hours | http://elephantcare.org/resources/formulary/drug-index/famciclovir/ | Brock AP, Isaza R, Hunter RP, Richman LK, Montali RJ, Schmitt DL, Koch DE, Lindsay WA: Estimates of the pharmacokinetics of famciclovir and its active metabolite penciclovir in young Asian elephants (<i>Elephas maximus</i>). <i>Am J Vet Res</i> 2012, 73(12):1996-2000. |
| Fenbendazole | Anthelmintic | 5 mg/kg PO | http://elephantcare.org/resources/formulary/drug-index/fenbendazole/ | Raman,M., Jayathagaraj,M.G., Rajavelu,G., and John,M.C. 2000. Strongylosis in captive elephants – a report. <i>Indian Journal of Animal Health</i> 39(2):85-86. |
| Flunixin | NSAID | 1.1 mg/kg IV, IM,. Or PO daily for up to 5 days (equine dosage) | http://elephantcare.org/resources/formulary/drug-index/flunixin-meglumine/ | |
| Furosemide | Diuretic | 300-500 mg/animal IM | http://elephantcare.org/resources/formulary/drug-index/furosemide/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1995. Principles and Practice of Fixing Dose of Drugs for Elephants. In: Daniel,J.C. (Editor), A Week with Elephants; Proceedings of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 430-438 |
| Gentamicin | Antibiotic | 4.4 mg/kg IV (or IM) once daily. The IV injection can be diluted with 10% saline | http://elephantcare.org/resources/formulary/drug-index/gentamicin-sulfate/ | Schmidt, M.J: Senior Research Veterinarian, Washington Park Zoo, Portland, Oregon, personal communication, 1986. In: Olsen,J.H., 1999. Antibiotic therapy in elephants. In: Fowler,M.E. and Miller R.E. (Editors), <i>Zoo and Wild Animal Medicine: Current Therapy</i> 4. W.B. Saunders, Philadelphia, PA,USA p. 537 |
| Haloperidol | Tranquilizer / Sedative | 40 mg/animal IM or PO Asian elephants | http://elephantcare.org/resources/formulary/drug-index/haloperidol/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1995. Principles and Practice of Fixing Dose of Drugs for Elephants . In: Daniel,J.C. (Editor), A Week with Elephants; Proceedings of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 430-438 |
| Halothane | Inhalant Anesthetic | | http://elephantcare.org/resources/formulary/drug-index/halothane/ | |
| Ibuprofen* | NSAID | Asian: 6 mg/kg PO BID African 7 mg/kg PO BID | http://elephantcare.org/resources/formulary/drug-index/ibuprofen/ | Bechert, U. and Christensen, J. M. (2007). Pharmacokinetics of orally administered ibuprofen in African and Asian elephants (<i>Loxodonta africana</i> and <i>Elephas maximus</i>). <i>Zoo Wildl Med</i> 38, 258-268. |
| Isoflurane | Inhalant Anesthetic | | http://elephantcare.org/resources/formulary/drug-index/isoflurane/ | |

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| Isoniazid* | Antibiotic / Anti-tuberculosis | 5 mg/kg PO or per rectum as a starting dosage; adjust to achieve a serum drug levels of 3-5 µg/ml. | http://elephantcare.org/resources/formulary/drug-index/isoniazid/ | Maslow, J.N., Mikota, S.K., Zhu, M., Isaza, R., Peddie, L.R., Dunker, F., Peddie, J., Riddle, H., and Peloquin, C.A. 2005. Population pharmacokinetics of isoniazid in the treatment of Mycobacterium tuberculosis among Asian and African elephants (Elephas maximus and Loxodonta africana). J Vet Pharmacol Ther. 28(1):21-7. Egelund EF, Isaza R, Al Sultan A, Peloquin CA: Isoniazid and rifampin pharmacokinetics in two Asian elephants (Elephas maximus) infected with Mycobacterium tuberculosis. Journal of Zoo and Wildlife Medicine 2016, 47(3):868-871. |
| Ivermectin | Anthelmintic | 0.059 – 0.087 mg/kg PO for lice | http://elephantcare.org/resources/formulary/drug-index/ivermectin/ | Karesh,W.B. and Robinson,P.T. 1985. Ivermectin treatment of lice infestations in two elephant species. Journal of the American Veterinary Medical Association 187:(11):1235-1236 |
| Ketamine | Anesthetic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/ketamine-hcl/ | |
| Ketoconazole | Anti-fungal | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/ketoconazole/ | |
| Ketoprofen* | NSAID | 1-2 mg/kg PO or IV every 24-48 hours | http://elephantcare.org/resources/formulary/drug-index/ketoprofen/ | Hunter, R. P., Isaza, R., and Koch, D. E. (2003). Oral bioavailability and pharmacokinetic characteristics of ketoprofen enantiomers after oral and intravenous administration in Asian elephants (Elephas maximus). American Journal of Veterinary Research 64, 109-114. |
| Levamisole | Anthelmintic | 2.5-3 mg/kg PO as a single dose | http://elephantcare.org/resources/formulary/drug-index/levamisole/ | Chandrasekharan,K. 2002. Specific diseases of Asian elephants. Journal of Indian Veterinary Association Kerala 7:(3):31-34. |
| Lidocaine | Anti-rrhythmic / Local anesthetic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/lidocaine-hcl/ | |
| Magnesium sulfate | Parenteral electrolyte | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/magnesium-sulfate/ | |
| Mannitol | Osmotic diuretic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/mannitol/ | |
| Mebendazole | Anthelmintic | 2.5-4.0 mg/kg orally as a single dose | http://elephantcare.org/resources/formulary/drug-index/mebendazole/ | Chandrasekharan,K. 2002. Specific diseases of Asian elephants. Journal of Indian Veterinary Association Kerala 7:(3):31-34 |
| Mebendazole | Anthelmintic | 6-7 mg/kg PO | http://elephantcare.org/resources/formulary/drug-index/mebendazole/ | Carreno,R.A., Neimanis,A.S., Lindsjo,J., Thongnoppakun,P., Barta,J.R., and Peregrine,A.S. 2001. Parasites found in faeces of Indian elephants (Elephas maximus) in Thailand following treatment with mebendazole, with observations on Pfenuderis papillatus (Cobbold, 1882) Stiles and Goldberger, 1910 by scanning electron microscopy. Helminthologia 38:(2):75-79 |
| Medetomidine HCl | Tranquilizer / Sedative / alpha2-adrenergic antagonist | 3-5 µg/kg IM | http://elephantcare.org/resources/formulary/drug-index/medetomidine-hcl/ | Sarma,B., Pathak,S.C., and Sarma,K.K. 2002. Medetomidine a novel immobilizing agent for the elephant (Elephas maximus). Res Vet Sci 73:(3):315-317. |
| Medetomidine HCl | Tranquilizer / Sedative / alpha2-adrenergic antagonist | 0.009 ± 0.002 mg/kg medetomidine in combination with 0.03 ± 0.007 mg/kg butorphanol for standing sedation in African elephants. The addition of hyaluronidase reduces time to full sedation – see web page.. | http://elephantcare.org/resources/formulary/drug-index/medetomidine-hcl/ | Luders I, Tindall B, Young D, van der Horst G, Botha S, Luther I, Maree L, Bertschinger HJ: Standing sedation with medetomidine and butorphanol in captive African elephants (Loxodonta africana). Veterinary journal (London, England : 1997) 2016, 209:190-192. |
| Meperidine | Opiate analgesic | 75-150 mg/100 kg Q.I.D. | http://elephantcare.org/resources/formulary/drug-index/meperidine/ | Schmidt,M.J., 1986. Proboscidea (Elephants). In: Fowler,M.E. (Editor), Zoo and wild animal medicine. W.B. Saunders, Philadelphia,PA, USA pp. 884-923. |
| Methocarbamol | Muscle relaxant | | http://elephantcare.org/resources/formulary/drug-index/methocarbamol/ | |
| Methylprednisolone | Glucocorticoid | | http://elephantcare.org/resources/formulary/drug-index/methocarbamol/ | |
| Metoclopramide HCl | Antiemetic | 250-400 mg/elephant IV as an antiemetic | http://elephantcare.org/resources/formulary/drug-index/metoclopramide-hcl/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1995. Principles and Practice of Fixing Dose of Drugs for Elephants. In: Daniel,J.C. (Editor), A Week with Elephants; Proceedings of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 430-438 |
| Metronidazole* | Antibiotic | 15 mg/kg per rectum ~ q 24 h or based on MIC of pathogen | http://elephantcare.org/resources/formulary/drug-index/metronidazole/ | Gulland,F.M. and Carwardine,P.C. 1987. Plasma metronidazole levels in an Indian elephant (Elephas maximus) after rectal administration. Veterinary Record 120:440. Sander SJ, Siegal-Willott JL, Ziegler J, Lee E, Tell L, Murray S: Pharmacokinetics of a single dose of metronidazole after rectal administration in captive asian elephants (Elephas maximus). J Zoo Wildl Med 2016, 47(1):1-5.47(1):1-5. |
| Metronidazole* | Antibiotic | 15 mg/kg per rectum q 24 h | http://elephantcare.org/resources/formulary/drug-index/metronidazole/ | Gulland,F.M. and Carwardine,P.C. 1987. Plasma metronidazole levels in an Indian elephant (Elephas maximus) after rectal administration. Veterinary Record 120:440 Sander SJ, Siegal-Willott JL, Ziegler J, Lee E, Tell L, Murray S: Pharmacokinetics of a single dose of metronidazole after rectal administration in captive asian elephants (Elephas maximus). J Zoo Wildl Med 2016, 47(1):1-5. |
| Midazolam HCl | Tranquilizer / Sedative | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/midazolam-hcl/ | |
| Mineral Oil | Laxative | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/mineral-oil/ | |
| Morantel Tartrate | Anthelmintic | Morantel tartrate 2-4 mg/kg orally as a single dose; Morantel citrate 2-3 mg/kg orally as a single dose for helminthiasis | http://elephantcare.org/resources/formulary/drug-index/morantel-tartrate/ | Chandrasekharan,K. 2002. Specific diseases of Asian elephants. Journal of Indian Veterinary Association Kerala 7:(3):31-34 |
| Morphine Sulfate | Analgesic / Narcotic Agonist | For analgesia: 3-6 mg/100 kg qid; for analgesia and sedation: 6-20 mg/100 kg qid | http://elephantcare.org/resources/formulary/drug-index/morphine-sulfate/ | Schmidt, M: Elephants (Proboscidea). In: Fowler, M.E. (ed): Zoo and Wild Animal Medicine. 1986. Saunders, Philadelphia. p.892. |

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| Nalmefene | Reversal agent / Opiate antagonist | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/nalmefene/ | |
| Naloxone HCl | Reversal agent / Opiate antagonist | 10 mg total dose in small elephants; up to 30-50 mg in adults | http://elephantcare.org/resources/formulary/drug-index/naloxone-hcl/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1995. Principles and Practice of Fixing Dose of Drugs for Elephants . In: Daniel,J.C. (Editor), A Week with Elephants; Proceedings of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 430-438. |
| Naltrexone HCl | Reversal agent / Opiate antagonist | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/naltrexone-hcl/ | |
| Neomycin Sulfate | Antibiotic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/neomycin-sulfate/ | |
| Neostigmine | Parasympathomimetic | 4-5 mg/animal | http://elephantcare.org/resources/formulary/drug-index/neostigmine/ | Cheeran,J.V., Chandrasekharan,K., and Radhakrishnan,K., 1995. Principles and Practice of Fixing Dose of Drugs for Elephants. In: Daniel,J.C. (Editor), A Week with Elephants; Proceedings of the International Seminar on Asian Elephants. Bombay Natural History Society; Oxford University Press, Bombay, India pp. 430-438. |
| Omeprazole | Gastric acid (proton) pump inhibitor | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/omeprazole/ | |
| Oxibendazole | Anthelmintic | 2.5 mg/kg orally as a single dose | http://elephantcare.org/resources/formulary/drug-index/oxibendazole/ | Chandrasekharan,K. 2002. Specific diseases of Asian elephants. Journal of Indian Veterinary Association Kerala 7(3):31-34 |
| Oxyclozanide | Anthelmintic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/oxyclozanide/ | |
| Oxytetracycline* | Antibiotic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/oxytetracycline/ | |
| Oxytocin | Hormone | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/oxytocin/ | |
| Penicillin G* | Antibiotic | Dosages differ for various organisms. Refer to web page | http://elephantcare.org/resources/formulary/drug-index/penicillin-g/ | Schmidt,M.J. 1978. Penicillin and amoxicillin in elephants: A study comparing dose regimens administered with serum levels achieved in healthy elephants. Journal of Zoo Animal Medicine 9(4):127-136. |
| Perphenazine | Tranquilizer / Sedative | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/perphenazine/ | |
| Phenylbutazone * | NSAID | Asian: 3 mg/kg PO q 48 h African: 2 mg/kg PO q 48 h | http://elephantcare.org/resources/formulary/drug-index/phenylbutazone/ | Becherl, U., Christensen, J. M., Nguyen, C., Neelkant, R., and Bendas, E. (2008). Pharmacokinetics of orally administered phenylbutazone in African and Asian elephants (Loxodonta africana and Elephas maximus). J.Zoo.Wildl.Med. 39, 188-200. |
| Praziquantel | Anthelmintic | 2.5-4.0 mg/kg PO | http://elephantcare.org/resources/formulary/drug-index/phenylbutazone/ | Chandrasekharan,K. 2002. Specific diseases of Asian elephants. Journal of Indian Veterinary Association Kerala 7(3):31-34. |
| Prednisone | Glucocorticoid | | http://elephantcare.org/resources/formulary/drug-index/prednisone/ | |
| Prednisolone | Glucocorticoid | 1mg / 3 kg body weight (heatstroke) | http://elephantcare.org/resources/formulary/drug-index/prednisolone/ | Schmidt,M.J., 1986. Proboscidea (Elephants). In: Fowler,M.E. (Editor), Zoo and wild animal medicine. W.B. Saunders, Philadelphia,PA, USA pp. 884-923. |
| Promazine HCl | Tranquilizer / Sedative | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/promazine-hcl/ | |
| Propofol | Short-acting hypnotic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/propofol/ | |
| Pyrazinamide * | Antibiotic / Anti-tuberculosis | 30 mg/kg PO or per rectum; adjusts to achieve serum drug level 20-60 µg/ml | http://elephantcare.org/resources/formulary/drug-index/pyrazinamide/ | Zhu M, Maslow JN, Mikota SK, Isaza R, Dunker F, Riddle H, Peloquin CA: Population pharmacokinetics of pyrazinamide in elephants. J Vet Pharmacol Ther 2005, 28(5):403-409. Brock AP, Isaza R, Egelund EF, Hunter RP, Peloquin CA: The pharmacokinetics of a single oral or rectal dose of concurrently administered isoniazid, rifampin, pyrazinamide, and ethambutol in Asian elephants (Elephas maximus). Journal of Veterinary Pharmacology and Therapeutics 2014, 37(5):472-479. |
| Ranitidine HCl | H2 agonist | Refer to website | http://elephantcare.org/resources/formulary/drug-index/ranitidine-hcl/ | |
| Rifampin * | Antibiotic / Anti-tuberculosis | 10 mg/kg PO. Adjust to achieve a serum drug level of 8-24 µg/ml. Do not administer with food; not absorbed rectally | http://elephantcare.org/resources/formulary/drug-index/rifampin/ | Peloquin CA, Maslow JN, Mikota SK, Forrest A, Dunker F, Isaza R, Peddie LR, Peddie J, Zhu M: Dose selection and pharmacokinetics of rifampin in elephants for the treatment of tuberculosis. Journal of Veterinary Pharmacology and Therapeutics 2006, 29(6):581-585. Brock AP, Isaza R, Egelund EF, Hunter RP, Peloquin CA: The pharmacokinetics of a single oral or rectal dose of concurrently administered isoniazid, rifampin, pyrazinamide, and ethambutol in |
| Succinylcholine Chloride | Muscle relaxant | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/succinylcholine-chloride/ | |
| Sucralfate | Gastromucosal protectant | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/sucralfate/ | |
| Sulfadiazine/Trimethoprim Sulfamethoxazol /Trimethoprim* | Antibiotic | 22 mg/kg PO BID | http://elephantcare.org/resources/formulary/drug-index/trimethoprim-sulfa/ | Page,C.D., Mautino,M., Derendorf,H.D., and Anhalt,J.P. 1991. Comparative pharmacokinetics of trimethoprim-sulfamethoxazole administered intravenously and orally to captive elephants. |
| Sulfadimethoxine | Antibiotic | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/sulfadimethoxine/ | |
| Thiabendazole | Anthelmintic | 20 mg/kg orally as a single dose for helminthiasis | http://elephantcare.org/resources/formulary/drug-index/thiabendazole/ | Chandrasekharan,K. 2002. Specific diseases of Asian elephants. Journal of Indian Veterinary Association Kerala 7(3):31-34. |
| Thiabendazole | Anthelmintic | 32 mg/kg orally for strongylosis | http://elephantcare.org/resources/formulary/drug-index/thiabendazole/ | Chandrasekharan,K., Cheeran,J.V., Nair,K.N.M., Ramanujam,K.N., and Radhakrishnan,K. 1982. Comparative efficacy of 6 anti-helminthics against strongylosis in elephants. Kerala Journal of Veterinary Science 13:15-20. |
| Tiletamine HCl- Zolazepam HCl | Tranquilizer / Sedative | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/tiletamine-hcl-zolazepam-hcl/ | |

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| Tylosin | Antibiotic | 12 mg/kg /day IM | http://elephantcare.org/resources/formulary/drug-index/tylosin/ | Schmidt, M: Elephants (Proboscidea). In: Fowler, M.E. (ed): Zoo and Wild Animal Medicine. 1986. Saunders, Philadelphia. pp.911-912. |
| Vitamin E/Selenium | Vitamin | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/vitamin-e-selenium/ | |
| Xylazine HCl * | Tranquilizer / Sedative | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/xylazine-hcl/ | |
| Yohimbine HCl | Reversal agent | Refer to web page | http://elephantcare.org/resources/formulary/drug-index/yohimbine-hcl/ | |
| Zuclopenthixol | Behavior-modifying agent | An Asian elephant (approx. 3750 kg) in dystocia was given 480 mg zuclopenthixol per os. An additional 400 mg was given 5 hours later and a vaginal vestibulotomy was performed under local anesthesia. | http://elephantcare.org/resources/formulary/drug-index/zuclopenthixol/ | Schaftenaar,W. 1996. Vaginal vestibulotomy in an Asian elephant (Elephas maximus). Proceedings American Association of Zoo Veterinarians. Pages: 434-439. |